DEFINITE SPACE –

*FUZZY RESPONSIBILITY*

# BOOK OF PROCEEDINGS

AESOP PRAGUE

Annual Congress 2015

13 – 16 JULY 2015, PRAGUE, CZECH REPUBLIC CZECH TECHNICAL UNIVERSITY

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# BOOK OF PROCEEDINGS

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### Definite Space – Fuzzy Responsibility

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## FOREWORD OF THE AESOP PRESIDENT

Dear members and friends of the AESOP community,

Welcome in Prague for the 2015 annual AESOP Congress!

In these challenging and troubled times, the unpredictable and contested nature of our shared spaces forces us to develop innovative planning research, in the light of intellectual freedom, democratic enhancement of differences, cooperation, ethics and justice. This requires a deep sense of responsibility, individually as well as collectively, considering our ethical sensitivity, civic engagement and research commitment as parts of a wider social practice.

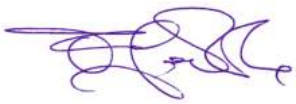
This issue – and the consequential dialectical tension – is at the core of the AESOP Prague Congress; in fact, the gap between sprawled powers and blurred sense of responsibility is the focus of the 2015 Congress debates. According to its intriguing title “Definite space – fuzzy responsibility”, the Prague Congress asks us: who should take responsibility for how cities and regions are being changed? Our community will face this difficult question, with hundreds of papers and presences in Prague. This is a great occasion in order to consider whether anything systematic can be said about how such ethical and political issues arise, hence how they might be understood, and addressed today.

The AESOP Prague Congress also provides an opportunity for researchers in planning to think about the implications for their work of the changes in governance and planning which have been both a spur for, and object of, their academic work. In large measure, these derive from a perennial set of ethical issues surrounding research which seeks to inform public policy. There are ethical challenges which are distinctive of the kind of research which at least some planning researchers undertake, in contexts of social tension and/or conflict, sometimes associated with clear oppression and injustice. These circumstances are only more extreme versions of the challenge to any planning scholar, because the definition and use of space is bound up with social justice in the broadest sense, and the way power – and governmental responsibility – is exercised in society.

Consequently, one of the purposes of the Congress is to explore ways of thinking about planning which considers the social context of ethical perception and public political behaviour. By doing this, we hope to shift the emphasis of discussion from individual and/or occasional probity to those circumstances that help planners and public officials develop and use sound ethical judgement: in public life, in society, in our cities as well as in our schools. Although the moral landscape within which planning is undertaken is not an easy one to read or traverse, the Conference debate and contributions will certainly identify significant planning issues which can constitute part of an agenda for discussion among researchers and policy-makers.

Due to the excellent and terrific work of the Prague Local Organizing Committee, the AESOP Congress 2015 is providing the best environment for all this, and I wish a fruitful and intellectually attractive experience to all the participants!

Francesco Lo Piccolo



## CONGRESS THEME

### Definite space – blurred / fuzzy responsibility

***While many of the initiatives and powers moved outside public control, the sense of responsibility for spatial change and sustainable development of cities and regions hardly overstepped the domain of city halls and ministries, and planners as their experts. The gap between sprawled powers / potency and blurred sense of responsibility should be the focus of the Congress debates.***

Our cities are spreading, the distances that most of us have to travel for jobs, shopping, entertainment, etc. are steadily increasing, and money available for maintenance and improvement of roads, utilities and public services is shrinking. Rich people are retiring to gated communities while some others may remain trapped in social and ethnic ghettoes.

All these problems are expected to be tackled by planning as an instrument for urban and regional management. But planning itself was affected by drift from hierarchic control by state and local governments, through public-private partnership projects, to governance where the actual field of municipalities´ and states´ action is dissolved and shared with business. Also many services formerly provided by public domain have been outsourced. Who should take responsibility for how the cities and regions are being changed?

## LOC MEMBERS

**Chair**

Professor Zdeněk Zavřel, Vice-Dean, Faculty of Architecture, Czech Technical University in Prague

**Executive Chair**

Professor Karel Maier, Czech Technical University in Prague

Arch. Petr Durdík, President of the Association of Urbanism and Planning

Prof. Maroš Finka, Slovak Technology University in Bratislava – PhD workshop

Arch. Jan Kasl, planning practitioner, Ex-Mayor of Prague

Prof. Ladislav Lábus, the Dean of the Faculty of Architecture, Czech Technical University in Prague

Prof. Vojtěch Petráček, Vice-Rector of the Czech Technical University in Prague

Arch. Ivan Plicka, Chair of the Czech Chamber of Architects

Tomáš Sklenář, Ministry of Regional Development of the Czech Republic

Dr. Matěj Stropnický, Vice-Mayor of the Capital City of Prague

Dr. Jakub Vorel, Vice-Dean, Faculty of Architecture, Czech Technical University in Prague

**Contact person**

Vít Řezáč

**Executive part**

Irena Benešová, Veronika Brejchová (GUARANT – congress organiser), Zuzana Krmelová, Milan Macoun, Kateřina Rottová, Martin Šilha, Jana Tóthová, Daniel Zahrádka, Petra Zhřívalová

## TRACKS AND TRACK CO-CHAIRS

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| **2. Territorial Cohesion in the Multi-Actor Arena** | *Dominic Stead* | *Juho Luukkonen* |
| **3. Responsibilities in Planning Education and Practice** | *Andrea Frank* | *Anna Geppert* |
| **4. Participation and New Governance: Ethics, Responsibilities and Commitments** | *Louis Albrechts* | *Doris Gstach* |
| **5. Legal Environment for effective Governance and efficient Use of Land** | *Rachelle Alterman* | *Leonie Janssen (TBA)* |
| **6. Urban Design Quality and its Social Dimension** | *Ali Madanipour* | *Marion Roberts* |
| **7. Dealing with Urban and Rural Decline: Interplay of Actors and Responsibilities** | *Martina Schretzenmayr* | *Wim Van Der Knaap* |
| **8. Planning "in" and "for" Multicultural Societies. Diversity, Social Justice and Democracy** | *Lia Vasconcelos* | *Angelique Chettiparamb* |
| **9. Energy and Space as Resources / Limits for Planning Decisions** | *Thomas Fischer* | *Giancarlo Cotella* |
| **10. Planning in Weak Institutional Environment** | *Jose-Miguel Fernandez Guell* | *Pantelis Skayanis* |
| **11. Planning across Borders: Transnational, International and Intergovernmental Planning and Spatial Management** | *Stefanie Dühr* | *Jochem De Vries* |
| **12. Responsibility for Social Cohesion in Housing, Cohousing and Neighbourhood Planning** | *Nikos Karadimitriou* | *Roelof Verhage* |
| **13. Transport Planning and Mobility Policies: Available and Affordable Transportation** | *Angela Hull* | *Morten Skou Nicolaisen (TBA)* |
| **14. Responsible Economics and Public Finance of Urban and Regional Interest** | *Michael Getzner* | *Francesco Musco* |
| **15. Culture, Entertainment, Tourism and Planning: Panacea or Threat?** | *Jan Schreurs* | *Piotr Lorens* |
| **16. Planning Responsibilities in the Face of Information Technology** | *Paolo Nunes Silva* | *Michele Campagna* |
| **17. Ethics and Justice in Planning** | *Simin Davoudi* | *Willem Buunk* |
| **18. Complexity, Planning and Fuzzy Responsibilities** | *Peter Ache* | *Maroš Finka* |
| **19. Smart Approaches to Responsible-minded Planning Practice** | *Petra Hirschler* | *Roberto Rocco* |

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| **M2** | **Territoriality and its role in contemporary European integration** | *Tobias Chilla*<br>*Jonathan Metzger* |
| **M3** | **The Political Meaning**<br>**Of Informal Urbanisation** | *Roberto Rocco*<br>*Jan van Ballegooijen* |
| **M4** | **Situated practices of strategic planning** | *Louis Albrechts*<br>*Alessandro Balducci* |
| **M5** | **Climate Change, environmental risks, resilience and their implications for planning education** | *Richard Sliuzas*<br>*Cassidy Johnson* |
| **M6** | **Planning Perspectives on Civic Initiatives** | *Adriaan Slob*<br>*Beitske Boonstra* |
| **M7** | **What, actually, is neo-liberalization? Exploring a highly contentious concept** | *Stefano Moroni*<br>*Barbara Pizzo* |
| **M8** | **Conversations in Planning': An YA-AESOP collaboration** | *Mona Abdelwahab*<br>*Verena Peer* |
| **M9** | **Spatial and Transport Development on a Macro-Regional and European Scale: The case of the EU TEN_T Orient/East-Mediterranean Corridor (Former Corridor 22)** | *Prof. Bernd Scholl*<br>*Prof. Andreas Voigt* |
| **M10** | **Planning History - Are there Lessons from the Past for the Future** | *Dirk Schubert, IPHS*<br>*Prof. Dr. Carola Hein* |
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| **T2** | **The EU Urban Agenda in Cohesion Policy 2014-2020: why, how and for whom?** | *Anna Geppert*<br>*Laura Colini* |
| **T3** | **Creating policy spaces for innovation** | *Robin Hambleton*<br>*Sandro Balducci*<br>*EURA* |
| **T4** | **Multi-disciplinary critical perspectives on urban security/safety** | *Simone Tulumello*<br>*Feras Hammami* |
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| **T6** | **What Actor-Network-Theory offers to Planning** | *Laura Lieto*<br>*Robert Beauregard* |
| **T7** | **Connecting Sustainability Knowledge and Action in Urban Planning** | *Meg Holden*<br>*Majken Toftager Larsen* |
| **T9** | **EU-HORIZ0N 2020 - INSPIRATION: INtegrated Spatial PlannIng, land use and soil management Research ActTION** | *Uwe Feber*<br>*Maroš Finka* |

## KEYNOTE SPEAKERS

### Peter Mehlbye

Peter Mehlbye is Director of the Coordination Unit for the ESPON Programme since 2002. Before coming to ESPON, Peter worked in a Danish Ministry as Head of Unit for national spatial development and planning, regional policy and international cooperation, attached to the cabinet of the Minister. He then worked at the European Commission, DG Regional Policy, where he was involved in the conceptual development of EU regional policy, including the European Spatial Development Perspective.

By education Peter holds a master degree in Economics and a master degree in Architecture, specialised in regional development and spatial planning.

**The European Territory – Policy dynamics, territorial trends, governance challenges and long-term futures?**

New times and decisive game changers are emerging that will influence European space. The digital revolution and the accelerating global interdependencies of European regions and cities in the world economy are among the important ones. This happens in times of crisis and economic recovery, with continued calls for innovation, growth and more jobs. At the same time, Europe is ageing and experiencing internal and external migration flows, largely driven by economic concerns and emerging life style changes that may redefine the “hot” places within the European territory.

The economic downturn from 2008 affected economies in some countries, their regions and cities, and had more important negative consequences in some places than in others. The resilience of individual regions and cities were not equal, the economic conditions and governance defence was not in place everywhere to limit impacts, and despite many today have recovered to levels before the crisis or even beyond, there are still parts of Europe and specific types of regions and cities suffering. The Greek example shows that the recovery is still not stable and that more could happen.

Current trends, fuelled extra by the crisis, has accentuated territorial concentration forces within Europe where more developed, urban areas, in particular metropolitan regions, stand out as key drivers and magnets of activities and investments. The positive growth rates in second tier cities before the crisis, above the level of capital cities in many countries, has been fading out, and the positive regional convergence process within Europe until 2008 has due to many sources experienced a 10-15 years set-back. All in all, these developments have dragged the territorial structure at European level towards a stronger European core and given more importance to metropolitan agglomerations, capitals and the larger cities.

The current policy debate related to territorial cohesion and urban policy focus on these trends and developments. The basic mindset in this policy arena is to counteract territorial concentration and stimulate a balanced and polycentric Europe. Several issues are currently on the policy agenda: A European attention to small and medium sized urban areas and new emerging inner peripheries within countries, focus on polycentric benefits from cooperation of neighbouring towns, cities and larger urban agglomerations across all borders, national, regional and municipal, an EU Urban Agenda reinvigorating an urban policy discussion, to mention but a few. On the latter, lately, EU Member States agreed on a declaration in Riga building up to further towards further urban policy focus at the Dutch EU Presidency in 2016.

However, framing these policy considerations in the era of rapid globalisation seems to require a stronger global sensitivity and perspective. That is why a reference framework at European level for the European territory in the long term is being considered that could act as guidance

or reference for different sectors and for the responsible decision makers and bodies at different administrative levels. In the current European reality with strong positions of EU Member States, this is for sure a particular challenge to install a shared responsibility and ownership and to promote horizontal and vertical coordination and multi-level governance for its implementation.

Nevertheless, the Luxembourg EU Presidency has taken up the challenge of starting the discussion of scenarios and visioning for the European territory during autumn 2015. A special emphasis is expected on raising awareness of likely consequences of different territorial scenarios. An important input for this policy discussion is the ESPON project on Vision and Scenarios for the European Territory 2050 proposing the long-term aim of an “Open and Polycentric European Territory 2050”.

The key note speech will address relevant issues related to the policy dynamics, territorial trends, governance challenges and long-term futures set out above with the purpose of providing a context for the discussion of the conference theme “Definite spaces versus fuzzy responsibilities”. Recent ESPON territorial evidence will be displayed to underpin key messages, and in addition, the speech will address the future ESPON 2020 Cooperation Programme and inform about the objectives and opportunities for AESOP members that the programme will offer.

## Erik Swyngedouw

Professor of Geography, The University of Manchester Research interests: socio-economic change, politics and spatial restructuring; water: politics, economics, ecology, and urbanization; political-ecological theory and practice: nature, society and social power; politics, governance, power and citizenship

### Insurgent Planners and the Spectral Return of the Political in the Post-Democratic City

Over the summer of 2013, the Taksim Square revolt in Istanbul and the Brazilian urban insurgencies rocked the established urban order, with still uncertain and largely unpredictable outcomes. Rumanian activists mobilise Occupy!-type tactics to fight against accumulation by dispossession and threatened socio-environmental destruction by Canadian company Gabriel Resources around planned gold-mining in Rosia Montana and against the pending restructuring and further privatization of the country's medical services.

These urban rebellions by insurgent planners are the latest in a long sequence of political insurgencies that erupted rather unexpectedly after Mohamed Bouazizi's self-immolation on 17 December 2010 ignited the Tunisian revolution. During the magical year 2011, a seemingly never ending proliferation of urban rebellions sparked off by a variety of conditions and unfolding against the backdrop of very different historical and geographical contexts profoundly disturbed the apparently cosy neoliberal status-quo and disquieted various economic and political elites. There is nonetheless an uncanny choreographic affinity between the eruptions of discontent in cities as heterogeneous as Istanbul, Cairo, Tunis, Athens, Madrid, Lyon, Lisbon, Rome, New York, Tel Aviv, Chicago, Hong Kong, London, Berlin, Thessaloniki, Santiago, Stockholm, Barcelona, Montreal, Oakland, Sao Paulo, Bucharest, or Paris, among many others. The end of history proved to be remarkably short-lived as incipient political movements staged, albeit in often contradictory and confusing manners, a profound discontent with the state of the situation and choreographed new urban modes of being-in-common.

A wave of deeply political protest is rolling through the world's cities, whereby those who do not count demand a new constituent process for producing space politically. The era of urban social movements as the horizon of progressive urban struggles, celebrated ever since Manuel Castells' seminal 1980s book The City and the Grassroots (Castells 1993), seems to be over. A much more politicized if not radical mobilization, animated by insurgent urban planners, is increasingly choreographing the contemporary theatre of urban politicized struggle and conflict.

It is precisely the aftermath of such urban insurrections that provides the starting point for the arguments developed in this presentation. From a critical political perspective, the central question that has opened up, after the wave of insurgencies of the past few years petered out, revolves centrally around what to do and what to think next. Is there further thought and practice possible after the squares are cleared, the tents broken up, the energies dissipated, and everyday urban life resumes its routine practices?

This figure of the Post-Democratic City will be leitmotiv of this contribution. Taking our cue from Jacques Rancière, Slavoj Žižek, Chantal Mouffe, Mustafa Dikeç, Alain Badiou and assorted other critics of the cynical radicalism that has rendered critical theory and radical political praxis impotent and infertile in the face of the rapidly de-politicising gestures that pass for urban policy and politics in the contemporary neo-liberalising police order, we shall attempt to re-centre the political in contemporary debates on the urban. While taking the city as our point of entry, we shall develop the argument in four steps. The first part recovers the notion of the political and of the political polis from the debris of contemporary obsessions with governing, management, and urban polic(y)ing. A theoretical, yet eminently practical, position of what constitutes an urban political space will be enunciated. In the second section, the depoliticised condition of the late

capitalist urban will be explored, arguing that the urban frame has been thoroughly, and perhaps fatally, infested by an ordering that is thoroughly post-political and post-democratic. This evacuation of the political from the plane of immanence that defines the very possibility of the polis and the concomitant consolidation of an urban post-political arrangement runs, so we argue, parallel to the rise of a neo-liberal governmentality that has replaced debate, disagreement and dissensus with a series of technologies of governing that fuse around consensus, agreement, and technocratic environmental management. However, the incoherencies of the contemporary urban ordering, the excess and the gaps that are left in the interstices of the post-democratic urban order permits thinking through if not materially widening and occupying genuine political urban spaces. This will be the theme of the final section. While the city as polis may be dead, spaces of political engagement occur within the cracks, in-between the meshes and the strange inter-locations that shape places that contest the police order. It is here that utopias as concrete political interventions germinate.

## Iván Tosics

Head of the Metropolitan Research Institute, Budapest He is mathematician and sociologist, research fellow with long experience in urban sociology, strategic development, housing policy and EU regional policy issues.

### 25 Years After: The Development Path of The "East" of Europe

***The changes of post-socialist countries in 25 years: the transition and the new system***

Post-socialist countries became free 25 years ago and had high expectations for democracy and quick economic development. Both aims have been achieved to a given extent, however, not without ccontradictions and externalities.

The reality today in these countries is the dominance of market forces and the weak performance of the public sector. Economic development is accompanied with increase of inequalities between social strata, growing disparities between the layers of the settlement system, brain-waste through outmigration, car-dominated urban sprawl and market-based urban regeneration.

It is clear that compared to the original expectations something went wrong. The post-socialist countries have been affected by two sets of factors:

- the general features of the capitalist economic model, causing unequal development, loss of power and control by the state and local governments against market actors, growing inequalities between social groups, market dominated urban development and emerging segregation of the excluded
- the specificities of post-socialist transition, such as the politics-dominated allocation of the resources, corruption, urban development led by the coalition of political leaders with the investors (opportunity planning).

The presentation aims to focus on the second set of factors, highlighting the specificities of post-socialist development.

After a decade of slip to market economy, in the course of the 2000s some interesting policy initiatives emerged in post-socialist countries and cities to tackle to the above mentioned problems:

- integrated urban development through a top-down led new planning system of EU resources, ensuring also social proofing (Hungary)
- a new regional policy with the reinforcement of regional centers and initiating functional urban area planning (Poland)
- integrated and participative local regeneration with strong social goals (Hungary)

These policy innovations can be considered as good practices also on pan-European level.

Unfortunately most of them could not prevail for long: they did not become embedded enough into the policy-thinking and practice. Such multi-governance structures were mostly swept away by the changes in national and local politics towards top-down, power based authoritarian governments.

**The post-crisis period**

In the post-crisis period, in all parts of the EU there are a series of bottom-up initiatives and governance innovations observable. Many of such initiatives also mushroom in post-socialist cities.

However, there are large differences, how the established forms of political power react on these new initiatives in the different parts of Europe:

- in many of the core EU countries increasing flexibility can be observed from the side of public institutions in order to better accommodate the new bottom-up initiatives
- in the post-socialist countries there are only a few examples of taking the new initiatives on board; instead the new, pragmatic forms of political power push through drastic measures in order to strengthen their own top-down systems, leading to further aggravation of societal problems (e.g. new policies against the homeless and the most disadvantaged along the idea of "undeserving poor")

It can be rightly said that the new bottom-up initiatives and governance innovations in themselves do not guarantee a better and more just society (and are in fact controversial from the perspective of inclusion). However, if no chances are given to such initiatives through cooperation from the side of the public sector, the situation is much worse and much larger burden of the crisis is pushed on the poorest parts of society.

**Some outlook to the future**

Europe is facing serious challenges regarding energy and climate, economic competition, migration, social inequalities, etc., which jeopardise both the core and peripheries of Europe. Increasingly, cohesion inside and among countries, cities, regions and nations is vanishing vis-à-vis volatile economy, unsecurity and risks for future. Basic political problems have to be addressed, such as how to deal with populism and extremism. Can the shortcomings of representative democracy be compensated by giving more role to participative mechanisms? Will stakeholders and other actors of participation accept also their part of responsibility? Are the EU peripheries different in this respect from the core?

Different development scenarios for the EU are under discussion, such as heading towards more global efficiency (economy led development) or towards more equality/solidarity. Will the EU withstand the tension between the endeavour for global competitiveness and increasing disparities? Do Europeans feel responsibility for how their welfare is paid for?

Post-socialist countries and cities have proved once how positive for the "old Europe" it was to integrate these dynamic and ambitious countries and there were also some innovative policy solutions coming from these countries in the recent years. However, the political changes towards top-down power politics threaten to totally eliminate the positive role of these new democracies.

In urban terms, the key to reverse the recent unfortunate tendencies lies in enhancing the performance of the public sector towards more integrated planning. Special efforts have to be taken towards more participatory and socially inculsive development, enforcing the „social proofing" of all new development ideas.

The dominance of free-market economic policies over social and territorial considerations increases disparities. The EU should pay more attention to its peripheral areas and also an EU Urban Agenda could make steps into this direction – if having chances at all to be accepted in any meaningful form.

There are huge tasks to accomplish in politics, planning and governance to orientate the post-socialist countries towards a model which would help the EU to overcome its crisis and address the upcoming challenges.

## Matěj Stropnický

Deputy Mayor of the Capital City of Prague, actor, journalist. He is a graduate of journalism and international territorial studies at Charles University in Prague, subsequently also media studies. In 2014, has succeeded thanks to the preferential votes in the elections to the city of Prague and subsequently became Deputy Mayor for the area development plan.

## FULL PAPERS (ORAL PRESENTATIONS)

Arranged by tracks and name of the first author.

# TRACK 01

# Planning Theory and Methodologies: Towards an 'ethics of responsibility'?

## Track description

Co-chairs: **Willem Salet**, **Enrico Gualini**

Spaces for democratic politics and for the governance and regulation of the living environment are increasingly indeterminate: they are either 'fuzzy' or overtly contested, and so are the social and political responsibilities attached to them. Relevant agenda-setting and decision-making take place in multi-level and multi-scalar environments, and related multi-actor arenas are defined by practices and discourses in which the devolution/delegation and the sharing of responsibilities play a significant strategic role. On the one hand, this often threatens to result in dissolution of accountability, in a 'post-political' dispersion of a sense of public responsibility. This might disguise not only the established modes of regulation but also the underlying hegemonic practices and relations of power. On the other hand, several new forms of social mobilization and civic initiative bear the potential of radically questioning the way responsibilities for shaping the 'common good' in cities are traditionally defined, assigned and distributed.

Under such conditions, it is more than warranted for planning to critically reconsider itself with regard to this issue of repositioning public responsibility. How does planning theory conceptualize the question of democratic accountability in defining new forms of public responsibility? How does it cope with established routines of public interest while being challenged by new, more radical civic initiatives? The track welcomes papers which critically discuss current challenges to planning related to rethinking the meaning of public responsibility as well as papers which present significant experimental and/or methodological applications for addressing these challenges in practice.

# REEVALUATING THE ANALYTICAL POWER OF REGIME THEORY

Ilona Akkila

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*How is urban space produced? Planners, politicians, building companies, real estate owners, investors, entrepreneurs and citizens are all entangled in the process, but the challenge is how to describe this complex, multi-actor process? Urban politics is a spatially and temporally bound process between the actors involved. There is no single institution or actor which explains the local political process; rather, there are several, dissonant actors cooperating on emerging agendas. The construction of power between them depends on the agenda, the composition of actors and their relations. To understand these intricate courses of action, I suggest the application of a case-sensitive urban regime analysis. Whilst regime theory is based on the context of North American cities in the 1980s and 1990s, it still offers an insightful analytical tool to investigate urban politics. Urban regime theory enables the examination of politics from the inside, rather than outside, similar to urban governance theory. Although urban regime theory has been accused of ethnocentrism, I believe it is suitable for research in European or even Nordic cities if one is sensitive to the legal, economic and political differences amongst different countries. I will illustrate this by presenting a case study I have conducted in Finland the city of Lahti. My aim has been to re-evaluate the analytical explanation power of regime theory in today´s Nordic city.*

Keywords: urban regime theory, city center, urban renewal

## 1. Urban renewal – from industrial to attractive?

This article reevaluates the analytical power of regime theory (Stone, 1989; Stoker & Mossberger, 1994) in explaining political processes especially in Nordic cities. The article is based on a case study conducted on city center renewal in the Finnish city of Lahti. The originally North-American regime theory has been used to describe relationships between the institutionally strong local state and financially powerful private business sector. Even though the theory has been accused of being a product of its time and for ethno-centrism (Pierre, 2014), I argue that the regime theory is still useful to examine local urban politics due to its focus on the dynamics and political process. It seems that no other theory offers such a clear-cut but societally all-encompassing way to approach local urban politics.

Lahti is a former industrial city that is known amongst other things as a winter sports city, its vivid past as an entrepreneur city and for its design school (Ahokas *et al.,* 2005). Inhabiting 100 000 people (a middle-size Finnish city), it is not a declining but neither is it particularly successful or attractive city. Two heavily trafficked roads intersect at the very commercial center of Lahti, which makes walking, cycling and lingering unpleasant (Akkila, 2013). The population is growing slowly due to regional in-migration, but structural issues make it lag behind. Lahti has a high unemployment rate, small amount of highly skilled jobs and less educated work force than other cities of similar size (TILDA statistics Lahti, 26.1.2015). Its location in Helsinki´s economic influence secures its position, but it does not guarantee success in the ever-tightening competition between cities (cp. Ache *et al*., 2008).

The strategy and master plan of Lahti state the city center urban renewal as one of the key goals. The city center should have more pedestrian areas and better bike routes, more residential buildings and it should become more accessible from outside. The aim of the renewal is to strengthen the city center in relation to the external shopping centers (Strategy of Lahti 2025, 2013; The goals of Lahti master plan 2025, 2013, pp.17–18.) Local, especially small, entrepreneurs have opposed to the pedestrian areas because they think it would be bad for their business.

This is not the first time the city of Lahti has made plans to regenerate the city center by decreasing the amount of cars and car spaces. The oldest such plan is from 1973. After that similar plans have been made regularly (Proposal for transport development in Lahti city center, 1973; Plan for transportation and environment in Lahti city center, 1988; Vision for Lahti city center, 2002).

Urban renewal projects are a popular way of boosting a city´s competitiveness and image, but they have also been questioned for their societal effects. Managerial and entrepreneurealistic policies, which increase the authority of private businesses, are often associated with such projects (Sager, 2011, p. 154; Harvey, 1989, p. 7). The city center of Lahti is also developed with the local business sector. On one hand this follows from the participatory planning obligations stated in the Finnish Land Use and Building Act (Finnish Land Use and Building Act 5.2.1999/132, 5 § & 6 §), on the other the businesses seem to have a more unofficial and pragmatic role in the local planning: They are included in the planning process due to their resistance of pedestrian areas.

Urban politics is viewed here from an interpretive perspective: politics is not bound to institutions or actors. Politics has the potential to emerge wherever via action political action (Keränen, 2014, p. 34; cp. Leino, 2006, p. 8). Political processes include increasing amount of civil society and private business actors. The relationships between city officials, elected local politicians and private business and their cooperation in the Finnish city Lahti are examined in order to see how regime theory fits to a Nordic context.

The research material consists of interviews with the city officials, planners, politicians, private businesses and local organizations and field notes from planning workshops for local businesses. The material is analyzed with intrepretative policy analysis, which views political processes as struggles to define political meanings (Häikiö & Leino, 2014).

## 1.1. Material and methods

A qualitative case study was chosen as a research method, since it enables a more in depth description of the topic (Laine *et al*., 2007, pp. 9-10). The research material consists of 19 interviews, which duration is approximately one hour each. In addition to that, field observations were conducted in three urban renewal workshops for local businesses.

The interviewees were chosen by elite research method that is based on their reputation and expertise (Kainulainen, 2000, pp. 290–291): the interviewees were asked who they thought were the central actors in the city center renewal so that one person led to the next interviewee. The method has proved to be suitable to small communities, such as municipalities (ibid.) In the end, four local politicians, four planners, three leading city officials, three real-estate owners, one representative of the local media, three representatives of the Lahti City -association and one regional development company Ladec representative. They form seven groups of actors: politicians, leading officials, planners, real estate owners, entrepreneurs´ association, local media and regional development company. The first four actor groups proved to be the most important ones.

I participated as an observant to three workshops, where urban renewal was planned in cooperation with the city, entrepreneurs, real estate owners, transport operators, and

organizations. In addition I participated two sessions where the workshops were planned by the consultants and council officers. These occasions were useful to gain an understanding of the relationships and positions between different actors. The fieldnotes were used as a complementary method to the interviews (Emerson *et al*., 2001).

The material was analyzed by using interpretative policy analysis, which views politics as a result of struggle over definition – who gets to define politics and who does not (Häikiö & Leino, 2014). Similar to regime theory, interpretative policy analysis focuses on structural power between the known official and the emerging actors. Political power is generated trough action. It is not limited only to official institutions. (ibid., p. 14; cp. Mossberger & Stoker, 2001, p. 829 or Pierre 1999, p.375.)

The scope of the research was limited to the city organization and businesses and associations in the city center. Research on regimes is often limited like this. It is justified by the fact that the citizens define the terms for the relationships between different actors. (Stone, 1989, p.184). Regional or state level actors were not involved in the research because the aim of the research was to understand the policy process on the local level.

## 2. Governance and regime theory

Research literature on urban politics is often based on North-American or English context, which differ significantly from the Nordic cities in their political, economic and juridical systems. This is something one needs to keep in mind.

Governance is a comprehensive way to describe urban politics. It goes beyond studying planning projects, it takes into consideration the political and economic forces within planning (cp. Häikiö, 2005, pp. 13–14). Governance describes the transformation from hierarchical, bureaucratic *government* to a more flexible and horizontal *governance*. Governance entails cooperation with private sector, such as local businesses, and possibly civil society actors (Pierre, 2014, pp.10–12; Healey, 2006, pp. 59, 206). Cooperation is necessary for the local government, since it cannot maintain its tasks without the economic resources of the private sector (Pierre, 2014, p. 10). Instead of official and institutional politics, research on governance focuses on the unofficial cooperation of private and public sector (ibid., p. 59). This cooperation, or relationship, is seen as an empirical question

(Pierre, 1999, pp. 375–376). Businesses influence on urban politics, but governance theory recognizes the authority of the public sector in relation to the private sector (Pierre, 2014, p.11.) The private and public sector are intertwined, and decision making power is constructed between them depending on the relationships between the actors and resources that are needed for the specific policy agenda.

Similar to local governance, urban regime theory focuses on unofficial governance networks and ways to cooperate (Kainulainen, 2000, pp. 292, 293; Stone, 1989, pp. 6-9). A regime is one type of local governance. But unlike governance, regimes do not exist in every city. Regimes are cooperation networks that are centered on the cooperation of the city organization and the local business elite.

Regime theory goes deeper in examining the local cooperation than governance theory, since it focuses on interaction between the local stakeholders, collective organization of action and problems that are involved with it. Whereas local governance is interested in politics viewed from the outside, urban regime theory describes the inner dynamics of urban politics (Pierre, 2014, p. 21; Häikiö, 2005). Regime theory has been described as a "middle way" theory, since it´s interest is not on specific institutions or the penetration of the private to the public sector, rather the long-term consensual cooperation between different actors (Mossberger & Stoker, 2001, p. 812).

Power is constructed between the local actors in both regime and governance theory. But unlike governance, regimes do not form unintentionally, but via conscious action and negotiation and it always involves influential private businesses. Regimes are a result of elitist urban politics: real political influence is open only to those who have the institutional, social and/or economic resources, the desire and motivation to cooperate and the ability to maintain it. (ibid., p.198.) Regime theory is thus essentially a political economy approach to urban space (Logan & Molotch 1987).

Regimes in continental Europe have often actors from civil society organizations and associations. Civil society organizations can also work as intermediaries between the local government and citizens (Stone, 2005, p. 314.) The role of none-elected public officials is central due to the broad public sector in continental Europe. (Stoker & Mossberger, 1994, pp. 198, 202; Stoker, 1997, p. 60.)

## 2.1. Regime types - an analytical tool

Characteristics of different regime types can be found within one city and the regimes also change trough time (Stoker & Mossberger, 1994, p. 208). Regime typification by Stoker and Mossberger consists of instrumental, organic and symbolic regimes. The typification describes the different aims, motivations, creation of a common agenda, quality of the coalition (competing or cohesive interests) and the exclusiveness or inclusiveness of a regime. (1994, p. 199.)

The instrumental regime is based on accomplishing short-term projects. The goal of an instrumental regime is the realization of projects and the actors are motivated by concrete results. (Stoker & Mossberger, 1994, p. 199.) The businesses are naturally motivated by the profit to be gained from the projects, politicians and non-elected officials by the reputation the project could bring or just of ”getting things done”. The civil society actors are often uninterested in cooperation unless they see how they could benefit from it. (ibid., p. 203.) Common understanding is created by material or immaterial incentives (ibid., p. 204.) Incentives are assumedly less common in Finnish cities, where local officials are obliged to treat businesses equally by law (Savikuja, 2003, p. 32). Instrumental regimes are exclusive: the actors do not want to share their resources or networks to outsiders (ibid., p. 207). The regime chooses projects based on the likelihood that they will be realized. Negotiation and bargaining, which help the identification of common interests, defines the relationships of the network (ibid., p. 206).

The organic regime´s aim is to retain the status quo political power relations. (Stoker & Mossberger, 1994, p.199). Its actors´ motivation is based on their dependency on the locality (ibid., p.203; Logan & Molotch 1987). The coalition´s common understanding stems from tradition, sense of community and social cohesion (ibid., p. 204). Actors are politically like-minded and those with competing interests are excluded from the regime (ibid., pp. 206-207). Organic regimes have a clear identity based on local history, traditions, or the locality. They do not have a need for growth or change, like the other two regime types. Organic regimes can be found in small cities that hold on to their small-town lifestyle and low taxes (cp. Stone, 1993: maintenance regimes; Stoker & Mossberger 1994: 199.) As the

globalization of economics and politics has proceeded, it is difficult to imagine purely organic regimes in a capitalist western city.

Symbolic regimes aim to change the ideology and/or image of the city (Stoker & Mossberger, 1994, p. 201). Regime´s actors are motivated by expressive politics that uses strategic symbols in order to change the local attitudes to the regime´s policy. The business actors are motivated by their concern for the success of the city; they might feel societal responcibility, guilt or just want to improve their own public image. The politicians and city officials are motivated by their concern for the local economy or desire to be seen as an innovator. (ibid., p. 203.) A common understanding is created by symbolic politics and political rhetorics (ibid., p. 205). Members of the coalition can have conflicting interests, but they might find a common understanding if they have a clear policy agenda. Symbolic regimes are more open to new actors than the other regime types because they need a broad legitimation to their policy (ibid., p. 201). These regimes are common in cities that are severely influenced by the economic structureal change or sluggish growth. They strive for growth, but based on commonly agreed values and visions. Symbolic regimes require change in people´s attitudes so that they accept the new policies. In this way the regime can mobilize even actors who have been negligent to its policy agenda. (1994, p. 201.) The regimes existence might also be result from absence or weakness of other coalitions. A symbolic regime can also be a transitional regime to a new type of governance (Ibid., pp. 201, 205, 209.)

## 3. Renewal- and businesscoalition in Lahti

The intreviews and workshops revealed that Lahti city center is a particular kind of planning processe for the following reasons: firstly, there are powerful business interest groups with differing views on how the city center should look like. They consist of entrepreneurs and real estate owners. This is challenging to city officials and planners, who are obliged to make participatory arrangements and plan “with the people and communities whose conditions and perquisities the plan influences or might influence considerably” (Finnish Land Use and Building Act 5.2.1999/132 5 § & 6 §). Secondly, real estate developers´ scope for action is limited by the fact that the city of Lahti is the largest land owner in the city center – it can therefore control the development by zoning. Thirdly, the public officials´, planners´ and elected politicians´ actions are limited by their duty to saguard common public interest and

treat businesses equally (Savikuja, 2003, p. 32). In other words, they cannot make planning solutions that advantage one business over another. Fourthly, protected sites that are nationally valuable are located in the city center, which sets limits to planning. Powerful interest groups, state as the majority land owner, public servants obligation to safeguard public interest and treat the businesses as equals and cultural heritage sites sets a framework for the local cooperation.

*In comparison to a master plan or a neighborhood project, the city center renewal is a more difficult task to conduct. Other projects are more straight-forward but the city center is a living organism: there are a multitude of stakeholders and every single one of them thinks theie opinion is the right one. City center involves a great deal of emotions, economy and action. Managing that is difficult. As a public official one can influence, but in a more limited manner than elsewhere. Zoning and plans are not enough to do it. A lot of other kind of wheeling and dealing is required.* (Planner)

Modes of transportation made a clear divide among the local actors. The "business-coalition" would like to keep the transportation system as it is, thus letting the cars drive trough and in the city center. The opposite group of actors, "the renewal-coalition", would like to transform the city center into more walkable, bicycle- and public transport –friendly. Motives of both coalitions are essentially economic: they aim for local growth, which is typical for symbolic regimes (Stoker & Mossberger, 1994, pp. 199–201). The two coalitions just have different means to maintain and increase growth: the former sees accessibility by car as the central means for growth, whereas the latter is in the opinion that a walkable, cycling and public transport –centered city is the best way to maintain and add growth.

*Some of the city officials and planners find it impossible to understand that people need to drive in the city center. Some of the public officials lack realism in where the money comes from. They don´t listen to politicians either.*
(Real estate developer)

*Take ten minutes from where ever, and you´re in the city center. I think Lahti could offer an easy lifestyle with all the services close by. Lahti´s proximity to Helsinki makes it easy to travel there by train to work, but Lahti and its city center need an image-reform.*
(Leading city official)

### 3.1. Poweful public officials and businesses as participants

The central role of non-elected public officials and planners was emphasized in the interviews. This corresponds to findings in previous Finnish and Nordic research (Niiranen

*et al*., 2013; Goldsmith & Larsen, 2004, pp. 121–122; Puustinen, 2006; Leino 2006, p. 141). This differs from the North-American context, where local politicians are central actors (Stoker & Mossberger, 1994, p. 198).

The interviewees thought that the public officials´s and politicians´ tasks are clearly divided: public officials are technical experts, who prepare matters for decisionmaking, and politicians decide upon them, often on a yes/no –basis. Politicians are expected to keep distance from the preparation and deliberative processes with the businesses or citizens. Politicians´ role in the city center regeneration is more distanced than the public officials´ or planners´. The politicians were not keen to take part in the urban redevelopment, because businesses were so much involved in it, and politicians could be accused for favoring a business or inside trading.

*City center businesses, especially big ones, might lean towards the political right wing. Our challenge is, how we can be objective so that we understand different interests of the stakeholders, but also understand, what common interest we have and how can we influence in their realization together.* (Local politician)

According to the interviewees position politicians take differ even within parties and seem to be based more on personal relations than partisan politics. In a small city, the politicians listen to their voters, such as business owners and real estate owners carefully. The interviewees thought that this leads to unpredictable policy making and wasting of public resources. Unlike in Laine and Peltonen´s (2003; Peltonen, 2004) or Nevalainen´s (2004a & b) regime reseach, Lahti lacked clear partisan alignments in city center planning.

*There is the yes- and the no-movement. And this does not go according to which political party one belongs, rather it goes right trough the parties.* (Local politician)

The interviewed real estate owners are in regular contact with the city planning office and they also have one to one meetings with the leading public officials. The public officials and politicians thought that local businesses need to be involved in the planning of the city center because without their investments the city center will fade away.

The ”Lahti City”-association is an organization for city center businesses and its aim is to keep the city center alive and active. It is funded partly by membership fees and partly by the city of Lahti. Its board members are business and real estate owners and there is also one

public official from the local government. According to the interviewees, the Lahti City-association is mainly seen as the advocate of city center businesses, but also as an extencion of the local government. In the latter sense its purpose is to be the mediator between the city and the businesses. These kinds of mediators are required when the local government does not have access to the participants whose support they need for the political processes (cp. Stone, 2005, p. 314). In Lahti´s case, the businesses felt alianeted from planning and decision-making and Lahti City-association brought them closer to the public officials.

According to Stone, the reason for local actors low motivation can be the experience of not being included in the decisionmaking process (2005, p. 315). The interviewees in Lahti said that the local business owners had become frustrated and cynical, because they felt that their voice was not heard. Previously, the city center development plans were represented to them at a quite final stage and they felt that they had no real influence on planning. In the past few years, new participatory actions, such as the mentioned workshops, have been taken to involve the businesses at an earlier stage, which has brought them and the city closer.

In the past few years, the role of Lahti City –association has grown and become more independent (cp. Akkila, 2013). The progress in construction and involving the entrepreneurs more closely have broadened and changed its role. The association has become more of a lobbyist for entrepreneurs´ and real estate developers´ viewpoints, whereas previously its role was ambiguous and weak (Akkila, 2013, p. 113). This change in role invokes certain questions. Lahti City -association is an advocate for private business interest. It does not have the mandate of public administration or elected representatives, rather it is the spokesperson of a limited group of actors: the association had 63 members in 2014 (Lahti City –association´s home page, 2014). As a co-funder, the city has a say to the associations´ actions, but according to the interviewees, the association and its members act fairly autonomously.

Nordic cities are known to have more distant relationships to the businesses than the Anglo-American ones (Pierre, 2014). Lahti City –association is a legitimate way for the city to be engaged with the businesses. When there is a neutral actor between the city officials and businesses, the city can not be blamed for too close relatioships to entrepreneurs or real estate developers. Still, the close cooperation between the city and Lahti City –association makes one wonder if the businesses gain too much power in terms of planning in comparison

to the ”resource-poorer” organizations and city-dwellers. According to the interviewees, there is no active residential association that is involved in the city center renewal.

As previous research has shown, the actors related to Lahti´s competitiveness are dispersed (Kanninen & Ylä-Anttila, 2011; Ache *et al*., 2008). Based on the interviews and workshops, the roles of regional development company Ladec´s and regional marketing company Lahti Region´s roles in urban renewal were unclear. Some interviewees said that because the companies are regional, not local, they do not participate in the city center renewal process. One real estate owner did find Lahti Region important in promoting its business and the city center. There were a few interviewees who thought the regional companies should be more involved in the process. The city center is an important part of the whole region, even the whole county. Considering the common interests of growth and attractiveness, it is surprising that the city and the regional companies do not work more closely together on the city center.

### 3.2. Demarcations of public, private and political

The city officials and politicians viewed cooperation with the local businesses necessary when the city center is in question.

*There are several issues the city can decide on and implement on its own. These issues are mostly attached to production of public services. But there are numerous issues which the city can not decide or implement on its own. For example urban planning requires a more flexible attitude: the only things we manage to do on our own are zoning and building the streets. A city remains quite empty if one settles with that.* (Leading city official)

The interviewed city officials and politicians were still divided on how much and what kind of public-private cooperation the city should conduct: does the city take the leading role and simply enable the businesses - or should private sector have more leeway in urban planning? On one side the interviewees stressed the need for more entrepreneurial and pro growth-governance, but on the other they limited their task to be a service provider and enabler of businesses.

*I think our planning projects are viewed mainly as transport and land use planning, but not as economic policy, even though it could be a more intregrated part of planning.* (Leading city official)

*The city´s task is only to provide infrastructure to businesses, not to support them.* (Planner)

*We can´t say to a developer or a business, that ´listen, you have to do this and this if you want to be located here´, Lahti´s leverage is not that big that we could set terms for businesses like they do in Helsinki. We have to be simultaneously growth-oriented but also official public authorities.* (Leading city official)

Lahti´s urban renewal process differs for example from Joensuu´s, where the urban development projects were driven by the local business elite (Nevalainen, 2004a, p. 19). The development projects in Lahti have been initiated and pushed by the local government. Even though some would like to see the city to take a more entrepreneurial stand in urban regeneration, the city still seems to have the authority in the city center.

In addition to the partisan incoherence there is a lack of political leadership when it comes to urban renewal. This was seen in voting situations, where decisions were made with one vote majorities. It was surprising that the themes environment and design were almost absent in the interviews, since they are often linked to urban renewal and central in the strategy and master plan of Lahti (Strategy of Lahti 2025, 2013; The goals of Lahti master plan 2025, 2013). The urban renewal appeared as a project to improve the space for existing and future businesses rather than long-sighted strategic planning of the whole city.

### 3.3. Towards a stronger local identity?

Stoker and Mossberger write that some cities, whose identity is built mostly on industrial production, can have difficulties to renew their identities (1994, p. 205). The interviews indicated that Lahti lacks a clear local identity, which would create a mental basis for urban renewal. Some interviewees thought that this could be a result of the rootlessness created by short industrial history, and the lack of human and cultural capital associated with it. Whereas some cities have turned that into a marketing strategy (e.g. Zukin, 2010), industrial past was not seen in as an asset in Lahti. The interviewees thought that entrepreneurial spirit, the combination of urban lifestyle and closeness to nature and the reputation of a sport city are central to Lahti´s identity.

*We are on our way of transforming from an old, industrial, chimney-city into something new, but the process is still going on.* (Local politician)

*I think the the mindset of the 1960s boom is still visible in the background in Lahti.There is this optimistic attitude and dynamic activity, which shows that we are not defeated. Lahti has a different kind of mental atmosphere, because it´s a city of athletes and businessmen.*
(Planner)

The local actors had no common vision, how Lahti´s identity could be strengthened. Letting the identity and image to develop genuingly from the city and not by making superficial marketing stunts was stressed. Similar to previous research, the interviewees believed that the beneficiary location close to Helsinki is the most essential factor for its success (Kanninen & Ylä-Anttila, 2011; Ache *et al*., 2008). Proximity to Helsinki assures Lahti´s growth, especially as a residential city.

Lahti´s position in the national city network as a an ”average” influences the local cooperation and city center renewal. It is a middle-size city, that is neither successful nor declining, has no significant concentration of commercial or technological businesses but its strategic location is beneficial. This has lead to a polarized development ideology: Lahti tries to compete with larger cites, but the proximity to Helsinki increases its competitiveness so that the renewal activities lack the wider local support.

## 4. Forming a common agenda

The central ideology in Lahti city center renewal is growth. The interviewees found increasing competitiveness and growth as the primary goals, but the measures to reach this divided the local actors into two coalitions. On one side is the pro-pedestrian, pro-renewal and politically “green” renewal coalition, and on the other the anti-pedestrian, pro-car, slightly right-wing (in economic policy) business coalition that aims to maintain the local power *status quo*. The divition into coalitions is not based on partisan politics; it is based more on the actors´ local personal relations and negotiations.

The leading city officials, planners and part of the politicians belong to the renewal coalition that resembles a symbolic regime (Stoker & Mossberger, 1994, p. 201). The coalition aims to change the physical image of the city center, but also further improve the whole image of Lahti to attract new investments, residents and tourists. The renewal coalition is motivated by the transformation from an industrial city into something else, and the assumed increase

in growth and competitiveness that follows. Typical to symbolic regimes, the actors had competing interests, but they were united by the aim of growth and competititveness. The renewal coalition was open to new actors, since it needed all possible support in order to go trough with the urban renewal and changing the image of the city. Even though the coalition resembles a symbolic regime, expressive politics that uses strategic symbols could not be detected in the interviews. The coalition aimed for a common purpose more practically: by trying to convince the businesses of the advantages of cooperation - this kind of use of incentives is more typical to instrumental regimes.

The business coalition is most similar to the organic regime type that aims to maintain the local political and business elite in power. The coalition´s interest is to keep the transport system in the city center the way it is: car-centered. The business coalition consists of city center entrepreneurs, real estate owners, and politicians. They lobby for their own economic interests via local politicians and Lahti City –association. The coalition is motivated by local dependency, thus the investments they have made in the city center (Logan & Molotch 1987). Changing the city center into a more pedestrian-friendly direction can have negative consequences to their businesses, since they have maximized the profit of their investment based on the current transport system. The politicians in the coalition listen to the business actors, because they want to keep in good terms with them and stay in the elitist coalition.

Nevertherless, the aim of growth and increasing the competitive potential of Lahti has brought the two coalitions closer to each other. The renewal coalition has had to mobilize the resources it needs for renewal (Stoker, 1997, p. 61), in this case the city center entrepreneurs and real estate owners who investi in the city. Lahti City –association has been a mediator of this resource mobilization (cp. Stone, 2005, p. 314) by bringing the city officials and businesses around the same table. The focus on growth and competitiveness resembles a symbolic regime, but unlike North American regimes, Lahti´s regime is run by leading city officials, who have an upper hand over the business actors. Their authority results from an active municipal zoning policy and the secured legal status of the public government.

However, the renewal coalition has not succeeded in its goal to change the whole city´s image. This would require a change in local ideology (Stoker & Mossberger, 1994, p. 201; Hynynen, 2000, p. 68). The coalition has not been able to link the urban renewal projects into the strategy of the city or some other “greater purpose” (Stone, 2005, p. 318), which the

business-coalition could join. The regime´s common sense of purpose has remained at a practical level similar to instrumental regimes. Change in ideology and image could be reinforced by the regional development companies and a stronger political leadership, which are currently absent. The leverage of city officials is not enough alone to implement the strategy or finding a common purpose.

The research shows that the power to produce urban space is mainly in the hands of the city officials due to the extensive preparation, expertise and legal position they posess. Also the bystander-position that the local politicians have adopted has increased the power of the city officials. The businesses have increased their influence via their early involvement into planning process. Nonetheless, it seems that the public and private sector are clearly separate entities in Lahti. The governance of urban renewal has a business-centered entrepreneurial and market-relying neoliberal ideology (Sager, 2011, p. 154; Harvey, 2008), but governance practices are publicly lead new public management, where the city organization is managed like a business corporation (Christensen & Lægreid, 2011).

Governance that is based on partnerships and unofficial practices has been idealized as the newcoming of direct, deliberative democracy (Blanco, 2013; Boelens, 2010; Häikiö, 2005). Nevertheless, networked and horizontal governance form has its downsides: if resourceful interest groups, such as local businesses, plan the city with city officials, and politicians take the role of a bystander, what is the role of representational democracy in urban politics? If the decisions are not made openly and chances to participate are unequal, the legitimacy of the planning process is challenged.

## 5. Local cooperation at the expence of representational democracy?

Unlike in regime theory, the public city officials were central actors instead of politicians in the Lahti city center urban renewal process (Stoker & Mossberger 1994: 198). In addistion to them the business owners and real estate developers gained a central role with the help of Lahti City –association. The politicians remained in the background and handed over their authority to the city officials. There were two coalitions in the city center: the urban renewal coalition that wants to change the city center into a more pedestrian, bike and mass transport –friendly direction and the business-coalition which wants to maintain the modes of transport car-centered. The former wants to change the city´s image and the latter wants to

keep the political and economic *status quo*. Both coalitions aim to increase local growth and competitiveness, but this is not enough to build a cohesive regime. The city center regeneration has been difficult because the two coalitions lack a shared ideological base. A "we-sense" could be created by stronger political leadership and involving the regional marketing companies into planning.

The residents´ voice might become neglected, beacuse there are no organized residential associations in the city center of Lahti and the city is cooperating tightly with the local businesses. Even tough there have been numerous hearing occasions and workshops for citizens there is no certainty that the gathered opinions travel as efficiently to the politicians as the business actors´. Business actors are fewer than citizens and organized and they have the resources that the city needs - therefore they get their voice heard more easily.

The relationship between participatory planning and representative democracy ought to be discussed more in urban studies. Participatory planning is always skewed. Ther is always a danger that stakeholders, who do not posess the required institutional or economic resources are set aside. A planning system, that priveledges one group over another is risking its legitimacy. Therefore representational democracy should secure democratic planning at first hand: politicians should openly engage in value discussions on planning. Participatory measures should not replace representative democracy.

Even though there were two opposite coalitions in Lahti city center urban renewal, the regime theory was suitable for studying the political process. The theory provided a necessary framework for studying the relations and dynamics between the local actors. The central advantage of regime theory is that it focuses on the inner dynamics of the local politics, which further enables the tracing of political power relations. The challenge is to develop a regime theory that fits the European context that would not take the North American coalition of politicians businesses as given.

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# Meeting the Challenge of Public Responsibility: Planning as Institutional Design

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## Abstract

Planning must "critically reconsider…the issue of repositioning public responsibility", our Track chairs said. This can be understood in several ways. One is as responsibility *to* publics, i.e. accountability, which involves public values. Another is as responsibility *of* the public, raising structural issues. A useful approach for addressing these is institutional design (ID). What is ID, who does it and where, are answered and reviewed. How ID is done involves knowledge and methods. Public values and their relationship to ID are explored. Here "repositioning" means prioritizing accountability vs. other values e.g. efficiency or equity. Concrete implications are developed in discussion of public value promotion and conflict.

Public responsibility in the structural sense conventionally refers to the public sector: state and government. Here "repositioning" means sharing responsibility with others: private actors and the market, NGOs and civil society. ID explores repositioning alternatives of non-traditional forms of governance and service delivery: public-private partnerships, outsourcing and privatization. Selected cases show relevant ID applications; for institutions effectuating public values and as arenas to mediate value conflicts: EU institutions, metro-regional planning in New York and Queensland, and military base closing in the USA; to reposition and share public responsibility: New Towns and planned communities in Britain and the USA, groundwater conservation in Apulia. The discussion and cases show how ID can help planners to effectively reposition public responsibility.

## 1. Introduction

Planning must "critically reconsider…the issue of repositioning public responsibility", our Track chairs said. This can be understood in several ways. One is as responsibility *to* publics, i.e. accountability, which involves public values. Another is as responsibility *of* the public, raising structural issues. A useful approach for addressing these is institutional design (ID).

Twenty years ago Judith Innes (1995) said: "Planning is institutional design", and while I would not go so far[1], seeing planning as ID is how these aspects of repositioning public responsibility can be confronted. A brief introduction to ID explains what ID is, who does it and where. How ID is done raises the issues of knowledge, methods and experience.

The relationship between planning, ID and public values is explored. Planning involves public values through its remit to represent the public interest. I will show how planning as ID can promote public values, and how ID is important in mediating conflict between opposing interests espousing different public values.

Public responsibility in the structural sense conventionally refers to the public sector: state and government. Here "repositioning" means sharing responsibility with others: private actors and the market, NGOs and civil society. ID explores repositioning alternatives of non-traditional forms of governance and service delivery: public-private partnerships, outsourcing and privatization.

Selected cases show ID applications relevant for each of these aspects of public responsibility. Cases involving public values include regulating strategic installations in the UK, EU institutions, metro-regional planning in New York and Queensland, Australia, and closing military bases in the USA. Structural repositioning cases include major infrastructure planning and delivery, new towns and planned communities in the US and the UK, and groundwater allocation in Apulia. The discussion and cases show how ID can help planners to effectively reposition public responsibility.

## 2. Institutional Design

*2.1 What is institutional design*

To understand institutional design, we have to define institutions. Institutions are:

> "the rules of the game in society…the humanly devised constraints that shape human interaction…complexes of norms and technologies that persist over time by serving collectively valued purposes…some have an organizational form, others exist as pervasive influences on behavior." (North, 1990, p. 3).

*Institutional design*, then, means designing institutions: devising and realizing rules, procedures and organizational structures to enable and constrain behavior and action and conform them to held values, achieve desired objectives or execute given tasks (Alexander, 2006: 4).

Many aspects of planning demand ID. There is the planning process itself, which becomes problematic when existing planning systems are flawed or inadequate. If a plan or policy includes new programs or projects, ID must say how these will be organized and implemented. When policy or plan implementation demands new organization or reorganization, legislation, regulation or new routines and procedures, ID will be needed.

*2.2 Institutional Design – where and who?*

Three “levels” are associated with different types of institutional design:

At the highest level institutional design is applied to whole societies or addresses significant macro-societal processes and institutions. This is sometimes called “constitution writing” (e.g. the U.S. Constitution and the EU and its institutions). But it also includes major national reorganizations and innovative strategic political-administrative programs, from the Justinian legal code to Roosevelt’s New Deal. The people engaged here are statesmen (if they succeed) and politicians (if they do not) and their advisors, usually administrators and lawyers.

The next level involves policy, planning and implementation structures and processes. This includes establishing and operating interorganizational networks, creating new organizations and transforming existing ones, and devising and applying incentives and constraints in the form of laws, regulations and resource deployment to develop and implement policies, programs, projects and plans. This is the level associated with planning, policy and program fields: economic development, energy, land-use planning and development control, housing, transportation and infrastructure, environmental policy, education, health and other social and human services.

At the lowest level we find intra-organizational institutional design, addressing organizational sub-units and small semi-formal or informal social units and processes: committees, teams, task forces, work groups etc. This occurs in every field, from the global corporation's "matrix" organization to the weekly poker club in Brady's Bar. Intended to ensure effective and timely task performance, this level engages anyone involved in initiating and managing an activity or process in an administrative-managerial role.

*2.3 Knowledge and practice*

Applying theoretical knowledge to institutional design is problematic, for four reasons. 1) Ignorance: because institutional design is a relatively new concept, it can only have a limited and eclectic knowledge-base. 2) The intrinsic nature of design, for which abstract scientific models or simple technologies are useless. 3) The ecological fallacy, which makes mechanical application of universal abstract knowledge problematic. 4) The multi-party nature of institutional design: often the first challenge is to get all the involved actors to agree on their common purposes. For these reasons and others the "Handbook of Institutional Design" will never be written, and it will be useless if it is.

Nevertheless, there are some concepts and areas of knowledge that may be helpful to the practitioner. One concept is governance, where institutional economics can be a useful tool for institutional analysis. Williamson's (1985, 1995) transaction cost theory offers a repertoire of forms of governance that reflect transaction related adaptations of the "perfect" market (Alexander, 2001). At the meso-level the concept of interorganizational coordination structures (Alexander, 1995) also presents some institutional design options. At the intra-organizational micro-level, agency theory (Miller, 1992) provides concepts and models that are essential for informed intra-organizational institutional design (Alexander, 2006, pp. 8-12).

The only conscious and deliberate effort to develop a systematic method for institutional analysis and design is Ostrom's IAD (Instititional Analysis and Development) framework, which is an indispensable source for the informed practitioner. Originating in her work on common resource pool associations (Ostrom, 1990), the IAD was subsequently extended and generalized (Ostrom, 2005) to enable its application to most types of institutions.

Another model offered (more implicitly) for institutional analysis and design is the ICD (Institutional Capacity Development) framework, which its authors (De Magalhaes, Healey and Madanipour, 2002; Healey, De Magalhaes and Pendelbury, 2003) developed for their studies of local governance transformation. Recently this model was applied to the case of Government (Federal) to Government (Indigenous) planning in Coastal British Columbia (Barry, 2012).

Institutional design is a relatively new concept: hence the paradoxical contrast between limited theoretical knowledge (discussed above) and the wealth of applied institutional design experience. The practitioner can share some of this experience through relevant case-studies (Alexander, 2006, pp. 12-24).

## 3. Planning and Institutional Design: the Public Interest and Public Values[2]

*The Public Interest* has always been important for planning, where it takes several forms. One is as a norm legitimating state-led land-use planning and development control. Another is as a professional

foundational principle and an ethical rule for professional practice, which is the form that applies to our discussion.

Planners in particular are required to advocate and promote the public interest, while the Public Interest is an acknowledged objective of state policy and action. In public administration it is associated with sound government and prescribed for state officials. In the judiciary, courts invoke the Public Interest as a decision criterion in private and administrative law[3]. There are various concepts of the Public Interest (Alexander, 2002.a).

For our purposes, the relevant ones involve dialogic-discursive applications. These include procedural concepts: a deontic approach is applied in legal adjudication, when courts define the Public Interest as compatibility with individual procedural rights; the dialogical approach is applied in the political arena when a specific substantive Public Interest is defined and operationalized for a particular case or issue, as policies develop through political discourse. A deontic approach can also combine a substantive focus with dialogic application, when administrative or legal review bodies judge a proposal's compatibility with acknowledged substantive rights[4].

Bozeman (2007) used the Public Interest to introduce *Public Values* into political discourse and policy debate, as an alternative to neo-liberalism limited to economic considerations. Public values, such as justice and equity, democracy and solidarity, transparency, accountability, and effectiveness, are counter posed to private value and utilitarian efficiency. But Bozeman goes into little detail on how the Public Interest actually inserts public values into political and policy agendas.

Detailed review of different concepts of the Public Interest suggests how its applications work to introduce public values into collective decisions and actions. In the dialogic process of identifying or determining what is in the public interest in a specific context, case, or issue, the participating actors express their particular interests (which may become subjects for bargaining and debate) and justify them by appeal to their basic values, which may also be contested. These may include general public values to which various parties may give different priorities (e.g. effectiveness vs equity or accountability) and instrumental values that relate to their interests and goals for the issue at hand.

For example, in the UK National Infrastructure Commission's deliberations on approval of major strategic facilities (e.g. power stations, LNG terminals) proponents of projects cited the need for efficient energy supply to meet rising demand and support the national economy, while opponents ("greens" and local interests) countered with the public values of conservation – of natural resources and the environment – and sustainability (linked to alternative energy sources that would inhibit global warming) that would be promoted by denying the application (McKay, Murray and Macintyre, 2012).
How important the link is between Public Values and the Public Interest becomes clear when we consider how many arenas there are for dialogic development of an agreed-upon Public Interest, and how often this happens. Administrative-managerial deliberation on adopting possible policies, programs or projects, administrative-regulatory review of projects submitted for permission or approval, and judicial review of disputed proposals take place almost everywhere and are happening almost all the time. This is true for the public and private sectors, and especially so for the interface between them, and applies in most societies – all those with democratic regimes that observe the rule-of-law.

When are institutions involved in these dialogic applications of the Public Interest? Their most important role is framing these discourses: all the arenas itemized above essentially serve as the institutional environment and context for the dialogic processes they host. This is clear from our examples: the corporation's management executive encapsulating private enterprise, the municipality's

budget committee and the County Planning Commission – the institution of government, and the District Circuit Court representing the legal system. Institutions also participate in the dialogic process itself, sometimes as social groupings such as economic sectors or interests, movements (e.g. "greens" or property-rights advocates) or as organizations-agencies. Institutional design, then, offers a way of effectuating public values through the institutions that channel them into collective discourse and action.

## 4. Sharing public responsibility: the role of institutional design

Conventional socio-economic and planning theories juxtapose planning and markets in dichotomous opposition, and most institutional analysis sees the "free" market as the default alternative. But the opposite applies to public responsibility, which is associated with public institutions – the state, government and public agencies - rather than non-state or private bodies. Repositioning public responsibility, then, must mean devolution of authority and power to act from traditional governments and public agencies, and sharing "public" responsibility with civil society and private organizations and institutions: associations, households, families and firms.

This is one of the "bread-and-butter" concerns in many of the issues and cases that involve ID in developing policies and plans, and designing, delivering and implementing programs and projects. At the highest "level", ID is engaged in shaping and reshaping institutions of countries in transitions. One such transition is from conventional-modern government to postmodern governance and "reshaping" representative to participative democracy (Dryzek, 1996). Another is the transformation of political-economic institutions in Eastern Europe from state controlled socio-economies to advanced social democracies (Offe, 1996).

In broad-scale social policy planning and related program design, ID is often invoked to meet this challenge. The ID and evolution of the UK welfare state, and the NHS in particular (Klein, 1996), is a prominent case in point. On the issue of national health services and related insurance and delivery programs comparison and evaluation of IDs between the UK, Canada, Scandinavia and the US is revealing[5]. The ID of social policies and programs focuses on the allocation of responsibilities in ways that reconcile effectiveness with accountability. This means looking at alternative assignments of planning, management and monitoring responsibilities, funding or financing sources, and in-field delivery functions between the various public agencies, NGOs, and private actors that make up the relevant policy-issue system, to assess and evaluate their implications.

Policies, programs and projects in planning-related areas - housing, urban revitalization and community development, settlement planning and regional development, and environmental planning and management – offer instructive cases that show how ID repositions public responsibility. One example is the varying and changing (over time) ID of public, social and affordable housing policies and programs between countries and socio-political cultures, e.g. the UK (with its "council housing"), the Netherlands and Scandinavia (with their active housing associations), Israel (declining state-led) and the US (federally funded decentralized and privatized) and their relative effectiveness[6]. Other examples are different IDs for regional development, new towns and planned communities, urban renewal and revitalization programs[7], and river basin management in Europe and the USA (Alexander, 1995).

In project planning and design, conventional approaches to "sharing public responsibility" reduce the question to the common dispute for or against privatization. A more sophisticated approach disaggregates the project planning and delivery process, to explore the consequences of private vs.

public provision of its relevant constituent elements, including their respective transaction costs. One main issue is *procurement*: public, private or a combination – public-private partnerships (PPPs) in various forms. These can involve alternative procurement structures and processes from design-build to design-build- finance-operate-maintain. Another is *financing:* public vs. private; here again PPPs are possible. Public or private financing raises the question of value capture – another way of repositioning public responsibility for funding – and alternative IDs for value capture , e.g. special assessments, special Districts, or PPPs based on land sequestration (Alexander, 2015.b).

## 5. Public Values in ID: Cases[8]

*5.1 The EU and its Institutions*

The painful emergence of agreed-upon institutional responses to the possible collapse of the Euro and the depression of EU economies illustrates how the dynamics of competing proposals reflect their proponents' public values – linked to their particular values and interests. Thus rival configurations and rules for the ECB's (European Central Bank) credit and support for EU banks and financial instruments, and emerging EU institutions to ensure member nations' fiscal responsibility[9], respond to member states' conflicting respective demands.

On the one hand austerity – reflecting the public values of economic discipline, independence and responsibility (effectuated through fiscal control from Brussels) is Germany's demand, endorsed by some of the northern EU members. On the other hand "growth" (supported by ECB credit and funding, and ultimately by mutualizing part of member states' debts) – reflecting the public values of solidarity and mutual support – is advocated by France, Italy and Spain, supported by the EU southern and eastern periphery.

Over the longer run, the design and evolution of EU institutions and their roles in developing and implementing EU policies illustrate the interplay between national interests and particular values and supranational European "community" interests in two alternative models. The intergovernmental model assigns primacy to national institutions and interests and prioritizes the public values of state sovereignty and independence. Here EU institutions are limited to a mediating role between national interests and values.

The "communautarian" model emphasizes the supranational aspect of EU institutions and prioritizes the values of community and solidarity linked with the value of economic efficiency, which was the incentive for the original European Common Market. EU institutions promote this model, seeing progress as ever increasing integration and evolution toward a federal state. These models explain European integration as a form of "dialectic structuralism" alternating "communautarian" periods of accelerated integration with slower intergovernmental intervals.

*5.2 Metropolitan-Regional Planning in New York and Queensland*[10]

Comparing the institutions that were set up for planning the metropolitan regions of New York (USA) and Queensland (Australia) offers some enlightening lessons in ID. The subjects of this comparison are the Committee on the Regional Plan of New York's development of the 1929 *Regional Plan of New York and its Environs*, and the institution and operation of a complex intergovernmental structure for the SEQ 2001 Project: preparing and implementing a plan for the metropolitan region of South East Queensland.

*New York:* In the first case, the personal initiative of a prominent banker led to the establishment of the Committee on the Regional Plan of New York to develop a plan for the metropolitan region. The Committee was an extra-governmental body representing primarily business and financial interests. It was supported by a professional (planner) head with a small (foundation funded) staff who applied the rational planning model to develop its plan. The Committee's isolation from its relevant social and institutional environment is the most striking thing about it. All its interactions with outside bodies were informal, limited to consultation and information exchange between officials and staffs. Consequently, rather than the Committee's emergent proposals influencing other planning in progress, outside plans and projects modified its metro-regional plan. The resulting plan was more a collage of existing proposals than an integrated vision of its own. In retrospect, the failure of the plan to realize its sponsors' aims can be attributed to the flaws in the institutional design of the planning process and its agents.

*Queensland*: The SEQ2001 project shows a successful application of ID, in a planning process that resolved the multiple actors' concerns about the distribution of power through a "cooperative partnership". The founding conference included 20 local governments, the existing regional organization, State and Commonwealth government agencies, and community and business groups.

The ID was a complex (but effective) planning process structured through several interlocking organizations. Its overall governance and policy direction was by an interorganizational group established by State government, the Regional Planning Advisory Group (RPAG), representing all the primary stakeholders, backed up by a more broadly-based Advisory Council. The RPAG was really a new planning organization with its own professional staff seconded from participating agencies. Overlapping the RPAG was the S.E. Queensland Organization of Councils (SEQROC) – a formal association of all the region's local governments – and its sub-regional affiliates. These provided the local government input to the regional planning process, the "bottom-up" component complementing the RPAG's "top-down" integration of the planning process.

Plan development was an interactive process over several years, ultimately producing the final plan SEQ2001 that was formally adopted by all the relevant governments through a binding Memorandum of Agreement. The evidence of the success of this ID is the outcome: an adopted regional plan with the same powers as a statutory plan, but its implementation is by agreement and contract, instead of law.

*- Comparison and discussion:* These two institutional designs of metropolitan-regional planning processes were driven by very different public values, which resembled each other only in their common procedural, rather than substantive, orientation. The New York case reflected its principal actors' values of scientific-technocratic rationality, while the values driving the Queensland case were very different, reflecting different actors in a different time.

The SEQ2001 project effectuated the espoused value of democratic participation in the institutional design of the planning process and its organizational structure. At the same time the ID served another public value that was equally important - effectiveness in goal-achievement - since no plan could be implemented that was not the product of all the stakeholders' participation in the planning process.

*5.3 Military base closing in the U.S .Congress*

For decades, closing major military bases in the USA was a problem, due to Congress' control over administration proposed budgets and expenditures. As a result, any proposed base closures were

deleted in the congressional oversight committees, whose senior members had a vested interest in keeping these bases in their constituencies. To solve this problem Congress had to find a face-saving way to allow the members of the powerful Armed Services Committees to make the base closure decisions to which they were entitled, while forcing them to decide to close some bases. A congressional commission developed a new three-stage decision-making process that was adopted by the appropriations committees.

In the first stage the Dept. of Defense presented a list of all the bases it wanted to close. In the second stage the committee set its agenda: a list of bases that were its own candidates for closing, by rigorously applying a set of criteria developed by the commission that included physical and operational considerations, "need" factors and cost saving potential. The final stage was voting, when committee members ranked all the bases on their list by priority for closing. Depending on the savings generated by each closure, this procedure always yielded a collective committee decision on how many and which bases to close to meet the framework budget.

This case illustrates how ID effectuates public values: here the congressional commission successfully reconciled two public values that often conflict. One is democracy, manifested in due process of the U.S. Congress and federal government. The other is effectiveness: deciding on feasible actions to achieve defined goals. The goal in this case is also a public value - fiscal discipline - and the new military base closure process was a reformed institutional framework to effectuate this public value.

## 6. Repositioning public responsibility: Cases

*6.1 New towns and planned communities*[11]

There have been striking changes over time in positioning public responsibility for planning and constructing new towns and planned communities. Up to the mid-1960's this was essentially undertaken by central government; later ID of public-sponsored new-settlement programs had increasing devolution to and participation by local governments, civil society (voluntary associations) and the private sector (developers and land development corporations)[12]. This is shown in the US Greenbelt and New Communities Development programs and the UK New Towns program.

The centralized model – conventional government-public planning and delivery, with varying IDs – applies to the earlier programs. The US Greenbelt program of the 1930s (part of Roosevelt's "New Deal" addressing the problems of the great Depression) was run by a new agency which was a subunit of the federal Resettlement Administration. The federal government was the public developer, doing the planning, land acquisition and development, construction and management of the three new towns it built, and funding the whole program. The government remained the landowner-administrator until the properties were sold to the residents[13] in the mid-1940s. The only exception to this centralization was in planning, which was done in coordination with existing State and municipal planning powers.

The UK New Towns program (which began in the late 1940s and continued into the 1970s) also followed this model, though with some important modifications over time. The government created a new agency as the public developer, a New Town Corporation, for each new town, immediately upon deciding on its general configuration and location. These Corporations were like private development corporations with two exceptions. Their funding was advanced by the Treasury, and they enjoyed planning powers that were preempted from their areas' local authorities. The early generations of New Towns were planned, developed, constructed and administered directly by their Corporations, which exercised close control over their development through most of the stages of their growth. Later

generations saw gradual relaxation of control with outsourcing of subarea planning and detailed planning and design to private developers who acquired large tracts of land[14]. These also saw much more public participation in planning their growth and much quicker devolution of political-administrative authority to the communities' newly constituted local authorities.

*6.2 Groundwater conservation in Apulia*

At a contrasting scale to the last cases, all national programs, this is an example of proposed ID to reposition public responsibility at the most local level, from a quasi-governmental district agency to specific areas' farmers. This exercise grew out of a critical review of Bruschetta and Giordano's (2015) analysis of problems in implementing groundwater protection policy in Apulia. Their description of the policy-action arena identified three relevant actors: the regional authority (regulator), the irrigation management consortium (water allocator-distributor) and the region's farmers (users)[15]. The problem was the failure to implement groundwater conservation policy through the consortium's price-setting, when farmers did not reduce their water consumption in response to higher water cost, but converted to more profitable (but more water-intensive) crops.

This is a classic ID problem: the irrigation management consortium should be a common resource pool association (Ostrom, 1990). Institutional analysis would show its present shortcomings, which are the source of the current problems. The most likely cause of the consortium's policy failure is flaws in its structure and governance, in particular its disconnection from the farmers who are the relevant users of the common resource. A secondary factor is the consortium's present simple water pricing and policy goal ("guarantee equal water distribution") which is inadequate to address the farmer-users' predictable strategic behavior.

A new ID would change the structure and governance of the irrigation management consortium to turn it into a common resource pool association. Following Ostrom's principles[16], these changes would restructure the organization to integrate the (now separate) farmers and "consortium" through a newly designed framework for collective governance and decision making. The new consortium could ration the available groundwater proportionally to use-benefit, by developing an irrigation water allocation model that would be run each year or season to arrive at a price schedule for irrigation water that is agreed-upon by the suppliers and the farmer-users. This model could be applied to vary between subareas, so that it would be administered collectively by the farmers in that subarea, which would ensure effective policy implementation.

## 7. Discussion

Above we see how practicing planning as ID can address two important aspects of "repositioning public responsibility". One relates to public values; the other involves structural devolution of public responsibility.

First, "repositioning" implies changing priorities between values, which leads to the links between planning, ID and public values. Public values concern planning because planning is charged with representing and promoting the public interest. Dialogic concepts of the Public Interest involve agreement on a case-specific public interest; this occurs whenever public agencies deliberate on adopting policies, programs or projects, or review projects submitted for permission or approval, and courts review disputed proposals. These are important channels and arenas for effectuating public values, and our cases show how ID of relevant processes and institutions can reposition public responsibility.

Next, "repositioning" can mean moving the locus of traditionally "public" responsibility; this is a classic challenge for ID at every level and in many fields. At the macro-level it can involve evolutionary "constitution writing" for socio-economic regimes (as in our cases of EU institutions and democratizing East European countries), but this concerns us less. The "meso"-level of ID is of more interest for planning, involving policy-making and planning with plan, program and project design and implementation. Relevant fields range from broad social policy and human services through strategic infrastructure planning and delivery, to multi-scale planning: from metro-regional to neighborhood-level community development.

ID alternatives to conventional public planning and regulation and program-project design and delivery include the common resource pool association (as in the Apulia groundwater case), inter-organizational collaborative planning (as in the SEQ2100 case), and PPPs in various configurations for infrastructure, settlement planning and land development, urban revitalization and community development – shown in other cases above.

Planning can reposition public responsibility through ID. Institutions can be designed to effectuate appropriate public values, such as democracy, transparency, and accountability. Through alternative ID planning can restructure institutions to devolve public responsibility from state agencies and share it with private actors and civil society.

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## Notes

[1] All planning is not ID; many planning practices and activities do not involve ID at all.

[2] Much of this section is from Alexander (2015.a).

[3] For example, to void otherwise valid contracts in private law, and in U.S. anti-trust actions.

[4] These exist (usually) as institutional rights in various fields, e.g. health care, welfare, education etc. In planning they are called "planning rights" – for more detail see Alexander (2002.b)

[5] The literature on this is too extensive to cite here.

[6] This is a whole field of research and study in itself.

[7] See cases below.

[8] Condensed from Alexander (2015.a).

[9] Limitations of time and space prohibit going into any detail here.

[10] This case is based on Abbott (2009) and Alexander (2009).

[11] For sources, see Alexander (1995).

[12] Scandinavia is an exception: Sweden's new towns planning and development (1950s-70s) heavily involved local government (especially Stockholm municipality) while Finland's also engaged Helsinki city government and national housing associations.

[13] Previously their tenancy was by leasehold.

[14] This trend reached its climax in Milton Keynes, where the Corporation's planning and development responsibility was limited to the town's major infrastructure grid that framed its neighborhoods.

[15] Applying ambiguity analysis to this problem, the authors gave no information on these actors' institutional characteristics, and whether/how farmers are represented in the irrigation management consortium and participate in its governance.

[16] Using Ostrom's (2005) IAD (Institutional Analysis and Development) method.

# THE CODING TURN IN URBAN AND REGIONAL PLANNING: THE ROLE OF PLANNING INSTITUTIONS

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Keywords (maximum 3): Planning Codes, Complexity, planning and democracy

**Abstract**

The paper deals with the growing tendency to articulate planning policies in principles and codes discussed in recent planning theory and reflected in planning practices. While this tool arouses interest and enthusiasm, very little attention is given to the way it affects planning thought and impacts – or should impact – the act of planning and the institutions involved. After discussing historical decision-making frameworks that applied planning codes, the paper turns to the decision-making frameworks designed to operate comprehensive land-use plans in regulatory planning systems, and to the problematics of zoning and outline plans as a regulatory device. It then discusses the meaning of the transition to planning codes and elaborates on the conditions to turn it into the dawn of a new, liberal and democratic planning framework for planning legislation.

## 1. Introduction: the long history of planning codes

Throughout the history of mankind, the development of the built environment was subjected to abstract principles and codes deduced from religious, cultural and political conducts. Alongside the construction of mega-sites by rulers and religious leaders, the development of cities and settlements was the mutual product of groups and individuals operating for their best interest subjected to social and environmental stipulations. For most of the time people shared and obeyed unwritten principles regarding the characteristics of built elements and the relations between them. Occasionally, codes and rules were explicitly articulated, specifying spatial demands.

This was the case, for example, with respect to the history of Mediterranean urbanism, described by Hakim (2001, 2008, 2014). In an early research, Hakim (2001) analyzes a treatise written in Ascalon, Palestine, in the years 531-533, delineating spatial relations between elements of the built environment. This treatise was later included in books of law published in the Balkans, Greece and in Slavic areas and has affected planning and building there until the first decades of the twentieth century. His later research (Hakim, 2014) related to Greece, Italy and Spain and covers more than two millennia of urban development according to codes and abstract principles. Akbar's (1988) research reveals similar conditions with respect to Middle Eastern, mostly Muslim cities, exposing un-written principles arranging the relation between the three basic associations to urban elements: ownership, control and use. These principles stemmed from Muslim point of view, according to Akbar (ibid.), and created a powerful set of rules directing the creation and management of the built environment. To his claim, these principles operated for centuries, until the late nineteen century and the intervention of modern states in issues of planning.

Abstract principles directed the production of the built environment in other parts of the world as well. Ashmore's (1981, 1991) researches reveal what she terms as "spatial patterning" governing the development of Mayan cities. While these archeological researches (see also: Willey and Bullard, 1965; Hutson, Magnoni, Mazeau & Stanton, 2006) do not present documented rules that relate to planning and building, the patterning is reflected from the spatial analysis of sites. Ashmore and Sabloff (2002, 202) deduce that the patterns express Maya beliefs regarding the positioning of elements and their directions, as well as "political affiliation through emulation of civic architecture at more revered or powerful places".

Needless to say, abstract principles and codes were responsible for most of the historical development of European cities. Logan (1976) describes building and planning codes that developed in German cities from the medieval period till the dawn of the twentieth century. Talen (2009) lists a long tradition of none-mapped (none-specific) regulations that affected the development of cities in Britain, France, The Netherlands, Germany, and throughout the Prussian empire. And so on.

**2. Modern planning and the dissipation of coding**

This long tradition of following abstract, formal and informal guidelines between elements of the built environment has abruptly changed with the spread of modern planning ideas. Particularly since the 1950s, urban planning is conducted by national and municipal institutions generating organized, top-to-bottom planning regulations meaning to plan the details of the built environment and to oversee the implementation. A plan-led regulatory planning (as opposed to the code- or principle-led planning of the past) is operating in most EU countries as well as the US, Japan and Australia. It is centered on zoning and statutory land-use plans both as the means to set an official visionary image of urban districts and as a major regulatory device. Against the qualitative and abstract rules that directed the slow-pace development of cultural spaces, Land-use plans were – and in many cases still are – meant to dictate *what* to build and *where* to build. As observed by Moroni (2010), the prevalent plan-led machinery is an end-state control-device aiming at *ordering* the actions of private people—as opposed to simply *regulating* them.

**3. The effect on the built environment: Between *an ordered* and *an organized* city**

Urbanists, planners and theoreticians relate to the differences between the *order* of built environments developing under pre-modern (i.e. code-led) and modern (i.e. plan-led) regulations. Resembling Jane Jacobs' (1961) understanding of the complexity and emergent order typifying free development of the built environment, Christopher Alexander (1965, 58) stated: "I want to call those cities which have arisen more or less spontaneously over many, many years *natural cities*. And I shall call those cities and parts of cities which have been deliberately created by designers and planners *artificial cities*". In fact, Alexander (1965, 1975, 1977, 1979) invested his career dealing with the question of order in planned – as opposed to "natural" – cities. He named the order of natural cities as "the quality without a name" (Alexander, 1979, xi) and claimed that "this quality […] cannot be made, but only generated, indirectly, by the actions of the people". In Alexander's work, the abstract codes and principles that regulate the emergence of this quality were named "patterns", and he defined the shared knowledge of the people engaged in creating the city "a pattern language". Very much like Jane Jacobs (1961), Alexander (ibid.) also spoke of places that are alive, and of living patters.

The idea of abstract codes – as opposed to specific land-use statutory plans – for enabling the emergence of *spontaneous order* in the built environment and the creation of living places was further elaborated by Portugali (1999, 2011), Alfasi and Portugali (2004, 2007, 2009), and Moroni (2007, 2010, 2014). The main claim of these writers is that for the planning machinery to acknowledge the complexity of the built environment, it should base on qualitative guidelines, codes, or rules, and that "such rules should equally apply to all the elements planned to be built in the city, including dwellings, businesses, industry, public buildings, and infrastructures" (Alfasi and Portugali, 2007, 170).

**4. Some problematic aspects of statutory land-use plans**

Today, the dis-functioning of top-to-bottom, organized, comprehensive planning is a shared knowledge among scholars. This is mainly due to the vast disappointment from land-use plans as the means of controlling the qualities of the built environment. Recent researches relate to the changing image of *flexibility* in planning: resulting from the expectation to sheer top-down development,

flexibility was considered as a problematic quality of land-use plan. In time, however, it became clear that comprehensive planning is incompatible with the actual dynamics of the built environment, and flexibility was interpreted as a positive and necessary quality (Tasan-Kok, 2008). In practice, flexibility was often achieved by circumventing, coercing, and amending land-use plans according to local and ad-hok circumstances (Cullingworth, 1994; Berry, 2001; Alfasi, 2006; Buitelaar & Sorel, 2010; Buitelaar, Galle & Sorel, 2011; Charney, 2013). Recent researches show that land-use and zoning maps are ineffective when it comes to achieving the basic purposes they were intended to achieve, as preventing sprawl and safeguarding open spaces from new development (Bramley & Kirk, 2005; Tian & Shen, 2011; Alfasi, Almagor & Benenson, 2012; Zhong, Mitchell, & Huang, 2014; York, Tuccillo, Boone, Bolin, Gentile, Schoon & Kane, 2014; Wang, Han & Lai, 2014Y; unos, Johar, & Sabri, 2015).

Another bothering fact stemming from the application of top-to-bottom statutory planning relates to the idea of *the rule of law*. In line with the poor performance of comprehensive land use plans, research reveals that in many places, the dominance of the statutory land use plan remains in the law books, while local amendments and spot-planning shape the actual development of the built environment (for example: Cullingworth, 1994; Alfasi, 2006; Buitelaar, Galle & Sorel, 2011). The authorization to perform such local amendments to the comprehensive plan usually remains in the hands of the same planning authority that fixed the initial land-use plan. This means that in many places, planning is conducted in a case-by-case manner without the leading power of an accepted, publicly articulated, and equal set of rules. Clearly, this conduct is also diverting the emergence of a spontaneous spatial order.

Moroni's (2007) claim is that zoning ordinances and master planning as means of regulation violate the liberal ideal of the rule of law. Specifically, to his claim, this practice contradicts principles as *impartiality* (i.e., that the law should apply equally to all), *stability* (i.e., that rules should enables citizens to have reliable expectations with regard to the actions of others, including the state itself), *Publicity* (i.e.. that laws are known and adequately publicised), and *non-retroactivity* (i.e., that laws are prospective and never retrospective). He further (Moroni, 2010) links planning regulation by means of abstract codes to the notion of *nomocracy*, while *teleocracy* is linked to authoritative regulation stemming from specific, end-purpose plan. Although both ways may be lawful and democratic, *nomocracy* is linked by Moroni (ibid.) to an indirect way of regulation that enables free action and complex result, subjected to clear yet abstract rules. At the same time, *teleocracy* is described as a direct approach, in which purpose-dependent directives are operated and simple end-solutions are created.

**5. Indications to a recent change**

In the last decade, the modern top-to-bottom planning practice is facing a gradual change. Inspired by principles of New Urbanism, there is an increasing interest in the role of codes and qualitative principles in urban planning. This interest is now affecting both planning theory and practice. Thus, in line with the ongoing entrenchment of American Form-Based Codes (Talen, 2009), and the recent consolidation of British Planning Policy Statements and Planning Policy Guidelines into the National Planning Policy Framework, there is evidence to planning in other countries gradually adopting a code- or principle-based approach to planning regulation. In addition, scholars show greater interest in past experiences with planning codes (Talen, 2011; Ben Joseph, 2005; Carmona, Marshall & Stevens, 2006). And, additional thought is given to the possibility of advancing the codes to general and abstract rules in a way that fits with the complexity of the built environment and the evolution of a spontaneous spatial order (Moroni, 2014).

**6. A new look on past coding traditions and the way they were implemented**

Still, if we want to see planning machineries that acknowledges the quality of complexity of the built environment, and if we want to provide the terms for spontaneous urban orders to emerge and enhance the development of cities, renewal of codes as means of regulation is not enough. We have to look at the way codes are used, how they are developed and determined and pay attention to the way they guide decision-making with respect to transitions in the built environment. In the past, the emergence of spatial spontaneous order in cities and places leaned on the fact that all parties involved – private people, craftsmen, salesmen, institutions etc. – shared the same "pattern language" and followed a collective set of codes. Alexander (1979, xiv), for example, expects that sharing of rules would lead people to act within their framework hence create a sufficient mechanism of planning and building, saying: "within the framework of a common language, millions of individual acts on buildings will together generate a town which is a live, and whole, and unpredictable, without control" (my underline). And, "it is a process which brings order out of nothing but ourselves; it cannot be attained, but it will happen of its own accord, if we only let it" (ibid.).

In line with Alexander's views, researchers relate to Middle Eastern urbanism as emerging without the precedence of comprehensive plans and the stemming control devices. Writers as Costello (1977), Grabar (1979) and Bianca (2000) enlarge on the effect of the socio-cultural code of Middle Eastern societies on the built environment. Their analysis refers mainly to the demand to preserve the privacy of dwellings and the integrity of the family but also to values like allowing accessibility to water resources and granting mutual rights of pre-emption for neighbors.

A clear reference to the decision-making procedure preceding planning and building is provided by Akbar (1988) who describes the habit of reaching an (often implicit) agreement between the owners, the adjacent neighbors and those controlling the land or building regarding the amendment or construction of urban elements. With the spatial code at the backdrop, the involved parties shared a safe ground for negotiating the development of the built environment and for understanding the consequences of their agreements. Similar terms – i.e. mutual agreements between neighbors who share the same set of abstract rules – were responsible to the magnificent urban order that developed in Paris, during and after Haussmann's massive transformation of the city's form and structure, in 1850-1870 (see: Hall, 1998; Pinon, 1999). Jordan (2004) claims that "The architects of the day shared a common vocabulary and needed no additional coercion to produce a homogeneous cityscape". He cites Pinon (1999, 218-9) regarding Boulevard Saint-Germain, where "owners and their neighbors should arrange between themselves to have, in each construction *îlot*, the same height for each floor in order to continue the principal lines of the façades and to make the entire *îlot* a single architectural ensemble".

Modern planning, however, interfered with the simple, horizontal manner of regulation operating in Paris as it did with the one operating in Middle Eastern cities. Modern planning institutions were designed in a top-to-bottom structure. As a result of differences in juridical systems and the administrative structure of states, a great variety of planning administrations and planning tools actually exists. Despite the diverse forms and methods of regulation, according to Akbar (1988, 142) a shared trait is the essence of what he observes as the problematic result of this intervention: "Contemporary regulations have one thing in common: control of the built environment by a central authority". In fact, the "Crisis in the Built Environment", as the title of Akbar's (1988) book, relates to the dramatic change in what he terms as "the model of responsibility" (141). That is, replacing the method of mutual agreement with control by means of precise plans and prescriptive regulation. By putting the responsibility and authority in the hands of a supervised agency, the variety of modern methods eliminated, each in its unique way, the language, the code, the essence of order in the built environment.

**7. Current planning institutions and the necessary terms for implementing codes: a model**

Since codes are abstract, implementing them in the built environment necessitates a case-by-case interpretation of meaning and impact. In ancient societies, the habit of mutual agreement provided a mechanism for discrete decision-making which is highly sensitive to the code. As numerous actors were operating to interpret the code according to local and unique circumstances, the order of the built environment emerged spontaneously, without the control of a plan. Moreover, the code itself was alive and changing—again without control and supervision—along the lines of social and religious values, cultural changes and technological developments.

In the modern built environment, typified by multiculturalism and a huge hierarchy of powers and interests, the terms of mutual agreement no longer exist. A different method of case-by-case decision-making is needed, to ensure that interpretation of the code continues and that the code itself is free to evolve and adjust to cultural and environmental changes. The order of the built environment depends on this, and as discussed above, the loss of this order is burdening society and space. The very use of codes is therefore not enough, and designing the structure and performance of modern planning institutions is an important complementary task.

The essence of the framework highlighted here was presented in Alfasi and Portugali (2004, 2007, 2009) and Portugali (1999, 2008). It leans on the principles of liberal democracy, the central being the separation of powers. Consistent with the description of this principle by Hayek (1955/1978, 210), it suggest that "the laying-down of new general rules" must be separate from "their application to particular cases" also in the field of planning. Currently, planning is far from accepting this idea, since generally speaking – and despite the tremendous differences between planning institutions in various places – planning policy and planning decision-making is conducted under the auspice of a single entity/authority. As a result, the adoption of planning code as a the source of planning regulation often means that the interpretation of the planning code is done on case-by-case manner by the same body—sometimes the same people—that articulated the abstract rule at the first place. The necessary boundary between the abstract and the specific is thus being blurred. And, since every case is a unique mutation of the codes, we face the danger of the specific avoiding the abstract and circumventing it. In the model presented in figure 1 we suggest that these two functions – the articulation of abstract code and its specific interpretation are "performed separately by two coordinated bodies before it can be determined whether coercion is to be used in a particular case" (ibid.), to match with the principles of the libertarian ideal.

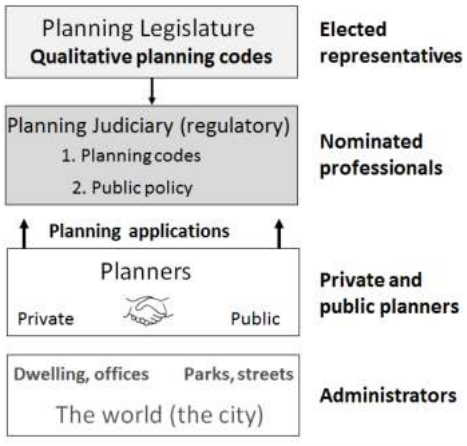


Figure 1: The decision-making process compatible with the coding turn in urban and regional planning

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# The Art of Creating Consistency: Planning Strategies in the Age of Active Citizenship

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Abstract

This paper addresses the emerging practice of civic initiatives in urban development, and the struggles professional planners and governments face in finding adequate strategies in dealing with this form of 'active citizenship' – strategies that reach beyond the inclusionary and disciplinary confines of participatory planning approaches. Based on empirical studies of 14 civic initiatives in Denmark, the Netherlands and England, and a theoretical hybrid of complexity theory (self-organization), actor-network theory (translation) assemblage theory (individuation), and recently developed post-structuralist planning theories, this paper argues towards a planning strategy that *does* fit the age of active citizenship. The paper argues that planners should no longer focus on organizing involvement in formal planning processes or setting up frameworks to counter fragmentation. Instead, planners should focus on *creating consistency* between a redundancy of spatial interventions and planning strategies that evolve from active citizenship. Creating consistency is based on three lines of thought: the need for conditions that do not constrain, but rather *open up* possibility spaces, the need for a facilitating planner who does not mediate but rather *navigates* between planning initiatives, and most importantly, a *flat ontology* of planning strategy. This flat ontology states that there is no a priori or ontological difference between the intentions and performed behavior of planning actors (including civic initiatives). By opening the spectrum for many others, navigating between these emerging others, and being able to empathize with the behaviors and strategies of these many others, potentials for consistency can be recognized and acted upon.

## 1. The Challenge of Civic Initiatives in Spatial Planning

Civic initiatives in spatial development are on the rise. Whereas for a long time civic initiatives were seen as just a fringe movement, perhaps enlivening space but mostly in the way of planned urban development, they now emerge as valuable strategies for urban development in their own right. The spatial planning community brooding over a new planning practice, the *Vogue* identified "initiatives based on the strength of community" as a major upcoming trend (Vogue NL, 2012: 192), and governments speak eagerly of "active citizenship" and "participatory society." These terms made their first entry in Dutch governmental policy during the late 1990s, addressing citizens who were involved in civic initiatives in their neighborhoods and in public policymaking (Hurenkamp & Tonkens, 2011; Hurenkamp et al., 2011; ROB, 2012), and from that moment, political and policy attention for civil society and civic initiatives only increased (Dekker et al., 2007; Van de Wijdeven et al., 2013; Veldheer et al., 2012; VROM Raad, 2004; WRR, 2005; 2010). Nowadays, Dutch national government and advisory boards speak of "a Do-Democracy," "active citizenship," "a vital society," "participatory society," "civic strength," "self-strength," "the energetic society," "self-reliance" and "shared-reliance," "self-guidance," "self-organizing capacities," "do-it-yourself" and "do-it-together society," "civic initiatives," "participatory governments," and so on (BZK 2013, ROB 2012, WRR 2012). All these terms, in one way or another, address civil society: the sum of voluntary organizations and associations, initiatives, movements, and networks in a social space, with a primary focus on specific partnership interests and social struggle for hegemony, characterized by non-violence, discourse, self-organization, and a recognition of plurality ((Gosewinkel & Kocka, 2006; Swyngedouw, 2005).

The Dutch government and Dutch policymakers are not alone in paying attention to civil society. Under the influence of the depreciated dichotomy between state and market, "Third Way" thinking and the European breakup of welfare states (Giddens, 1998; Hirst & Bader, 2001), interest in civil society has increased in recent years in a number of western European countries, for example, Ireland, Sweden (Powell, 2013), Germany (Keane, 2006), Denmark (Lund & Meyer, 2011), and of course the United Kingdom with their "Big Society." (Cameron & Clegg, 2010; Blond, 2010) Even the European Union is showing an increased interest in civil society (Curtin, 2003), using the term "social innovation" to address civic initiatives that try to solve societal challenges that state and market actors are unable to address (European Commission, 2013; Moulaert et al., 2013). The concern for active citizenship exists in a number of domains, domains in which national governments traditionally held strong positions, including spatial development (Veldheer et al., 2012; Ossenwaarde, 2006; Van de Wijdeven et al., 2013; Van der Heijden et al., 2011). It is hoped that, by decentralizing state powers to a more local and individual level (Van de Wijdeven & Hendriks, 2010; Van de Wijdeven, 2012), and creating a society in which government is supportive toward personal responsibility, self-reliance, self-motivation, and voluntary work (MinAZ, 2007; Dekker et al., 2007; RMO, 2013), citizens will be stimulated to take not only personal responsibility, but also responsibility in these domains and for the common good in general (Van de Wijdeven et al., 2013; Veldheer et al., 2012; Ossenwaarde, 2006; Van der Heijden et al., 2011). Active citizenship implies that individual citizens participate in public policy processes through "citizen involvement" and that they promote and participate in "civic initiatives." Civic initiatives are issue-oriented projects that have an assignable social and geographical origin, often in loose and informal structures, serving a

specific community interest that can change while the project expands socially and geographically (Gosewinkel & Kocka, 2006; Van Meerkerk, 2014). Civil initiatives differ from initiatives in the private sphere (individuals), public sphere (governmental initiatives with a primary focus on representational vote-winning), and business sphere (with a primary focus on profit-making) (Gosewinkel & Kocka, 2006; Swyngedouw, 2005; Boelens, 2009). Civic initiatives are, however, not limited to residents, but can also be undertaken by entrepreneurs, artists, etc., as long at the initiative pursues a community purpose and not a direct business purpose.

However, until now, planners have been mainly focused on strategies for citizen involvement through participatory planning, a planning strategy that has developed profoundly over recent decades. However, participatory planning addresses only one side of "active citizenship," and moreover, constrains citizens with an inclusionary and disciplinary tendency. In citizen involvement through participatory planning, citizens can exert influence on goals set by governmental agencies, through procedures and frameworks that are set by the same governments and planners, resulting in disciplinary processes of thematic, procedural, and geographical inclusion. A strange situation thus arises: Although the legitimacy of unilateral government actions in planning has decreased and governments seek citizen involvement and shared responsibility, governments hold on to instruments that keep them in central and disciplinary positions (Boonstra & Boelens, 2011). As such, participatory planning has a hard time dealing with and benefiting from initiatives that emerge from civil society spontaneously, as these are often too complex, unpredictable, dynamic, and multiplicit to fit within the constraints of participatory planning. Even though planning strategies that propose to move as close as possible to citizens' life world (Hillier & Van Wezemael, 2012), to provide frameworks delineating the freedom in which civic initiatives can create their projects (Hajer, 2011; Urhahn Urban Design, 2010; Uitermark, 2012; Rauws et al., 2014), or enable civic initiatives through governmental budgets (Tonkens & Kroese, 2009; Tonkens & Verhoeven, 2011; Lerner & Secondo, 2012; Allegretti & Herzberg, 2004), all seem to be in line with the ideas of active citizenship, also stay within the premise a disciplinary role of government and planners. Civic initiatives are thus challenging spatial planning to its core, and planning strategies that answer to the dynamics of civic initiatives, and are able to meet the complexity of the age of active citizenship, have so far been seriously underdeveloped.

This paper addresses the emerging practice of civic initiatives in urban development, and the struggles professional planners and governments face in finding adequate strategies in dealing with this form of 'active citizenship' – strategies that reach beyond the inclusionary and disciplinary confines of participatory planning approaches. Therefore, this paper proposes a perspective in which the actual becoming of civic initiatives in spatial development is leading (cf. Boelens, 2009; Specht, 2012). To operationalize this civic initiative's perspective on planning strategy, the notion of self-organization is used. Coming from complexity theory, self-organization stands for the spontaneous emergence of order out of unordered beginnings. When translated to urban development, self-organization can be understood as the emergence of initiatives for spatial interventions from intrinsically driven, community-based networks of citizens and entrepreneurs. Understanding civic initiatives as a form of self-organization puts the emphasis on internal and local drivers, and the lack of centralized control. Internal drivers, as the incentives for the initiative come from within the network itself, the initiators are the intended end-users and eventual profeteers of the initiative, and are thus driven by self-interest and self-motivation. Local drivers, as civic initiatives are often a

reaction to local events or interactions, or events or conditions that generate local meaning and thus become localized. Lack of centralized control, as decision-making, knowledge, information, and other resources are not located at one central actor summoning others to take action, but are dispersed among many actors. In other words, civic initiatives are complex constitutions: Internally driven but with boundaries open wide, toward their environment, and to other actors and their resources. Self-organization is thus understood as the emergence of actor-networks, and seen as individual, performative, interventionary, and seeking to make a difference in the world operating upon them, creatively transforming their environments. Instead of trying to seize the grand narrative and promises of "active citizenship," the notion of self-organization enables to focus on the diversity of strategies that are developed within the actual practice of civic initiatives.

Empirical insights are gathered by looking at actual civic initiatives in three different contexts, acknowledging that, despite their internal drivers, these initiatives still take place in an institutional environment. 14 civic initiatives in Denmark, the Netherlands and England were followed, traced and analyzes with a theoretical hybrid of the ontologically related Complexity Theory (self-organization) (Luhmann, 1996; Cillier, 1998; Heylighen, 2001), Actor-Network Theory (translation) (Callon, 1986; Thrift, 2000; Latour, 2004), and Assemblage Theory (individuation) (DeLanda, 2002; 2006). Building upon the outcomes of these analyses, and various contemporary post-structuralist planning theories (Boelens, 2009; 2010; Hillier, 2007; Van Wezemael, 2010; 2012; Boelens & De Roo, 2014), this paper moves towards a planning strategy that *does* fit the age of active citizenship. It is argued that planners should no longer focus on organizing involvement in formal planning processes or setting up frameworks to counter fragmentation. Instead, planners should focus on *creating consistency* between a redundancy of spatial interventions and planning strategies that evolve from active citizenship. Creating consistency is based on three lines of thought: the need for conditions that do not constrain, but rather *open up* possibility spaces, the need for a facilitating planner who does not mediate but rather *navigates* between planning initiatives, and most importantly, a *flat ontology* of planning strategy. This flat ontology states that there is no a priori or ontological difference between the intentions and performed behavior of planning actors (including civic initiatives). By opening the spectrum for many others, navigating between these emerging others, and being able to empathize with the behaviors and strategies of these many others, potentials for consistency can be recognized and acted upon.

## 2. Conditions that "open up"

*The first planning strategy in the age of active citizenship this paper presents concerns the creation of conditions that do not constrain, but rather open up possibility spaces for civic initiatives. This planning strategy builds upon the questions governments and planners have on* what the "right" conditions would be that allow civic initiatives to emerge (WRR, 2012; BZK, 2013). In order to accomplish ambitions for a "participatory society" and "active citizenship," governments feel the responsibility to create such "right" conditions. Conditions are then seen as a requirement or requisite, as external influences that do not predefine initiatives, but that will increase the likelihood that specific processes will happen spontaneously (Rauws, 2015). Hajer (2011), Urhahn Urban Design

(2012), and Uitermark (2012), claim that conditions for civic initiatives consist of governments that set out frameworks in which freedom is found and ideas can be developed. Also Rauws et al. (2014) state that regulatory structures, such as development plans, are a precondition for self-organization as they set limits and define spaces that allow freedom of action. Framework conditions that consist of physical structures or reservations for specific land uses (Rauws et al., 2014; Urhahn Urban Design, 2012) focus mostly on the actual, the physical environment and other practical things an initiative needs in order to materialize. Such conditions aim to let the initiative in its individuation process "land" within the frames of the actual. However, such frameworks are not so different from the disciplining and inclusionary constraints of participatory planning: they still guide participants along predefined formal-organizational procedures toward all-inclusive plans (Boonstra & Boelens, 2011; Loepfe, 2014). Civic initiatives that do not fit into these self-referential conditions they remain to be overlooked (Van der Stoep, 2014: 34), or merely streamlined toward this governmental self-referentiality (cf. Swyngedouw, 2005). Whether such conditions are indeed the "right" ones, remains thus to be seen.

First, a distinction needs to be made between conditions that set initiatives in motion, and conditions that allowed initiatives to become and materialize. Conditions that set the initiatives in motion were often the intrinsic drivers of the initiators to take matters in their own hand. In the cases studied, such conditions were for instance specific housing demands that could not be fulfilled by the regular housing stock, concerns for the spatial quality of a neighborhood, a lack of certain amenities, or urban plans causing resistance among local communities and challenging citizens to come with alternatives. More than often, the civic initiatives were triggered by local, situational conditions that motivated them to change a situation and gain influence to do so, sometimes in response to an invitation or event. Such conditions are highly situational, and certainly not intentionally created, let alone with the purpose to stimulate civic initiatives.

Conditions that allowed the initiatives to become and materialize have more to do with the environment of the initiatives, and whether this environment is receptive to the initiatives or not. Such conditions can be non-situational and unintentional, such as elements in the planning system that allow for a certain degree of flexibility and negotiation or the traditional legal frameworks for collective action. These conditions give internal stability to the initiatives, and create a better understanding between initiatives and public authorities. But despite their importance, also such conditions are unintentionally created, and can thus not be regarded as a planning strategy to create conditions for active citizenship.

Intentionally created conditions to stimulate civic initiatives, on the contrary, can be regarded as a planning strategy. When non-situational, these conditions can for instance be legal frameworks for collective action intentionally created to stimulate civic initiatives, or knowledge exchange and capacity building programs. The availability of lessons learned and best practices makes initiators well prepared, experienced, and educated, offered inspiration and made initiators and other stakeholders believe they could be successful. When situational and intentionally created for the sake of active citizenship, such conditions can for instance be invitations from local municipalities to citizens to come with their own ideas or to formalize self-management, and consciously created learning programs around encounters with civic initiatives in order to smoothen the interaction in the future, were all intentionally created. What also appeared to be important, are conditions that

gave actors a reason to form associations around the emerging civic initiatives, and allow civic, public and sometimes even private actors to join around projects that address an interest for them all. Such conditions can be stagnated local planning conditions and undeveloped land, a desire to make actual physical improvements in a neighborhood. These conditions created a willingness to experiment, and a willingness to learn from the encounters with civic initiatives. Most of the time short term projects and temporary partnerships (though the interventions themselves are durable and last).

*Figure 1 Overview of conditions found in the cases.*

| | ***Unintentional*** | ***Intentional*** |
|---|---|---|
| ***Non-situational*** | Frameworks for collective action<br>Features of planning legislation | Policy for active citizenship |
| ***Situational*** | Decoding of the initiators | The ability to recognize potentials for opening up, and to move along with the initiatives and its possibilities (co-evolution). |

What all of the above mentioned conditions have in common, is that they created agency and provoked a creative "opening up" of possibilities (cf. Van Wezemael, 2008). This is in line with Jean Hillier's plea for a planning ethos oriented toward experimentation, the emergence of the new, and of opening up potentialities and connections (Hillier, 2007). The challenge for planning practice in the age of active citizenship is therefore to create conditions that "open up," that provoke agency, that go beyond an instrumental thinking, and reach beyond the logic of control (Loepfe, 2014: 211).

When non-situational, such conditions are virtual: They exist, but in a formless way (Van Wezemael, 2008: 173). They merely create a potential, are not obligatory to be exercised (Van Wezemael, 2012), and they only become actual when used and deployed by a civic initiative, on behalf and when desired by the initiative itself. This in contrast to the more actual framework conditions mentioned above.

When situational, it concerns the awareness of actors of the potentials of opening up (cf. Loepfe, 2014). This last form of conditions is always situational and intentional. All cases show how important it is to find like-minded people and planning authorities who are willing to form associations around the changes envisioned by the initiative, to find others who are willing to turn away from the usual ways of doing. Finding those associations proves to be even more important and effective than to spend time convincing those that regard the initiative as threatening anyway. With regard to existing planning legislations and legal frameworks, the challenge is, time and again, to use, deploy, and refold them according to the interest of those involved. The ability to do so, however, depends largely on the resourcefulness of the initiators, their know-how and capacities,

and on the ability of the municipal officials. Municipal officials should know the extensibility of their own frameworks, the room for maneuver to interpret them creatively, and the possibility of changing or deviating from these frameworks, when considered opportune.

The planning strategy of creating conditions that "open up" and recognizing the possibilities to open up, answers to two aspects of assemblage thinking in planning: Provoking spaces of possibility and experiment in existing assemblages, and changing assemblages from an inactive, non-directional state to a space of agencement (Hillier & Van Wezemael, 2012: 316-318). Talking of "conditions" however, seems to create a distance between the condition maker and the condition user, between public authorities and self-organized initiatives. One very important condition that has been only touch on in this paragraph, is a condition that overcomes this distance. This specific condition answers to the third aspect of assemblage thinking in planning: The active creation of assemblages. This can be done through an intercession, a "going in between," the production of creative interference, as a way of generating agencement (Hillier & Van Wezemael, 2012: 327). This is explained by the following, second planning strategies in the age of active citizenship.

## 3. The need for navigators

The second planning strategy presented in this paper, addresses the period after a civic initiative has been set in motion, when the civic initiatives is gaining robustness and resilience over time. The trajectory of an initiative over time can be seen as the establishment of a new assemblage, and as a transition from the virtual to the actual. That this establishment of new assemblages is a core activity for planners, is affirmed in Post-structuralist planning. Assemblages are maintained by planners (Hillier & Van Wezemael, 2012: 313), but planners also play a pro-active role in creating them (Van Wezemael, 2012: 93). The actor-relational approach of Boelens can be seen as an operationalization of this pro-active creation of assemblages. Boelens uses the notion of translation for this pro-active engagement of planners in the forming actor-networks around spatial interventions (Boelens, 2009: 192; Webb, 2011: 274). Especially human actors have a role in forming these actor-networks, as within planning, according to Boelens, objects cannot be seen as self-acting, but are rather "mediated factors of importance," which only act through human representatives who put value to these objects due to their own self-interest (Boelens, 2009: 193; Balducci et al., 2011: 492). The forming of actor-networks then takes place through several steps, that imply the gathering around a certain matter of concern, the collection of resources, and the institutional anchoring of a certain solution (Boelens, 2009). This second planning strategy focusses on the specific role various actors take on in this gaining of robustness and resilience, and claims that "navigators" have a central position in this process.

As civic initiatives usually do not have all the resources available they need to materialize their initiative, they need to spend a considerable effort in collecting them, such as land, property, knowledge, procedural and legal competences, funding, investment capital, authority, and key positions within networks. These resources are spread among various actors, and in order to collect them, institutional barriers often need to be taken. In the cases, more than one actor was involved in

collecting the resources necessary to establish the initiative and actualize it toward a materialization in space, and more than one actor was engaged in setting up new projects and partnerships as part of the initiative. And although the actors who played a role in the move from expansion, contraction toward coding, were different in each and every case, in general it can be said that there were three main actor-groups: The case initiators or the spokespersons of the civic initiatives with their civic background, the governmental officials those who work in close distance to civic initiatives, or are the first entry points for municipal organizations with their public background, and connecting agencies who have a commercial or not-for-profit interest to support civic initiatives.

From the cases it becomes evident that the actors who contribute greatly to the collection of resources, the institutional embedding of the initiative, and its increased robustness and resilience, are most of the time people who are able to establish connections. They know their self-interest and perspective very well (as initiator, municipal official or third party), but are also very well capable of relating that self-interest to other actors and organizations. A vast amount of literature within management studies, policy sciences, public administration etc. has over the years given attention to this connecting role (Van der Stoep, 2013, Specht, 2012). These persons have been given many names, including knowledge and innovation brokers (Winch & Courtney, 2007; Klerkx & Leeuwis 2009), bricoleurs (Levi-Strauss, 1966; Cleaver, 2002; Padt, 2007), boundary spanners (Noble & Jones, 2006; Williams, 2002; Van Meerkerk, 2014), policy entrepreneurs (Kingdon, 2003; Zahariadis, 2007), street level bureaucrats (Lipsky, 2010), reflexive practitioner (Schon, 1983), deliberative practioner (Forester, 1999), everyday maker (Bang & Sorensen, 1999), everyday fixer (Hendriks & Tops, 2005), civic entrepeneur (Durose, 2009) or frontline workers (Maynard-Moody & Musheno, 2003; Hartman & Tops, 2005).

In the context of civic initiatives, boundary spanners are individuals who are able to make connections between the spheres of public, private, and civic actors (e.g. Alter & Hage, 1993; Williams, 2002; Van Meerkerk, 2014). According to Van Meerkerk (2014), boundary spanners are able to think beyond the boundaries of the organization they work for and represent, they are able to empathize with actors on the other side of organizational boundaries, build, and maintain sustainable relationships, organize a mutual exchange of information, and search for shared meanings. This enables them to understand the coding schemes and needs of existing institutional structures in relation to the emerging structure of a civic initiative, and negotiate a fit between an initiative and its environment (Van Meerkerk, 2014). Their role as active listeners and translators of needs enables them to establish durable relationships (Specht, 2012). As such, these boundary spanners bring in connections and legitimacy for the initiative. Additionally, both Specht (2012) and Van Meerkerk (2012) emphasizes the knowledge, capacities, and acquaintances (often from their own professional background) these boundary spanners bring in both to the civic initiatives that often lack specific knowledge, as the capacity for institutional actors to be flexible and move along with the dynamics of a civic initiative.

So far however, boundary spanners are described rather non-directional: they have to listen, empathize, and translate, but without necessarily taking or choosing direction. However, according to Van der Stoep (2014), civic initiatives also need mobilizing action, in order to overcome institutional resistance to change. They need clear and stable ambitions, that are relevant to other as well. The people who create this direction, have the same characteristics as the boundary

spanners: the ability to empathize and listen, and attentiveness to events, circumstances, and context. But what is more, according to Van der Stoep, these people are able to "sell" ideas, getting attention, and navigate targeted supporters' self-referentiality (tweak their conceptions in favour of the initiative). With this, Van der Stoep adds a certain notion of "direction" to the work of boundary spanners (Van der Stoep, 2014). This notion of direction is very much in line with what Hillier (2010, 2011) calls "strategic navigation." Navigation implies an embarkation point, a journey and a goal "to reach land," but without knowing the specific destination: "Trajectories are followed rather than specific end points." (Hillier, 2011: 90) In the context of civic initiatives (a practice which Hillier hardly addresses), strategic navigation can be seen as an ongoing experimentation toward possible futures, led by the "people on the raft," those people that are part of a civic initiative. They wonder whether anyone on board can tweak conditions so that outcomes (reaching land) become more favorable, they establish conditions for a safe journey while being underway, sometimes just looking for the path of the least resistance, constructing stories in fluid forms that retain the ability to change (Hillier, 2011: 87). At the same time, the people on the raft look for other rafts or ships heading in the same direction to become connected or coded to, ask people to join the raft, all in order to create the necessary stability for a save journey and reach land in the end. Just like boundary spanning, Hillier emphasizes that this practice is not possible without a constant transgression of boundaries. Moreover, strategic navigation is a performance of risk-taking, of not being in total control, of transcending the technicalities of planning practice, and to allow possibilities for something new to emerge (Hillier, 2011: 14).

As said, the notion of "navigation" adds a direction to "boundary spanning," but still with a flexibility to change and without a fixed and known endpoint. Whereas "boundary spanning" itself seems to relate mostly to the behavior of expansion and contraction, and sometimes coding, "navigation" relates back to the decoding of the initiators and other actors as their embarkation points and possible (though of) futures. Navigators are certainly not intermediaries that do not transform anything in transporting the course of action, but they are also not mere mediators (cf. Latour, 2005) like boundary spanners are, as there is a clear self-interest and thus direction involved in their actions as well. Therefore, this activity of connecting, seen in all the cases discussed in this thesis, as further discussed as "navigation," the main performers of this activity "navigators," and the second planning strategy that fits the age of active citizenship as "be a navigator."

However, navigators did not receive so much attention for nothing, as their role time and again proves to be as challenging as it is crucial. Navigators are like the outposts of organizations, and they neither belong to the environment nor to the official organization they represent. They will always be *in the middle*. This means that their performance often implies a critical reflection on the functioning and the ideas of their own organizations, that they more than often show inappropriate than appropriate behavior, that they can encounter forces of resistance or of institutional rigidity, easily become isolated, and most of all feel a tension between what their "home organization" expects from them and what emerges within the group of the civic initiative (cf. Peeters et al., 2010 in Van Meerkerk, 2014). Governmental navigators can be confronted with the institutional logic of their organizations, the accountability mechanisms of representative democracy, the pressure to follow internal guidelines and routines, a culture of project management in which projects have tight boundaries, and a sector structure of the governmental organization. These internal structures and mechanisms often do not match with the complexity and dynamics of contemporary governance

issues, nor with the dynamics of dealing with civic initiatives and can thus withhold the navigators from performing their activities (Van Meerkerk, 2014).

The empirical findings in the cases of this thesis however show, that the activity of navigation does not have to cause any problems. The role of the "governmental" navigator could be legitimized by the organizational structure (as a specific function), by regular planning legislation, or by acting in targeted and temporary partnerships around specific projects, in which they unambiguously serve the aim of their own organization. The role of the navigator can become problematic and challenging though, when no match can be found around specific projects or partnerships, or when the individual navigator empathizes with the initiative but is not able to find any anchor points within the organization. Then, navigators can become stuck between the interests of initiative and those of the municipality. For "civic" navigators, challenges are comparable, as they too function as outposts of the initiatives they represent, getting and keeping a group together during a very dynamic process of finding locations, setting up a legal plan, choosing financial schemes etc. They have to justifying their actions to be in the interest of the individual members of the initiative as well. When the group around the civic initiatives is more volatile, less effort is made in keeping a group together and legitimizing actions. However, sometimes questions are asked (by the municipality or by fellow residents) who these leading initiators actually represent. For the "commercial" or "not-for-profit" navigators, not many challenges are found, as the activity of navigation belongs to the core of their professional work, and they are only involved in the cases temporarily. The only risk they face is a financial one, when sometimes the facilitation of an initiative group demands so much more time and effort than foreseen.

Navigators need to be internally and externally connected, and need legitimacy within their own organization to do their job. When laying connections is their main professional and institutionally embedded task, the cases show that the challenges navigators face are mainly limited to practical issues around specific projects or issues. However, questionsmarks can be placed at whether any specific organizational structure will be the "right" one to led navigators do their work. Perhaps of more importance is whether an organization offers room for maneouvre and discretion, for improvisation and experiment (Specht, 2012), and whether recurring bottlenecks can be addressed and discussed, and whether a navigator is equipped by his organization with sufficient knowledge, skills, and information. This relates strongly to the conditions for opening up and being able to recognize the potentials for opening up. For governments this means they have to perform a double role. On one hand they need to fulfill their traditional role of representatives of the public, providing security, equity, and regulation by law, and living up to representation, entitlement, and status, accountability, legitimacy, scale, and order of governance (Swyngedouw 2005). And on the other hand they must facilitate the role of navigator within their organization. This challenge lies not so much in the preparation of plans, guidelines or procedures that make navigation possible, but rather in creating methods which with the navigators can legitimately move along with the dynamics of citizens' initiatives. But as navigation is rather an activity practiced by individuals than a specific institutional role, and therefore very performative, attention should also be given to the connective and relational capabilities, competencies, capacities and experience these navigators have (Van Meerkerk, 2014).

## 4. The flat ontology of planning strategy

***(Re-)Understanding planning***

Whereas the first planning strategy on creating conditions also still had a role for professional planners in mind, the second planning strategy that elaborated on the importance for navigators within professional organizations and within civic initiatives already suggested a certain symmetry between the professional world and the world of civic initiatives. The third conclusion goes even one step further, and reflects on processes of becoming, and self-organization as emerging assemblages as an *equivalent of planning*.

Renowned planning theorists stress as the core of spatial planning, the (collaborative) development of strategies (Hillier, 2011), creation of collective awareness around spatial issues (Forester, 1989), designation of collective concerns and ideas about physical environments (Healey, 2007), and an operationalization these ideas with vision, coherent actions and means for implementation (Albrecht, 2006: 1491, also in Loepfe, 2014; Van der Stoep, 2014). Additionally, some Dutch practitioners have explained planning as the interaction between a given situation and a new program (Frieling, 2007), or as the shaping of the best reciprocal interaction between space and society, such for the sake of society (Cie Van Veen, Den Haag 1972 in Boelens, 2005; Vermeersch 1994 in Leinfelder, 2007). Without explicitly stating so, these theorists and practitioners clearly have a professional planner in mind, more than often working on behalf of public government. A post-structuralist understanding of spatial planning opens up to the idea that "*all* actants are engaged with some form of spatial planning and that decision-making is the emergent outcome of the interplay between this multiplicity of activities" (Hillier, 2007: 271), and that governments and their agencies are not the only nor the most prominent actors in space, but that various actors in business and civic society are as important (Kreukels, 1985; Boelens et al., 2006). However, planning strategies that follow from this post-structuralist understanding still seem to have a hard time to think beyond the idea of a professional spatial planner.

Therefore, a short look is taken at how "planning" is defined outside the field of *spatial* planning, within psychology and organizational studies. By doing so, the intriguing view of Portugali is followed, who sees planning more as a basic cognitive capability of humans than as a pure professional activity (Portugali, 2011). In psychology, planning is defined as thinking of a way to achieve a certain goal or desired action (Morris & Ward, 2005), and the ability to bring these thoughts about a desired goal to actualization through organizing activities and taking actions (Ajzen, 1991). This understanding of planning is also found with the organizational studies of Mintzberg (1994), who sees planning as a thinking about the future, and a consideration how such a future might be brought about through actions, that are embedded in collective decisionmaking and a societal context (Dror, 1971; Mintzberg, 1994). This view corresponds with the idealism that De Roo et al. (2012) sees as an instrinsic mind-set within planning practice. According to De Roo et al. (2012: 7), planners compose and suggest desired outcomes to tackle difficulties faced at a particular time and place. These ideas about what would be better are mental pictures about "reals-to-come," ideas on how to improve things. Plans, in this perspective, are expressions of such intentions (Mintzberg, 1994) and are made everywhere, at all times, in various spatial and time scales, comprehensive, specific, initiated by public, business, and civic actors. But despite their diversity, all plans head in the

same direction: Toward the future, and an envisioned and desired spatial change. It is the ability to express such intentions and put them to action is what turns people into spatial planners.

However, the distinction between intended and unintended behavior or action is often difficult to make (Ajzen, 1991; Wildavsky, 1973). Again, then, Mintzberg provides perspective by introducing the term "strategy," as a certain consistency, or pattern in behavior over time (Mintzberg, 1994). This pattern in behavior can then either be intended and deliberate with an overall goal in mind, but also be emergent out of a chain of little ideas or initiatives (Mintzberg, 1994). This view on planning as a mix between intentionalities and behavior (cf. Ajzen, 1991) brings into perspective the equivalence of planning and self-organization, as the process of organizing (activities, behavior) the actualization of a self (intentions, intentionalities). It also softens the relation between the term planning and the formalized procedures, rationality, integrated system of decisions and formalized documents it is often associated with (Mintzberg, 1994). By seeing planning as behavior, planning becomes performative, a consistency of behavior and intentions as part of the virtual, and individual actions, organization of, and interventions in space as part of the actual world (Hillier, 2007). In this line, the term "planning strategy" (not to be confused with strategic planning), addresses deliberate or emergent patterns of behaviors to achieve a certain goal within a world full of other intentionalities and behaviors and (with a wink to Mintzberg) formalized procedures.

"Translation" as derived from actor-network theory concerns the process of making connections between things that gain consistency along the way. This process of ordering can be seen as an equivalent of self-organization as the emergence of networks. In the literature concerning translation, it is described how translations can be collateral and unintentional, but also how translations can be the result of purposeful and deliberate action. Collateral translations happen incidentally, along the way, unintentionally, and they often remain quiet and uncontested. They happen for instance when actors accidently encounter in space, or when a person without intention provides orderings of situations at hand by telling others how to see things (Law, 2009a). Purposeful and deliberate translations happen pro-active and intentional, aim at establishing something envisioned, and are a performative process of network building, of creating links between actors and factors that were not linked before (Law, 2009b; Latour, 2004; Mol, 2002a). Both views on translation are possible. Full collateral translation is hard to make, as actions by individuals will always to a certain extend be intentional. Intentional translation, on the other hand, is often partial, incomplete, more or less local and implicit. Even the most intentional practices are still surrounded by a world which is "messy, multiple, heterogeneous, constantly escaping the precarious orderings of even the most determined." (Law, 2009b: 11) In the case of civic initiatives, this mix between collateral and purposeful translations, can be described as quasi-intentionality. For civic initiatives, the eventual physical intervention might not have been entirely envisioned beforehand along a prefixed plan, and people in the initiative might not know exactly where and how they will end up, and what the spin-off of their initiative might be, as many collaterals happen during its process of becoming. But still, civic initiatives always contain a certain degree of intentionality. Regardless whether they have an idealistic motive or a personal, individual interest, there is always a reason why they start organizing something new, by themselves.

***Twelve archetypical planning strategies***

So what behaviors and intentionalities can be found in civic initiatives, in order to improve things and actualize the desired "reals-to-come"? Firstly, three intentionalities are distinguished in translation, that are not sequential, but rather relate to their intensity, degree of activity, and interaction with their environment. All three intentionalities have collateral features as well.

1) The first intentionality is *interfering for change.* This intentionality is based on the understanding of translation by Mol (2002a, b), that focusses on how things have been made better, according to the actors involved. What is better, is of course no pre-given truth or fixed optimum, but rather something that is normative, situated, contextual, and thus constructed as entity within the network (Mol, 2002a). Interferences for change that come from that normative, situated, and contextual perspective, aim at shifting the object of treatment, in order to counter deviances that are felt or considered as incommodious to the translation of the network. There is no question on what the best interference might be, but only the question of whether it effectively solves a certain problem or addresses a certain need within particular circumstances, according to those involved (Mol, 2002b; Law, 2009b). With this emphasize on interference, the urban environment is no longer a "single passive object in the middle" (Mol, 2002a: 5), but it is talked upon, and the delineation of problems in the environment is followed quickly by foregrounding practicalities, materialities, the pro-active creation of events that not only aim at changing the understanding of the physicality, but also aim at changing the physicality itself (Mol, 2002a: 12). Space is being re-done (cf. Metzger, 2011) according to the potentialities the initiators see. Interferences for change are thus very situated actions in time and space, with a high intensity directed not so much toward the self of the initiative but rather at changing its environment. In civic initiatives, interference for change, the initiative may be short term, very issue based and materialize in a temporary event, a small scale intervention, for instance an art project or a temporary redecoration of a street. The intervention then for instance focused on creating awareness, or a new understanding of a certain place.

2) The second intentionality is *networking for a fit*. In this intentionality, a network is gradually strengthened, expanded, and made thicker. Events and networks are knit together around new and emerging meanings, and creating a context around an idea (Latour, 1996: 119, 133). Grouping around meaning concerns how unity, a common world, and a common good are established among the components of the emerging network through the reassembling of facts and values, a movement toward potential unification (Latour, 2004). In spatial planning, this intentionality refers to the collection of resources needed for the realization of a spatial intervention (Boelens, 2009). Spatial planning itself can be seen as a process of network-building, in which entities of various kinds are assembled in ways that allow the network to undertake certain functions. It is a process in which actors with a certain interest and willingness to invest in their local environment out of more or less self-interest, engage in organizing and networking meaningful spatial connections, and the means, such as land, finances, buildings, permits etc., to achieve their goals (Boelens, 2009; 2010). Compared to *interfering for change*, the intentionality of *networking for a fit* happens in a more continuous way, and with a slightly lower intensity. Its relation with its environment is one of mutual influence, compliance, and fluidity, and its goal is to achieve an optimal fit

between the idea and the physical environment, so that this idea can materialize into an actual physical project. The main focus is on trying to find a fit between the internal world of the initiative and the external environment, in a process of mutual reconstitution, and its aim is a gradual strengthening of a network by collecting resources and knitting together events and interests. The civic initiative aims at materializing a project that is meant to be there to stay. What the initiative is looking for, is the right environment to realize their idea in, that fits best to their ideas.

3) The third intentionality is assemble to maintain, an intentionality that is found in more or less stable networks focused on maintenance, homogeneity, and coherence (Thrift, 1996; Hillier, 2007). It concerns strong and tight networks that, despite their heterogeneity, work in unison. These networks provide resources for their components but restrain them as well. They work as sorting machines in favor of their own emergence and maintenance (Van Wezemael, 2010: 290). In this intentionality, "translation" concerns the continuous effort to maintain coherence, homogeneity and effectivity, a consolidation of goals, and providing a base for security and stability (Hillier, 2009; Latour, 2004; Thrift, 1999). Assembling to maintain is continuous in time and space, its intensity is much lower, and its relation with the environment concerns not so much the environment itself but rather the maintenance of the self within that environment. The assemblage is more internally oriented compared to the other intentionalities, and can sometimes even be a little constraining. When this intentionality is dominant in a civic initiative, the initiative aims for creating a stable community and improving parts within that community.

Secondly, the theoretical hybrid of complexity and self-organization (Luhmann, 1996; Cillier, 1998; Heylighen, 2001), actor-network theory and translation (Callon, 1986; Thrift, 2000; Latour, 2004), and assemblage theory and individuation (DeLanda, 2002; 2006), allows to distinguish four forms of behavior in emerging civic initiatives.

1) The first behavior is decoding, which refers to a disassociation from the usual, the desire to try something new, the will to change certain conditions, to step out of usual ways of working, to disassociate from existing schemes, and the articulation of a new direction to be taken. This behavior builds upon the notions of de-coding from Assemblage Theory, bifurcations from Complexity Theory, and problematization and perplexity from Actor-Network Theory. In a civic initiative, decoding reveals the conditions the initiative aims to change or leave behind, and why other actors are willing to leave behind their routines and associate to the initiative as well.

2) The second behavior is expansion, which refers to a widening orientation, open boundaries, exposure, exploration of new content, possible resources, and new actors in new constellations. It is about creating diversity, connectivity and redundancy of plans, ideas, content and actors – trying to be as broad, informed and open for new and different options and actors as possible (Van Meerkerk et al., 2013). This behavior builds upon the notions of dissipation from Complexity Theory, interessement from Actor-Network Theory and de-territorialization from Assemblage Theory. In a civic initiatives, expansion explains how the

initiative becomes embedded in a wider context, increases in scale and acquires relevance. It tells about who is consulted, what new actors are included, what different options for the initiative are assessed along the way, how the focus of the initiative broadens, what exposure is made or given to the initiative – all in order to make the trajectory of the initiative evolve further over time.

3) The third behavior is contraction, which refers to a closing off or narrowing down through selection, explication, a consolidation of content and resources, a stabilization of actor constellations. The behavior concerns self-reproduction, a strengthening and articulation of boundaries, exclusion of otherness, and the setting of internal hierarchy and order. A variety and redundancy of plans, content and actors is countered in a selection and sorting process (Van Meerkerk et al., 2013). This behavior builds upon the notions of autopoiesis from Complexity Theory, enrollment from Actor-Network Theory and Territorialization from Assemblage Theory. In a civic initiative, contraction explains how the 'self' is internally stabilized, what choices were made, how the identity, binding principle, and boundaries are maintained, and what organizational form was chosen.

4) The fourth behavior is coding, which refers to the elements that turn the initiative into a black box, but also into something familiar, something obvious, something common that fits existing schemes in the outside world. With coding, the initiative grows heavy with externally recognized norms, that make it stable, fixed and strong. This behavior is build upon the notions of coding from Assemblage Theory, mobilization of Actor-Network Theory and equilibrium from Complexity Theory. In civic initiatives, coding reveals how the trajectory of the initiative is smoothened by following already existing codes, by developing new codes of its own, what was learned from the case and turned into something 'normal' and 'repeatable' and how the initiative eventually materializes in space.

The four forms of behavior are of course interrelated. Decoding individualizes, whereas coding de-individualizes into something common. Expansion creates external robustness as it enlarges the network of the initiative, contraction creates internal robustness as is strengthens the internal cohesion. An emerging civic initiative should thus not put too much emphasize on either one: too much coding might alienate the initiative from its self, too much decoding might alienate the initiative from its environment, too much expansion could disintegrate the initiative internally and too much contraction could disintegrate the initiative externally. As none of them forms an independent self-organization process, the initiative should thus cautiously showcase all four behaviors, not sequential but simultaneously. Also the three intentionalities presuppose each other. An interference for change presupposes a network that is able to interfere. And this network has to "become", before it can be, find a fit with its environment, and is actually able to maintain itself. So even though interference for change, networking for a fit, and assembling to maintain are different forms of intentionalities, they cannot exist without each other. When drawing up a schedule with decoding, expansion, contraction, and coding on the horizontal axis, and these three intentionalities on the vertical axis, twelve ontological archetypical planning strategies show up.

*< Figure 3 Twelve archetypical planning strategies. >*

| | **Decoding** | **Expansion** | **Contraction** | **Coding** |
|---|---|---|---|---|
| Interfering for change | *Showing what should be changed in order to point out the need for a new direction.* | *Exploring different options and opinions in order to point out possible futures.* | *Emphasizing the like-mindedness and common grounds in order to create support for a new direction.* | *Setting up rules and regulations in order to make a change happen.* |
| Networking for a fit | *Changing things and leaving behind old practices in order to move along and find a fit with the environment.* | *Exploring different options and opinions in order to move along and find a fit between the initiative and an environment.* | *Creating like-mindedness and common grounds between the initiative and its environment.* | *Using exitsing and new rules and regulations (and sometimes tweaking them) in order to find a fit between the initiative and its environment.* |
| Assembling to maintain | *Defining what should be changed in order to maintain the quality and stability of the assemblage.* | *Disseminating and exploring different possibilities of and for the assemblage, in order to strengthen its stability and legitimacy.* | *Defining like-mindedness and common grounds in order to maintain the stability and strengthen the durability of the assemblage.* | *Upholding rules and regulations in order to maintain the security and stability of the assemblage.* |

This overview of twelve ontological archetypical planning strategies, all enacted within civic initiatives, show how diverse planning strategies deployed by, and in response to civic initiatives, can be. Some civic initiatives perhaps focus a bit more on “assembling to maintain”, when a community already exists but want to become more pro-active. Some civic initiatives focus a bit more on “networking for a fit”, when it is a specific project thy want to realize. And some civic initiatives focus more on “interfering for change”, when their main aim is address a certain need or envisioned change. With the overall aim of materializing a civic initiative, the four forms of behavior more or less explain how the initiators deal with the interaction between their selves and the environment. The three intentionalities more or less explain the intrinsic drivers of the initiative and how the initiative aims at making a difference in its environment. However, various planning strategies can be present in one case simultaneously, through the involvement of various actors, and because actors can also apply multiple strategies simultaneously, and even switch between strategies. These twelve archetypical planning strategies thus never stand alone, and there is a certain need for diversity in planning strategies to materialize civic initiatives and their projects. This overview of planning strategies is therefore not an attempt to provide an overall structure to categorize initiatives and their planners, but is rather a method that can help in creating understanding of difference and diversity of planning strategies, and moreover, the need for that diversity and difference. The resulting strategies are not strategies that head for a specific and well delineated end point, but are rather ways of navigating in a certain direction while retaining the flexibility for change and without a fixed and known endpoint.

***Planning strategy as a flat ontology***

What is remarkable though, is that when various cases of civic initiatives and the behavior and intentionalities of all actors involved are plotted on this scheme of planning strategy, it becomes evident that there is no significant difference between the planning strategies performed professional, public or formal planners on one hand, and civic, lay or informal planners on the other hand (apart from a little more presence of public actors in the fields of coding). Of course, resource interdependence is a bit more pressing among civic actors, as civic actors often do not possess a significant set of means like public or business actors often already do. In line with "assemblage planning", everyone who plays a pro-active role in the creation of assemblages can be regarded as a planner - even though their "assemblage of concern" can differ among civic, business, and public actors (an individual interest, an community initiative, a commercial project, a neighborhood or city, society as a whole)..

This symmetry between professional and lay (Specht, 2012), public and civic (Boelens, 2009), formal and informal planners (Portugali, 2011) is reminiscent of what Latour (2005) and DeLanda (2002) call a "flat ontology". In a flat ontology, no transcendent principles or essences exist, but only unique, singular individuals who can differ in spatio-temporal scale but not in ontological status (DeLanda, 2002). This flat ontology is for instance found in the symmetry human and non-human actors in Actor-Network Theory. Even though within planning, non-humans cannot act as proactive normative agents the way in which planners act, and can thus only act in decision making processes when represented by humans (Boelens, 2009), the ontological status does not differ between human and non-human actors. A flat ontology for planning strategy, implies a rejection of all a priori existing scales or hierarchies, and sees organization – and thus scale and hierarchy – as the outcome of interactions between particular, historically locatable entities (DeLanda, 2002). The difference between planning actors lies within the training on certain skills and employment to serve the common good of professional, public and formal planners, and the specific self-interest, and presupposed inability to think beyond that self- interest of lay, civic and informal planners. The hierarchy that evolves from this difference (professional is better than lay, public is better than civic, formal is better than informal) does not exists a priori, but has evolved from the interactions between planning actors and processes of urban development *over time*. Civic and public, lay and professional, informal and formal planners differ in scale and hierarchy, but as the above overview of ontological archetypical planning strategies shows, they do not differ in ontological status. The way in which civic initiatives emerge, define their goals, and materialize their intentions toward actual physical interventions in space, does not differ that much from the way in which public authorities plan, or the way in which planning agencies work.

Introducing a flat ontology of planning strategy serves a specific goal: "Action is possible only in a territory that has been opened up, flattened down, and cut down in size in a place where formats, structures, globalization, and totalities circulate inside tiny conduits, and where for each of their applications they need to rely on masses of hidden potentialities." (Latour, 2005: 252). When one primarily looks at the ontological status (intentionality met with behavior) of planning strategy, the flat ontology can help overcome any dichotomies and paradoxes that exist in planning and civic initiatives in spatial development. Now it shows, how civic initiatives neither follow from the planning system a priori nor are obstructed by the planning system per se, but rather how the planning system becomes alive, and is performed *through* these civic initiatives.

In a flat ontology of planning strategy, planning is seen as a performance that does not differentiate between professional or lay, public or civic, formal or informal actors. The flat ontology should enable all planners, including professional ones, to empathize and understand different kinds of behavior, intentionalities, and planning strategies performed by other planning actors encountered, including civic ones. By taking the various archetypical planning strategies in consideration, the professional planner should be able to not solely react on the behavior shown in the cases, but is able to discern the intentionalities of the initiatives.

## 5. The art of creating consistency

The flat ontology of planning strategy does not mean however, that professional planners have become obsolete in the age of active citizenship. So far, all the planning strategies mentioned in this paper, took individual civic initiatives as starting point, and focused planning strategies developed and applied within and in close interaction with these individual cases. Now, at the end of this paper, time has come to transcend this individual level and to consider the consequences of the emergence of a multitude of planning actors and initiatives within a certain territorial environment. Not in the sense of cities as self-organizing systems upon which the planner acts as an external force by introducing new planning policies (Portugali, 2011), as this view would not enable the planner to move beyond the safe confines of a governmental-led, disciplining, and inclusionary planning practice with frameworks and procedures. Instead, this paper argues that even professional planners who work with a multitude of civic initiatives, should not only focus on their spatial outcomes, but should continue to reason from every individual emerging civic initiatives itself. After all, "each urban agent is a planner – be it a single individual, a firm or the city's planning team – and the city comes into being out of the interaction between the many agents *and their plans*." (Portugali, 2011: 288, original emphasize). This approach to self-organization refers to the idea that various actors plan and take initiatives at the same time, in a distributed fashion, and in networked, open, and dynamic ways. Complexity exists because no single actor can oversee all the dynamics of these self-organizations simultaneously taking place, can neither predict the starting points for such new ideas, nore control the dynamics that occur after initiation, or allocate these outcomes to an individual initiating actor, making spatial developments in principle unpredictable and uncertain (Rauws & De Roo, 2011:272).

Researchers and planning professionals are very much struggling with this complexity, as it is difficult for *any* actor to fulfil the seemingly endless and conflicting needs and demands of society, to deal with the multitude of self-organizing actors in processes of governance and spatial becoming, interferences of external events, unforeseen coincidences, and unexpected changes in what actors do and say (Boons et al. 2009: 249). Such complexity cannot be managed solely by traditional comprehensive approaches with a focus on command and control, by strategies that build on collaborative and communicative planning approaches (Rauws & De Roo, 2011:272). But still, professional planners *do* have a meaningful and active role in the management of change. Not for the sake of change itself, as for instance transition management argues (Rotmans et al., 2012), but change for a better reciprocal relationship between space and society, such for the sake of society and the promotion of a sustainable development of places (Boelens, 2009; 2013).

What self-organized trajectories have in common, is that they move toward self-desired futures, mutually affecting each other *without losing their selves*. This is important, as within all the opening up, navigation, and empathizing in the age of active citizenship, one can easily become footloose and empty when loosing sight of one's own self. Therefore, a strong awareness of the self of a civic initiative, even if this self is normative, situated, contextual, and constructed along the way, is crucial in its process of becoming. A clear direction, but with the flexibility for change and without a fixed endpoint, is of utmost importance for civic initiatives in order to connect, align, and respond at all. This is not only important for civic initiatives, but for everyone who is entangled in heterogeneous processes of spatial becoming. Also professional spatial planning "takes part in an ongoing struggle against those whose 'reading in space' could take priority, and could better be attached to new meaningful interrelations and therefore possible manage identities." (Boelens, 2009: 31) Within a multitude of emerging networks, each individual planner has a self, a frame, a vision on how to improve things and goals to achieve. Awareness of such selves is especially needed in moments of uncertainty, as they can provide a feeling of consistency. Without that feeling, "quick closures" become very probable (Loepfe, 2014: 209-210).

And quick closure are not what the age of active citizenship asks for. Instead of closing down the opportunities civic initiatives offer for the viability of spaces, and the social, economic, political, and spatial benefits they bring, their diversity and creativity should not be frustrated and superseded by the inclusionary and disciplining practices that so often prevail in planning. Instead, the age of active citizenship asks for dynamism, diversity, openness, experiment, flexibility, navigations etc. Moreover, the age of active citizenship asks for a baroque harmony, in which different and independent voices are brought together through a web of reciprocal reference, interacting with each other and harmonically interdependent, but never loosing ones individuality and independency in rhythm and contour (cf. Kwa 2002). The age of active citizenship asks for co-evolution, in which various trajectories and their environment are seen as interdependent (Gerrits, 2012), and adapt to each other in a non-linear ways (Teisman et al., 2009). Spatial co-evolution as spatial developments resulting from interactions between multiple scales, at various localities, or from various perspectives (Rauws & De Roo, 2011). Institutional co-evolution as a transformation of existing institutionalized practices, organizational changes, and mutual adaptation of roles (Morçöl, 2005; Van Meerkerk, 2014). Such co-evolution, in which multiple trajectories move forward to their self-desired futures, affecting each other without losing their selves, with reflective insight in their own and other's selves, can very well happen collateral and unintentionally. But co-evolution can also be deliberately enhanced, which brings in to the final planning strategy in the age of active citizenship: The art of creating consistency.

***The art of creating consistency***

Baroque harmony, in which different and independent voices are brought together in reciprocal reference without losing their independency in rhythm and contour, corresponds to the heterogeneous processes of spatial becoming post-structuralist planning approaches speak of. In these processes, or in this baroque harmony of planning, professional planners are certainly "not the director, nor store manager, let alone an orchestra leader." (cf. Boelens, 2009: 31) Professional planners are just one of the many voices, one of the many performers. The harmony they can create does not follow from disciplinary frameworks or inclusionary procedures, but much more from their

ability to relate, to empathize, to build upon the performances of others (the twelve archetypical planning strategies can be instrumental in this), and to "create consistency." Consistency not in the actual sense of coherence and sameness in the appearance of spatial performances planners engage in, nor in the sense of genuine discussion and undistorted consensus. Consistency rather in the Deleuzian, virtual sense, in the sense of moving in the same direction, not because of frameworks telling to do so, but by actively empathizing with the emerging selves, by knowing and supporting their and one's own intentionality, and by making strategies as open and known as possible. The flat ontology of planning strategy was about recognizing consistency in intentional behavior within an individual initiative. Now the challenge is to recognize consistency, but also the inconsistencies and potentials for improved consistency in actual urban developments, and to pay attention to the non-intended non-individual forms of emergent spatial strategies (Loepfe, 2014: 128).

The art of creating consistency comprises that planners are able to recognize the potentials of specific and detailed projects of civic initiatives for longer-term futures, and that planners are able to strengthened these initiatives by new and additional specific and detailed plans that move in that same direction. Such planning allows immediate actions and adaptations, and simultaneously allows for the building robust associations and visions along the way (Balducci et al., 2011). To achieve such a planning, the proposition would be to scan the various becoming selves and explore what potentials there are for consistency between them. This consistency can be created by affecting the internal dynamics of self-organization without controlling the behavior of individual citizens or by imposing blueprints (Rauws, 2015). Creating consistency should then be a task for professional planners, a task that concerns: Relating civic initiatives and other spatial interventions to each other, considering measures to increase the robustness, resilience, and sustainability of the outcomes of civic initiatives; think on how civic, public, and private interventions in space can add up to each other, and what areas could benefit from additional impulses for and by civic initiatives.

The first move for the professional planner is then to be aware of any emerging consistencies and inconsistencies. The ultimate goal of creating consistency for professional planners is of course the development of qualitative and sustainable places, resilient and robust cities. Professional planners can for instance be concerned about the influence initiatives have on socially and environmentally "just" form, and be leading in the potential consequences of certain interventions for different actants (Hillier, 2011). Professional planners can also be concerned about inconsistencies that emerge out of a fragmented development within a certain territorial environment, due to the various autonomous drivers affecting areas (Rauws & De Roo, 2011: 280-1, see also Rauws & Van Dijk, 2013). The second move is to actually act upon the potentials for consistency. Connect fragmented developments and turn them into clustered patterns in order to make the area benefit these drivers (Rauws & De Roo, 2011: 280-1, see also Rauws & Van Dijk, 2013). Suggest alternative ways or trying to activate other actors that can add to the consistency in which a certain area is moving (cf. Van Wezemael, 2012; Boelens, 2009). The notion of strategic navigation introduced in conclusion two, can be instrumental in this. But now navigation not just between an individual initiative and its environment, but between many initiatives emerging at the same time. Navigation as the art of finding viable paths into the future, negotiating unknown terrain and unprecedented complexity, creating links between places that do not belong to the same world.

When this “art of creating consistency” is mastered by planners, a planning practice can grow in which heterogeneous processes of spatial becomings can evolve in synergy and consistency with each other. Planning “from and with, instead of against, differences, fragmentations, uncertainties, complexity […],constitutionally interrelated, plural, heterogeneous and always ‘becoming’, instead of pre-determined, structured and/or locked into itself.” (Boelens, 2009: 555). A planning practice in which civic initiatives can thrive, and that enables society to take the full benefits of the age of active citizenship.

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# PLANNING'S 'FAILURE' TO ENSURE EFFICIENT MARKET DELIVERY: A LACANIAN DECONSTRUCTION OF THIS NEO-LIBERAL SCAPEGOATING FANTASY

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*Our contemporary neo-liberal governance model often places a heavy burden on planning to take the 'responsibility' for the failure of market-lead governance to successfully deliver its policy promises of betterment, security and, consequently, future enjoyment. These include promised, but often unachievable policies, such as those of increased global competitiveness even for areas of structural economic and population decline; or housing affordability in areas of significant population growth and constrained land availability. Resultant policy failures then tend to result in a scapegoating response where planning is held responsible. Examples include that economic development, or housing affordability, is directly obstructed as a consequence of planning impediments, such as unnecessary regulatory controls or process delays. All of which are claimed to hamper efficient market delivery, hence 'planning' is to blame.*

*To deconstruct this neo-liberal fantasy that planning often impedes, or fails, in its responsibility to ensure policies for market-lead success, the paper will first document several exemplars of this scapegoating process. It will then briefly explore the role of fantasy and ideology in governance policy formulation and, from a Lacanian perspective, the theorisation that underlies this process. Having laid the necessary foundation, it will then investigating the role of the 'scapegoat' in ideological fantasy formation for public policy facilitation so as to explain why planning is often placed in this role, and why this role is often ideologically necessary, at least for neo-liberal governance, when planning undertaking its statutory responsibility of facilitating the public interest.*

## 1. Introduction

In numerous countries, especially since the 2008 world recession, planning has been placed in the role of scapegoat for neo-liberal governance policy failure. Indeed, since at least Van Hayek's (1962 [1944]) arguments that bureaucratically directed state planning must be inherently inefficient in comparison to the steering mechanism of the 'invisible hand' of the market, planning has been repeatedly castigated as an impediment to human freedom and unfettered growth. This is particularly the case in our contemporary world constituted by a hegemonic ideology of neo-liberal globalisation where consumer choice, competition and the market is enshrined as supreme; furthermore, this ideological perspective also largely underpins and frames contemporary planning (Gunder, 2010; Metzger et al, 2014; Taşan-Kok and Baeten, 2011).

Yet, even in our neoliberal world there is still a recognition for the need of governance regulation on matters of conflicting landuse, public safety and environmental protection, as well as a need for strategic planning to give spatial governance expression to the future co-ordination of the economic, social, ecological and cultural dimensions of a geographically defined polity, especially for infrastructure and related public policy interventions (Sager, 2013). However, this often positions planning in the frame as an impediment to the effective workings of the market. Here, planning can become a readily-to-hand scapegoat for contemporary governance policy failure when it is asserted

that planning policy and processes are impeding or distorting an efficient and hence competitive market place (Allmendinger and Haughton, 2014). This paper will explore the role of planning in this light from the perspective of ideological fantasy formation.

This exploration is important because it sheds light on a necessary responsibility of planning to often act as a key statutory check and balance against negative market externalities and even outright market failure. Yet, this is a responsibility that often positions planning as the 'scapegoat' impediment in opposition to popular aspirations for a superficially better entrepreneurial world without regard to the consequences, such as those created by unfettered growth. This paper argues that planning, when undertaking its statutory empowered responsibility of looking after the public interest, also often provides additional value-added to society, or at least factions within that society, by providing governance with a justification, or scapegoat, as to why its policies and the promises that they make are failing. Further, this justification as to why a policy, such as the provision of accordable housing, is being impeded, by the identified 'villainous' agency of planning, actually helps to sustain popular believe that the fantasy promised, such as affordable housing for all, will eventually be fulfilled, once this scapegoat is appropriately dealt with. But, of course, the latter never somehow occurs, since planning actually performs a necessary and important regulatory function and, as this paper will discuss, the actual impediments to policy success are generally more fundamental and have little correlation with planning agency.

Moreover and essentially, the initial promised fulfilment of generally any policy that contains 'feel-good' utopian values, of easy liveability, affordability or global economic or other similar desirable success, is eventually displaced and supplanted by new desirable policy promises (Gunder and Hillier, 2009). These subsequent promises provide resolution of more recently emerged issues requiring address, so as to engage with these newly emerged 'pressing' problems and fulfil a polity's resultant newly constituted 'most important' desires. At least that is, until the policy circle continues into its next evolutionary cycle of promises and subsequent impediments to their resolution (Gunder, 2015). With planning often playing important, if diverse, roles including that of policy implementer and sometimes that of policy impediment, at various stages of this evolving governance process, with the popular media also often contributing an important role in disseminating information and shaping ideological attention about the policy process and why it is, or is not, succeeding (Clifford, 2006; Gunder, 2011, 2015).

An understanding of the ideological fantasy dimensions that underlie this process is important for both planning theorists and practitioners, as it will better assist both groups with their academic or professional practice in the wider social world. Further, this understanding, at least as developed in this paper, is very much at odds with the dominant neo-liberal worldview and its simplified utilitarian economic underpinnings. This is because 'economics ignores the role of the unconscious and fantasy in market behaviour'; in contrast, the psychoanalytically derived philosophical approach drawn on in this paper 'is determined to bring such forces to the limelight', for 'psychoanalysis and economic reflection are no strangers' in the works of both Freud and Lacan from which this perspective is derived (Stavrakakis, 2012, p.2293). Further, one 'can summarize two steps [that] the analytical and critical benefits of focusing on fantasy [provides]… how fantasy may serve to bolster certain ideas that are not only contestable but also normatively suspect [and]… it reveals how a subject can get hooked into its logic, in the sense that the subject becomes strongly attached to or gripped by it' (Glynos, 2012, p.2406).

In understanding the ideological dimensions of public policy implementation, Stavrakakis (2007, p.180) argues that a traditional scientific focus on knowledge and rational textual argument is inadequate, rather he contends that 'we need to shift our attention from knowledge and consciousness

to another level, to the level of an often unconscious enjoyment'. In this regard, this Lacanian derived approach supplements discourse theory by adding an extra-discursive element to the conceptual framework, which is the subject's conscious and unconscious relationship to desire and enjoyment (Žižek, 1989, p.125). Importantly, 'the Lacanian concept of enjoyment is necessary to explain why some discourses', even though they are internally illogical and 'incoherent are preserved and maintained over time' and may even constitute dominant public policy narratives (Engelken-Jorge, 2010, p.77).

In this regard, failing fantasy narratives are 'commonly sustained through positing scapegoats, and in the case of neoliberalism the chief scapegoat is the opposition of free trade, namely socialism—or rather, the "paranoid construction" of a caricatures and stereotyped socialism ostensibly corrupting the capitalist system' (Fletcher, 2013, p.806). And is not the term 'planning', perhaps with the words 'state' and 'central' removed and perhaps 'spatial' added, not the main bureaucratic apparatus of this chief scapegoat remaining under contemporary neo-liberal governance, especially after the demise of socialism across much of Europe and the rest of the world (Allmendinger and Haughton, 2010)? Accordingly, does this not rather sets up spatial, or other, 'planning' as the chief remaining scapegoat of neoliberal governance, even though society needs this important regulatory apparatus of spatial planning for governance to function, especially at the local area level, as even Margret Thatcher was forced to implicitly acknowledged some thirty years ago (Allmendinger, 1997)? Indeed, Fletcher (2013, p.806) asserts that 'socialism (in the guise of state regulation) serves just this role within the fantasy space of neoliberal discourse'.

To deconstruct this neo-liberal fantasy which asserts that planning often impedes, or appears to fail, in its responsibility to ensure policies for market-lead success, the paper, after first documenting examples of this scapegoating process, will introduce an outline of the basic Lacanian theoretical conceptions of the subject, fantasy and desire. It will then briefly explore the role of ideological fantasy in governance theory (Gunder, 2015), prior to investigating the role of the 'scapegoat' in ideological fantasy formation for public policy facilitation, so as to explain why planning is often placed in this role.

Prior to beginning this important exploration, it is important to establish that the concept of an ideological fantasy is not just the illusion attributed by Marx as false consciousness, 'which pits "misrecognition"… against a "true objective knowledge"', even though there are dimensions of illusion often embedded in ideological fantasy, as will be discussed in the following sections (Glynos, 2001, p.193). Indeed, scholars 'have for a long time recognized that the issue of contested realities goes much deeper than a "false-consciousness" picture of the world suggests' (Glynos, 2014a, p.185). Rather than differentiating between a dichotomy of either an objective social reality somehow knowable via representation through rigorous scientific enquiry versus an alternative of delusional fantasy, this paper's psychoanalytical constructivist understanding positions fantasy, 'animated by logics of desire and enjoyment', covariant with one's discursive interests and principles, which are constituted by normative justification and epistemological scientific validation, as **both** facilitating the organisation of a subject's social reality and, where collectively shared, that of a subject's wider culture (Glynos, 2014a, p.185). In doing so, fantasy's contribution simplifies society's anxiety provoking complexity as well as its many inconsistencies and uncertainties, resulting in an apparent social reality that appears as a coherently materialised, yet simplified, whole (Gunder, 2011a, p.333). From this perspective, any society's shared social reality is, and will always remain, highly ideological and any resultant dominant consensual worldview is hegemonically successful largely through its promises of security, harmony and future enjoyment, even though, in actuality, this ideological framing, 'shaped by narratives and the media in democratic polities', may be often contrary to the interests of the majority of its citizens (Glynos, 2014a, p.188).

## 2. The role of planning as scapegoat in contemporary neo-liberal governance

Planning is often blamed for the failings of contemporary neoliberal governance and those of wider society. Allmendinger and Haughton (2014, p.29) go so far as to assert that in the UK, 'neo-liberal discourse seems to require a demonization of planners and planning as a bureaucratic, anti-enterprise form of social engineering that is forever "locking up jobs in filing cabinets"'. In my own country of New Zealand, the Minister of Finance and Deputy Prime Minister Bill English has recently pointed his 'finger at local government planning rules, saying they are a major cause of poverty and inequality because they drive up the price of houses' (Small, 2014, np). The current UK Chancellor (at time of writing) stated in a commentary in the Financial Times:

> In a global economy, where skills and capital are more mobile than ever, our planning system is a deterrent to international investment, and a barrier to the expansion of home-grown enterprise.
>
> When planning acts as a brake on growth, and on the much needed new jobs and new businesses, reform is imperative… Reforming a slow and inefficient planning system will be good news for the small business looking to expand; for the young family hoping for more affordable house prices; and for the community wanting to decide on their own future. (Pickle and Osborne, 2011, np)

The UK Guardian Newspaper observed that '[d]esperate for someone to blame for the lack of growth, David Cameron has fallen back on the Margaret Thatcher's old bogey, local government, and the bugbear of planning control' (Jenkins, 2012, np). Indeed, a recent UK planning professional trade publication has reported a headline that: "The planning system is to blame for Britain's overpriced housing and struggling retail sector, according to research by a think-tank" (Webb, 2014). Similarly, a US think tank of acknowledged right-wing perspective went so far as to blame urban planning for the 2008 world recession:

> big government not only let the crisis happen, it caused it… it all started with the [housing] bubble. But what caused the bubble? The answer is clear: excessive land-use regulation… It almost exclusively struck states and regions that were heavily regulating land and housing.
>
> The key to making a housing bubble is to give cities control over… "growth-management planning." If they have such control, they will restrict such development in the name of stopping "urban sprawl" – an imaginary problem – while their real goal is to keep development and its associated tax revenues within their borders. Once they have limited rural development, they will impose all sorts of conditions and fees on developers, often prolonging the permitting process by several years. This makes it impossible for developers to respond to increased housing demand by stepping up production. (O'Toole, 2008, np)

It does not take much effort to find similar evidence from other right-of-centre neoliberal regimes and their voice-pieces that planning is often asserted as the cause for many of their country's problems. Further, considerable criticism has been made by academics of planners and their professional institutions for not better defending planning against these ideological attacks and the resultant negative imagery of planning consequentially projected in the popular media (Clifford, 2006; Gunder, 2011a; Tewdwr-Jones, 1999). As Allmendinger and Haughton (2014, p.30) observe in regard to

planning's lack of development of a robust defence against its scapegoating, at least in the UK, a 'more compliant scapegoat for neoliberal ideologues and scaremongers could scarcely be imagined, so naturally like all bullies they keep coming back'. To begin to theorise how and why this process works in ideological formation and contemporary society, a brief précis of the Lacanian subject and its relation to fantasy formulation is necessary, as developed in the following section.

## 3. The Lacanian subject, fantasy and desire

For Lacan (2006), it is a fundamental 'lack' that constitutes both the subject and the subject's engagement with fantasy. This 'lack', (and *jouissance* – enjoyment – which will be discussed in detail shortly) relates back to our initial infantile relationship with our first caregiver – Mum – and the fictional sense of post-natal wholeness that this relationship created for the new born. It is the growing infant's emergences from a relatively simple state of biological existence into the symbolic order of language and culture that creates a traumatic separation from this primordial Other. This lack 'results in deep loss (of enjoyment), a loss we are never able to forget', so we constantly seek to duplicate this primordial fulfilment, but without success, only generating dissatisfaction, as this 'enjoyment is always deferred, with the result that we continuously miss our goal, yet keep coming back for more' (Kapoor, 2014, p.1128). Moreover, this:

> "lost object" is primordial in the sense that it is something we never had – and for this reason impossible to recover. Nevertheless, it is said that this lost object structures the desire and being of the subject. So enjoyment is linked to impossibility and its fantasized outcomes. (Glynos, 2012, p.2404).

In other words, our very 'subjectivity is a function of being interpellated into the symbolic order', which Lacan calls the 'big Other', where we 'henceforth experience ourselves as fundamentally lacking' and our attempts to forever replicate this misleading primordial fantasy derived from 'our unconscious conviction that we were once whole and completely satisfied' are forever without success (Ruti, 2014, pp.304-305). Accordingly, subsequent new fantasies then play on the subject's mechanism of perpetual hope – desire – that this primordial fantasy of wholeness and complete satisfaction will someday return, even though it no way reflects the rather terrifying actual reality of our infantile pre-symbolic existence.

Lacan's triad registry of the Symbolic, Real and Imaginary is the basis on which this theorisation of our inter- and intra-psychic life is developed. Subjectivity and resultant human agency is fundamentally constituted by the inability of the subject to fully represent itself in the Symbolic order of words, knowledges, understandings, values, and beliefs, which, in aggregate, these signifier chains incompletely construct as society and social reality. For in the symbolic order 'the subject is never fully equal to itself, it is only constituted discursively via a signifier representing the subject for another signifier' resulting in the symbolised subject being fundamentally incomplete and lacking (de Vos, 2014, p.87). For 'once we (as human animals) enter language, we are thoroughly denaturalised' as 'we are unable to relate to the world directly any more, since it is always mediated by and through language' and 'because we are linguistic beings and the symbolic order is lacking, so are *we* lacking, always divided and alienated (from the world, from our own biological instincts)' (Kapoor, 2014, p.1122 – emphasis in original). Lacan (2006, p.678 – emphasis added) asserts that assimilation into language and resultant culture 'castrates' us from our biological instincts, that is '[t]he cut made by the signifying chain is the only cut that verifies the structure of the subject as a discontinuity in the <u>real</u>'.

The Lacanian concept of the 'Real' is simply a placeholder term for some noumenon (in contrast to an observable phenomenon) that somehow disrupts signification. But it is a noumenon in a non-Kantian

'sense' of the word, since it does not exist-in-itself, as it is 'nothing at all, just a void, an emptiness in a symbolic structure marking some central impossibility… a certain limit which is always missed' (Žižek, 1989, p.173). Indeed, the Real is 'the immanent obstacle, stumbling block, of the Symbolic order itself' (Žižek, 2008, p.319). This is especially apparent when we try and represent the Real in the Symbolic and, at best, can only signify some of the symptoms that it's inconsistencies produce as the Real's excessive impossibility overflows 'our illusions of order and coherence' undermining the 'Symbolic attempts to create coherence' (Fletcher, 2013, p.798). In doing so, 'the Lacanian [R]eal ruptures the complacency of the prevailing symbolic, rendering it less securely authoritative than it pretends to be' (Ruti, 2014, p.299).

The Imaginary is the third element of Lacan's triad, which embodies our attempt through fantasy to conceal this elemental disjuncture between the Symbolic and Real, which Žižek (1989, p.118) called the "screen concealing the gap". Fantasy plays an important role in concealing the Symbolic order's disruptive relationship with the impossibility of the Real. In this regard, 'fantasy denotes a framing device which subjects use to "protect" themselves from the anxiety associated with the idea that there is no ultimate guarantee or law underlying and guiding our social existence' (Glynos, 2012, p.2405). Fantasy allows us to meaningfully structure social 'reality, often in the least expected scenarios, ordering our emotional investment within a larger narrative of reconciliation and stability… fantasy is what attempts to conceal all fissures… turning our worldly experience into something coherent and appealing' (Bloom and Cederstrom, 2009, p.163). Accordingly, 'fantasy shades into reality in a myriad of subtle and not so subtle ways [so that social] reality is overdetermined by fantasy' (Glynos, 2014a, p.185). Indeed, in this regard, fantasy functions as 'a means for an ideology to take its own failure into account in advance' (Žižek, 1989, p.126 – emphasis in original).

'The essential kernel of fantasy is its capacity to organize' and sustain desire over time for the subject, 'not to represent [social] reality in a faithful way' (Glynos, 2014a, p.183). Lacan called the pursuit of desire: *jouissance*, which is 'a basic compulsion to enjoy; to achieve consummate satisfaction and therefore heal the gap, or "wound" in the order of being' (Žižek and Daly, 2004, p.3). But the fulfilment of desire – which would mean the loss of the 'lack' that constitutes the subject, is impossible – so *jouissance* has components of both enjoyment and pain in the pursuit of a satisfaction that can never be fully achieved. Or in the context of hegemonic ideology, '[j]ouissance is the paradoxical satisfaction in dissatisfaction that results from the repeated failure to obtain the full enjoyment subjects are promised in hegemonic discourses' and the fantasies that they propose (Müller, 2012, p.282). Indeed, '[j]ouissance elucidates why people become so attached to cultural values and socio-political systems, and why power can turn out to be so intractable, persistent and enduring' and explains why an individual or society 'has trouble giving up such things as racism, materialism, sexism or religious fundamentalism because one enjoys them; they give one a certain sense of stability and fulfilment, despite the fact that (and sometimes because) one may well know they can be pernicious and cruel' (Kapoor, 2014, p.1129 – emphasis in original).

Accordingly, '[i]n the fantasy-scene desire is not fulfilled, "satisfied," but constituted' (Žižek, 1989, p.118). Moreover, 'through fantasy, *jouissance* is domesticated' (Žižek, 1989, p.123). In other words, 'the aim of fantasy is not to satisfy our desire, something that is ultimately impossible'; rather its aim is 'to construct it and support it as such: through fantasy we "learn" how to desire' (Stavrakakis, 2000, p.89). *Jouissance* often concerns 'the excessive satisfaction or kick we get from doing something transgressive, irrational or even wrong', it often 'involves the intense pleasure taken from pain, a kind of idiotic stupor that often makes us ask for more even though we well know the risks' (Kapoor, 2014, p.1128). Indeed, fantasy 'relies on the dialectic of the promise of enjoyment on the one hand and the *jouissance* that subjects procure from failing to obtain this enjoyment on the other hand' (Müller, 2012, p.282). Through this process, 'fantasy's promise to deliver the desired satisfaction at some future point

conceals the impossibility of this promise, the Real-Symbolic gap it obscures, and the symptoms that signal this disjunction as well' (Fletcher, 2013, p.799).

We can understand and reflexively engage with 'the content of fantasy by exploring, for example, its ideals, the obstacles to achieving such ideals, the way challenges can be overcome, the vision of a successful outcome, and the imagined consequences of failure' (Glynos, 2012, p.2405). In doing so, 'while there is something important we need to hold on to about the force of enjoyment that is distinct from the specificity of normative content, we should also acknowledge how fantasmatic content, animated by logics of desire and enjoyment, can hook up with normative content in multiple overdetermined ways' (Glynos, 2014a, p.185). In this regard, 'Lacan (2006) helps us to comprehend how fantasy bridges our psychic life (the Imaginary) with socially constructed reality (the Symbolic) and prevents us from encountering, what Lacan calls, the Real', that 'which is outside everything that can be (legitimately) symbolized, is literally too terrifying and must be avoided at all costs' (Fotaki, 2010, p.641).

## 4. Fantasy and Scapegoats

Ideology helps to obscure the terrifying contingency of the Real that defies the symbolic order by typically proposing 'some utopian horizon which explicitly or implicitly promises some fullness to come, and it does this through fantasy' (Engelken-Jorge, 2010, p.75). From a psychoanalytical perspective, 'fantasies are not designed to allow us to flee an unsatisfactory world, but rather to render the world satisfactory by reassuring us that the Other – the social environment within which we struggle to find our bearings – possesses the correct, calming, or consoling answers to our most pressing questions' (Ruti, 2010, p.2). For planning and governance, these are questions of how to assure the subject a good life and a good city, perhaps by making our cities more liveable, sustainable, 'world class', or such like (Gunder and Hillier, 2009).

Yet, in most cases, policy responses to these broad questions can seldom deliver actual success. Or even if they do for some, this is not without cost for others. My city of Auckland's Council promises Aucklanders that the Council will make Auckland 'the most liveable city in the world', yet up to 89 percent of the population of some wards in the south of Auckland continue to live in areas of high urban deprivation (Auckland Council, 2012, p.92). Moreover, the same Council is not prepared to fund its own identified policy initiative necessary to overcome this identified deprivation, simply because 'not all local [community] boards [of the Auckland Council] backed the project' (Baker-Wilson, 2014, np). Consequently, to 'retain its grip, every hegemonic ideology needs to take into account in advance its own failure and to condition its own transgression' (Stavrakakis, 2010, p.15). In this regard, 'fantasy is understood to operate at different phases of the policy process, for example, formulation, public justification, as well as implementation' (Glynos, 2012, p.2383).

Where the ideological potential is failing to be achieved, the 'fantasy locates the object of satisfaction as somehow *still in the picture* – still there, *not yet lost'*, so that the fantasy constructively shapes social '"reality" by guiding the way the subject historically weaves (and symptomatically distorts) the denials of loss into the fabric of its "reality"' (MacCannell, 2007, p.171, emphasis in original). Here the 'failure to achieve happiness in the present can even extend one's investment in a certain path of action: if the more one waits, *the more one gives up, then the more one waits, the harder it is to give up*' (Ruti, 2014, p.303 – emphasis in original).

Indeed, 'the more invested we are in the guarantee that fantasy conjures, the more susceptible we become to what we could call the "theft of enjoyment" temptation', which 'involves projecting the inherent impossibility linked to subjectivity as such—the idea of a split subjectivity—onto an external

figure who is then treated as an obstacle to the realization of our ideals: [perhaps] the inefficient or lazy public servant' (Glynos, 2012, p.2410). Moreover, once a governance policy fantasy becomes non-delivering – say for liveability – this failure often receives a further explanatory narrative as to why the desirous fantasy has failed, cannot be permitted, or is being prevented by some pernicious influence, or terrible Other. Significantly, this de-stabilizing fantasy is 'not benign in nature', rather it often is predisposed to 'be perpetrated by malicious forces aiming to destroy what an individual' believes as being most valuable, such as the right to an affordable dwelling unit or a decent job (Bloom and Cederstrom, 2009, p.165). In the case of South Auckland, accordingly to my Deputy Prime Minister Bill English, this malicious force is 'local government planning' that 'drive up the price of houses' causing 'poverty and inequality' (Small, 2014, np). Yet, this is the same local government that promises to make Auckland 'the most liveable city in the world' via a statutorily required spatial plan, legislated by the same current government in which English is the Deputy Leader (Auckland Council, 2012)!

Under the theft of enjoyment narrative, 'the concept of scapegoat plays an important fantasy role in suggesting that our enjoyment might be regained, but only as a state of future potential, if we maintain the prevailing ideology by being resolute against this "thieving" Other' (Gunder, 2011a, p.334). Further, fantasy facilitates the structuring of 'enjoyment embedded within scapegoating stories, an enjoyment which energizes a range of pre-emptive political logics… [so that scapegoats] embody an obstacle to an ideal which is [actually] preserved by the scapegoating process' (Glynos et al, 2012, p.312). Moreover, the role of scapegoat provides support to a fantasy, as by erasing this 'disturbing excess… from the picture, the picture will be that of a harmonious Whole' (Žižek, 2014, p.324). Indeed, Stavrakakis (2007, p.241) contends that fantasy does not only act 'as a screen which promises to fill the lack in the Other, but also as what "produces" this lack'.

Consequently, fantasy acts as the crucial mechanism to hide the contradictions and fissures in social reality. In doing so fantasy constitutes the frame that enables desire for something, but then does not fulfil the desire. Indeed, the promise of fantasy to supply the desired fulfilment at an unspecified future time obscures the very impossibility of the promise to deliver, often through deploying a process that evokes a scapegoat as to why the fantasy is failing to satisfy its desired promise. This results in 'the disjunction between the Real and the Symbolic' being 'further sutured by positing the infiltration of' some kind of evil Other (Fletcher, 2013, p.799). This is "an external element, a foreign body introducing corruption into the sound social fabric"' (Žižek, 1989, p.126). Hence, 'what is excluded from the Symbolic… returns in the [R]eal as a paranoid construction of' the culprit that has been repressed' (Žižek, 1989, p.127).

Here the neoliberal governance policy outcome might be for affordable housing for all, which the fantasy promises, but the planners impede through their needlessly restrictive landuse controls which drive up the cost of land and whose time consuming approval processes add further needless additional expense to the selfless developer. In this example, the planners are the scapegoats that prevent the market and its efficiency from doing its 'thing' and providing affordable housing for all. Yet, in this situation the 'planners' function as 'nothing but a fetishistic embodiment of a certain fundamental blockage' (Žižek, 1989, p.127). Further, by identifying 'planners' as this blockage, they provide veracity to the policy fantasy's future promise of affordable housing, by implying that this will still occur, only once these dreadful planners are dealt with by the necessary change of legislation, or however the resolution is proposed. Yet, somehow this resolution never seems to quite occur, or work out!

Of course, it is not the planners that cause this blockage of housing affordability. Rather the cause is the very nature of neoliberal capitalism to bid up land rents and housing costs to the highest exchange

value that a society can sustain. That is, at least until the next capitalist crisis and resultant market contraction. This inherently produces housing costs that largely exclude entry for those on the margins, high risk sub-prime lending aside, while benefiting both established affluent home owners and their lending and related institutions with their capitalist gains, at least until the next recession, or worse, occurs (Aalbers and Christophers, 2014; Dean, 2013; Harvey; 2014).

Žižek (1989, p.127) attributes this scapegoating process 'to identification with a symptom'. In this case, the need for neoliberal government/governance to require a planning regulatory function, which generally has a statutory responsibility to regulate built development, much of it profit driven, so as to protect the public interest by ensuring a minimally acceptable build quality that curtails adverse safety, amenity and environmental effects, at least to a societally set acceptable standard. That there is a need to regulate property development in this regard, especially where it is concerned with profit maximisation, is 'clearly a social symptom: the point at which the immanent social antagonism assumes a positive form, erupts on the social surface, the point at which it becomes obvious that [neoliberal] society [and its market logics] "doesn't work", that the social mechanisms "creaks"' (Žižek, 1989, pp.127-128). Perhaps best put into context by Dean (2013, p.144), who contends that in the lead up to and aftermath of the 2008 recession's speculative American housing bubble and the sub-prime loan transference of debt to those 'seemingly furthest from Wall Street', 'the increase in the number of poor people isn't a social problem, it's an investment opportunity', where the neoliberal capitalist 'system turns in on itself and feeds on its own excesses'.

Accordingly, 'one of the ideological strategies is to fully admit the threatening character of a dysfunction, and to treat it as an external intrusion, not as the necessary result of the system's inner dynamic' (Žižek, 2008, pp.388-389). Consequently, resolution is achieved by producing the scapegoat 'to cover up, and divert attention away from, the [polity's] internal troubles (the Real)', so that 'once the scapegoat is removed or eliminated, the [polity and capitalism] will recover its (impossible) harmony' (Kapoor, 2014, p.1133).

**5. Disavowal, Repression and Primal Dependency**

Generally 'markets are treated as a neutral means of coordinating supply and demand in a way that achieves a set of substantive aims' (Glynos, 2012, p.2384). Yet, 'the critique of market capitalism often becomes coterminous with a critique of those logics of fantasmatic desire and enjoyment that buoy up everyday consumptive patterns' (Glynos, 2012, p.2379). Neoliberalism, like any 'ideological system binds people to it by seducing them (through *jouissance*); it creates a series of lacks, and through a cycle of satisfaction-disappointment (and hence postponement) is able to endlessly stimulate and redirect our desires (for consumption, wealth, jobs, etc)' (Kapoor, 2014, p.1134). At the same time the neo-liberal fantasy has to disavowal and conceal its contradictions, be they devastating Gini coefficients that symbolise exploited labour and resultant marginalised home-owners and renters; or, the global ecological crisis and the loss of bio-diversity and climate change that unconstrained global capital consumption induces (Gunder and Hillier, 2009; Harvey, 2014). As a consequence, every hegemonic ideology, including neo-liberalism,

> needs to take into account in advance its own failure, its own limits, and to condition its own (partial) transgression. Here, we see the lacking "other'" an incomplete power structure, indirectly acknowledging this lack, allowing a certain degree of dis-identification, providing a breathing space for its subjects, on the condition, of course, that this remains under control: 'Ideology is effective precisely by constructing a place of false disidentification.' (Stavrakakis, 2012, pp.2297-2298 – emphasis in original)

In this regard, 'neoliberal analysts tend to engage in a sort of "fetishistic disavowal" (Žižek, 1989, 2008)—a simultaneous admission and denial—often superficially acknowledging yet ultimately dismissing for the most part potential critiques concerning the presence of essential contradictions in the performance of neoliberal mechanisms… something generally known yet rarely openly voiced' (Fletcher, 2013, p.797). This ideological disavowal is what permits ideology to work, even in the planning office, and not just for wider society (Gunder, 2014). This keeping quite and dismissing contentious issues is also called repression.

Repression occurs at both the conscious and unconscious level and our observable material actions – agency – is driven by both levels of mind. We all have ideas that are inappropriate, unseemly, dangerous, or unrealistic, or simply in contrast to the objectives of important others, such as our employer, and these ideas are likely to generate disapproval, or even punishment (Gunder, 2014). So we intentionally try and shelter ourselves from the penalties of considering or even acting on these thoughts and desires by simply forgetting them, pretending to not be aware of these thoughts, literally by pushing them from our consciousness. But, of cause these repressed thoughts still reside in our unconscious, and these repressed desires, even though out of conscious consideration, still continue to drive aspects of our agency, which may result in our developing and undertaking actions that achieve the fulfilment of often unseemly, dangerous or unrealistic aims. But we tend to be unaware of these unconscious desires and how they may still dominate our individual actions.

Indeed, the task of the clinical psychoanalyst is to bring this unconscious repression into consciousness for the analysand. So that the troubled patient seeking help is enabled to understand the fundamental Thing that is shaping and motivating their desire and the resultant often repetitious suffering it tends to induce in their actions. Psychoanalysis has the clinical objective to facilitate the analysand's ability to say: 'Enough!' or at least mitigate these repressed thoughts and desires' most painful dimensions by loosening their grip on the subject's compulsion (Ruti, 2014, p.304).

There are two types, or levels, of repression for Lacan. The first is fundamental or primal repression that constitutes, or accompanies, subject formation for the young child and which constitutes our most fundamental desires (as discussed in a prior section) and the second is symbolic or surplus repression (after Marcuse) that is constituted in the social pressure that forces compliance to the moral codes, norms and standards of the symbolic order – society – and/or the demands of the 'big Other' (Ruti, 2014, p.308). The latter, might be said to correspond to Foucault's normalisation, or Butler's performativity. This symbolic repression is shaped by our inherent socialisation, our desire to be wanted and be considered a 'good' person by others, once assimilated within the discourses of culture and society (Gunder, 2011b).

Neoliberalism has produced a 'traumatic reality of intensified vulnerability that has been created by governmental and corporate abandonment of most of the citizenry', which has occurred through the dismantling of the welfare state and its replaced by an autonomous model of individual competition, where success accrues to the few and results in an extensive symbolic repression, or perhaps more correctly, after Freud, a disavowal, maintained by a fetish structure oscillating between two contradicting fantasies (Layton, 2014, p.171). The first is a fantasy of mastery and independence that we either are, or, at least for most of us, that one-day we will be, competitively successful in our neoliberal social reality (Glynos, 2014b, p.8). The second is a fantasy of dependence that we are somehow still loved and protected by the symbolic order, Lacan's 'big Other', or perhaps better phrased: 'Caring Other', acting as a metaphorical sublimation of our desire to return to our primordial fiction of wholeness with our primordial caregiver (Glynos, 2014b, p.9). Yet the 'fantasies endemic to narcissistic neoliberal subject formation are produced in part by the radical split between autonomy and connection… in the autonomy fantasy, we imagine ourselves self-sufficient and omnipotent,

needing no one (the entrepreneurial self); in the fantasy marked by neoliberalism's degraded state of dependency, we fantasize that we will be loved and taken care of without having to make any effort' (Layton, 2014, p.171).

In looking after the public interest, planning is aligned with the weaker second fantasy of dependency, which is that social reality, as materialised traditionally in the role of the state, will somehow still care and look after you, by protecting you from the non-Caring Other, say 'big business'. But this latter fantasy is a negative one of failure under the dominant neoliberal discourse, where one is lacking competitive success due 'to failures of *individual* choice and responsibility', which makes you both weak and dependent on the Other for your own wellbeing (Hamman, 2009, p.50 – emphasis in original). Accordingly, this weaker fantasy's alignment with planning's agency for the common good tends to alienate popular support for it. This is because alignment with the dependency fantasy, at least under neo-liberal values – makes you a societal looser and failure!

Rather, an alignment with the stronger neo-liberal fantasy of the 'omnipotent solution resolves', at least at a superficial level, many of 'the problems of abandonment, danger and helplessness' that largely pertains to the fundamental trauma underlying the weaker fantasy's basic premise of dependency. While the sublimation of the fundamental desire for a return of primordial Mum with her promises of completeness and comfort is no less needed, an alignment with the omnipotence fantasy allows more 'psychic room' for new sublimations for alternative fantasies. These might be dependency fantasies of a more personal, or market base provision, ones that are less dependent on neo-liberal governance/government for their fulfilment, even if no more able to sate the underlying desire propagating them (Layton, 2010, p.307).

Yet our fantasy aspirations inherently leave us both individually and collectively open to manipulation, be it through mechanisms of governance, the market, or simply traditional political promise (Gunder and Hillier, 2009). Glynos (2014b, p.10) understandably raises the concern of being over-attached to our fantasies, say perhaps that we will soon have that better job or affordable house, and when this is not forthcoming we are then susceptible to being directed to projecting this attachment 'onto an external figure… who is then treated as an obstacle to the realisation of our ideals'. Here, perhaps, the politician's scapegoating statement is most effective. In this type of situation, a key dimension of ideology again works through repression and disavowal, when the actual truth of our situation hurts, such that you may never have that better job or your own home, it is often easier, and less painful, to align with the dominant promises, even if told by a politician you inherently may not trust! Consequently, it may be easiest to simply blame one's misfortune on those socialist planners!

Regardless of the ethics involved in its deployment, or the often obscenities of scapegoating's historical global precedents, scapegoating provides any governance regime, neo-liberal or otherwise, an effective mechanism for its diversion of faults and policy failures. In the exemplars of planning discussed in this paper, the scapegoating process used is one that builds on and re-enforces neo-liberalism's central normative values of individual independence, self-determination and entrepreneurial success, while downplaying the contradicting values of independence, social justice and care of the other (Harvey, 2005, 2014). Indeed, as René Girard's (1987) mimetic theory develops, it is through 'the sacrificial violence of scapegoating' that 'the mechanism central to the construction and maintenance of order' is maintained and this is 'a process able to channel the violence of all against all into the violence of all against one', so as to obscure, in this case, the inherent contradictions imbedded in the contemporary neo-liberal capitalist global order (Brighi and Cerella, 2015, p.19). This includes neo-liberal governance's scapegoating of its own necessary functionary: planning, so as to obscure its fundamental policy contradictions when predicated in the pursuit of

capitalistic wealth creation for the few that merit such reward and to facilitate the exclusion of the vast majority that lack the necessary worth.

Fundamentally, we are constantly driven by our desired seeking of that impossible Thing that we can never find, at best, we can achieve 'only its pleasurable associations' (Lacan, 1997, p.52). Metaphorically, these are associations that governance and its planning agency attempts to promise and even occasionally provides in its spatial policy delivery (Gunder and Hillier, 2009), yet this common good often sits at odds with neo-liberal's fantasy promise of independence, omnipotence and competitive success for the few that are 'truly worthy'. According, a scapegoating process is often deployed that allows governance to channel public dissatisfaction into just one dimension of its failing governance function, which can then be disavowed. Further, this fantasy deconstruction explains one dimension as to why subjects can first develop and then 'enjoy their hatred of big government' as well as how 'this enjoyment blinds them to their "real" interests', while facilitating the interests of neoliberal governance, as this governance process further depoliticises and dis-enfranchises the 'non-worthy' majority from the achievement of their own desires (Glynos, 2014a, p.181 – emphasis in original).

## 6. Conclusion

> What is so powerful about Lacan's ethics of psychoanalysis as an antidote to the master's service of goods is that it asks, quite simply, that we cease to care about what the big Other wants – that we reject the legitimacy of the Other's desire so as to create space for the truth of our own. (Ruti, 2014, p.313).

This paper has deconstructed the neo-liberal scapegoat fantasy that asserts that planning often impedes, or fails, in its responsibility to ensure policies for market-lead success. It first documented several exemplars of this neoliberal scapegoating process by politicians and their voice-pieces. It then briefly explored the role of fantasy and ideology in governance policy formulation and, from a Lacanian perspective, the theorisation that underlies this process. Having laid the necessary foundation, it then investigated the role of the 'scapegoat' in ideological fantasy formation for public policy facilitation so as to explain why planning is often placed in this role, and why this role is often ideologically necessary, at least for neo-liberal governance, when planning undertaking its statutory responsibility of facilitating the 'common good' and/or public interest. Further, from Lacan's (1997, p.321) ethical perspective, planning in allowing itself to be placed repeatedly in the role of scapegoat, while still attempting to retain and facilitate the attainment of its core values (desires) of protecting the wider public interest, actually makes the profession heroic!

The paper concluded that one thing that fantasies generally 'have in common, including fantasies of independence and fantasies of dependence, namely: the potential of fantasmatic over-investment that springs from the promise of a guarantee, or, to put it in more Lacanian terms, the promise of subjective suture', that is the promise that 'the uncertainties, ambiguities, and ambivalences of [social] *interdependence*' constituting a society will somehow be overcome (Glynos, 2014b, p.10 – emphasis in original). This is a key insight as to how ideology works. The paper has illustrated how the role of the scapegoat helps to facilitate and sustain this suture, by helping to insure faith that the governance policy guarantee will somehow prevail, even when the evidence appears contrary to this success, by identifying, correctly or not, who is impeding this promise. Planning is often socially useful in this role, at least for ideologically driven neo-liberal governance, even if it may be rather frustrating for the planners that are simply doing their heroic best to do their jobs in fulfilling the public interest.

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# Beyond resilience: The role of leadership in progressive planning

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**Key words:** Resilience; Leadership; Sustainable development; Urban politics

## Abstract

Resilience has become an influential concept in planning theory and, to some extent, in planning practice. This paper, by drawing on research on the role of place-based leadership in promoting progressive planning and urban innovation in cities in fourteen countries, will suggest that resilience is a concept with serious limitations. On the plus side, the concept has proved itself to be valuable in enhancing understanding of the ability of an ecological system to absorb disturbances and recover from shocks and stresses. But the meaning of the word is now being stretched and applied in an inappropriate way to socio-political systems. The growing misuse of the term is eroding its usefulness in relation to pressing public policy debates. The evidence suggests that, as with the term sustainable development, powerful interests appear to be using the word resilience to promote a depoliticised, or managerial, view of city politics and planning. In much of the recent literature on resilience fundamental social conflicts are downplayed, power structures are neglected, and major challenges facing cities, particularly growing inequality in societies, are overlooked. Research for a new book, *Leading the Inclusive City,* suggests that paying attention to leadership, and particularly various forms of place-based leadership, can provide helpful insights on how to tackle social and environmental ills. The paper suggests that it may be possible to strengthen resilience theory and practice, certainly as it relates to urban and regional governance, by injecting ideas drawn from the study of place-based leadership.

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## Introduction

In recent years resilience is a concept that has gained popularity in planning theory and, to some extent, planning practice. The literature on resilience has expanded rapidly in recent years (Monahan 2012; Lewis and Conaty 2012; Newman et al 2009; Pearson et al 2014; Rodin 2015). In this paper I seek to raise some concerns about both the concept of resilience, as it applies to socio-political systems, and the way it is being applied in some cities and city regions.

Concepts are important. They can help us make sense of our complex world and, if they gain acceptance in political and policy circles, concepts can come to have a marked influence on practice – and on society as a whole. As explained by Donald Schon, in his perspicacious book, *Beyond the Stable State,* concepts can move, sometimes quite swiftly, from the margins of scientific discourse to become 'ideas in good currency' (Schon 1971 p123). Resilience would appear to be an idea that is now, in some circles at least, regarded as an idea in good currency.

The rational, scientific model offers one way of explaining the rise of resilience thinking. From this point of view understanding of natural and social systems has been advanced over the years by sound research and analysis. As a result, scholars have discovered and developed this useful concept called resilience. Schon argues, however, that stakeholders may, wittingly or otherwise, collude in the creation of a scientific mythology. He suggests that governments appear to believe that they need to operate under an aura of rational, active work on what are taken to be public problems. He describes a need for a façade of progress and problem solving:

> 'This has the effect of inducing premature abandonment of issues. If we are not solving them, we must at least give the appearance of progress by moving to the next batch. It tends to be true of government, as of philosophy, that old questions are not answered – they only go out of fashion' (Schon 1971 p142)

In this paper I will explore whether Schon's analysis might help us explain the way resilience appears to be displacing sustainable development as an idea in good currency. Perhaps governments have found it too tough to implement effective approaches to sustainable development. On this interpretation resilience may be proving attractive to politicians and policy makers because it offers less of a challenge to established power relations than sustainable development. I will suggest that paying attention to the role of leadership, inspiring place-based leadership, is now important if we are to create just and sustainable communities.

The analysis unfolds in four parts. First, we consider, albeit briefly the notion of sustainable development. Over the years, various interested parties have chosen to redefine the concept to the point where, in some settings at least, it has become a virtually meaningless expression. We then turn to examine the

concept of urban resilience. Again our touch will be light because a substantial literature is available. In the third section three concerns about the concept of resilience are outlined. If this critique has merit, the concept would appear to have serious limitations, at least as it relates to urban and regional governance. A fourth section discusses the importance of focussing more attention on place-based leadership if we are to understand why progressive change takes place in localities and city regions. The commentary here draws on evidence presented in a new book on *Leading the Inclusive City* (Hambleton 2015). It will be suggested that it may be possible to strengthen resilience theory and practice, as it relates to urban and regional governance, by injecting ideas from the study of place-based leadership.

**1) The use and abuse of sustainable development**

The United Nations Conference on the Human Environment, held in Stockholm in 1972, stressed, in line with the 'limits to growth' argument set out by Meadows et al (1972), that any agenda for future development must include the creation of a healthy and productive environment for all human beings. And, more than a decade later, the World Commission on Environment and Development, chaired by Gro Harlem Brundtland, mapped out a framework for equitable development. Described, in the Brundtland Report, as 'sustainable development' this approach attempted to balance environmental, social and economic needs (WCED1987).

The work of all those involved in creating and developing the notion of sustainable development, and advocating its application in the public, private and non-profit sectors, is a spectacular achievement. The idea that companies should focus solely on the 'bottom line' and seek profits at all costs was challenged. And the last thirty years have seen important steps forward across the world in relation to sustainable planning, sustainable development and sustainable living. There is now widespread recognition that the resources of the planet are bounded.

A problem, however, is that powerful interested parties have chosen to redefine, and dilute the core messages of sustainable development to the point where, in some settings at least, it has become a virtually meaningless expression. This happened fairly quickly. For example, the goal of 'sustainable development' was endorsed by the leaders (including Prime Minister Thatcher of the UK and President Reagan of the USA) of the G7 group of industrialised nations at the Toronto summit of 1988. An attempt was made to disguise the conflicts between environmental protection and economic development: 'The term sustainable development appears like a magic wand to wave away such conflicts in a single unifying goal. We can have our cake and eat it, it seems to say' (Jacobs 1991 p59)

We can note, then, that over twenty years ago evidence was presented showing that economic growth and environmental conservation are uncomfortable bedfellows. Fears were expressed that sustainable development was likely to become 'a green cover for "business as usual"' (Jacobs 1991 p59). Others have criticised the way the term has been used:

'Sustainable development remains ambiguous, inexact, ill-defined, unbounded and unmeasurable' (Stewart and Collett 1998 p59). Nigel Taylor (2003) provides a particularly incisive analysis of the meaning of the term 'sustainable development' and shows that fudging together conflicting aspirations is intellectually dishonest.

It is important to go back to the Brundtland Commission definition of sustainable development. Please note that it contains **two sentences**, not one:

> 'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains two key concepts: 1) the concept of 'needs', in particular the essential needs of the world's poor, **to which overriding priority should be given**; and 2) the idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet present and future needs' (WCED 1987 p43, my emphasis)

The second sentence, with its strong commitment to addressing the needs of the world's poor, has vanished from view in many academic and policy debates. Some writers on sustainable development not only forget to include the second sentence, they pay no attention to poverty and unfairness in society at all.

This drift in focus away from dealing with inequality and poverty has not gone unnoticed. It is encouraging to be able to record the increased interest in planning circles in environmental justice (Anguelovski 2013). As Adebowale (2008) explains, adopting an environmental justice perspective to nature foregrounds the social dimension. It highlights the way society interacts with the environment not just in aggregate terms, but also in relation to the **distributional impacts** of planning and urban development policies and practices. Environmental 'goods' and 'bads' are very unevenly distributed in many societies and planning plays a key role in this process. It follows that the distributional effects of urban planning and development should be at the heart of sustainable development.

Unfortunately, much of the time, distributional effects are ignored. Dana Meadows and her colleagues, when they revisited their *Limits to Growth* analysis thirty years on, reinforce this point: 'Current modes of growth perpetuate poverty and increase the gap between the rich and the poor…. In the current system economic growth generally takes place in the already rich countries and flows disproportionately to the richest people within those countries' (Meadows et al 2005 pp 41-42).[i]

**2) The emergence of urban resilience**

In every day use the word resilience means springing back, or resuming an original shape after bending or stretching. The concept has been in use in the study of ecological systems for over forty years, although it's meaning has evolved and is, even within ecological debates, contested (Holling 1973;

Bulkeley 2013). In more recent times efforts have been made to make connections between ecological and planning resilience research (Nelson et al 2006). For our purposes it is sufficient to note that the term resilience is often used to refer to the ability of an urban system to withstand, and recover, from shocks. This is, for example, the way the phrase is used in the annual conferences on *Resilient Cities* organised by ICLEI, the international organisation of local governments dedicated to sustainable development.[ii]

The concept has enhanced understanding of urban vulnerability to disasters, like floods, storm surges or heat waves, and has been popularised by various writers (Lewis and Conaty 2012; Monaghan 2012; Newman et al 2009; Pearson et al 2014). Cathy Wilkinson (2012) explores the notion of socio-ecological resilience and suggests that planning theory should give more attention to ecological concerns. This is, in my view, a sound proposal.

In 2013, The Rockefeller Foundation launched a '100 Resilient Cities Challenge' to encourage cities to better address the increasing shocks and stresses of the 21st Century.[iii] Judith Rodin, President of the Rockefeller Foundation, has written a book, *The Resilience Dividend,* making the case for giving resilience more attention (Rodin 2015). It summarises many of the arguments currently being put forward in favour of 'resilience'. It provides, in my view, a reasonably up to date statement of the arguments used by those who believe resilience presents a sound way forward for localities, cities and city regions in the 21st Century.

Rodin defines resilience in the following way:

> 'Resilience is the capacity of an entity – an individual, a community, an organisation, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience' (Rodin 2015 p3)

This is, pretty much, a mainstream definition of the way the concept of resilience is now being used in public policy making in a number of cities and city regions around the world. By drawing on systems theory Rodin sets out some broad-brush ideas on how to build resilience. She identifies five characteristics of resilience (aware, diverse, integrated, self-regulation, adaptive) and explores three phases of resilience building (readiness, responsiveness, revitalisation).

Questions can be raised about the quality of the evidence Rodin marshals to support her argument. For example, a fair amount of the case study material presented in her book is drawn from the written applications cities made to become members of the 100 Resilient Cities Challenge. It goes without saying that cities bidding for the reputational gains and resources that flow from being awarded the status of a 'Rockefeller Resilient City' have a vested interest in presenting a case that fits well with the resilience narrative. Offering a critique of this particular book is not, however, my focus of interest in this paper. Rather I am spotlighting *The Resilience Dividend* as it provides

a helpful way of drawing attention to wider problems with what we might describe as the urban resilience discourse.

**3) A critique of urban resilience**

In my view scholars and practitioners interested in resilience should be asking much more penetrating questions about the distributional consequences of being resilient. It is important to ask: 'Resilience for whom?' Answering 'Resilient for everyone' is an unsatisfactory response because we know that steps taken in the name of the resilience agenda have distributional consequences.

For example, measures taken to make cities more resilient to the risk of flooding may involve displacing populations and it is often poor communities that tend to be disproportionately affected. The post-Katrina reshaping of New Orleans illustrates the argument – residents of public housing areas have lost out. Edward Goetz notes that the response to the hurricane has had distributional effects:

> 'Katrina provided the opportunity for a final push to close down public housing in the city and move toward redevelopment' (Goetz 2013 p 93)

The environmental justice dimensions of fostering resilience seem to be getting displaced onto the margins of scientific and public policy discourse. Equally worrying, there is a risk that resilience will come to replace sustainability as the next spray-on term that vested interests may try to use to support the status quo of socio-political power relations in the modern city. In the discussion below I separate out three inter-related criticisms of urban resilience theory and practice.

*i) Resilience is a significant step back from the progressive agenda originally set out for sustainable development*

As mentioned above, the definition of sustainable development provided by Gro Harlem Brundtland and her colleagues in 1987, was progressive. It provided a framework for equitable development. It stressed the importance of tackling poverty. Indeed, it made clear that giving attention to meeting the needs of the world's poor should be given 'overriding priority' (WCED 1987 p43). The United Nations Sustainable Development Solutions Network has stayed true to this agenda. Their recent report to the United Nations, advocating a separate urban goal for the Post-2015 Development Agenda, stresses the vital role of sustainable development in tackling poverty and bringing about social inclusion (UN-SDSN 2013).

This commitment to progressive possibilities is **not** centre stage in the narrative about resilience. On the contrary, definitions of resilience focus on process, not substantive outcomes. For example, the definition of resilience provided by Judith Rodin – see above - is devoid of social purpose. Dictators would be happy to sign up to this as a description of their approach to governing. They will agree that it is wise: '… to prepare for disruptions, to

recover from shocks and stresses, and to adapt and grow from disruptive experience' (Rodin 2015 p3). To be fair, Rodin's book does mention poverty, albeit only once. However, it is introduced to suggest that '… poverty is in decline' (Rodin 2015 p 91). The lack of awareness in this book of the growth of inequality in the modern world is startling, particularly when there is so much fine scholarship on this topic (Dorling 2014; Stiglitz 2012; Wilkinson and Pickett 2010). The growth of inequality is a critical feature of our time and resilience strategies that ignore it are unlikely to be effective.

In making this criticism of resilience thinking I am echoing the critique of planning theory set out by Susan Fainstein (2010). In her book, *The Just City,* Fainstein argues that much planning theory is obsessed with process – as a result it simply ignores the reality of structural inequalities and hierarchies of power in modern society. She argues that the substantive purposes of city planning should be central to planning theory, not some kind of afterthought. The same is true for resilience. The focus in much of the urban resilience literature is on process – substantive social purposes are neglected.

Allow me to press the point. The apartheid system in South Africa was clearly a resilient socio-political system if we accept Judith Rodin's definition of resilience. The National Party, the ruling party in South Africa from 1948, was able to curtail the rights of the majority of black inhabitants for almost half a century. It was so resilient it was able to imprison articulate, political opponents, including Nelson Mandela, for decades. Dictatorships across the world are, right now, demonstrating that they can be resilient in the face of legitimate political pressures for change. The governmental systems dictators steer in these countries seem to manage, much of the time, to adapt creatively to perceived threats and shut them down. Resilience, then, describes a quality of a given system. It is **not**, in and of itself, a desirable objective for a social system. It describes a process – the ability to adapt to changing circumstances. Progressive politics requires the overthrow of oppressive power systems. Frankly speaking, we don't want these unjust systems to bounce back.

*ii) Intellectual incoherence*

Perhaps because the substantive political purpose of resilience is rarely clearly expressed, writers on urban resilience appear, at times, to be confused about the objectives of resilience efforts. On the one hand, resilience implies an ability to 'bounce back' – to recover from shocks and stresses. In broad terms resilience appears to refer to the ability of an urban system to adapt in the face of change – to recover, to get back to where it was before. On the other hand, some writers on resilience appear to recognise that it is important not just to 'bounce back' – it might be important to move beyond resilience and consider how to transform the systems that limit socio-environmental possibilities (Pelling 2011).

This is a key point. Is the objective to bounce back? To recover from the disruption caused by a shock to the system? Or is it the opposite? That is, to **not** to return to a pre-existing situation, but to change into something else?

Some writers seem to be confused on this point. For example, Satterthwaite and Dodman (2013) exhibit a tendency to collapse together resilience and transformation in their discussion of urban change. This approach fails to recognise that these words have **different meanings**. Transformation means making a thorough and dramatic change in form and/or character. It is not about bouncing back, it is about changing into something else.

In her book Judith Rodin appears to recognise this distinction (Rodin 2015). But, because her definition of resilience lacks substantive content we are left wondering what political and social objectives she believes resilient policy makers should pursue. In the discussion below I suggest that effective civic leaders are not focussed on returning to the status quo – they strive to change things. They collaborate with diverse interests to develop a vision of the future and then work with stakeholders to bring about that vision. They are clearly in the business of transformation.

*iii) The neglect of power and politics*

My third concern about resilience, and it is a variation on my first criticism, is that it seems to pay little attention to power and politics in modern society. When it does show political awareness, it appears to be careful not to offend figures in the established power structure. This is unsatisfactory. There is now a helpful body of literature on the exercise of power in cities and city regions, but this literature on the struggles and conflicts encountered in every city does not feature that much in the urban resilience literature. Urban political scientists and sociologists have advanced our knowledge of who gains and who loses in the modern city. But authors like Fainstein (2010), Harvey (1973) and Stone (1989) seem to be rarely cited by academics studying urban resilience.

There is a deeper argument here about, what I call, the 'managerialisation of politics'. By this I mean the masking of socio-political conflicts by those powerful interests who prefer to define current political challenges within a managerialist paradigm. Erik Swyngedouw builds on and deepens this argument. He links the current populist discourse relating to climate change and sustainable development to the attempt, pursued by many in power, to adopt a 'post-political' approach to the public sphere. In this post-political world, so the argument goes, words are redefined or diluted in order to emasculate fundamental conflicts.

On this analysis it is no accident that sustainable development has become a relatively meaningless term because: 'Post-politics refers to a politics in which ideological struggles are replaced by techno-managerial planning, expert management and administration' (Swyngedouw 2010 p225). In making the link between post-politics and climate change he argues that many involved in green politics have moved from a position of contestation, organised action and radical disagreement, ten or twenty years ago, to one in which they have been co-opted into the service of neo-liberal aims and objectives. He argues that weak definitions of sustainable development, ones that attempt to

maximise consensus, stand in the way of clear thinking about what is actually going on. Perhaps the same can be said of resilience.

Judith Rodin gave a public lecture about her new book, *The Resilience Dividend,* at the University of Bristol on 16 January 2015. When asked by a member of the audience why she had said little or nothing about politics she asserted that there is no longer a right wing or a socialist way of bringing about change. She espoused a view that is clearly in line with the managerialisation of politics. Her book does not discuss power in modern society and says relatively little about the fundamental conflicts found in all cities, even so-called resilient cities.

Perhaps we need to ask some more fundamental questions about the use of the word 'resilience' in the urban context. Has the academic fashion for studying resilience led to the concept being used in an inappropriate way? Do we always want urban systems to bounce back to how they were? Does the concept of resilience embody an inherently conservative political stance?

**4) Can study of place-based leadership contribute?**

The critique of urban resilience set out above is not intended as an attack on the values that underpin authentic approaches to sustainable development, sustainable planning and sustainable living. Rather I am raising a few questions that could be given more attention by scholars and practitioners keen to understand and improve the quality of life in cities. In my own work I have found it helpful to focus on place-based leadership.

In my new book I suggest that those interested in progressive public policy making might find a notion that I describe as *New Civic Leadership (NCL)* to be helpful (Hambleton 2015). NCL involves strong, place-based leadership acting to co-create new solutions to public problems by drawing on the complementary strengths of civil society, the market and the state. If we are to understand effective, place-based leadership, we need a conceptual framework that highlights the role of local leaders in facilitating public service innovation. Here I provide a sketch of a possible framework.

**Figure 1** suggests that in any given locality there are likely to be five realms of place-based leadership reflecting different sources of legitimacy:

- **Political leadership** – referring to the work of those people elected to leadership positions by the citizenry

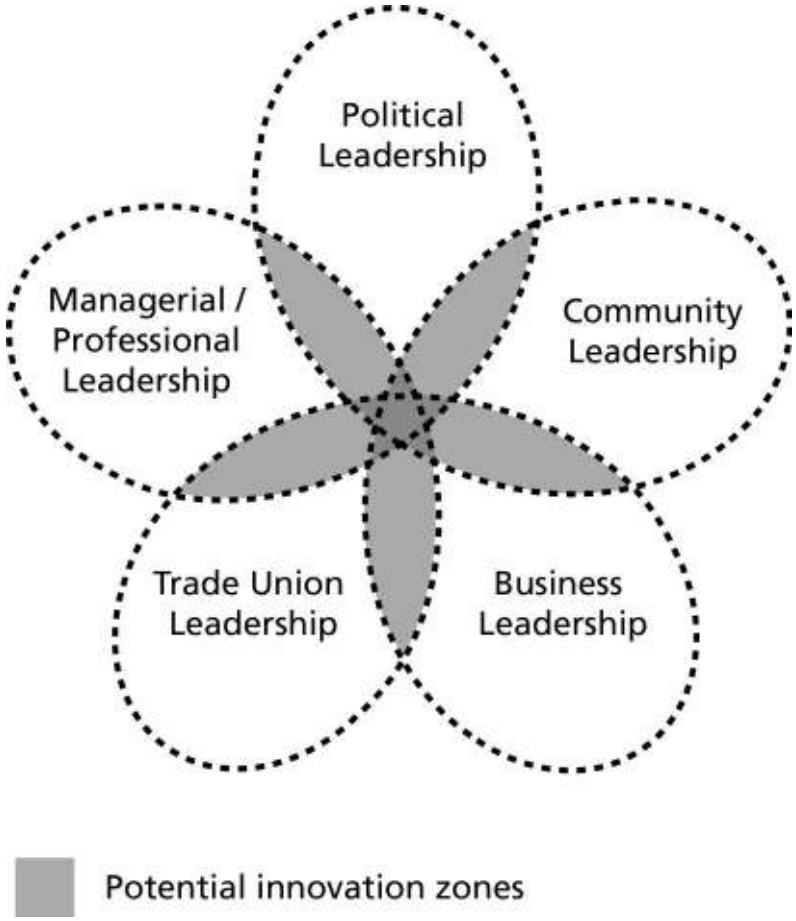
- **Public managerial/professional leadership** – referring to the work of public servants, including planners, appointed by local authorities, governments and third sector organisations to plan and manage public services, and promote community wellbeing

- **Community leadership** – referring to the many civic-minded people who give their time and energy to local leadership activities in a wide variety of ways

- **Business leadership** – referring to the contribution made by local business leaders and social entrepreneurs, who have a clear stake in the long-term prosperity of the locality

- **Trade union leadership** – referring to the efforts of trade union leaders striving to improve the pay and working conditions of employees

**Figure 1: The realms of place-based leadership**




These roles are all important in cultivating and encouraging public service innovation and, crucially, they overlap. I describe the areas of overlap as innovation zones – areas providing many opportunities for inventive behaviour. This is because different perspectives are brought together in these zones and this can enable active questioning of established approaches. It is fair to say the areas of overlap in **Figure 1** are often experienced as conflict zones, rather than innovation zones. These spaces do, of course, provide settings for power struggles between competing interests and values. Moreover, power is unequally distributed within these settings. This is precisely why place-based leadership matters. The evidence

from my research is that civic leadership is critical in ensuring that the innovation zones – sometimes referred to as the 'soft spaces' of planning (Illsley et al 2010) or 'space for dialogue' (Oliver and Pitt 2013, 198-99) – are orchestrated in a way that promotes a culture of listening that can, in turn, lead to innovation. Civic leaders are, of course, not just 'those at the top'. All kinds of people can exercise civic leadership and they may be inside or outside the state.

## Reflections and conclusions

Powerful forces shape the context within which place-based leadership is exercised. Influential place-less leaders – in globalised corporations, central governments and elsewhere – may care little about the quality of life of particular communities living in particular localities. However, cities and localities are not helpless victims in a global flow of events. A key challenge for place-based leaders is to understand how to use their local power to negotiate with place-less organisations to bring about desirable outcomes and enhance the power of local democracy. The analysis presented here suggests that place-based leadership can, even in heavily constrained situations, work to expand the amount of political space available to local communities. The obsession with markets and market values has done great damage to societies across the world (Sandel 2012). But many cities are, right now, pursuing progressive strategies that amplify the power of communities living in particular places to shape their own future.

Creating resilient communities capable of responding to modern urban challenges – growing inequality, feelings of social exclusion, climate change and so on – requires the development of effective, multi-level, place-based leadership. In my book I provide seventeen examples of inspirational civic leadership drawn from cities in all continents. The urban resilience literature has enhanced our understanding of ecology *in* cities as well as the ecology *of* cities. However, in this paper I have suggested that the word resilience is now being stretched and applied in an inappropriate way to socio-political systems. Perhaps the growing interest in place-based leadership – politically driven leadership working to create inclusive cities can offer a corrective.

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## Endnotes

[i] It is worth noting that in recent years scholars have created new academic journals that are attempting to advance interdisciplinary analysis of cities and urban development – ones that span socio-political and socio-environmental perspectives. For example, the European Urban Research Association (EURA) launched an international journal – *Urban Research and Practice* – in 2008; and *The International Journal of Urban Sustainable Development* was first published in 2010.

[ii] ICLEI has been running international conferences on Resilient Cities since 2010. More: http://www.iclei.org

[iii] More: http://100resilientcities.rockerfellerfoundation.org

# Collective learning experiences in planning: The potential of experimental living labs

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**Abstract**
*'Living labs' originate from an R&D environment, and intend to innovate commodities by experience-based knowledge, with a direct involvement of users. Meanwhile, the living labs approach has been shifting into a wider range of uses, and for instance also into the toolbox of actor- and action-oriented planners. The approach is (implicitly) promoted as a new and better way of combining capacities of different stakeholders by exploring and experimenting in real-world situations. In this paper, we attempt to critically discuss the use of the living lab approach. The first section explores the potential thereof for planning issues: How unanimous is the concept of Living Labs? How much do different interpretations and practices of Living Labs resemble in terms of actors involved, actions stimulated, processes promoted and criteria for good practices accepted? The exploration is based on the experience of two experimental living labs, which are compared to a range of international examples. The second section turns to a series of alternative approaches in spatial planning in Flanders: How do the aims and means of these collaborative learning experiences differ? What is the role of users and how important is experimentation? Which innovation is created in planning? How do the practices deal with path dependencies and uncertainties in complex multi-actor settings? We will answer these questions based on research seminars on 'collective learning', which are organized for the Policy Research Center Spatial Planning in Flanders, as a part of a work-package which focusses on methodologies for future explorations.*

## 1. Introduction: future explorations, collective learning and living labs in one scene

Imagining the future of cities and regions involves a complex and at time fuzzy set of actors, disciplines, fields of expertise, interests and voices. The exploration of probable, possible or desirable futures is a challenge to all participants in a planning process: imagining a different here and now urges actors to leave known comfort zones, yet at the same time to bring in their knowledge and experiences in order to assess the plausibility and feasibility of proposals on future development. Then also, imagining plausible alternative futures is no non-committal exercise: it presupposes engagement of professional and social knowledge, as well as taking responsibility within a planning process. We here investigate how establishing different types of 'living laboratories' can support in the reflection on business-as-usual, in the search for innovative practices in spatial planning as well as in setting up of conditions for the implementation of novel practices. In this, we see an important role for collective learning, since "Consensus without collective learning simply reproduces what is, and does not open up the possibility of transformational change" (Brown, Lambert, 2013, pp. 250).

Current contribution reflects on the potential of living labs for planning issues and on the value, conditions and limitations of collective learning in spatial planning. The reflection is based on the experiences from two experimental living labs, which are developed by the Policy Research Centre for Spatial Planning, as well as on the analysis of a wider range of actor- and action-oriented initiatives in spatial planning in Flanders, which is based on interviews with project leaders for the different initiatives and on a collective and transdisciplinary methodological research seminar with practitioners and academics. We intend to critically assess how different approaches and heuristics in future explorations and collective learning could possibly alter contemporary planning practices, and the governance thereof.

The paper starts (and ends) with a reflection on the merge of living labs with spatial planning. The point of departure sheds a light on combining living lab approaches with planning, starting from a brief legitimation and rational for this ambition. We then zoom in on the experiences with living labs in spatial planning in Flanders, and particularly on the development of guiding principles in setting up a shared methodology (i.e. 'How is the living labs concept altered when applied to planning?'). The conclusion of section two intends to anchor few insights on the remodelling of planning practices through the living lab approach, which can be described as a collective learning experience to develop transformational change in response to contemporary and future challenges. The section attempts to reflect on whether and how planning could be altered through the use of living labs, in account of earlier experiences with participatory practices. The next section then presents the results from an analysis of different collective learning initiatives. The threefold structure starts from an outline of the analytical frame to study collective learning initiatives. It then turns to the preliminary results from analysis. We also present the next steps (and tracks for a wider, future-oriented research agenda) in the analysis of collective learning for transformational changes in spatial planning. The conclusions then continue the reflection on merging living labs (and –by extension- also other collective learning initiatives) and spatial planning: How could this merge potentially remodel planning practices – if at all, considering an already quite rich and versatile tradition with regard to inclusive approaches? How can these practices and indeed also changed modes of governance be valorised? What is the importance of experiments in this? The reflection here adds another bandwagon in a train of related methodological reflections[1].

## 2. Living Labs and Spatial Planning: effects of a 'seemingly logical marriage'

Section 2 explores the potential of applying a Living Labs approach for spatial planning. The exploration is based on the experience of two experimental living labs, which are compared to a range of international examples. We here reflect on three consecutive questions: 'Does it make sense to match living labs and spatial planning? (Why?)', 'Does the concept of living labs alter when being applied to spatial planning? (How?)' and 'Can planning potentially alter through the development of living labs? (How?)'.

### 2.1 A *rationale* to introduce living labs in spatial planning

Generally speaking, a living lab is "a user-centric innovation milieu built on every-day practice and research, with an approach that facilitates user influence in open and distributed innovation processes engaging all relevant partners in real-life contexts, aiming to create sustainable values." (Bergvall-Kåreborn e.a., 2009, pp. 3). The concept of "user-centred environments for open innovation" (Schaffers e.a., 2010, pp.1) originates from R&D environments, i.e. to develop innovative technologies using rapid prototypes cycles. The main focus there is on "confronting the user with technology" (Veeckman e.a. 2013). Basic features of living labs can be summarised as follows:

- Different kinds of users are involved in an early stage, and on a continuous base, with the aim to result in a sustainable stakeholder partnership and agreements between partners.

[1] i.eon the role of designerly research in actor-oriented planning (community development and forming coalitions) (invited lecture by Jan Schreurs on occasion of the AESOP Heads of Schools Meeting 2014, on connecting academia and local communities, University of Lisbon, March 2014), on the development of a shared understanding on peri-urban developments (Schreurs, Kuhk, Dehaene, 2014), on the potential of developing and using boundary objects (Schreurs, Kuhk, 2014; Kuhk, Schreurs, 2015), on the ambitions and inclusiveness of living labs (contribution from A. Kuhk to a workshop at the Polytechnico di Milano on living labs as socio-digital environments), on the valorisation of living labs (contribution from A. Kuhk to the SASUI-workshop in Helsinki), on the potential of self-organisation in and the use of social media in spatial planning (Schreurs, Kuhk, 2015), on the development of guiding principles for living labs in spatial planning as well as on an analytical frame to study collective learning initiatives (internal methodological seminars), on the relevance of the living approach as an alternative heuristic in innovative planning practices (contribution from A. Kuhk to a roundtable at the CORP-conference, Ghent, 2015) and on the valorisation of collective learning initiatives (methodological research seminar with external partners).

- Living labs aim at open innovation (Chesbrough, 2006): there is a basic openness towards various possible solutions forwarded by different partners, innovation can come from external resources as well.
- A 'lab' is not merely a test bed for innovations that have been developed in a closed expert laboratory and desktop research setting, it rather is an incubator for innovation in collaboration with (end-)users.
- Innovation is expected to be the result of collaboration and co-creation, it can also be widened towards 'democratic innovation' (Von Hippel, 2005) with a larger audience participating.
- Innovations from living labs start from a real-world setting, and intend to alter a relatively local setting. However, it can also lead to changes on a more systemic level, which mostly require then accompanying policy innovations in order to transfer novel practices.

Even if there is a series of basic features that are commonly recognized to be central characteristics of living labs, there is no standardized, generic methodology[2] (Veeckman e.a., 2013). The notion refers to a range of possible approaches, such as a more business-oriented logic, a 'lead user' concept (cf. von Hippel, 2005) unto wide participatory approaches for 'crowdsourcing' (cf. Howe, 2008). The introduction of the living lab concept to spatial planning can therefore alter (or further stretch) the concept. Based on this broad definition of living labs, we could nevertheless discover three different possible entries to establish a relation between a rather generic approach of Living Labs and the specific environment to which we introduce the approach, namely spatial planning in Flanders. In fact, these entries can be read as legitimations to apply living lab approaches for spatial matters:

A first important link between living labs and spatial planning can be situated in the shared interest for adaptive, cyclical approaches -be it that the iterations and cycles in living labs are generally shorter than the ones in spatial planning-. As for the Living Lab concept, Chesbroughs description of 'open innovation' has been an important point of departure. 'Open innovation' assumes non-linear, cyclical innovation processes (cf. Chesbrough, 2003; Veeckman e.a., 2013) with iterations, feedback loops and hands-on, formative evaluations. Also planning practice and theory has become increasingly sensitive to these kind of processes, i.e. as a response to the complexity of socio-spatial systems and the wickedness of problems (cf. Bertolini, 2010). This sharpened sensitivity is equally reflected in the mushrooming of actor- and action oriented approaches[3], stressing the importance of collective learning. These initiatives are all attempts to deal with (rather than to reduce) the complexity of planning issues, the uncertainty over contextual factors or the multiplicity of actors involved, and therefore urge the development of similar approaches (cf. Boelens, 2009; Bertolini, 2010; Healey, 2006). For instance the Flemish administration has organised series of 'partner dialogues' and 'working groups' in the run-up to a white paper and Spatial Policy Plan. Then also, there are efforts to collaborate over so-called 'Territorial Development Projects' and for 'Strategic projects'. Other examples of collective learning experiences are the 'Labo XX'-collaboration with the Flemish 'bouwmeester'-, or the unique project of the 'Metropolitaan Kustlandschap 2100'.

These diverse collective learning initiatives vary in the level of abstraction, in the number and variety of actors involved and in the sense of urgency of the core issues. Then again, they all subscribe to a desire to explicitly involve a larger group of users, mostly already from the start of an initiative. Some of these practices fit in a tradition of participation, and a demand for more direct forms of democracy, some of which have their roots in the late 1960s. They may represent a plea for shifting from representative democracy towards participative democracy, as has been equally supported in the white paper on urban policies (Boudry e.a., 2005). The explicit emphasis place on the early involvement of a variety of users constitutes part of the potential relevance Living Labs may have for Spatial planning,

[2] The 'stretch' in the concept of living labs results in a wide variety of initiatives that deploy this nomination. Then again, there are also initiatives that fit with main characteristics of the Living Labs concept, without being identified as a 'Living Lab'.

[3] Whereas the different initiatives generally recognise the complexity of planning issues and the need to equally involve a multiplicity of actors, they deal differently with the need to build a more adaptive, cyclical planning approach.

as has been equally recognised by Veeckman: "The idea of investigating the user as a scientific research object links the roots of Living Lab activities to different disciplines such as the usability approach (e.g. participatory design), domestication approach, adoption diffusion paradigm and design thinking." (Veeckman e.a., 2013). The Living Lab approach does raise serious questions regarding the way in which actors are engaged. The emphasis seems functional and operational and seems less concerned with aspects of legitimacy, and political engagement. The adoption of Living Labs in spatial planning have the potential to help to articulate ongoing discussions regarding the distribution of roles between government, market and civic partners. They steer an ambiguous line between efforts to empower communities to regain control over resources and the construction of local capabilities on the one hand and the decollectivization of shared responsibilities or the offloading of public responsibilities on groups and individuals.

Thirdly, there is also a link between the Living Lab concept and designerly approaches – an integral part of the spatial planning approaches in Flanders - in a common focus on experiments (cf. Geldof, Janssens, 2007). The nature of a 'laboratory' is a systematic approach, yet also an open approach (cf. Chesbrough, 2003; Veeckman e.a., 2013). There is a set of rules, but the outcome is not known. A living lab creates an environment for 'guided imagery'[4] as a basis to articulate experiments. Also approaches of designerly research contribute to the creation of such a fundamental openness, e.g. in presenting and discussing potentiality maps, in fostering collective imagining through the co-creation of possible worlds, in depicting possibilities of creating shared value, in rendering abstract possibilities in a contextualized and specific manner and inviting stakeholder to take up concrete engagements, etc.

With these elements in mind, we see potential in matching a living labs approach to the domain of spatial planning. Given the search for iterative, evolutionary approaches with a fundamental openness for experiment and a thorough base in user-experiences, living labs can add a planning-heuristic that helps mediating between global or regional challenges and a common, 'ordinary' awareness of spatial misfits. A next question then would be whether a living labs approach would also be capable of introducing genuinely new ways of governing -instead of being old wine in new bottles-. Based on an analysis of examples in scientific journal databases, the Finnish researcher Sirkku Wallin identified three types of urban living labs (cf. Wallin, 2015, pp. 2). The first type is a series of technology-driven living labs, for instance leading to city-wide experiments or pilots to enhance local mobility services. Wallin notices that the role of the users remains very limited in this constellation. The second type of living labs produces urban artefacts, e.g. through the co-creation of public spaces. The third type of initiatives that were described as an 'urban living lab' focuses on vision-making, mutual learning, deliberation and new models of local governance. Whereas the typology clearly illustrates the stretch of the living lab concept in a merge with area-based logics, it remains silent as to whether and how planning can be altered with the introduction of living labs: "Planning work is not just about the substance or specific context of issues… It is also about how issues are discussed, and how problems are defined and strategies to address them articulated. Questions of process as a result are as important to local environmental planning as questions of substantive content" (Healey, 1997, pp. 85). In order to better apprehend the usefulness and potential impact of living labs in spatial planning, we therefore explore two 'living' cases.

### 2.2 Reinventing living labs in spatial planning: experiences from the Flemish fields

The Flemish Policy Research Centre for Spatial Planning is currently developing two experimental Living Labs, in order to test and to further explore innovative tools for collective learning. We focus on a suburban strip along the N16 regional road (i.e. connecting Temse to Willebroek Reinventing living labs in spatial planning: experiences from the Flemish fields, with vast industrial areas as well as polynucleated, spread residential fabrics and fragmented green, open spaces), and on the relatively dense Dender-valley at the West of Brussels (i.e. a river that flows into the river Scheld).

[4] The term of 'guided imagery' was coined in health sciences and psychology. It refers to techniques to pull participants out of their comfort zone, and to actively help imagine a different here and now.

*Figure 1: Schematic positioning of two living lab areas, in relation to the central axis between Antwerp and Brussels and Charleroi, (source of the basic map is the green paper for spatial planning Flanders, RV, 2012).*

**Structured research capacities**

Whereas the capacity to develop these living labs is rich and diverse in its qualities (e.g. joining knowledge on designerly enquiries, on future explorations and on planning and public policies), it is limited in its means. The Living Labs are developed in a cooperation with researchers from the University of Ghent and Leuven with in total a 60% research assignment for two years, yet also the input of different supervisors. The capacity is substantially broadened with the input from students in three design studios, which each last one term. The partners in Ghent executed and evaluated the interviews, organised the workshops and studios and developed potentiality maps (i.e. Marleen Goethals, Luuk Boelens, Michiel Dehaene, Martin Dumont). The contribution from the Leuven partners focuses mainly on the documentation of processes and on the participation to some of the meetings/workshops, as well as on the reflection and development of shared methodologies (i.e. Annette Kuhk and Jan Schreurs)[5].

For a more systematic documentation of the living labs, we develop a 'state-of-the-art'-text on the issue setting, which also illustrate the progressive insights on the shared problematisation[6], the articulation of project definitions, as well as the identification of actors, thresholds and limitations for the implementation. We also develop a 'logbook' to document the construction of a shared methodology[7]. Both accounts have been regularly also discussed at the 'curatorium', which is a scholarly reflection board for the living labs. This gathering of four professors and two senior assistants, recently also joint by an expert from the Flemish administration of spatial planning, was organised more or less every two months (i.e. the already mentioned researchers as well as Tom Coppens from the University of Antwerp and Liesl Vanautgaerden from the Flemish department of spatial planning).

[5] For reasons of textual clarity, the following paragraphs refer to the living lab researchers as one entity, as 'we'. The introduction to the cases made clear that specific tasks are executed by specific persons and/or research groups. Since the results are always also reflected upon in joint meetings, it seems reasonable to also refer to the project by use of an 'editorial we'.

[6] i.e. 'shared' between stakeholders, different local users and the research partners

[7] i.e. 'shared' between researchers with different backgrounds and disciplines.

| Guiding principles | Examples from different project proposals in the two living labs | References for the guiding principle |
|---|---|---|
| **User-orientation and iterations** | | |
| To (pro-)actively and continuously reflect on the building of a shared methodology | e.g. through systematic documentation in a logbook as well as a by the frequently organised feedback on the subject of concern as well as on methodologies in a 'curatorium' | with reference to designerly approaches, experiences with design processes |
| To consider a multiplicity and diversity of actor perspectives as of the beginning of the living labs: not only is innovation expected to emerge from co-creation, the development of novel coalitions can itself be an innovation in complex (spatial planning) issues | e.g. the building of novel coalitions on energetic woodsides with both local authorities (for supply); farmers (for maintenance); schools, a swimming pool and a hospital (as energy and heat consumers) and the setting up of a agro-maintenance group. | with reference to actor-relational approaches and Synoikos-workshops as well as to a shared understandings of living lab features |
| To develop the living labs as non-linear, cyclical innovation processes, with explicit attention for reiterations and moments of consolidation: in this, it is important to also identify gaps in the knowledge production, and to use progressive insights and/or the participation of other actors for a next iteration | e.g. with a methodological triangulation in the presentation of the 'state-of-the-art'-text to local partners, which was based on interviews with those partners (i.e. to test whether the interpretations would be shared). | with reference to evolutionary planning, cf. also literature on uncertainties and on wicked problems, which are defined and redefined instead of being 'solved' |
| To navigate through the complexity of spatial issues by means of tracing, mapping, diagramming and agencying | e.g. through sequences of document analysis and interviews to trace the current state, potentiality maps to show plausible alternatives and round tables to discuss responsibilities. | with reference to actor-relational approaches, based on Deleuze and Guattari, 1987 |
| To foster a reflection on more continuous, dynamic, strategic and inclusive planning processes | e.g. in bilateral meetings with the commissioning authorities (i.e. spatial planning Flanders) | with references to hybrid combinations of images and narratives, as can be found in scenarios and designerly approaches |
| **Systemic approaches and strategic development** | | |
| To reassess proposals for change with regard to effects in broader, dynamic socio-technical regimes and wide contextual changes (to avoid myopia on the local setting), and an assessment of the potential to innovate on a systemic level. | e.g. prepared in systematic documentation on the projects in living labs, in order to transfer information also on the conditions for alternative practices (e.g. driving forces such as demographic or economic conditions) | with reference to transition management as well as explorative scenarios and research-by-design (cf. Dehaene, Devree, 2014) |
| To particularly also consider actors from niches | e.g. novel practices in local energy production | cf. strategic alliances and transition management |
| To consider the potential of turning novel coalitions into strategic alliances | e.g. the scaling up of community supported agriculture projects into a broader logic of ecosystem-services and (urban) metabolisms. | in reference to the strategic alliances (i.e. proposed by the expertpanel for the Spatial Policy Plan Flanders; cf. Coppens, et al., 2014) |
| To study thresholds and path-dependencies for the development of novel practices | e.g. limits in economic feasibility in the exploitation of energetic woodsides | in reference to scenario-analysis and wider future explorations |

*Table 1: Guiding principles and shared methodologies for the development of Living Labs in Spatial Planning in Flanders (based on Kuhk, Schreurs, 2015).*

**Guiding principles 'on the go'**

Whereas there is no generic method for the development of living labs for spatial issues, we developed specific guiding principles for the area-based living labs. Table 1 provides an overview of these guiding principles, with examples of how these can be understood and/or realized as well as references to the inspirations, which served as a basis to formulate the guiding principles. The development of localised living labs for spatial planning in Flanders joins a wider array of experiences and methodologies, amongst which knowledge on actor-relational approaches (Boelens, 2009), experiences with future explorations and scenario-analysis (Kuhk e.a., 2011), reflections on evolutionary, cyclical or adaptive planning (cf. Bertolini, 2010), a view on transition management, systemic approaches and the need to build strategic territorial alliances (Coppens, Allaert, eds., 2014), knowledge on social innovation (Moulaert e.a., 2013) or on participant design- scenario workshops (Cox e.a., 2014) and dealing with uncertainties in research-by-design (Dehaene, De Vree, 2014). The link with actor-relational approaches and strategic territorial alliances have been explicit references as of the start of the area-based living labs, already in early negotiations with the commissioning authorities (i.e. the department of spatial planning in Flanders). The other frames of reference have been included only gradually and/or often more implicitly. It has been a process of progressively growing insights to develop a shared methodology for the two experimental area-based living labs. It is the result of negotiations, e.g. at the 'curatorium'. The 'logbook', in which the process of building living labs is documented and reflected upon, has provoked discussions on specific methodological issues, e.g. about the level of ambition of the living labs, on the openness and/or the level of inclusion of particular actors, the valorisation objectives of the living labs, and so on . Each member of the 'curatorium' contributed to the building of a shared methodology based on own experiences, knowledge, backgrounds and interests. The appendix shows how this collective learning and co-construction of knowledge on the functioning of living labs in spatial planning developed. It illustrates the process of developing a shared, yet tailor-made methodology.

**2.3 Living labs in planning: outlived subsidiarity and a challenging panarchy awaiting**

Even if there is no generic method for living labs, few common elements are identified to be necessary to qualify as a 'living lab' approach. These are (1) operating in a real-world setting, (2) creating an environment for open innovation (i.e. early involvement of users, openness towards different solutions and innovations as a result of co-creation) and (3) as such, giving a chance to develop an incubator for change. Living Labs are an attempt to work on local, tangible, actual issues with a diverse setting of relevant actors. With the two research-based living labs that are currently being developed for spatial planning issues along the N16 and in the valley of the Dender, we explicitly also reflected on methodologies and on the potentials of this approach in contemporary planning processes.

The operational 'real-world setting' in the living labs departs from the local perspectives of the N16 and the valley of the Dender , i.e. including initial hypotheses that are based in early observations and consultations as well on earlier research). This leads to negotiations with one or more municipalities, as well as regional agencies and administrations - relevant to frame a *problematique*-, local businesses and/or representatives from international enterprises in local plants, local inhabitants and a variety of users (e.g. for specific questions about open spaces, mobility, agriculture, recreation, etc.). The local perspective brings in tangible cases, where actors are challenged to show commitment. The local focus equally adds a sense of pragmatism, reality and urgency to the proposals, which could otherwise be perceived as a non-committal reflection (e.g. if developed as a future exploration on the regional scale). These two heuristics – i.e. a regional perspective to better estimate systemic impacts as well as local cases to identify particular valorisations and tangible path dependencies- are complementary, yet also dependent: living labs can hereby challenge existing hierarchies in planning, and induce a panarchy instead (cf. Gunderson, Holling, 2001). In this, the interrelations between regional and local developments in socio-spatial systems are stressed to be mutually interlinked and continuously evolving. It emphasises that planning has no end, both spatially and temporarily. The outside-in approach of living labs adds concreteness in the application of regional laws, visions and conditions, but also openness

through reinterpretation (and critical questioning): experiments on a local scale can be the trigger to also invest in a more generalised innovative practice.

In other words, inserting local living labs in regional planning structures requires accepting that principles of subsidiarity have outlived their rhetoric: changes are cross-scalar, and can crystallise from different nuclei. The addressing of complex transformational change requires some form of collective learning across scales in order to join different kinds of expertise and to confront different value positions. Wicked problems defy strategies which try to make direct linear links between problems and solutions. They require processes of collective learning in which both the current understanding of the problem (i.e. multi-causal and interdependent issues, with unforeseen consequences, instability and social complexities) as well as the variety of possible approaches and means at hand are simultaneously addressed and redefined. Such processes require some form of collective imagination in which a new space of possible problem-solution combinations is opened up.

Not all that glitters is gold though: in developing two different experimental living labs, we detected a perpetual ambiguity in their functioning. Whereas living labs envision openness towards different possible solutions, the situating in a real-world local setting and the emphasis on operational processes potentially also reduces the bandwidth of solutions. In this constellation, proposed practices can be a reinforcement of solutions that are locally already available with a constant tendency to come to some sort of premature consensus on appropriate resources (cf. Christensen, 1985). The consensus can be called 'premature' because it appears without critically studying (the desirability of) systemic changes that can follow from a unique case if applied as a more generalized practice. It is therefore highly important to accompany the operational search with a thorough reflection over values. This can (or rather: should) be the ambition of a collective learning process: to explicitly also focus on value settings in order to better legitimize solutions with a strong operational focus.

## 3. Collective learning and transformational changes in spatial planning

Section 3 presents evidence for a variety of collective learning challenges and experiments in different actor- and action oriented projects in spatial planning in Flanders. It equally discusses the valorisation potentials thereof, and adds few thoughts to the reflection on planning approaches. Before discussing the (intermediary) results from the analysis of different collective learning initiatives, we first briefly reconstruct and motivate the analytical frame to study these initiatives.

### 3.1 An analytical frame to study collective learning initiatives

The study of collective learning initiatives is part of a wider reflection on methodologies for future explorations in spatial planning. Typically, the examination of probable, possible and desirable futures for issues as complex as spatial planning, requires input and interactions from different actors. Ideally, these processes can develop as a win-win for all participants, i.e. create a situation within which participants capitalise each other's resources. In any case these processes generate at least new insights, and hopefully shared sense making and collective understanding. We study the orchestration of such processes, and particularly also their promises: what kind of direct and indirect valorisation is possible with collective learning initiatives?

In order to articulate these promises and valorisations, the analytical frame combines three foci:

- The first focus is based in public policy studies, where policy learning and change is conceptualised in different subsystem approaches (e.g. Kingdon's Multiple Streams Framework, 1995; the Punctuated Equilibrium Model of Agenda Change by Baumgartner and Jones, 1993 or the Advocacy Coalition Framework by Sabatier and Jenkins-Smith, 1993). A central question here is: What are the strategies to induce change? In the analysis of collective learning initiatives, we mainly focus on two actor resources, i.e. mobilisation and knowledge production (cf. typology of policy-relevant resources by Sabatier and Weible, 2007, pp. 201-203, applied in: Kuhk, 2013, pp. 67-71). The

development of social resources and of knowledge resources can equally announce different types of innovations, and as such also valorisations of collective learning initiatives. For instance, the direct valorisation can be assessed in the creation of novel coalitions or in the progressive insights on innovative practices.

- The second focus addresses the (im-)possibility of finding a common ground in diverse actor settings. We study how 'boundary objects' can help in multidisciplinary, heterogeneous settings (cf. Star, 2010) to cope with diversity and to cooperate without a need for consensus. In the analysis of collective learning initiatives, we broadened the initial definition of Star, and focus both on the development of shared understandings and problematisations (cf. Star & Griesemer, 1989, pp. 410-411) as well as on the development of shared methodologies (cf. Schreurs, Kuhk, 2014), and the role of future explorations and experiments in this. Both can contribute to the development of innovative practices and as such be a direct valorisation of collective learning initiatives.

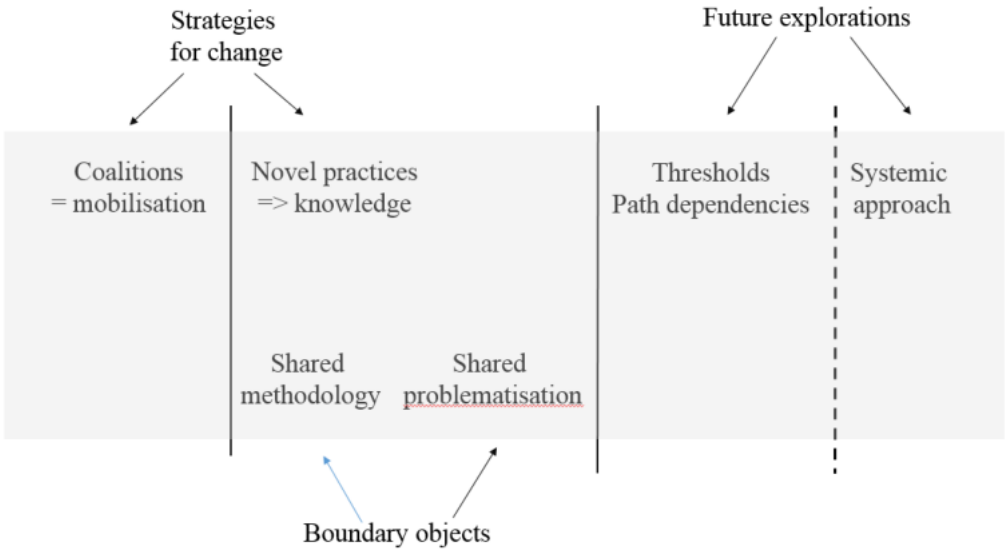


*Figure 2: Analytical frame for the study of Collective Learning Initiatives*

Whereas thinking about strategies for change, and also the reflection on building shared methodologies and shared problematisations are equally categories in the development of future explorations, the study of methodologies for future explorations has pointed at two more aspects that can be relevant to study collective learning initiatives for complex spatial planning matters (i.e. a third relevant analytical category). One question is whether the novel coalitions and practices experience lock-ins or path dependencies that limit the implementation or create a threshold to even have a single-case try-out (cf. Moulaert e.a., 2013). These can be legal constraints, values and political-institutional settings that hinder openness towards change, restrictions in financial means, or limitations in the cognitive creativity to develop a feasible experiment. Another question is whether the novel coalitions and practices can (or should) be generalised (cf. Checkland, 1990). It thus considered indirect forms of valorisation, beyond a specific initiative.

The analysis of collective learning initiatives attempts to better situate the conditions for such initiatives and evaluate the direct and indirect valorisation thereof. We[8] selected six cases for analysis in the first stage of this investigation. All cases focus on complex spatial issues with accordingly complex actor settings. In these, the design of multiple iterations is desirable and/or necessary to develop a shared

[8] The 'editorial we' is different than earlier in the paper: the analysis different collective learning initiatives is tied to work package 3/ Research on methodologies for future explorations with Annette Kuhk, Jan Schreurs, Michiel Dehaene and Martin Dumont. This is a relatively small team, which is fully comprised in the larger team for the living labs. Then again, the analysis of collective learning initiatives was enjoying vivid reaction too from the project leaders in the different initiatives that were studied.

understanding, to drill for innovative practices or to gather the necessary commitments to engage in implementations. With this in mind, we assumed that in all these cases, some kind of collective learning (i.e. capitalising on each other's resources) would develop to a higher or smaller degree.

### 3.2 Preliminary results from the analysis of Flemish cases

The Living Labs were one case. The other cases for now are: TOP Limburg, TOP Noordrand and Metropolitaan Kustlandschap 2100, that were all initiated by the Flemish administration for spatial planning, as well as an initiative from the city of Antwerp, i.e. Labo XX, and the Dutch study 'Brabantstad'[9]. The analysis is developed based on document analysis, participant observation and in-depth interviews with project leaders. The results from this analysis were then presented for methodological triangulation to the respondents, at a joined methodological research seminar[10]. The latter was an occasion to reconstruct and to expound the analytical frame (introduction), to refine and to complement the intermediary results (part 1) and to further develop the strategy for analysis (part 2).

#### Collective learning curves

Each participant was challenged to critically reflect on a series of methodological issues in the development of the collective learning initiatives which they know best, in order to also reflect on or to articulate spaces for improvement. It was emphasised that the objective of this analysis is explicitly *not* to compare the cases to produce a 'ranking of practice'. Instead, apart from methodological assessment and improvement, the aim is to design the methodological research seminar in itself also as a collective learning initiative, where participants can capitalise on each other's resources, i.e. to exchange their experiences in the orchestration of a *prospective* in a complex multi-actor settings (cf. Gaston Berger on 'La Prospective', 1960, cf. Durance, 2007). In that sense, the seminar was a kind of *analogon* for the initiatives analysed.

In the first part of the workshop, each respondent received a résumé of output from in-depth interviews. Each initiative was represented in a table with a brief summary of general conditions, novel coalitions, innovative practices (i.e. new insights and understandings, but also shared methodologies), thresholds and potentials for future valorisations. The discussion on valorisation and innovation potentials (i.e. how do *we* change? / novel coalitions, *how* do we change? / methodologies, '*what if*' we change? / novel practices, and 'what if' *it changes*? / contextual shifts) was prepared in the face-to-face interviews, then further explored in small group discussions with two project leaders and one moderator/reporter each, and finally discussed in a plenary session in order to identify a number of specific issues for further analysis.

We here briefly present a selection of examples that proved to be inspirational during the discussions:

- A relatively long 'stage zero' of the project 'Metropolitaan Kustlandschap 2100' (MKL 2100), which aimed at creating alternative imaginaries for the Belgian coastal area, was dedicated to designing a protocol for collaboration between the main parties (i.e. the Flemish administration of Spatial Planning, the division 'Labo Ruimte' with the 'Bouwmeester', and the Flemish administration of mobility). The formal signing of such protocol triggers more explicitly a reflection on the role and capacities of each of the participants (which can both be enabling or prohibiting in an early stage).
- As for the uniqueness of coalitions, there are multiple remarkable examples: Brabantstad created a broad platform with both elected officials and public servants from 5 cities, the province of Brabant and the 'agencies for water'. The TOP Noordrand – Territorial Development Project for Flemish sites at the densely populated Northern fringe of the Brussels-Capital Region- managed to set up a cross-regional collaboration with a directing role for the department of Spatial Planning. The MKL 2100 project actively promotes the involvement of authorities from different regions ánd scales, with federal, regional and municipal partners as well as participants from France and the Netherlands. The novelty in these coalitions –in a Belgian context- is the openness to involve across

[9] Online references to the different projects are provided in the bibliography.
[10] Referred to as 'MOS' (Methodologisch OnderzoeksSeminarie in Dutch).

political-institutional borders. Another type of innovative practice is realised in the living labs, where municipalities, organisations with a high energy demand, farmers and a agro-management group collaborate in a project of energetic woodsides; or the example of the Labo XX project, which explicitly also attracted sound expertise on financial conditions in the development of alternative urban renewal to redefine the 20th century belt around the city of Antwerp. The novelty in these two cases resides in the tailor-made combination of expertise (i.e. a 'novel coalition') to explore potentials of innovative practices.

- With regard to how the processes of change are orchestrated (i.e. shared methodologies), we already extensively explained the (process of formulating) guiding principles for the living labs. Another noteworthy example is the Labo XX project, within which steering and policy capacity as well as design capacity are to be developed simultaneously.
- There are numerous examples when it comes to innovative practices and experiments, e.g. the explicit multi-scalar perspective in the TOP Limburg project to combine local development with Flemish perspectives and European ambitions. When discussing novel practices in the in-depth interviews, the search for collective imaginaries seemed to come naturally to the foreground. Whether it is a description as a 'carpet', 'dispersed urbanity', 'landscape-metropolis' (cf. Brabantstad, TOP Limburg, TOP Noordrand), the focus on the 20st century 'belt' (cf. Labo XX), the focus on 'interfaces' and on development along both sides of a 'border' (cf. land-see relations in MKL2100 and cross-regional relations in TOP Noordrand), or the nomenclature of a 'plantation' that is used to indicate the experimental character of 'Living Labs', the here forwarded concepts all demonstrate a desire to better articulate the observed evolutions as well as the intended interventions.
- The thresholds and path dependencies that would keep from actually implementing the planned interventions, are versatile, with for instance a lack of political mandate, determining institutional-administrative frames, the conservative nature of existing discourses (i.e. 'worldviews'), limitations in physical structures, historically grown and relatively rigid interpretations and uses, the necessity to receive time-consuming feedback from other actors, the estimations about the potential impact on a systemic level, all kind of 'syrupy' processes, etc. (cf. Hendriks, Toonen, 1998). With many thresholds related to the slowness of mental ecologies, we specifically also searched for examples in which a liberating climate was created. For instance, a mental *terrain vague* can be formed with a wide temporary perspective (e.g. the coastal study, which calibrates its explorations on the year 2100). In this, another important artifice has been the explicit reference to a long history of the 'hold the line'-discourse with at the same time an increasingly rapid changing context in terms of climate conditions, demographic challenges or economic aspirations. As contradictory as it may sound, also a principle of limitation can create liberties and overcome mental barriers: with a framing of interventions as 'experiments', it is clear that a (temporary) commitment is asked for, whereas it remains open as to whether the experiment naturally would state an example and pilot for generalisation. The question of systemic changes and magnified transitions was rarely explicitly stated, although all collective learning initiatives regularly and/or implicitly refer to a wider context of changes and disruptions.

### 3.3 Next steps in the study of collective learning initiatives

One important outcome of the methodological research seminar is the *collective* decision to organise at least one more session of meta-learning in august 2015, as well as additional in-depth interviews (on known and new collective learning initiatives) to prepare this. The focus for the next session is provisionally fixed on the following issues:

- The representations of the collective learning initiatives are rich, but still too simplistic since the schemes do not show *relations* between different analytical categories: Can hindering factors (i.e. thresholds) be countered in a widened coalition? Would the exploration of future potentials add a substantial footnote to the proposed innovations? Can the current coalition – even if positively perceived – become a threshold for the implementation? Which methodologies are required to produce progressive insights and the support of a wider community of practice to innovative

practices? As with the previous session, the participants will again receive a scheme with the outcome of in-depth interviews for methodological triangulation.
- The session will also focus on few specific issues, such as the importance of consolidation and the cumulative knowledge in iterative processes of planning, conditions for the development of collective imaginaries, the role of authorities and different other participants in collective learning processes, the role of design and future exploration and opportunities for 'potentiality mapping' up to the possibilities and limitations of collective learning as a socio-*digital* environment.

Then also, the focus for further methodological reflections – which are the last stage in the research project of the Policy Research Centre for Spatial Planning- will concentrate more on the explanatory levels and on policy-relevance: whereas the analytical frame allows gaining rather detailed accounts on different collective learning initiatives in terms of direct and indirect innovative practices, the next steps would more closely also focus on qualifying the processes of collective learning as such. With this, we intend to move from the exploratory and more descriptive level of research to an explanatory level, i.e. to better explain the conditions for collective learning, to qualify the nature of collective learning processes, and to interpret the potential of different collective learning initiatives for future explorations on complex socio-spatial developments. The latter is central for the formulation of policy recommendations, i.e. to critically discuss planning approaches in the light of contemporary challenges.

## 4. Conclusions: Can living labs remodel planning approaches?

Based on the experiences with the two experimental living labs and the wider analysis of collective learning experiences in spatial planning in Flanders, we here want to forward few concluding reflections. These intend to feed the debate on how different approaches and heuristics in future explorations and collective learning could possibly alter contemporary planning practices, and the governance thereof.

Living Labs typically start from a real-world setting. The ambition of this approach is to create an environment for open innovation through early involvement of users and an open agenda. The merging of living labs with spatial planning can possibly bring new elements to a debate on participative practices that has been ongoing for almost six decades. Nevertheless: the so-stressed user involvement is a virtue of living labs, it is no novelty for spatial planning though. Then also, the explicit addressing of a specific location as a non-human actor is no novelty in planning practices: site visits, walkthroughs and the staging of a joint 'choreography' with different actors on site, the use of photographs and impressions,… all these elements as a form of situated learning have been included in design and planning practices for a long time already.

How then did the experience with research-based living labs for spatial planning and the reflection over different collective learning initiatives add to a discussion on remodelling planning approaches? The explicit focus on methodologies has led to discussions on for instance open agendas in planning, on the role and potential of explorations and of experiments, as well as on the consolidation of collective learning processes.

The condition of openness that is typical for living labs is potentially threatened in an area-based focus that departs from a local, tangible setting. In this, the myopia for ongoing, familiar practices can lead to premature consensus and potentially prevent from considering alternative positions. The challenge then is to purposefully create a kind of 'estrangement' (cf. Halse e.a., 2010, pp. 66). This can be achieved through different heuristics: we see a potential and value in using future explorations to question what is taken for granted, to open up agendas and to challenge deep core assumptions. Openness as a condition would also allow accommodating dissensus on spatial claims and in discourses on spatial issues, based in different expertises and interests. It is a quintessential condition for collective learning, since capitalising on each other's resources requires some sort of (accepted) complementarity.

At the same time, the living labs have the ambition to be an 'incubator for change'. The initial openness is therefore challenged with every articulation of proposals for innovative coalitions and practices. This

limitation and zoom-in is a precondition though to develop operational or strategic interventions. The focus on specific proposals rather than others (e.g. when selecting from a description of several 'experiments' to continue with 2 or 3 of these) is motivated in the commitment of partners, in estimations over the feasibility of a proposal as well as a reflection on the relevance of an intervention. The defining of a specific focus in living labs is *critical*. Then again, a more generalised practice of living labs in spatial planning – comparable to the regular developing of for instance neighbourhood projects in the Brussels-Capital Region- would allow a *series* of try-outs.

In this, the development of 'experiments' can possibly present a balance between 'strategic' proposals (i.e. proposals for interventions that are –as of the introduction- intended to lead to a generalised practice) and 'non-comittal' explorations. Whereas the proposing and the implementing of an experiment requires the commitment of specific, local actors, it is still labelled as an 'experiment'. Experiments are the natural answer to a situation in which uncertainty is high. In such settings experimentation may constitute a valuable way to recognize complexity, make it subject of a concrete sociocratic process, and resisting the temptation to trade complexity for concrete action, and a narrowed rhetoric of entrepreneurship. Even if these kind of interventions zoom in on a single project, there remains a fundamental openness with regard to the evaluation of results. Experimentation might be a way to maintain openness to dissenting views, and avoid the side-lining of parties that cannot or do not want to take up a practical engagement in the early stages of the project. An experiment can -but does not have to- lead to strategic changes. It is a try-out, and the evaluation of the results is part of an iterative process. An experiment allows rehearsing an alternative approach, and as such also rehearsing new roles or relations of actors.

In these iterations, it is important to actively define moments for 'fixation' in order to consolidate the processes of collective learning. 'Openness' and 'fixation' are complementary in this: whereas a *terrain vague* - or at least some form of questioning of familiar practices- paves the way for innovative practices, the articulation and indeed confirmation of earlier achievements, proposals or decisions is necessary to actively build a shared understanding and to move a step closer towards implementations.

In order to consolidate the collective learning processes, it is therefore vital to document these practices, which otherwise remain rather ephemeral. Documenting can take different forms, but it should look for some kind of triangulation (i.e. to close a loop in an iteration, to actively create a shared understanding). The interviews and methodological research seminar on different collective learning initiatives added to this practice but occurred so far in a policy making arena and should be expanded to include direct feedback-loops with all stakeholders.

With serious doubts over strictly instrumental 'one size fits all'-methodologies (e.g. as seems to be expressed in the 'living labs harmonization cube', Mulder e.a., 2008), we hereby attempted to document and elaborate tailor-made approaches of different collective learning initiatives for spatial planning. It is an attempt to build capacities for different possible 'orchestrations' of such processes. The analysis focuses on the direct valorisation in novel coalitions (i.e. 'rehearsing new roles') and on novel practices (i.e. 'rehearsing new futures'), with a reflection on thresholds (i.e. 'path dependencies') but also on the potential of future valorisations (i.e. 'rehearsing transitions'). The methodological research seminar is in itself also a moment of collective learning. The exchange with different project leaders and professors on methodologies was a novelty, which required an intensive time of preparation. The initiative has been and still is fragile though: it has been difficult to gather these high profiles, and it is equally difficult to transcend from a short-lived reflection to an ongoing and continued practice, also beyond the duration of the Policy Research Centre (i.e. to anchor explicit methodological reflections as a generalised practice in the spatial planning department). The required high levels of engagement (including the high mounting transaction cost and the needed time) also put in question the extent to which such initiatives can easily be replicated. Whereas the outcomes of this analysis are relevant in a reflection on planning practices in the light of uncertainties (i.e. dealing with wicked problems), the analysis does not reveal much (yet) on conditions for collective learning, apart from the discussion on the need for consolidation. This will be the subject and focus for the next steps in the analysis.

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**Appendix:**
**Guiding principles for the Living Labs on spatial planning in Flanders**

**User-orientation and iterations**

The logbook served as a reminder to also situate the particular experiments in Flanders in a wider range of living lab experiences. In this, Chesbroughs description of 'open innovation' has been an important point of departure for the Living Lab concept. 'Open innovation' assumes non-linear, cyclical innovation processes (cf. Chesbrough, 2003; Veeckman e.a., 2013) with iterations, feedback loops and hands-on, formative evaluations. This can for instance be realised through 'open innovation platforms' (Feldman, 2007). The complexity of planning issues, the uncertainty over contextual factors or the multiplicity of actors involved urges the development of similar processes, which translate into a series of actor- and action-oriented approaches, stressing the importance of collective learning. This is equally emphasized in the publication "The Urban Connection, An actor-relational approach to urban planning" (Boelens, 2009), in which the author advocates for planning approaches that explicitly consider a multiplicity and diversity of actor perspectives. The reasoning and legitimation for such efforts is based in the observation that contemporary planning practices often experience path dependencies and lock-ins, whereas at the same time, alternative practices emerge as a response to a significantly revised social context. However, these novel practices often stand little chance to be implemented, valorised or transferred to a greater scale (cf. Boelens, 2009, pp. 8-9). Another argument to promote investing in multi-actor collective learning initiatives is the observation that scientific theories on spatial planning seem to develop at a large distance from daily practices (ibid., pp. 183-189). A series of case studies in the publication illustrates the relevance of the actor-relational approach (ARA): "Space is always relational (...), it is constantly co-structured by the reciprocal interaction between (leading) actors and their networks, e.g. strategies and (institutional) settings" (ibid.:11). The author concludes that the examples from practice are promising in order to develop a novel and more robust form of urban planning with flexibility and a strong practice orientation (Boelens, 2009: 197). Such an 'outside-in' approach that starts from stakeholders (as opposed to an 'inside-out' approach that starts from governments) could be developed in different stages (ibid., pp. 193-197), e.g. starting from a first inventory of actors and values, development of potentiality maps, bilateral talks and round tables, development of business cases or pilots, according coalitions and possibly also the widening of new practices. The use of maps is essential here since it enables to represent territories related to interpretations of different spatial uses, i.e. shaped (and shaping) actor relations to physical spaces. Mapping is one of four ways to navigate through the complexity of spatial planning issues (ibid., pp.

172-177, based on Deleuze and Guattari, 1980). The process of mapping is preceded, yet often also accompanied by an unravelling and a reconstruction of the existing, which is a process of 'tracing'. Then again, potentials cannot be realised unless matching partners can be found. The relevant structure to navigate through complexity here is a 'diagram', e.g. to represent relationships and transformations thereof. Last but not least, the realising of novel practices equally requires knowledge about a wide field of 'agencements' such as laws, regulations or institutions (and the potential to change these) to be able to estimate the likelihood of potential developments in spatial planning. The fourfold Deleuzian cartography –traces, (potentiality) maps, (actor) diagrams and 'agencements'- has become a shared fundament in the methodology for the experimental living labs.

Other references in the methodology of the experimental living labs have been experiences in research-by-design and particularly also the 'synoikos scenario workshops', e.g. in the European 'Thought for food'-project (T4F) with a case in Roeselare Hoogleden (cf. SPINDUS-project, Segers e.a., 2013). The aim here was to test 'participatory urban design' in a real-world setting, as a method for social innovation (i.e. approaches to enhance social interactions and basis needs for specific social groups). A significant resemblance to the actor-relational approaches is the starting point, which are, in both approaches, local actors. Then again, the SPINDUS project has an explicit focus on social innovation, which seems to be no sine qua non condition for the ARA approach. The observation of this difference with regard to taking an explicit normative position has equally been discussed in the 'curatorium'.
The 'architecture' for the T4F project is based on synoikos processes and on the 'Netzstadt' approach (cf. Oswald Baccini at ETH Zürich; Oswald, Baccini, 2003). The aim is to create strategies for development and to launch project ideas based on the contribution of a multiplicity of actors, similar to the ARA. The project started from a morphological and physiological research, which is partly comparable to a process of 'tracing'. The results of this were presented in a first workshop, which lead to 'scenarios' (comparable to the stage of 'mapping'). These are hypotheses about possible pathways for more sustainable spatial development over a period of 50 years, with an indication of the 'change agents' (similar to a process of 'Diagramming'). The experience from this participatory urban design approach as well as from a variety of research-by-design projects has been valuable in developing potentiality maps for the living labs. The multi-valence of such design-scenario hybrid, which integrates images and narratives, is expected to also contribute positively to a more continuous, dynamic, strategic and inclusive planning process (cfr. Schreurs & Kuhk, 2011, p. 346). Vandenbroeck agreed with the expectation of added value, but stresses the need to use strong boundary objects to integrate approaches from planners and designers, in order to also operationalize the use of both scenario analysis and designerly research in planning practices.
The T4F experience equally sharpened the focus on the importance of iterative and cyclical developments: building a shared understanding requires a methodology that structurally builds on reiterations. Neither the Deleuzian ways to navigate complexity (i.e. tracing-mapping-diagramming-agencying) nor the architecture of synoikos workshops (i.e. inventarising- scenarios and scanning directions for development – indicating change agents) should be read as linear processes: it requires many iterations with local and regional actors to sail across the complexity of spatial planning issues (cf. evolutionary planning, Bertolini, 2010).
The experiences from actor-relational approaches, participatory and designerly approaches (with their emphasis on future-orientation and on experiment), which are at times combined to scenario-thinking, are moulded into a methodology for two experimental area-based living labs on spatial planning in Flanders.

**Systemic approaches and strategic development**
Prior to the living labs, there has been another ad hoc, short term assignment at the Policy research Centre for Spatial Planning, i.e. the 'expertforum'. The group of experts accompanied the writing of the white paper on spatial policies during two years. In this, Coppens and Allaert pointed at a central dilemma in spatial planning: whereas several aspects in the business-as-usual are fiercely criticised for their negative impact on for instance traffic congestion, water management, bio diversity, food- and energy facilities or effects on health and environment (Coppens e.a., 2014: 40), it seems to be increasingly difficult to actively steer societal systems and as such also the development and the use of spaces. The members of the expertforum expected that transition management could potentially offer a

way out of this impasse. The starting point is an analysis of broader socio-technical regimes which focus on (1) tangible and intangible structures (e.g. network infrastructures or systems of regulation), (2) on the dominant images, values, paradigms and discourses (e.g. the importance of juridical stability, or the strong individualization in spatial development in Flanders), and (3) on routinely system behaviours (e.g. discrepancies between permits and enforcement). With a certain number of similarities to this approach, the analysis of dominant images or worldviews has also been the subject to explorative scenarios (cf. Kuhk e.a., 2011), as well as to the 'theories des cités' (Boltanski, Thevenot, 1991) or to subsystem approaches in public policies (cf. Kuhk, 2013, pp. 42-44).

A common assumption in the literature on transition management is that the measures to resolve systemic conflicts are generally conformist and only rarely innovative on a systemic level. Measures may temporarily appear to be functional, whereas they essentially reinforce an existing lock-in (which is, from a systems perspective, essentially a dysfunctional evolution, e.g. using breakdown lanes as a measure against congestion and/or other symptom control). Another example is the exuberant regulatory framework in spatial planning, which attempts to summarize even complex conflicts in high density areas in an encompassing regulatory context. In an attempt to adjust regulations for every combination and variation, the regulatory systems becomes rather dysfunctional than facilitating (e.g. creating 'exception decrees' and 'repair laws', ibid., p. 47). Transition management argues that socio-technical regimes have a persistent stability, with little possibility to actively steer the regime. In future explorations and scenario analysis, a closer analysis of thresholds and path-dependencies is expected to shed a light on these kind of syrupy processes (cf. Hendriks, Toonen, 1991).

At the same time, there have been also numerous examples of socio-technical regimes that change quite radically, often at relatively short notice and starting from small-scale innovations. Niche changes can, under certain conditions or so-called 'windows of opportunity', be applied on a larger scale. Transition management does not aim at steering towards one specific 'optimum', but it is primarily striving to accelerate the process of change in the direction that is more sustainable. Solutions are a priori not determined, but found in the course of the process (cf. Coppens e.a., 2014, p. 45).

The living labs depart from a similar logic: the issue setting (or 'problematisation') and the possible approaches (or 'solutions') are both defined by all relevant actors involved, from the beginning of the process. The expertforum expected innovations to develop in new and unexpected connections of actors, including actors from niche networks. The novelty then would be a result of unexpected linkages between actors who previously were in relatively separate worlds, e.g. social organizations with private operators, energy suppliers and food producers, hobby farmers with water companies, etc. If these innovative coalitions evolve into a system level, they can turn into 'strategic alliances' (ibid., p. 49). Innovative practices in space can then also result in a system-wide transition. There is an important flipside to this coin though: even if novel practices function well in particular niches and particular locations, the effect on a larger scale needs to be considered carefully. The reassessment of systemic levels both considers potentials as well as possible negative externalities with a generalised application of novel practices.

# Engaging action research with urban planning practice in identifying new courses of action for sustainable urban development

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## Abstract

*New workable approaches to urban sustainability are often explored within temporary and interdisciplinary project structures located outside direct formal jurisdictional authorithy and every day planning practice. In this context multiple examples of cross-border collaboration can be identified where researchers engage with urban practitioners in knowledge production processes also popularly coined as modus 2 or action research. There is a great need for critical reflection on the methodologies applied in specific contexts of collaborative knowledge production in order to get a better understanding on how to arrive at actionable conceptions of urban sustainability. I take my point of departure in the Interreg project Urban Transition Øresund (2011-2014) involving urban planners from five municipalities and an interdisciplinary team of researchers from five research institutions all located in the Oresund region. The project has been set up with the ambition to develop models for collaboration and approaches to work more thoroughly with sustainability in urban planning processes. Based on my findings from being a research participant in the project I claim that action research can support the creation of inter-collegial spaces of social learning to discuss professional values, norms and challenges around sustainability. But what also has become apparent during the project is how the normative drive for enhancing democracy through collaborative knowledge production may be obscured by competing conceptions of participation based on the logics of the knowledge economy as well as they may be pervaded by internal conflicts of different knowledge interests among researchers and their partners.*

## 1. Introduction

It has been widely acknowledged that the urban scale represents an important governance arena for dealing with climate change as cities have a major impact on energy use, construction of buildings, waste and sewerage systems and transport infrastructure (Bulkeley, 2010; McCormick et al, 2013) By holding the formal authority to direct the physical development of the city urban planning definitely constitute an important field of action for a more sustainable development.

In a Scandinavian context many urban governments have for several years put forward visions for reductions in emissions and adaptions to climate change. Likewise visions of moving towards a more sustainable city have taken a prominent position on the urban agenda working as the collective name

for a broad range of policies. Within urban planning the practical experiences with integrating sustainability visions in new urban development and urban regeneration projects are still growing. Research and practice in the field note that in order accomplish higher degrees of sustainability there is a need for an integrated planning approach for addressing social, economic and environmental challenges in ways that in the same time remains sensitive to the needs of particular urban areas (Holden, 2012; McCormick et al 2013). Though experience show that a significant gap between visions and practice still remains as visions are far from effectively integrated across policy areas as well as it remains unclear how planners and politicians can deal with the conflicts that may arise between social, ecological and economic interests (Stanojcic og Hermelin, 2013; Nilsson, 2007).

### 1.2 Action research and knowledge production on urban sustainability

In order to arrive at more operational conceptions of sustainability and work more thoroughly with it in urban planning it can easily be argued that different types of actions need to be explored and levels of agency to be activated. Within the institutional structures of the local government administration a wide range professionals are employed with different dimensions of urban development ranging from ecological issues to citizens participation all relevant to further expand operational conceptions of sustainability. It is the scope of this research project to look into how the experiential knowledge of urban planners and their space of action ascribed to their professional practice can work as a platform for furthering a more sustainable urban development. More specifically this is explored within the framework of the cross-sectoral and interdisciplinary development project Urban Transition Øresund where urban planners and researchers have been working with different action research approaches.

New workable approaches to urban sustainability are often explored within temporary and interdisciplinary project structures located outside direct formal jurisdictional authority and every day planning practice (Bradbury, 2010; Laing et al, 2012). In this context multiple examples of cross-border collaboration can be identified where researchers engage with urban practitioners in knowledge production processes also popularly coined as modus 2 or action research (Trencher et al, 2013). Proponents of the modus 2 perspective claim that the collaboration between research and practice is necessary in order to contextualize knowledge production and link it more directly to changes in practice (Gibbons et al 1994). Critical stances within action research direct the attention to establishing alternative visions of sustainability to challenge the current systemic state of unsustainability (Nielsen and Nielsen 2006, Svensson et al 2009). This form of collaborative knowledge production in interactive research projects between practitioners and researchers still represents a relatively new phenomenon but experiences in the field are still growing (Svensson et al, 2009). My argument here is that there is a great need for critical reflection on the methodologies applied in specific contexts of collaborative knowledge production in order to evaluate to which degree that these ideals are actually achieved – or how they fail to be achieved. Towards this end I look into the differences of participants and how they try to deal with it, how the process of co-production is formed and point to impediments for forming more radical visions on sustainability.

### 1.3 Urban Transition Øresund

One of the many initiatives that have been set up to address the gap between the visions of sustainability and urban planning practice has been the project Urban Transition Øresund (2011-2014). The project that has been partly financed by EU's Interreg IV A Programme has involved five

municipalities[1] and five research institutions[2] across the Danish-Swedish border in the Oresund region. In the project an interdisciplinary team of urban planners and researchers have tried to identify new approaches and methods concerning ways of collaborating, organization of planning processes, building regulations and new forms of financing in urban planning. My Ph.D. has been partly funded by the project and the terms of my enrollment in the project has been to facilitate the ongoing process of knowledge production in the project together with a team of other researchers. Simultaneously and in a longer time perspective it has also been my role to follow the learning process of the collaboration between research and practice. During the project I have taken part in more than 50 meetings and workshops, conducted interviews with participants and held presentations. In this paper I will focus on just one of the working groups that explored new formats of collaborating on sustainable urban development.

The working group chose after some initial discussions to work with designing a sustainability board game as a way of building collaboration across different fields of knowledge and tasks among urban planners working in different administrative departments and achieve a broader understanding of sustainability in urban planning practice. The process of game development has been coordinated by two design researchers at Malmö Högskola and organized through a series of practical experiments and reflective workshops. In total more than 100 people took part in the experiments where as a smaller group of around 10 people have formed the core group.

The composition of participants in Urban Transition Øresund has been rather diverse spanning from those responsible for drawing up local district plans, representing either an architectural or social science background to social workers and communicators e.g. involved in urban renewal projects. In this sense they represent a typical case on how the roles and skills of urban planners are diversifying as they work with different tasks and within different organizational setups in urban development projects. This creates different frames for urban planners to organize and define specific actions for sustainability strategies.

### 1.4. Research interest

One of my initial motivations for engaging in the Urban Transition Øresund was that I saw this temporary and interdisciplinary organizational structure as a potential arena for social learning and collaborative reflection on working with urban sustainability (Nielsen & Nielsen 2006, Nolmark et al 2009). It has been my thesis that such an arena located outside the formal hierarchical structure of the urban administration could offer a reflexive space where urban planners with different professional backgrounds and working areas jointly could reflect on mapping the complexity and controversies involved in working with urban sustainability, entering into repeated cycles of experiments and reflection, which Schön has phrased ‘reflection on action’ (Schön, 1983). This was based on a thesis that when structuring problems and formulating visions participants can be stimulated to reflect on their everyday routines in order to reach a deeper understanding of the complexity of the problems at hand. Likewise an arena like this offers the opportunity to establish an inter-collegial space to discuss professional values and problems faced in everyday practice and to strengthen a common professional identity a quality that seems to be especially important when working within a volatile organizational structure as is the case of urban planning (Drewes, et al 2010).

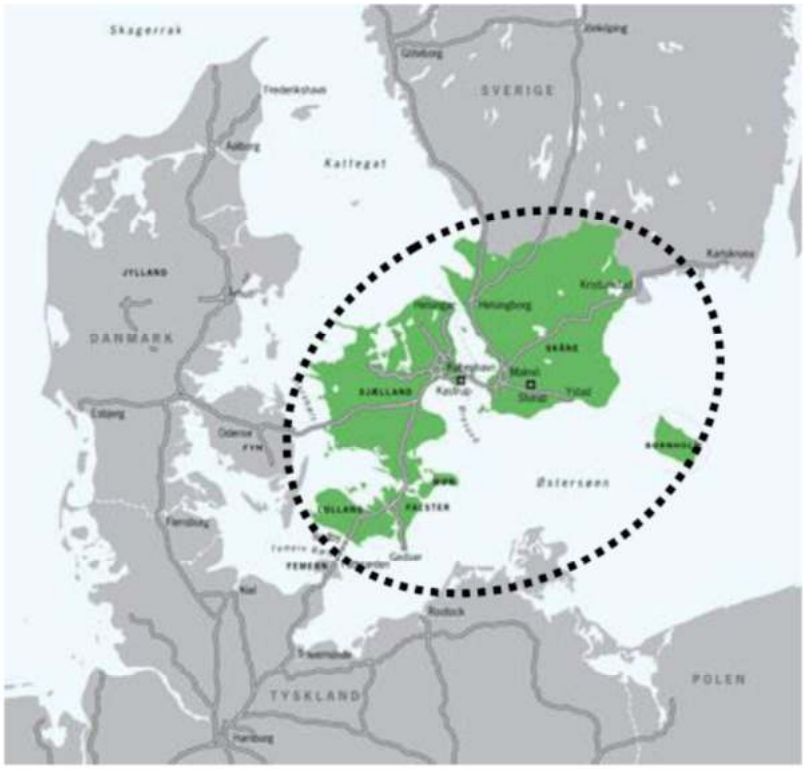
Admittedly the project has not produced much tangible outcomes as I as well as the other project participants initially hoped for. This has confronted me with the troublesome question if we failed to

[1] Copenhagen, Malmö, Lund, Roskilde and Ballerup
[2] Malmö Högskola, Aalborg University Cph, Lund University, SLU Alnarp and Roskilde University

learn? This does however present a rather gloomy perspective on the many efforts and resources that were put into the project. It does not do justice to the participants that kept engaged in the working groups and expressed content to have the option to have a platform were they could discuss operational ways to work with sustainability in practice. At the same time I find that the experiences from working in the project have raised important questions on how to use action research methodologies in meaningful ways to facilitate collaboration between researchers and urban planners and in exploring meaningful ways of operationalizing sustainability in urban planning practice. By exposing the ways of collaborating, visions and controversies that arose during the project it is my hope to contributing to a further discussion on methodological development when working in complex project constellations.

## Background: Urban planning in the Oresund Region

The Oresund region might represent one of the most well-known and widely published examples of regional and cross-border collaboration in the EU (Naewelaers et al, 2013). The construction of the Oresund Bridge that connects the capital region of Copenhagen located in eastern Denmark and the region of Skåne located in southern Sweden certainly represents a peak in a long history of collaboration across the borders. The bridge that opened in 2000 has worked as a catalyst for a functional integration of the two regions in terms of mobility and providing a potential ground for regional growth with closer links between businesses and labour markets.




**Figur 1 The Oresund Region (Naewelaers et al 2013:14)**

Taking an overall glance at the planning systems of Sweden and Denmark many similarities can be identified in terms of national regulation and administration. National planning regulations in both countries are based on a system of hierarchy where the physical regulations in plans produced on lower levels represented by regions and municipalities cannot contradict national legislation. On the other hand there is also a tradition of relatively strong local autonomy of the municipalities. The municipalities holds sovereignty when it comes to formulating legally binding detailed regulations on functions, uses and design for delimited urban areas and thus these represent an important level of intervention if a more sustainable urban planning is to succeed.

Across the strait of Oresund the notion of the urban planner is expanding from being mostly centered on architects and engineers to encompass more diverse fields. Urban planning in Swedish and Danish municipalities is to an increasing extent characterized by intermediate/strategic forms of planning. Accordingly urban planning is not just exercised by drawing up local district plans but is also supplemented by informal plans and area-based urban revitalization programs that aim to shape urban development through dialogue and negotiation with different stakeholders. In this sense there has been a general movement away from setting fixed requirements supported by legal claims to a more open planning process. These open planning processes works as a way to discuss opportunities for development for specific urban areas with citizens, businesses and developers before deciding on a more formal framework. The traditionally professionally/sectorial based administrations have been partly replaced by new forms of organization where values such as efficiency and democracy compete with values of professionalism. The change of planning towards new forms of project based and strategic planning in dynamic interaction with external actors increase the demand of urban planners to collaborate with others within the urban administration across different sectors and fields of expertise as well as they must collaborate with politicians, citizens and other actors in order to find the best solutions for urban development.

## 2. Methodological considerations for action research

The methodological landscape of action research and dialogical research is rather pluralistic and with the existence of many modus 2 inspired development projects the methodologies and approaches applied concerns theoretical as well as practical aspects and interests. In a Scandinavian context two trends of thought have attained significant influence: 1) The pragmatic one based on the dialogical tradition and 2) the critical theoretical trend represented by critical utopian action research (Nielsen and Nielsen, 2006). They differ in their conception of society and societal change, participation in knowledge production and learning (Nielsen and Nielsen, 2006; Trencher, 2013). In terms of understanding processes of co-production with urban planners I find both schools of thought to offer critical insights into the hopes and controversies arising when new courses of action towards sustainable urban development are explored and discussed. Working with action research on sustainable urban development on the level of urban planners requires methodologies that look into both the systemic challenges to further a sustainability approach as well as relational and dialogical aspect of co-production among partners in the research project.

One of the core ideas of action research and participatory research is to include partners as co-researchers. The democratic ideal consists in that researchers as well as their partners exercise power and share the control of the research process. Action research is concerned with the double aim of sparking changes as well as establishing theoretical and methodological platforms for reflection (Nielsen, 2001; Egmose, 2011). Through my engagement in Urban Transition Øresund my methodologies therefore have been organized in order to contribute to knowledge creation in an

academic context as well as supporting the learning and knowledge creation processes with the urban planners in the project.

As pointed out by Svensson et al 2009 modus 2 inspired development projects often fail to address the shortcomings of demand oriented research dictated by short termed economic interests and demands on solutions that can be easily implemented. Instead they argue that transition processes towards sustainability requires a long term perspective involving a broader set of societal values (Svensson et al, 2009). This suggests a more radical view on learning that does not only seek to identify pragmatic solutions within existing structures but only inspire to critical reflection and rethinking of those structures. Critical utopian action research based on critical theory propose radical view social learning where the aim is to develop utopian visions for a sustainable future and focusing on *what should be* rather than what already exists (Nielsen and Nielsen, 2006). In the process participants explore cracks in established social structures and practices and insofar they succeed to mobilize a greater public around their alternative visions opportunities to break with more unsustainable ways of acting.

The degree to which these ideals of democracy and participation are truly enacted in collaborative research projects remains debatable however as it also has been pointed out in much of the academic literature (e.g. Flyvbjerg, 2012; Phillips, 2011; Kristiansen and Poulsen, 2014). Relations of power between researchers and practitioners have often been neglected issues in the action research methodology that is based on critical theory where power is defined in political and economic terms (Kristiansen and Poulsen, 2014). Further Phillips 2011 notes that it often causes problems if collaborative development projects are organized and carried out from the assumption that the participants share interests (Phillips, 2011). It has led some researchers to point to that the future challenge for collaborative research is to focus on how power, conflict and differences can be dealt with and pay a little less attention to similarities and consensus (Shdaimah and Stahl, 2012; Phillips and Kristiansen, 2012) This points to a need to work with methodologies that make the differences between participants more explicit. In the same way analyses co-production processes should aim to uncover the complexities of relations established between participants and between the different forms of knowledge that are expressed and represented in the project (Bradbury, 2010). As the conception of urban sustainability is a highly ambiguous field representing a wide range of policy actions and competing agendas it seem quite evident that we must move beyond the discursively agreed norm of today's urban planning and look into how urban planners ascribe different meanings to the sustainability concept and how they imagine possible actions towards this end. Cross-border collaborations can also make tensions that arise from working with sustainability in urban planning practice more visible.

Doing collaborative research it is essential to keep in mind that research and practice are oriented towards different outcomes (Laing et al, 2012). Researchers can hold a normative position but final decisions are taken in the context practice (Bradbury, 2010)

Even though the researchers form their research design in order to ensure a high degree of participation of their professional partners it is far from evident that the professional partners have the wish to participate from the same ideals as assumed by the researchers. For instance it might be the case that professional partners do not have the interest of being a co-researcher but simply just want their problems solved and orientate themselves toward solutions that they use directly in practice. For researchers this raises a dilemma in which sense they should challenge their professional partners way of conceiving problems and working with finding solutions to them based on their own research ideals of participation and co-production and in which way the researchers should seek to adjust their methods and the outcomes that are created to the knowledge ideals that are considered to be of particularly legitimate within the context of practice they are operating within (Phillips and Kristiansen, 2012). Phillips and Kristiansen conclude that the level of participation in collaborative

projects must be openly negotiated among the participants. Otherwise the researchers run the risk that they despite good intentions of involving the professional partners end up making participation an instrument of dominance and power and thereby marginalizing important sources of knowledge.

Olesen 2014 highlights how shifting economic and political priorities and transformations have changed the conditions on co-production of knowledge. She points out how the institutionalization of the neoliberal discourse on the knowledge economy have a significant impact on what goals and rationalities govern projects that builds on collaborative projects (Olesen, 2014). In this context it is relevant to explore how frequent organizational restructuring, complex relations, demands on efficiency and flexibility (e.g. Sennett, 1998) affect the way researchers and their professional partners conceive and engage in collaborative projects. The action research idea of initiating democratically run processes of change has to compete with other agendas of innovation, demands for efficiency and institutional reorganization that run parallel with the work in the collaborative projects. It also leads to critical reflections on in which sense knowledge production should be contextualized and how useful knowledge it is not only confined to a higher degree of external steering (Egmose, 2011).

## 3. Methods

In this paper I exclusively focus on the process of the designing sustainability games even though the Urban Transition Øresund also consisted of other working groups. Consequently I only present the methods relevant for this process.

The process of designing a green game as a way to overcome problems with cross-sectoral collaboration on sustainable urban development was initiated around half a year after the project work had officially started. At that time the participants had started to express a certain frustration as they found it hard to find a common ground and drive the process forward. Additionally we as researchers were struggling to identify the urban planners in the municipalities who should be key participants and thereby make the specification of relevant sustainability issues to work on possible. On this background the two researchers holding the coordinative role managed to acquire additional funding to link a game consultancy company to the process. In the researchers view it was not the final game that was the most interesting but rather trying to develop a conceptual framework for understanding and communicating about complex systems. By involving the urban planners as co-designers it was the intention was that the process should help to highlight difficulties and dilemmas in planning practices and in the same time push the urban planners to make provisional decisions. The game designing was structured through a stepwise process where the participants experimented with different game mechanics to explore current models for organizing and setting up meetings with citizens as well as structuring cross departmental dialogue around planning issues. The principle of co-design implied that the urban planners was to be included in pointing out relevant issues, desired changes and in this way define the directions of future planning work on sustainable urban development. Additionally the urban planners were involved as co-constructors and evaluators of the experiments. While the urban planners and we as researchers agreed that it was needed to specify overall categories on how to understand urban sustainability the urban planners also pointed out that it was necessary to allow for adaptions to the particularities of individual cases. Accordingly each of the experiments involved the urban planners described the key considerations of the urban area to be developed.

Some of the experiments included:

- Providing input for further developing an overall plan for a large brown field development in a harbour area (North Harbour , Copenhagen) e.g. temporary uses of current infrastructures and facilities, urban space and greening
- Providing input for qualifying a developer proposal on a former railway area (Roskilde) e.g. green traffic solutions, reuse of historical buildings, cultural activities.
- Discussion on future initiatives for urban regeneration in a former hospital area to be a role model for green urban development (Segevång, Malmö) e.g. energy provision, urban gardening, use of public space
- Discussion on options to establish a local recycling centre as part of a new housing project (Västra Hamnen, Malmö)

While not holding the coordinative role in the process I have been engaged as a participant and observer in the practical experiments and reflective workshops. In this role I have discussed the experiments with the urban planners and other researchers and come up with my input to the design of the game. Along with this I have conducted individual interviews with 6 of the participating urban planners on their motivation for taking part in the process and their desired outcomes. Additionally I have facilitated an evaluation for 20 of the participants (urban planners and researchers) on how they have experienced the collaboration in the project.

## 4. Analysis

The project collaboration in Urban Transition Øresund early rendered visible that the urban planners had quite different conceptions of sustainability and how to operationalize it in urban planning projects. Likewise the fact that the municipalities had different conditions for planning for sustainability also hampered the process of identifying a common ground from which to work out guidelines for promoting sustainability in urban planning. For instance discussions in the group work and workshops pointed to how the municipalities operated under different legal frameworks regarding building code and well as they were to operate under different political priorities and administrative procedures in order to realize the vision of becoming more sustainable cities. These differences neither took the researchers nor the urban planners by utter surprise but merely demonstrated how sustainability remains a rather ambiguous concept. However the insights that the urban planners gained from each other's practices in the group discussions did cause many of them to abandon the initial project goal of formulating common guidelines for sustainability and standard methods to be applied. The discussion of different contexts and conditions for planning continued throughout the project. The evaluation of the project emphasized some variation in the perceptions of whether these more complex and nuanced views on sustainability in urban planning were valuable. Some of the urban planners expressed they found the complexity disengaging and regretted that the project had not provided them with a specific set of guidelines to use. Contrastingly others were of the opinion that the discussions had provided them with a more holistic view on sustainability crossing the confinements of their own work descriptions and professional competency. In tune with this some participants also expressed that the exchange of experiences had given them a better understanding of issues and processes important to translate sustainability visions into practice.

### 4.1. The dynamics of co-production

As mentioned earlier the game design process represented just one of the methodologies framing the co-production of knowledge in the project but will be one in which this analysis takes it point of departure. One of the virtues of the game design process was that it on the one side entailed a

combination of workshops with practical experiments in the setting of ongoing planning processes in which the urban planners were involved and on the other side where followed up by reflective workshops where the urban planners across the different municipalities collaboratively reflected on their experiences and challenges they saw when working with sustainability. None of the urban planners had any previous experience using games as ways to facilitate dialogues in planning processes. So their initial reactions were a mixture of curiousness to try out the method and timidity and skepticism on organizing meetings around a game design session inviting their colleagues, developers or citizens.

Different features of the process point to that an inter-collegial space for discussion of professional values centered on sustainability was in fact created. Several of the urban planners express content on the having a thorough debate on how to work with urban sustainability – an issue that they despite the political discourse found to receive stepmotherly treatment in daily planning practice. One of the urban planners found that playing the game with her co-workers served to establish 'game community' among them. Previously she had found it hard for the group to communicate and reach common decisions as the members represented different affiliations in the administration and thus different agendas. Using the game for framing the conversation the co-workers were forced to gain a better insight in each other's view points and negotiate on possible solutions. Similar experiences were expressed at the reflection workshops where there seemed to be a common agreement among the urban planners that the game situation established a more informal framework of discussion. In this setting important and difficult questions were neutralized where each participant were forced to look at solutions holistically instead of orienting themselves achieving their own ends.

In the perspective of a dialogical orientations within action research the practical experiments and reflective workshops suggest that the project succeeded in establishing a framework of co-production where the urban planners were involved forming the content and issues that they saw as important to address in order to deal more effectively with sustainability in urban planning. Likewise it seemed to be a constructive framework for establishing a discussion on a complex issue and include different perspectives on working with sustainability.

Concerning the ambition of critical utopian action research to point to systemic challenges for urban planners to work with sustainability and work out utopian visions on how practice should be organized differently the outcome was ambiguous. In the reflective workshops the urban planners voiced critiques on how they experienced the economic priorities of their departments to hamper projects on e.g. green areas, temporary uses of existing buildings and citizen involvement. They also expressed the frustration that when they tried to come up with suggestions on how to translate the politically formulated visions into specific planning projects they often found that they would be turned down by their superiors or shifting political decisions. Despite this the urban planners were hesitant to formulate alternative visions to challenge these systemic defaults. The way the game was designed to facilitate common decision making might also have been counterproductive in the sense to explicitly work with systemic critiques. One of the urban planners also noted that the fact that the consideration of economic viability was included in the discussion of more sustainable solutions delimited the possibility of radical learning.

### 4.2. Tensions and research practice roles and relations

In Urban Transition Øresund much time were spend on trying to form a good dialogue and relations of mutuality between participants. Personally I experienced how the roles between the researchers and the urban planners were formed, negotiated and learned through the interaction of organizing the

activities in the working groups. A source of dispute was that we as researchers expected the urban planners to take more initiative point the directions they wanted to take the project and making sure that more of their colleagues were involved in the experimental workshops. Likewise we hoped that they subsequently would work on implement what they learned around new forms of collaborating on sustainable development – e.g. the sustainability game – in their respective organizations. At many of the reflective workshops however we often experienced the attendance to be low. Also despite the expressed enthusiasm about the game design format the urban planners remained hesitant to use this as a way to facilitate meeting situations. On the other hand many of the urban planners expressed that they found that the level of abstraction was too high and some found that we as researchers did not provide them with enough knowledge that they could apply more directly in their practice. In this sense the team of researchers faced what Phillips and Kristiansen, 2012 and others point out to be a paradox of participation were the urban planners were reluctant about acting in the roles of co-researchers. Transforming our roles as action researchers to present the urban planners with readymade solutions for strengthening sustainability in planning practice would not only thwart our professional competences as action researchers. It also raises a more crucial dilemma for the researcher on how to maintain a position to spark critical reflection and not merely pointing to pragmatic solutions within the systemic structures of urban planning practice as pointed out by e.g. Nielsen and Nielsen, 2006; Egmose, 2011; Svensson et al, 2009. During the project Urban Transition Øresund this issue of conflicting expectations to process and outcome were discussed at several meetings between the researchers and participants. To some degree the researchers engagement in practical experiments and continued reference to those in the subsequent reflection workshops seemed to establish a stronger relation of mutuality. Discussions on expectations and roles were highlighted by the urban planners as crucial in the evaluation of the project. Several of them had also told in the personal interviews that the project represented their first experience of working closely together with researchers.

Additionally it can be argued that the collaboration and knowledge production in Urban Transition Øresund were challenged by the organizational framework of the project and the conditions under which the urban planners could take part in the project. The interdisciplinary multi-actor collaboration between different municipalities and research institutions posed a challenging task for organizing the development work. Likewise frequent processes of reorganization and job rotations within the municipalities most likely impeded the establishment of more robust guidelines on how to work with sustainability in urban planning practice. This seem to support the point made by e.g. Olesen that the popular discourse of establishing participative processes with professional practitioners easily gets outcompeted by a neoliberal discourse of greater efficiency and willingness to adapt.

## Conclusions

My argument has been that there is still a great need for critical reflection on the methodologies applied in specific contexts of collaborative knowledge production in order to evaluate to which degree that these ideals are actually achieved – or how they fail to be achieved. Working with action research on sustainable urban development on the level of urban planners requires methodologies that look into both the systemic challenges to further a sustainability approach as well as relational and dialogical aspect of co-production among partners in the research project. The project has been set up with the ambition to develop models for collaboration and approaches to work more thoroughly with sustainability in urban planning processes. Based on my findings from being a research participant in the project I claim that action research can support the creation of inter-collegial spaces of social learning to discuss professional values, norms and challenges around sustainability. But what also has become apparent during the process of designing a sustainability game is how the normative drive for

enhancing democracy through collaborative knowledge production may be obscured by competing conceptions of participation based on the logics of the knowledge economy as well as they may be pervaded by internal conflicts of different knowledge interests among researchers and their partners.

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# SCENARIO WORK AS AN INSTRUMENT FOR STRATEGIC ASSESSMENT OF URBAN PLANNING – CASE OTANIEMI

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## Abstract

*The scenario work methodology has been well developed in the context of strategic business management. As the strategic approach has recently gained interest also in urban planning, there have been attempts to apply the scenario work methodology in this context, too. However, in order to do so, further development of the methodology is needed, especially regarding considerations on spatiality and the public sector perspective. In this paper, the scenario work methodology is studied with a focus on developing it into an instrument of strategic assessment in urban planning. The scenario work consists of first identifying and analyzing local potentialities, development trends and driving forces, and then generating imaginatively and synthetically normative and explorative scenarios for the future development of the planned area. It opens a window for longer term visionary possibilities, but also less desirable developments, commanding strategic awareness in assessing the impacts of the planning alternatives in preparation. In the paper, scenario work is developed into a strategic assessment tool and, further, a platform for adjusting different interests in urban planning, by examining it through a case of planning the Otaniemi area, in the city of Espoo neighbouring the capital city of Helsinki, Finland. The area hosts the main campus of Aalto University, which, together with the local government, has high ambitions of developing the area as a world class hub of research and innovation. However, this planning scheme has been challenged by the local residents' association and the university's student union, which have initiated their own schemes.*

## 1. Introduction

Recently, the so-called evidence-based knowledge has had an increasingly dominating role in societal decision-making. With the sustainability and climate change debates, and the related demands on impact assessments, its role has been heightened in spatial planning, too (e.g. Davoudi, 2012; Krizek et al., 2009) . However, in planning, the hegemony of evidence-based knowledge is problematic, as planning is largely about coping with the yet unknown future; that of which we cannot have evidence. This is especially true for strategic urban planning that incorporates the methods of scenario planning (Albrechts, 2005; Zegras & Rayle, 2012). The evidence-based approach addresses future as a continuation of the existing and known development paths. While, in scenario planning, there is indeed a need to project the future implications of the present development paths, we also need an ability to imagine such development trajectories of which we do not have evidence, yet, but which might emerge in the future. The future is conceived in terms of alternative *scenario stories.* According to Peter Schwartz (1991), scenario planning is not a science but an *art*.

Patsy Healey (2009) also recognizes the art dimension in strategic urban planning, in the form of design thinking. However, she claims that additional sensitivity is required that would surpass the limitations of both scientific analysis and design thinking. A degree of comprehension of the material and cultural history of the place or region is needed to enable one to perceive the potentiality and desirability of different development trajectories. According to Healey (2009), this kind of understanding builds *critical judgment skills* in assessing, how and to what extent positive resonance and transformative capacity can be gained among the actors to strategic initiatives. This entails experiential probing, as well as targeted analysis, imaginative learning as well as reliance on hard evidence.

In Healey's vein, it is thus a matter of critical judgment how scientific evidence and artistic creativity should be combined to gain wisdom and joint momentum towards a *desired* future. While alternative scenario stories would probe *possible* futures, building imaginatively and creatively on the evidence of existing development paths and local potentialities, critical judgment is about selecting the scenario that we value as desirable, and deciding on actions that are needed in striving for it.

So, with Healey's notion of critical judgment, we arrive to three distinct capacities that are essential in strategic urban planning:

- the capability to *provide scientific evidence* on that which *exists*;
- the capability to *create scenario stories*, stretching towards the *possible* future from that which exists;
- the capability to *critically judge*, which future scenario we value as *desirable*, and to *decide* on the actions to be taken in striving for it.

In this article, our intention is to elaborate on these capacities by drawing on Bent Flyvbjerg's (2004) reading on Aristotle's three 'intellectual virtues': *episteme*, *techne* and *phronesis*. We will start our account by first recalling the development of scenario planning and studying it as part of strategic urban planning. Then we will discuss how Aristotle's all three intellectual virtues can be distinguished as essential constituents of strategic urban planning. A case study in Espoo, Finland will illustrate the uses of the three intellectual virtues and the potential of scenario stories in assessing competing schemes of future land use.

## 2. Scenario planning

Scenario planning emerged during the Cold War as a method to contemplate over the "unthinkable", namely nuclear warfare. Herman Kahn, a military strategist, developed scenario planning to analyze the likely consequences of nuclear war and its survival techniques (Kahn, 1962). However, scenario planning did not become widely known until it was adapted to business with Royal Dutch Shell (Wack, 1985). In 1971, Pierre Wack started developing a more practical use of scenario planning with forecasts to guide strategies for Royal Dutch Shell. After the Oil Shock in 1973, scenario planning was welcomed in the commercial world, as a tool to include a spectrum of forecasts, also "unwanted" ones, in a business strategy. Still today, the scenario planning method thrives as a tool for looking into the future in the corporate world, being more popular than SWOT or Delphi (Konno et al., 2014) .

The method of scenario planning was not clearly defined until the 1980s. Until then it was dependent on the capabilities and imagination of the "scenario gurus" of the time (e.g. Kahn, Schwartz and Wack) (Ogilvy, 2005). A clear step by step process for novices was only published in Schwartz's 1991 book "The Art of the Long view", a key textbook for scenario planners, still relevant today. Urban planning as a field has been slow to incorporate all aspects of scenario planning (Chakraborty et al., 2011) . It is typically used by various public and private agencies to identify common regional issues and to formulate decisions that

serve multiple jurisdictions. The general goal of many such "vision documents" seems to be to develop large-scale regional or metropolitan visions and concurrent strategy directions. However, the practice is often still too focused on developing a single preferred scenario and it fails to adequately consider multiple uncertain futures (Chakraborty et al., 2011) .

The scenario planning method is about finding new opportunities, storytelling, questioning assumptions and pinning down the critical uncertainties. It includes a thorough analytical part for which an extensive amount of data is needed. This data includes recognizing global/local trends and drivers (social, technological, economic, environmental, political, value-related, spatial), identifying actors and their agendas (niches) and uncertainties. It is equally important to recognize the role of global forces as it is to determine the local forces to have, or willed to have, a key role in making each scenario happen. The related actors can range from individuals to businesses, organizations to public officials etc.

As a starting point, a central question for the area, a focal issue, is formulated. This can have quite a general form, as lack of vision, need of new functions, bad connectivity, etc. Additionally, a timespan is also decided, ranging usually from 5 to 50 years. A shorter timespan would make the outcome too predictable and a longer one usually makes the results too unpredictable. In terms of analysis, the scenario method assumes that there is never enough information on which to base such a decision that would require certainty about the future (Garreau, 1994; Ogilvy, 2005). Moreover, it assumes that the future is not predictable. If it were predictable, there would be no need for alternative scenarios, nor planners. Thus it emphasizes the necessity to prepare for multiple futures, not relying on deterministic predictability, because, as history has shown, we can rarely count on predictions.

> "*The fantasy of deterministic predictability lives on and lurks among the assumptions of those who regard scenario planning as insufficiently scientific. Connect these points together in any of several combinations and you will see that judging scenario planning against the standard of deterministic science is non-sensical, paradoxical, and ultimately absurd."* (Ogilvy, 2005, 337)

It can be said that the strength of scenario planning lies in its ability to talk also about undesirable futures - in the end, this motivated the whole origin of the method. It concentrates on the 'unthinkable' and searches for critical uncertainties that influence the outcome of the problem that is being tackled. A critical uncertainty is something that exists in every plan and it is very much related to all the elements we think are predetermined. We can find these aspects of uncertainty by questioning our assumptions about the predetermined elements or facts. For example, we know that the population is aging, the oil reserves will be exhausted, global warming will accelerate, new technologies like 3D printing and augmented reality are emerging, but what we do not know is the willingness of people to change their habits in the face of these developments - and if so, how. It forces us to imagine the extreme situations, to find coping mechanisms we would not be able to conceive in safe and comfortable contexts. It can also make us understand better the outcomes of our actions, or even illustrate what would happen, if no action were to be taken at all.

Another key aspect of the scenario planning method is that it enables us to tell each other *stories* about how the world might work (Garreau, 1994). A key element of a great scenario is its capacity to captivate you as if you were a great character in a novel. The character of a good scenario might be a villain or a hero, but nevertheless it has a familiarity and credibility to it. A scenario is not a linear, mechanistic, number driven process; it is rather about the story and the assumptions, perceptions and imaginations that underpin it (Garreau, 1994). Like a good history lesson, it concentrates on explaining the forces that influence the outcome of events, rather than plain numbers and names. In this way it is easier for people to react to the scenarios, choose a desirable future and start discussing how to make it happen. Being stories, the scenarios can be integrated with the tradition of stories in planning (Albrechts, 2005; Forester, 1999; Throgmorton, 1996).

## 2.1 Scenario planning as part of strategic urban planning

In strategic urban planning, the main focus is not on the long term urban plan to be produced, in the sense of blueprint. The focus is actually on the here and now: how can we gain broad and long term insights to make strategically wise decisions in our immediate activity horizon? As John Friedmann notes, in strategic urban planning the object "is not to produce 'plans' (not even strategic plans), but insights into prospective change to encourage and promote public debates about them. […] It is a way of probing the future in order to make more intelligent and informed decisions in the present." (Friedmann, 2004, 56). What is needed is *strategic wisdom in planning practices*. The objective is then not to produce strategic plans *per se*, but to produce (and reproduce) such strategic plans that can be used as *tools* in strategically wise planning practices.

This is where the scenario planning method shows its relevance. Scenarios are not made to serve as forecasts of the future but to provide insights into plausible futures in order to inform our decision making today (Schwartz, 1991; Zegras & Rayle, 2012). According to Louis Albrechts (2005, 256), "[s]cenarios help us to think about how places/institutions will operate under a variety of future possibilities and they enable decision-makers/civil society to detect and explore all or as many as possible alternative futures in order to clarify present actions and subsequent consequences".

However, there is a lot of work to be done to fully utilize scenario planning as part of strategic urban planning. While there are quite a lot of step-by-step guides for scenario planners to start from, there are only few modified for urban planners (see Celino & Concilio, 2010; Mahmud, 2011; Petrov et al., 2011) . Today, the scenario planning method is often linked with urban planning in the cases of big regional and cross-border projects, through surveys compiled by experts, with a background in economic geography or public administration, in some cases also Think Tanks. In such cases, scenario planning is usually applied to generate background documents for visions and strategies. Those documents often concentrate on various processes, most notably on investments, business climate, transportation and governance, but they rarely have spatial implications or a spatial dimension to the scenarios. This means that future developments are described as a story, but often not played out on a map or a physical plan, which would offer a very different understanding and illustration of the impact of each of the scenarios. As noted by Petrov et al. (2011, 245): "Many stakeholders/policy-makers are familiar with scenarios work, but less with spatial modeling."

In adapting the scenario planning method to urban planning, we also have to address the issue of organizational complexity. The business world, where the method has been developed, provides organizational contexts of private enterprises and corporations that are considerably simpler in their goal-setting and distribution of duties than the world of urban planning, where the relationships between the public and private sectors and the civil society are complicated. Whose strategic practice are we talking about: the local or regional government that is in charge of making the strategic plans, or also the stakeholders (e.g. developers, investors, citizens, NGOs) who are needed in implementing the strategic decisions and in giving legitimacy to the decision processes themselves – but who also have strategic practices, and related motivations, of their own? Whereas in the business world the organizational boundaries are relatively clearly defined, urban planning has fuzzy boundaries involving multiple organizations, thus making it difficult to determine who and what is inside and outside. As noted by Christopher Zegras and Lisa Rayle (2012, 314), "given heterogeneous participants with different realms of influence, factors clearly external to one organization might be within the influence of another, making it difficult to separate scenarios that represent uncertainties from scenarios that represent possible strategies".

On the other hand, Zegras and Rayle (2012) emphasize the potentiality of scenario planning to overcome the difficulties of organizational complexity in strategic urban planning. At best, scenario planning becomes an educational and transformative exercise that may "persuade participants to dislodge pre-existing views, improve understanding of the organizational context, provide a common instrument of communication among disparate actors, and encourage relationships among participants. In particular, the scenario planning process may be a means of building networks and initiating collaboration." (Zegras & Rayle, 2012, 303). Scenario planning can thus also be a capacity building exercise, widening narrow perspectives, revealing the stakeholders' mutual interdependencies and inviting joint momentum towards an envisioned future. Zegras and Rayle regard such collaboration-inducing properties of scenario planning as its "second-order effects" (Zegras & Rayle, 2012, 305).

With her concept of *strategic framing*, Healey has such second-order effects in mind. In Healey's view, strategic framing brings together local resources and imaginative visioning into a setting that invites the actors to change their thought and action schemes and their approaches to each other. Following John Dewey, Healey perceives such a strategy work to generate around itself a *'community of inquiry'* which nurtures the collective intelligence of those brought within (Healey, 2009). In striving for this, critical judgment is key:

> "*A key area of judgment relates, then, to an assessment of the institutional moment, or "opportunity structure", for spatial strategy making. This leads spatial strategy makers to consider such questions as: what is the momentum for an explicit spatial strategy-making initiative? What forces and actors are driving this? What is the scope for the transformation of discourses and practices through such an initiative? How strong is the momentum? Can it be strengthened and what might weaken it? What kind of process is already underway, what might evolve and what could be created? What seems to be at stake and around which issues will critical judgments have to be made? How are the initiators situated in relation to this momentum, and how am "I" as an actor in such a process situated, in terms of role, skills, potential to exert influence and legitimacy?"* (Healey, 2009, 443)

Healey regards critical judgment as a "practical art" (Healey, 2009, 440), but here her notion of 'art' is different from Schwartz's notion of the "art" of scenario planning. Healey's "practical art" addresses the "second order" level of scenario planning, while Schwartz´s "art" remains at the "lower" level. Schwartz sees scenario planning as an art in the sense of being able to create coherent narratives of alternative futures, integrating existing and imagined driving forces in a given activity horizon. Healey, in turn, deals with the "practical art" of framing the produced palette of alternative scenarios, in the sense of identifying a desired scenario and probing on the initiatives, arrangements and decisions to be made, in order to gain consent and joint momentum behind this scenario. For Healey, this is less an art of creative production, and more an art of dealing with people in politically contentious contexts.

Next, we will elaborate these different types of capacities that are necessary in strategic urban planning utilizing scenario planning. For this purpose we will draw on the three 'intellectual virtues' that Aristotle identified in his *Nicomachean Ethics*.

## 3. Aristotle's three intellectual virtues in strategic urban planning

The first of Aristotle's intellectual virtues, '*episteme'* is familiar today as the etymological origin for the word 'epistemic'. *Episteme* concerns knowledge that is universal and invariable in time and space and achieved with the aid of analytical rationality. It corresponds to the modern scientific ideal as expressed in natural science. With the Enlightenment tradition, this scientific ideal has become dominant. According to Flyvbjerg (2004, 285), "[t]he ideal has come close to being the only legitimate view of what constitutes

genuine science, such that even intellectual activities like planning research and other social sciences, which are not and probably never can be scientific in the epistemic sense, have found themselves compelled to strive for and justify themselves in terms of this Enlightenment ideal". Accordingly, in the beginning of this paper we noticed the hegemony of the evidence-based approach in the production of knowledge in planning. In scenario planning, episteme would concentrate on knowledge regarding existing conditions and development paths and their projections to the future.

Aristotle's second virtue*, 'techne'* can be translated into English as 'art' in the sense of 'craft' (Flyvbjerg, 2004, 286). Unlike episteme, techne does not deal with the universal truths of existence; instead, it has to do with goal-oriented production of new things. According to Flyvbjerg (2004, 286), "[p]lanning research practiced as *techne* would be a type of consulting aimed at arriving at better planning by means of instrumental rationality, where 'better' is defined in terms of the values and goals of those who employ the consultants, sometimes in negotiation with the latter". Regarding scenario planning, we associate the 'craft' of techne with the ability to produce imaginative, yet convincing, scenarios that are not merely projections of existing trends. However, we do not see them as instrumental in the sense of producing a scenario for a given goal, but rather *explorative* in their effort to generate plausible scenarios that can be deemed either desirable or undesirable. Such normative considerations bring us to Aristotle's third intellectual virtue, *phronesis*.

*Phronesis* concerns practical wisdom and ethics. It has to do with deliberation of how things should be done for the purpose of doing well, making ethical choices. It does not concentrate on the invariables of episteme, as you cannot deliberate and make ethical judgments on the eternal truths. Thus its concern is on the context-dependent variability of production - yet itself phronesis is not production in the sense of techne, but *action*. As Aristotle says, "production aims at an end other than itself; but this is impossible in the case of action, because the end is merely doing *well"* (Nicomachean Ethics, cited in Flyvbjerg, 2004, 287). Phronesis is closely associated with *political action*, which, according to Hannah Arendt (1958), was treated in ancient Greek political philosophy as an *art* among other arts. Contrary to the "productive arts", such as painting and sculpture, it was likened to such activities as healing or navigation, where, as well as in a dancer's or play-actor's performance, the "product" is identical with the performing act itself (Arendt, 1958, 207). As in dancing, where the dance is brought to existence and maintained by the very activity of dancing, the political community is created and maintained by people acting politically. Political action is an end in itself, and it is not instrumental to any external purpose. Regarding strategic urban planning, we associate Healey's notion of critical judgment with phronesis. It is a practical art of political action that aims to develop a 'community of inquiry' of strategic planning.

Thus, we can link Aristotle's three intellectual virtues to the three capacities of strategic urban planning, suggested in the Introduction, as follows:

- *episteme* - the capability to *provide scientific evidence* on that which *exists*;
- *techne* - the capability to *create scenario stories*, stretching exploratively towards the *possible* futures from that which exists;
- *phronesis* - the capability to *critically judge*, which future scenario we value as *desirable*, and to *decide* on the actions to be taken in striving for it.

For Aristotle, phronesis was superior to the other two virtues. Using Max Weber's distinction between instrumental and value rationality, Flyvbjerg reformulates Aristotle's argument by stating that "[p]*hronesis* is most important because it is that activity by which instrumental rationality is balanced by value-rationality" (Flyvbjerg, 2004, 285). Concerning strategic urban planning, we also regard phronesis as superior to episteme and techne, in the sense of "second-order" framing of plausible scenarios and judging critically, which scenario to hold as desirable and how political consensus and momentum could be gained behind it. Accordingly, in scenario planning, as a constituent of strategic urban planning, techne can be seen as superior to episteme. Through creating scenario stories it frames the relevance of evidence on existing local properties and resources, and development trends, integrating it narratively with imagined

future development directions and possibilities. Conversely, episteme can be seen as a knowledge resource for the techne of imaginative scenario stories, which, in turn, can be seen as a resource of providing alternative future development paths for the phronesis of choosing a desirable path.

Hence, all of Aristotle's intellectual virtues are essential for strategic urban planning utilizing scenario planning. Flyvbjerg's claim is that the phronetic approach is most appropriate in planning research, which in his interpretation would focus especially on detailed case analysis and normative reflectivity on power in planning (Flyvbjerg, 2004). We, however, emphasize that for understanding and learning strategic urban planning, whether as researchers or practitioners, we need to grasp the interplay of Aristotle's all three intellectual virtues: how phronesis frames techne, and how, in turn, techne frames episteme.

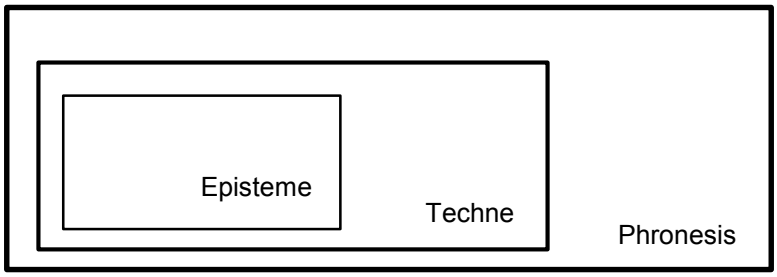


**Figure 1.** The nested hierarchy of Aristotle's three intellectual virtues in strategic urban planning utilizing scenario planning.

Next, we will examine a case of strategic urban planning, drawing on scenario work methodology, to illustrate the use of these three intellectual virtues.

## 4. Case study

Our case study area is Otaniemi, a peninsular district in the city of Espoo, Finland, roughly 7 km west of Helsinki city centre. The history and built environment of Otaniemi is closely related to Aalto University (until 2010 Helsinki University of Technology), whose campus and student community has been developed gradually since the 1940's in the previously rural peninsula. Today the Otaniemi district has around 4000 residents, most of them students. However, the daily population of Otaniemi is far greater with 14000 students and 11000 employees. The low-density campus structure, with lots of open space and listed buildings, is based on the plan by Alvar Aalto. Most of the land is owned by the real estate companies of the university and the Government of Finland. The planning of Otaniemi area by the City of Espoo has been done as a part of wider Southern Espoo master plan and with small scale detailed plans inside the campus area. However, with the university relocating activities from its two Helsinki campuses to Otaniemi, the West Metro line being under construction and general pressure for urban intensification, the need for a clearer land use vision for the whole Otaniemi area is increasingly acknowledged by the City of Espoo.

The current planning debate in Otaniemi has its origins in the plan of the new building for the School of Arts, Design and Architecture, which also houses the new metro station and forms the nucleus of the intensified campus. The architectural competition was followed by a process of detailed planning, which gave the main landowners an opportunity to envisage also wider area development in Otaniemi. The landowners prepared a strategic land use vision of the Otaniemi district, thus taking the role of the initiator in the planning process, ahead of the city. The publication of this "Kokokuva" ("The whole picture") vision in spring 2014 caused protest from the local students and other residents. The opposing groups did not

settle for a conventional reactive role in the process but started to prepare alternative plans for the area. The City of Espoo, now met with competing visions outside the legitimate planning system, asked the researchers of Aalto University to help in the planning discussions between the stakeholders.

An identification of the different actors and their roles, a crucial starting point for scenario work, is presented in Table 1. Obviously the actors are not homogenous or equal; they vary considerably by their size, composition, power, internal structure and mutual dependence. Single individuals can belong to and identify themselves with multiple actor groups. The actors who have developed their own land use vision are highlighted. The visualization of the students' and residents' visions has been assisted by Aalto University Built Environment Lab (ABE) personnel. It must be noted that both the ABE personnel and the authors of this paper are stakeholders in the case, belonging to the large and heterogeneous employee group.

**Table 1.** Actors in the area. The actors who have developed their own land use vision are highlighted.

| Actor | Actor group | Role | Voice | Position in the process |
|---|---|---|---|---|
| City of Espoo | authority | municipality, planning monopoly | single | strong |
| Aalto University | stakeholder | main tenant in the area, synonymous with the area itself | single | strong |
| **AYK and Senaatti** | **landowners** | **majority landowners, real estate companies owned by the university and the government** | **homogeneous** | **strong** |
| **AYY (Aalto University Student Union)** | **stakeholders, landowners** | **officially sanctioned and compulsory student representation body, autonomous organizations and groups, minor landowner** | **heterogeneous** | **medium** |
| **Non-student residents** | **landowners, stakeholders** | **housing associations (minor landowners), residents' association** | **heterogeneous** | **medium** |
| The employees | stakeholders | researchers, teachers, administration, personnel in other companies | heterogeneous | weak |
| VTT | stakeholder | governmentally owned research company, major tenant | single | medium |
| Other companies | stakeholder | minor tenants | heterogeneous | weak |
| Helsinki Region Transport (HSL) | authority | public transport planning authority owned by the municipalities | single | strong |
| Centre for Economic Development, Transport and the Environment (ELY) | authority | government body controlling planning, especially conservation questions | single | strong |
| National Board of Antiquities | authority | authority in built environment heritage questions | single | strong |

## 4.1 Utilization of a course in strategic urban planning in scenario work

As the debate of the future of Otaniemi land use was going on, a special course on strategic land use planning and planning cooperation was starting, in the autumn of 2014, in the Aalto University Department of Real Estate, Planning and Geoinformatics. This master's level course (5 ECTS cr.), mandatory for the students majoring in land use planning and urban studies, had 16 students from various backgrounds. The majority of the students had been studying planning or real estate economics for three to four years already. With an interesting case available in the campus itself and with a group of enthusiastic planning novices not tied to the routines and practices of the existing system, we decided, as the course teachers, to use the course as a test bed for strategic assessment with the scenario work methodology. In accordance with the threefold division of intellectual virtues, the students were asked, first, to provide evidence of the local

situation and general trends (episteme), second, to generate scenario stories (techne), and, finally, to utilize the scenario stories in critically reviewing the alternative planning schemes for the area (phronesis).

*Epistemic evidence of the planning context*

The path towards the final assessment of the alternative land use visions was guided through a few preliminary assignments. First, the students were asked to collect background information of the area and its environment. The students were split in four groups to cover specific themes: local planning history, the role of the area as one of the main business hubs of the Helsinki Metropolitan Region, the strengths and weaknesses of Espoo in promoting the area in the global competition of innovation centres, and challenges of sustainability, valued high in the official campus vision of Aalto University. The results of these assignments were shared among the other groups and they helped to orientate the students to the current challenges of strategic planning in the city of Espoo.

Moving on from the preliminary work, the students were introduced to scenario planning methodology, including extracts from Schwartz's seminal book *The Art of the Long View* (1991). Thus the next task was to identify relevant driving forces in Otaniemi and the adjoining Tapiola and Keilaniemi areas (previously branded by Espoo as "T3"). In accordance with Schwartz's instruction, a brainstorming method was used in the process. The students were once again split in groups, shuffling the groups so that experience from the previous assignment would be evenly distributed among the groups. Concentrating on specific driving force categories, the students were able to identify 23 driving forces, as shown in Table 2. As we can see, there is considerable overlap among the driving forces, a natural outcome from a rather freeform brainstorming process. However, we can see slight dominance of demographic and human forces. The students tended to see the overall growth and development of Otaniemi and surrounding areas as a predetermined force. Also their trust in relative competitiveness, internationalization and diversification was high. However, in their view, the critical uncertainty lies in the actual outcome, the rate, pace and timing of development, emphasizing the volatility of highly ambitious plans in Otaniemi.

**Table 2.** Relevant driving forces in Otaniemi, according to the student groups.

| Driving force category | Relevant for Otaniemi/T3 area | Predetermined elements | Critical uncertainties | Anticipated effect on Otaniemi/T3 area |
|---|---|---|---|---|
| **Sociocultural** | population | overall growth, high demand in Otaniemi | new development locations and the pace of building | population growth in Otaniemi due to new student housing |
| | age distribution | students dominating | Scale of diversification due to the new development | diversification of age structure, need for new services |
| | internationality | growing immigration | share of students, share of permanent dwellers | diversification of cultures |
| | mobility | better accessibility | modal share, reliability | growing popularity of the area |
| | education | increasing educational level, greater business cooperation | popularity of the campus area, functionality of cooperation | growth in businesses and international cooperation |
| | household size | high share of single households, diversification | diversity of housing stock, price level | growing need for diverse housing policy, need for diverse services |
| | social problems and phenomena | diversification of population | loneliness, segregation of subareas | new social phenomena increasing |
| | subcultures | growing popularity of T3 area as a dwelling place, diversification of population | attractiveness of the area to other than technology students | technology student culture spilling over to nearby areas |
| **Technological** | telecommuting | new possibilities for employment | overall motivation of ageing population to stay working | less need for car commuting |
| | transport technology | ongoing projects, e.g. Metro, stability of public subsidies | automation, legislation, willingness to change behavior | investment in public transport |
| | building stock | cost of conversion | solutions in energy use | innovative solutions increasing |
| **Economic** | business environment | economic system fundamentals, entrepreneurialism | cycle effects, economic policy measures | continuing investment in the area |
| | sustainability | transport path dependence, infrastructure | innovativeness in real estate and transport solutions | social innovations in services |
| | globalization | remoteness, increasing internationalization | attractiveness of the area | popularity as a studying place |
| **Environmental** | climate change | increasing volatility | actual effects | wide preparation for extreme weather |
| | sea level rise and floods | new development near the coastline | weather, general sea level rise | preparation for floods in new buildings and infrastructure |
| | biodiversity | human presence, new development | green area maintenance | less work-intensive gardening but more animal control |
| **Political** | bureaucracy | organization hierarchies, legislation | political terms, administration changes | transaction costs in development |
| | political culture | decay of conventional political participation | new ICT-powered movements | local cooperation increases |
| | sustainability | national and international regulation | upper-level decisions | austerity-driven adjustments in public services |
| **Spatial** | geography | natural geography, location in wider spatial context | prioritization of natural environment over development | conflicts in building projects |
| | built environment | graded buildings, road network | flexibility in heritage norms | some of the uniqueness of the area lost |
| | new developments | ongoing projects | attractiveness of the area | new services |

*The technical art of making scenario stories*

After the initial information gathering, the students were asked to create plausible scenarios of the development in Otaniemi. As Albrechts (2005) states, normative scenarios are essential to keep away from overt relativism. Thus the students were advised to form two scenarios, one normative (what ought to be)

and another explorative (what might be). The time frame was set to 30 years with 10 years' intervals. When building their scenarios from the elements formulated in the previous assignments, the students had to position their scenarios within the frame of two axes: local versus global networking and single-use versus multi-use functionality.

**Table 3.** Normative and explorative scenarios of the development of Otaniemi.

| | | Name | 2025 | 2035 | 2045 |
|---|---|---|---|---|---|
| **Group 1** | **Normative** | **Kelluva kampus ("Floating campus")** | intensive public transport, modal share away from private car, multi-actor cooperation generating start-ups, gradual improvement in services, English becomes the main language, ethnic services, new development honors the architectural heritage | Otaniemi international example of innovative built environment; new expertise in buildings next and on the water due to the effects of climate change; nature, culture and economy in balanced in development; support of different lifestyles and working habits | world leader in water and offshore buildings; hub of several world universities and research institutes; local autonomy complementing European federal government; increase in water transport |
| | **Explorative** | **UponnuT3 ("Sunk T3")** | problems in new development and transport; growth in population bigger than in services, dependence in other centres; turmoil both in regional administration and international relations causing uncertainty; silent revolution in studying habits | worsening usage of university facilities; disinvestment and demise of built heritage and natural areas; public transport development increasing but not meeting the needs; regional focus not in Espoo | shrinking importance of physical campus, no supplementing use; growth in population and services but uniqueness lost; regional role as a main employment and studying centre fading |
| **Group 2** | **Normative** | **24h campus** | gradual integration of both university schools and areas around Otaniemi; new development with flexible and effective space usage; traffic calming and transit oriented parking management; student lunch vouchers replacing canteens and spurring new services | flexible space management responsive to the change in studying and working habits; more social spaces available for anyone; university integration with shared identity; population and activity growth basis for new services around the clock; minimization of intra-area car use, innovative fringe parking and frequent rail-based transportation | withering away of conventional working hours, facilities and services fully supporting 24 hour lifestyle; no fundamental division in building use types; strong local community; innovative transport solutions |
| | **Explorative** | **8h campus** | continuous separation of schools despite common campus; modest new development along traditional lines; education still dominating the image; no new transport investments after the metro line, rigid space usage policies | eventual integration of university schools and identities; student housing and service needs met but otherwise problems in development; still car-based mobility, lack of parking and thus low attractiveness to businesses; bad municipal economy halting crucial projects | unified multidisciplinary university with modest international competitiveness; gradual diversification of population structure due to the location; growth in investments and services; slow modal shift away from the car |

As there is practically an unlimited number of potential future paths even starting from the very same drivers, it was no surprise to see the two student groups to formulate four very different scenarios (Table 3). The groups had slightly different perspectives for both normative and explorative scenarios. The first group had more vivid future projections, finding officially unconfirmed strengths and possibilities in the normative scenario (e.g. floating building technology) and even dystopic outlooks such as dereliction of buildings in the explorative scenario. The second group had a normative scenario quite similar to the official municipal and university strategies. The explorative scenario of the group was not a dystopia but merely a "business as usual" development with failing ambitions and modest development. The interesting common features were the emphasis on transport investments and modal shift away from the car, and the effect of studying habit revolution on the space usage. What for students represented a clear risk for the success of the area, was sticking to the conventional real estate and transport practices.

*Strategic assessment: critical judgment skills of phronesis*

The last assignment for the students was to conduct a strategic assessment of the competing land use schemes with the help of each group's normative scenario. As the schemes, by the major landowners, the student union and the resident association, were still under development during the course, and as the time available for this task was limited, the students conceived this assignment the hardest of the course. The results of this last exercise were also revised after initial comments from the teachers, as the assessments were presented first to the City of Espoo and the summaries to the different stakeholders in a participatory event in December 2014. The students had slightly different approaches in the assessment, partly representing the differences in their normative scenarios. The main results drawing on the used criteria are however summarized in comparable Tables 4 and 5.

**Table 4.** Strategic assessment of the schemes by Group 1.

| Criteria | Normative scenario: "Floating campus" | The landowners' scheme | The students' scheme | The residents' scheme |
|---|---|---|---|---|
| **Transport** | Emphasis on non-motorized and public transport, support for electric traffic and innovative solution, water transport | Generally similar to the normative scenario, greater emphasis on rail transport and shared space | Generally similar to the normative scenario, greater emphasis on rail transport and campus bikes, no vision of bus service | Support for non-motorized and rail transport, but centrality of car traffic |
| **Residential development** | Diverse and wide residential development for all groups, innovative floating housing | Wide residential development mixing with the other uses, but emphasis only on student and employee housing needs | Slightly less housing development than in the normative scenario, emphasis only on the current student housing needs | Only modest student housing development, no support for population diversification and increase needed for service development |
| **Services and offices** | More commercial services, coastal area as a meeting place, flexible space use, floating structure | Diverse service development with emphasis on local services, conventionally rigid space policy, no projection of service evolution | More local services, emphasizes the current surplus of office space | Calls for local service development based on existing real estates, new coastal cafe |
| **Natural environment** | Development based on existing recreational and conservation use, new floating routes, preparation for climate change effects | Developing the coastal area but keeping the existing conservation areas | Recreational use of coastal areas | Recreational use of coastal areas, strong emphasis on coastal path |
| **Innovations** | Supporting student-research-business cooperation, supporting start-ups, emphasis on water expertise | Emphasis on innovation environment, innovations in land use and aquatic environment, overtly advertising the world class university | Support for innovation environment, campus bikes helping intra-campus cooperation, overbranding of the university | Support for the existing studying and research environment, but less support for the innovation environment |
| **Culture** | Architectural heritage and new development, internationalization, vivid organization scene, student culture and year-round activities and events | Emphasis on built environment, urban culture complementing student heritage, coastal areas as a cultural hotspot | Internationalization, student heritage and leisure activities, vague image of cultural needs | Supports student culture heritage and development, neglects the needs of other groups |

The first group was more interpretative in its assessment, weighing elements from each scheme according to their potentials and caveats in supporting the group's scenario. Especially the potentials for water technology development, strongly represented in their normative scenario, were carefully scrutinized in the assessment. The second group concentrated more on the internal flexibility and substance of the schemes, having a more refined mobility analysis than the first group.

**Table 5.** Strategic assessment of the schemes by Group 2.

| Criteria | Normative scenario: "24h Campus" | The landowners' scheme | The students' scheme | The residents' scheme |
|---|---|---|---|---|
| **Services** | Open access for different services, diversity over quantity, based on demand | Emphasis on student services, great variety in leisure activities | Diversity in services similar to the normative scenario, also services run by the students | Service development based on the existing mall and conference centre |
| **Residential development** | Residential development in several sparsely used lots, flexibility in main use and sharing, including the office buildings | Emphasis on student housing, less residential development than in the normative scenario | Great emphasis on student housing | Only modest increase in residential development, mainly student housing |
| **Coastal areas** | A little new student housing, mainly recreational and nature reservation areas | Considerable development of the coastal areas | Recreational area | Strong emphasis on nature conservation and recreation, no new buildings except maybe a cafe |
| **Car traffic, parking and road safety** | Decrease in internal car traffic, shared parking, traffic calming measures | Similar to the normative scenario | No comments | No comments |
| **Walking, cycling and public transport** | More non-motorized routes, traffic nodes with cycle parking and sharing, internal bus circle line | Similar to the normative scenario | Emphasis on cycle lines and shared campus bikes | No comments |

Both groups noticed the differing foci of the schemes. Especially the residents' scheme was clearly a defensive act supporting the existing coastal area arrangements and only modestly having opinions of the development in other areas. This corresponds to the small and spatially concentrated landownership of the housing associations. On the other hand, the student activists' scheme, representing the official student union point of view, was geographically more substantive, but the main message of the scheme was clearly the agenda of increased student housing development. The landowners' scheme was the most comprehensive and covered several themes while promoting the vast new development clearly in the economic interest of the landowners. The versatile nature of the landowners' scheme was no surprise, as it was created by a major architectural bureau, having been involved in the planning of Otaniemi on behalf of the landowners for more than 20 years. The comprehensiveness of the landowners' scheme was noticeable also in the time scale: the landowners' scheme mapped development all the way to the 2030's, whereas the competing schemes lacked explicit time scale, implicitly suggesting development only roughly 10 years in the future. Our students saw the landowners' scheme the most supportive for the normative scenario, although there were differences in the projections of the long term development pace. The students' and residents' schemes, with their shorter time frame, did not close out the normative scenarios, but especially the residents' reluctance towards new non-student housing was seen as a risk for service development.

Overall, there were surprisingly few major disputes between the interest groups. Every party endorsed the built environment heritage and the value of nature environment, although the landowners' version of coastal route was not welcomed by the other parties. Every scheme acknowledged the need for intensification, new housing and especially new services. Even the residents, commonly seen to be the most critical of intensification and new housing, did not rule that option out, merely expressing doubts of the attractiveness of the area for people other than students. The principles of mobility reform aroused also surprisingly little argument.

## 4.2 Analyzing the results

In the post-course feedback the students thanked the urgent topic and active pace of the course, but expressed also stress from the limited time afforded for the assignments (2-3 weeks per assignment), especially the last assignment. Regarding the latter, they also criticized the fuzzy and changing instructions and the hard-to-obtain data of the opposing schemes. The roles and connections of different actors, especially between the landowners and the City administration, caused some confusion. This course differed indeed from one-directional and in-advance framed conventional course works and resembled more real-life strategic planning and participation work. The course schedule was constant but the case situation developed slightly differently than anticipated in the beginning of the course. Especially the inactivity of the Espoo City Planning Office was not anticipated, as the planner in charge of the area suddenly resigned from the City of Espoo just before the beginning of the course, causing an unexpected delay in planning work. Not surprisingly, the landowners with their stronger position and superior resources offered a more consistent and better visualized scheme than the groups investing their leisure time in trying to communicate their alternative views in a visual and constructive way. Even with the help of ABE personnel the initial schedules of the competing schemes lagged behind and our students had to rely on scattered and sometimes contradictory data from the student activists and residents.

The landowners' scheme was not only technically superior, it also corresponded the normative scenarios the best. Actually, the very name of the scenario may reveal the reason for this connection. The students were not only participants of our course but also stakeholders in the case. Not undermining the critical potential of our students, they are likely to be influenced by the very same discourse of campus development that the major landowners or their superiors, the university and the government, are committed to. The position of the university and the landowners in relation to the City of Espoo is also something far from being simple administration subordinates. In other words, the students in our course partly managed to capture and reproduce the general normative discourse in their normative scenarios. This leads to a more technical notion of scenario planning. Our case suggests that two scenarios, one normative and one explorative, are probably not enough to open the imaginative horizons, and they run the risk of working simply as another tool for legitimation.

In Otaniemi, the role of each scheme in the official planning process is slightly ambivalent. The alternative schemes are not "shadow plans" in the sense recently witnessed in Finland. Not only do the alternative schemes fail to meet the standards of a comprehensive detailed or master land use plan, the scheme they challenge is not an official plan itself. Actually each of the schemes is a "shadow scheme", as they intend to cause discussion and steer the action of the City administration in official planning. Having de facto a strong position in the planning practice, it is the major landowners' argument that is by nature the loudest for the City. It is therefore noteworthy that the landowners decided to engage in such a public discussion. The spokespersons of the landowners claim openness of their scheme to other arguments, too, welcoming the discussion from the makers of the alternative schemes. The goals of a vivid and innovative campus, complementing the economic real estate interests, definitely call for openness and civic engagement. The future will tell how this agenda of common future creation will materialize in Otaniemi and beyond.

As the main principles have caused little friction between the stakeholders, the cordial co-creation seems quite a realistic option. But how did the need for alternative schemes then ever come to place? The answer may lie in the strategic assessment results. Although the schemes do not disagree about single details, they speak of somewhat different issues. That is partly obvious as the schemes are argumentative acts emphasizing the issues important for each group. But they may also visualize the likely difference in the way of experiencing the area of Otaniemi. For the residents, it is their daily place of residence, for the students it is the university campus as a locus of both studying and dwelling, for the landowners it is mainly measurable land mass, infrastructure and buildings. In other words, Otaniemi is the stage for

different discourses in which the concept of space can be either absolute or relational (Harvey, 1973; Massey, 2005). Or, utilizing Lefebvre's (1974/1991) terms: for many it is the commonsensical mode (perceived space) that is central; for others it is the expert view (the conceived space); while the fully lived space might remain out of reach. This does not mean that the actors could not understand each other's arguments. The problem arises from the ambiguity of which discourse they are contributing to. This is exacerbated by the problematic nature of strategic visualizations: the structural graphs and other strategic maps must balance between vague abstraction and overt details. Even a full detailed plan cannot grasp all the different aspects of space, but even the highly hypothetical visualizations of future development, such as the "Kokokuva" scheme, are enough to cause fears among the stakeholders that do not share the discursive context of its authors. This unintended imagination inducing power of maps could be balanced with rightly timed and positioned scenario stories.

## 5. Discussion

The scenario analysis and strategic planning share their origins in the military context and subsequently in business life. Both realms offer the planner clearly defined organizational boundaries, separating the planner from the enemy or competitor. An army or a company has also usually a single main goal. That setting offers an ideal starting point for scenario work – once the organization is ready to think of the unthinkable. The urban planner is not privileged with such clarity. The boundaries are fuzzy and the goals multiple with changing political priorities. The actors and their roles should be known: who is the adversary and who the ally? With challenging schemes and other planning-related arguments emerging from different directions, those questions should not be set aside.

When shadow plans and other alternative land use schemes are drafted, their emergence underlines the inadequacy of official participatory processes, but yet they seldom exceed the role as arguments for public discussion only. The legitimate planning process is strictly mandated and the challenging documents face extreme difficulties in influencing the ongoing planning process, not to speak of becoming legally binding plans.

Scenarios are most effective when the exact procedure is yet to be decided. Timing is therefore crucial for effective cooperation, but with the limited resources of informal groups, their actual contribution attempts tend to come too late. Another important issue is the nature of contribution. The Aristotelian classification of intellectual virtues may help us in this question. The epistemic knowledge type of sheer facts is quite often in the focus of debates. True, without any solid base, the projection of future lacks all credibility. The 'facts' should therefore be agreed upon quite early. Another virtue that is hard to share is the phronetic action, quite naturally fitting the planners' ethos. The legal responsibilities and duties of planners and representative bodies structure the phronesis in planning.

However, the third Aristotelian virtue, techne, is by definition open for several interpretations and actors. The number of possible scenarios is unlimited and the imaginative power of scenario stories can bring different parties together. The planner, phronetically framing the process, must gather an adequately representative and open scenario group together in an early enough phase of the planning procedure.

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# BEING AND PLANNING

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*Hannah Arendt in The Human Condition wrote of the substitution, in modern times, of the 'social' for the 'political', thereby creating a situation of 'worldlessness' wherein the ground on which we could be held to account for our self-construction has disappeared. This 'worldless' world, in Peter Wagner's words, is 'a world in which social relations may have global extensions, but are so thin and ephemeral that contemporary modern human beings are held to realize their own lives in a social context that they cannot conceive as their own' (Wagner 2012, 66). Planning is left trying to construct a collective reality in an ephemeral and indeterminate social context where the only ground for determinations of truth and right is individual opinion .*
*In this paper we approach the question of 'worldhood' from the ontological and phenomenological perspective of Heidegger's Being and Time. We attempt a preliminary exploration of the 'Being' of planning and the 'Being' of planner as Dasein (the one that is there, for whom the world occurs). Our task is to identify the 'worldhood of the world' of planning and planner, and relate Heidegger's insights to the problem of 'worldlessness' facing the planner in today's modernity. From Being and Time we take two aspects of Heidegger's thought of helpful potential for planning in a worldless world, his concepts of authenticity and truth, noting that Heidegger always thinks in terms of both the positive and privative (or deficient) modes of qualities with which Dasein relates to Others and to the world.*

Keywords, Heidegger, Arendt, Ontology of planner

## 1. Introduction

This paper is an attempt to consider the relationship between the world as it now is and the occurring world of the planner (as reflected in the actions, rationality, knowledge and technology of the planner) to see if this sheds light on why what we now call 'strategic' planning has become problematic if not entirely meaningless.

We commence with a consideration of Heidegger's understanding of how Being works, that there is a relationship between Being and the actual and occurring world, and that the occurring world can be understood as a world view (*Weltanschauung*) which grants being to the one for whom that world occurs. We then seek to uncover key features of the world view of planners (or the Being of planners). To do so we use a version of a methodology developed from Dean (1999) and Foucault (1991) in understanding governmentality, which holds that the world view in play in a particular situation (in our case that of modern planners) can be understood through a historical analysis that identifies which technologies, rationality, and knowledge, survive and transform over time (Sturup 2010).

Having established these features of the world view of planners, the paper turns to a discussion of the idea of the worldlessness of the world presented by Arendt and Wagner amongst others. These authors posit that there has been a decided shift away from a world which can be understood as fabricated by humans (Daseins) and it has been replaced by a social world. In this view fabrication is

the act of bringing into being an object which is already envisaged, an object which is designed to hold an envisagement of the world through its existence (Arendt, 1958). Such objects include tables, institutions, and persons of historical significance. Such a fabricated world includes a public realm in which humans can fabricate themselves as public beings, beings which they come to be known as, and have a kind of historical longevity. This public realm is also the space in which humans come to create and maintain the distinction between one another. A planned world is clearly one that is fabricated. Arendt suggests that the public realm has been replaced with a 'social' world. The social world is one that allows complete and ongoing creation of the self, without any prior envisaging of who we might be. It is a world which displaces any relationship between the social self and the fabricated world in which human society functions and is maintained with any longevity.

Our discussion then turns on consideration of how this destruction of the fabricated world and the public realm, and its replacement with the 'social' interacts with the being of planner. Is there any possibility in this world without fabrication for the construction of a collective world view? What are the ontological conundrums presented for planners in this new world? What can we understand from this analysis in terms of the survival of planning?

## 2. Heidegger's Ontology or How 'Being' Works

Heidegger's project in *Being and Time* is to address a question which, he argues, philosophers – assuming that the answer is self-evident – have ignored, 'What is Being?' (Heidegger, 1962). He goes about this on the basis of the phenomenology developed by his mentor Edmund Husserl. Heidegger (Heidegger, pp.128-135 ) is seeking to break up the Cartesian way of seeing the world which informs mainstream science, the core of which is that there is a fixed distinction between what is objective (extraneous to the human mind) and what is subjective (constructed by the mind). Heidegger wants to propose a monist philosophy in which the subject-object distinction – which is after all no more than a human construct – is collapsed into one, 'experience'. Today we can say that his analysis has not changed, as he might have wished, the dominant and conventional way in which we still 'normally' perceive the world 'out there'. However it has created an opening for inquiry about whether, if there is a world 'out there', we have any relationship with it as itself (Bennett, 2004), and importantly for this paper, it sets up an understanding that while we construct the world out there in our relationship to it, this also generates the construct that we are for ourselves.

For Heidegger, all that 'is' does not exist in some ideal abstract 'reality' that is outside human experience. This is not a 'subjectivism' as we explain below. There is an outside world but it does not have 'Being' without us. All Being is conferred on entities by human experience. In that sense the only world with Being is the world that occurs to us. Being, then, starts and ends with the human, Dasein. Like many of the neologisms and compound words Heidegger uses, the term Dasein (Being-there) is designed to avoid, or bracket out, the conceptual loading given by the weight of philosophical reflection over the centuries that already attaches to a term like 'human'. In keeping with that purpose we will adopt Heidegger's term from now on.

Mulhall (2013, p.36) explains that Heidegger contests the Cartesian understanding of the human way of being 'as a synthesis of categorially distinct elements (i.e. of mind and body) in a purely material world'. Heidegger complains that Descartes, conceiving of a world of 'things' in contrast to the subjective internal world of thoughts, imposes his scheme upon the world and does not 'let entities in the world speak for themselves'. In Heidegger's critique Descartes thus disconnects the occurring world from Dasein, and forces everything that is not 'I' to occur as 'present-at-hand' – merely there.

For Heidegger, Dasein is given by the occurring world. Dasein has ‘‘Being-in-the-world’ in such a way that it can understand itself as bound up in its “destiny” with the Being of those entities which it encounters within its world’ (Heidegger, 1962, p.82). A human, then, is not fixed, but exists as a ‘Being-in-the-world’, and changes according to the assemblage the occurring world is perceived to be made up of.

Heidegger positions himself as the philosopher of the ‘everyday’ - one who looks at the everyday experience, from an everyday perspective, which is a phenomenological perspective (see for example Heidegger, 1962, pp.163-168, Section 27). In his work we can observe three different types of being given to Dasein’s relationship to the world. He notices that much of what we experience and on which we confer Being is fabricated for our use. To see this we only have to name the entities we encounter, houses, plans, organisations, strategies and so forth, but also all the tools we use and the objects around us, hammers, books, paper, laptops. The mode of being of these items is what Heidegger terms ‘ready-to-hand’ (zuhanden); they have their being as useful for us (Heidegger, 1962, p.98, Section 69).

Another sort of being Heidegger reserves for those objects to which we cannot attribute a being for our use. Such being he terms ‘present-at-hand’ (*vorhanden*, Heidegger, 1962, p.103). These present-at-hand entities, or objects, are thing-like. Entities that are ready-to-hand typically become thing-like when they are broken, as with a broken hammer which devolves to pieces of wood and metal (see Mulhall, 2013, p.58). Thus ‘ready-to-hand’ and ‘present-at-hand’ should not be thought of as a backdoor into dualism for they both stem from the singular experience of Dasein.

Finally, in turning to the matter of the relationship of Dasein to others of its kind, Heidegger once again insists that we must not make the mistake of starting from an isolated ‘I’. To characterise this relationship Heidegger introduces another term marking a mode of being of Dasein, Being-with (Heidegger, 1962, pp.154, 157). Being-with is the kind of being we share collectively with that which occurs as also creating an occurring world. Collectively those which create an occurring world come to an agreement about that which ‘is’ sufficient to allow society to function. This collective, agreed ‘is-ness’ is the always already world, the dictatorship of the ‘they’. The market is perhaps its most familiar manifestation, an occurring world in which we find ourselves dissolved, being without intent. Entities which occur as capable of being-with are provided room to present themselves ‘as they are’, or at least as they would occur for themselves.

In Heidegger’s terms, then, the being of the world, or the *is-ness* of the world, is given by Dasein. Dasein is Being in a world which occurs as ready-to-hand, present-at-hand, or being-with. Things ‘occur as’ because they are not fixed. For example something like the environment can occur as present to hand (*Vorhandene*) when it occurs as ‘that which we are in’, or as ready to hand (*Zuhandene*) when we search the Amazon for cancer curing plants, or able to create its own occurring world (to be-with) when an environmentalist experiences it as itself. Dasein is the kind of being that has choice in how it constructs the world and therefore, in so doing, reflexively constructs itself. In more commonly used terms, the ‘worldhood of the world’ consists of instruments (Zuhandene), things (Vorhandene), and of course people (Daseins), and the being of a particular individual person is constituted by which things are occurring as Zuhandene, Vorhandene and Daseins. That is to say what occurs (the occurring of everything including ourselves, or Being-in), provides a world view from which what it is logical, necessary or possible to do is derived, and with which our actions are in perfect accord. When Dasein learns to distinguish the world in particular configurations, they are said to have ‘become’ something, for example a planner.

Our next section will attempt to draw out key features of the world as it occurs for planners, always bearing in mind that this occurring gives being to both the world and the planner. It creates the world as it 'is' and thus what can be done in it. It creates planners as they 'are' and thus what it is possible for them to do. We can say that the discipline of planning holds a particular understanding of Zuhandene, Vorhandene and Mit-dasein ( that *with* which one can Be), which can be understood through observing the actions of 'the planner' and that with which it is concerned. Thus planning is a world view which gives being to planners and we can understand the construction of this being (and thus what is it possible to do) through understanding that constructed reality.

## 3. The Worldview of Planning

The 'world' of planning in which planners are situated has gone through a number of transformations over the last hundred years. Observing these transformations, what is resisted and how things adapt, provide insight into the underlying world view that constitutes planning. In this section we offer a – necessarily brief – interpretation of the recent trajectory of planning's world which seems to correspond with historical interpretation by at least one leading scholar and historian of planning (e.g Hall, 1996, 2000; Tewdwr-Jones et al. 2014).

By the end of the nineteenth century in Europe urbanisation had delivered crowded cities infested by squalor, poverty, malnutrition and disease. The modifications to capitalist growth engendered by the collective struggles of factory workers and the response of the more enlightened elements of ruling elites had opened the way to new ideas about cities, and yet failed to offer a path of 'real reform'. Those who we think of today as the founders of modern planning were visionaries drawn forth by the currents of modernity. Marshall Berman (1982) argues that the idea of 'planned development' can be traced to the Romantic interpreters of Enlightenment thought such as Johann Wolfgang von Goethe. Though not a central theme in Goethe's *Faust*, towards the conclusion of the great poem and near the end of his journey through life with Mephistopheles, Faust turns to a vision of great works transforming the environment for the good of humanity, and he uses the power of the Devil to force labour to the great work (Goethe, 1999, p.344).Berman comments 'Gradually, as the work comes together, we see Faust radiant with pride. He has finally achieved a synthesis of thought and action, used his mind to transform the world. He has helped mankind assert its rights over the anarchic elements' [of land and sea]' (Berman, 1982, p.65). Berman argues that to be modern is to believe in a kind of victory over the world. That all things will eventually bend to our will and design. We can make a plan and impose our will upon the world.

Several key elements in the world view of planners then stem from these earliest planners. Firstly from modernity we find the world 'out there' which of its own course will not lead us to where we wish to be. Second the idea that we can impose our will and design upon this world. Third that to do so requires a vision of what should be. This vision is beyond what will just happen in any case if societies are left to behave as an earlier vision has dictated[1], but somehow must deal with what the world 'out there' throws up.

[1] We are not suggesting that urban development left to a free market is somehow 'natural'. That would in any case be in precise contradiction of Heidegger's thought. In fact the 'naturalisation' of the market as beyond the human is a thoroughly Cartesian idea.

We can see this thinking in the work of the twentieth century Swiss-French architect, Charles-Eduard Jeanneret – Le Corbusier – developing grand visions for entire cities on green field sites, embracing the new world of individual car-borne mobility (Le Corbusier, 1929). 'We must kill the street' he thundered in a 1929 lecture (Moholy-Nagy, 1968, p.274), tear down the old cities and build new ones. 'Cafés and places of recreation will no longer be the fungus that eats up the pavements of Paris' (Le Corbusier, 1946, p.58). Such places would be 'transferred to the tops of flat roofs' segregated from 'the complete network of traffic' (Le Corbusier, 1946, p.58). Even the vision of the more accountant-like Ebenezer Howard involved creating new systems of cities in the countryside, effectively abandoning the industrial cities to their fate (Howard, 1898). Among British innovators, only Patrick Geddes (1915) in Scotland stood out as urging a more nuanced and socially informed approach to the understanding of city regions, looking beyond the carbon economy which polluted cities with coal smoke.

The bombers launched at the industrial cities of Europe during World War 2 did much in the way of 'slum' demolition, killing enormous numbers of civilians in the process, and transforming the world of planning (Judt, 2006, p.18). After the War European governments had little choice but to rapidly reconstruct the old cities to better standards and lower densities, and build new ones in what Hall (2000, p.26) calls 'the great postwar rebuild'. Planning for reconstruction, commenced during the War, became legislated and institutionalized in the aftermath. The world of planning was brought inside government and the state. Planners brought their visions into state bureaucracies and became part of a wider pattern of management, though still with little contact with the social worlds of the 'planned' (Dennis, 1970; 1972). The success of planning in reconstruction deepened the understood functioning of vision versus that which the world 'throws up'. Clearly the flattened landscapes of post war Europe were easier to plan than the complicated reconstruction of Haussman's Paris. The world 'out there' was most easily dealt with if it could be reduced to rubble. Further, planners embraced new developments in rational processes, positivist methods and architectural design. Methods which are rooted in the modernist world view, and which demonstrate the truth of a 'correct' design better than what would have occurred if the current political dispensation in society were allowed to take its own course. Though they were now inside government, planners were insulated from politics. They counted on the legitimacy of liberal democratic institutions to secure the influence of their world view.

The legitimacy of planning, and thus the influence of the world view, began to be disrupted once the solutions proposed by the rational planners were implemented, and the social consequences of those solutions fully appreciated. The universal rightness of the professional prescriptions began to be questioned and a more pluralist understanding of planning was demanded by, mostly American, planning theorists. Jane Jacobs (1963) launched a blistering attack on both the visionaries and their epigones. Yet her fundamental concern, that planning interrupts the organic, chaotic, 'what would have happened anyway' world, was transmuted. It never successfully impacted the world view that a designed world would be better than what would have occurred without planners. Instead her concern was reinterpreted to the question of *whose* design should be implemented, *how* the vision to be implemented should be found. In the quasi-revolutionary climate culminating in the rebellions of 1968 there were demands for public participation in all aspects and at every level of town planning (Skeffington, 1969; Sewell and Coppock, 1977).

This transformation of the critique can be seen in the systems view of planning where the choice of planning solutions was placed firmly in the hands of elected authorities (McLoughlin, 1969; Faludi, 1973). In this perspective it was not the business of professional planners either to make choices or to

resolve conflicts amongst interest and pressure groups. That political role was for elected authorities to perform. In the world view of planning, the planner as visionary was surrendered, but not the fundamental view that a vision was necessary. The planner remained the implementer. This latter view soon came under attack in an onslaught of criticism from both left and right aiming at the very institutions of liberal democracy on which the planners relied to secure their standing. Marxist geographers interpreted urban development, its private entrepreneurs and all agents connected with its regulation, including planners, as agents of the capitalist class and the state as, if not 'the committee for managing the common affairs of the whole bourgeoisie', at least functionally related to the maintenance of capitalism (Scott and Roweis, 1977; Harvey, 1985). These criticisms were again absorbed, not impacting the fundamental view that a vision was necessary and should be implemented, but causing some shift in who should do the implementing.

The next wave of critique, 'postmodernism' questioned the objective reality of the very world in which planning existed and intervened, and the universal truth of the values justifying such intervention (Rorty, 1979; Lyotard, 1979). This critique was aimed at the epistemic foundations of which pluralism was a political manifestation, a critique of 'knowledge'. Basing his 'report on knowledge' on Wittgenstein's later work, Lyotard took apart the narratives that 'allow the society in which they are told, on the one hand, to define its criteria of competence and, on the other, to evaluate according to those criteria what is performed or can be performed within it' (Lyotard, 1979, pp.19-20). In planning literature the emphasis on narratives, 'stories' (Sandercock, 2003, p.183) threw into doubt the idea that social progress would be based on an objective understanding of the world. Reflecting on postmodern, feminist and post-colonial critiques, Sandercock (2003, p. 73) writes,

> If we accept what is common to all these critiques – that all knowledge is embodied, historically situated, shaped by language, and embedded in power relations, institutionalized or not – then the very idea of the expert planner able to arrive at an understanding of "the public interest" through rational deliberation will have to be revised in favour of a notion of planning for multiple publics, based on an epistemology of multiplicity.

Sandercock's words can look like a critique of 'expertness' per se, but actually, as is clear from what immediately follows, they seek merely to redefine the planner's expertise as one who plans with multiple publics and their values, dodging the question of whether multiple and potentially conflicting values should be planned at all.

At this point it is worth making the obvious point that the occurring worlds of planners vary widely across different nations and institutional cultures. But we would argue that key features of the world view persist inside these variations. These key features include the idea that the world 'is' out there, and that something will negative happen if it is left to follow its current trajectory. There is also the idea that a vision can be created which will be a more legitimate expression of what should happen (or what people want to have happen, or the public good) than the default. Finally there is the idea that we can implement the vision and impose it on the world. This understanding of the world provides planners with the way they think about what can be done. Without this world view it would be ridiculous to even attempt a plan.

## 4. 'Worldlessness' and the Loss of the Public Realm

Just as the worldview of planning surrendered the position of visionary to some sort of collective, pluralist point of view, the validity and permanence of the 'public realm' as a means of collective

expression of needs was eroded. Arendt (1958, p.55) saw this coming in the USA even while the public realm still seemed secure as the foundation of post-war reconstruction in Europe, 'Only the existence of a public realm and the world's subsequent transformation into a community of things which gathers men together and relates them to each other depends entirely on permanence. If the world is to contain a public space, it cannot be erected for one generation and planned for the living only; it must transcend the life-span of mortal men'. Individualization and privatization results in a condition of 'worldlessness'.

> To live together in the world means essentially that a world of things is between those who have it in common, as a table is located between those who sit around it; the world, like every in-between, relates and separates men at the same time. The public realm, as the common world, gathers us together and yet prevents our falling over each other, so to speak. What makes mass society so difficult to bear is not the number of people involved, or at least not primarily, but the fact that the world between them has lost its power to gather them together, to relate and to separate them (Arendt, 1958, pp.43-44).

As Wagner (2012, p.66) puts it, a worldless world is 'a world in which social relations may have global extensions, but are so thin and ephemeral that contemporary modern human beings are held to realize their own lives in a social context that they cannot conceive as their own'. Gone is the 'communistic fiction' (in Arendt's term) that there is a natural harmony of interests in society, whether that be expressed through the 'workers' political party or through the invisible hand of the market – or, one might add, through some sort of pluralistic process (Arendt, 1958, pp.43-44).

As noted in the introduction the public realm was the place where a person could fabricate themselves in some sort of permanent way. The promise of the public realm was posterity, it provided the space whereby one could *speak* oneself into existence, and be held to account for that speaking. Acting and speaking in the public realm needed to be in alignment, so that the observed would be interpreted as who they were speaking themselves to be. In losing the public realm we have lost the space that held our self-constructions beyond the moment of our speaking them. The social self is constructed, but in such a way that any accountability or authenticity for that self lies at a place so removed from us that we might as well be something external to ourselves or something that we cannot control (the other). Although some argue that the lynchpin of liberal democracy, the nation state and its democratic forums, which provide a means for the formation of the long term public interest remain intact (Streeck, 2014, p.40), it seems increasingly the case that they are becoming empty shells, unfilled by any who is willing to speak themselves into existence, and none that would hear them even if they did.

Under these circumstances, the worldhood of planning has 'splintered' (Graham and Marvin, 2001) there is no ground upon which to create a collective vision, and nothing to 'hold' it in existence. Planners are thrown back on their own resources of interpretation and judgement to create a vision even while acknowledging its illegitimacy. The alternative is to attempt to create an expression of collective need and the long term public welfare, even while at the same time there seems no solid ground upon which to build this collective understanding. In the social world each person retains the right to their own world view, and to change that construction on a daily or hourly basis. In such conditions, agreement to a collective world view - let alone one that extends into a time frame relevant to planning horizons - seems impossible. The next section discusses the implications of the intersection between planners and this new worldless world.

## 5. Authenticity – Regenerating the Public Realm

Heidegger puts forward the proposition that while Dasein is often lured into a social world in which we cease to invent ourselves, it retains the capacity for self-saying, and truth finding. Heidegger invites us to see ourselves as 'fallen' or 'thrown' into a social situation which shapes our being, but from which, nevertheless, it is possible to distinguish ourselves as 'authentically' ourselves. In a most telling passage on the everyday condition Heidegger explains how we are all shaped by *das Man* translated as 'the they',

> 'We have shown earlier how in the environment which lies closest to us, the 'public environment' already is ready-to-hand and is also a matter of concern (mitbesorgt). In utilizing public means of transport and in making use of information services such as the newspaper, every Other is like the next. This Being-with-one-another dissolves one's own Dasein completely into the kind of Being of "the Others", in such a way, indeed, the Others as distinguishable and explicit, vanish more and more. In this inconspicuousness and unascertainability, the real dictatorship of the 'they' (*das Man*) is unfolded. We take pleasure and enjoy ourselves as they take pleasure; we read, see and judge about literature and art as they see and judge; likewise we shrink back from the 'great mass' as they shrink back; we find 'shocking' what they find shocking. The 'they', which is nothing definite, and which all are, though not as the sum, prescribes the kind of Being of everydayness. (Heidegger, 1962, p.164).

Dasein can never be like a blank slate with the ability to write anything whatsoever on it. Dasein is a social being thrown into an already existing social world constructed by 'the they'. The above quotation describes precisely the 'social' world that Arendt is referring to. The one in which, rather than distinguishing ourselves within, we merge into. But Dasein is the kind of being that has choice in how it constructs the world and therefore, in doing so, reflexively constructs itself. At this point Heidegger (1962, p.165) hints further at what authenticity might mean, 'If *Dasein* discovers the world in its own way and brings it close, if it discloses to itself its own authentic Being, then this discovery of the "world" and this disclosure of *Dasein* are always accomplished as a clearing away of concealments and obscurities, as a breaking up of the disguises with which *Dasein* bars its own way'.

This means that planners can and should choose from the great welter of identifying and prescriptive messages (what is and should be) coming from 'the they' to shape their world and themselves as planners. This is to be 'authentic'. The process starts with recognition of the pressure on them (dictatorship) of 'the they'. It does not mean, and cannot mean, a rejection of the world constructed by 'the they' (which is the sum total of human knowledge), but rather of choice from within it. It also means that planners have a say about the apparent disappearance of the public realm. Such a realm was only ever constructed, and it can be again. Every time one speaks oneself into existence and then holds to that speaking, the public realm is reconstructed, especially where the speaking occurs in the presence of those who will hold the speaker to account.

## 6. Being With – New Concern for New Entities

To bring the focus down to one Heideggerian theme of particular relevance to planning today, consider 'solicitousness' (Fürsorge) which characterises Dasein's relationship to other Daseins. Heidegger recognises that we don't treat other humans in the same way as we treat things. This is not a categorical imperative as in Kant, it is a mode of Being of Dasein, Being-with. We can see that it is

not a matter of how to behave towards others of our species, because solicitousness includes its privative modes, 'Being for, against, or without one another, passing one another by, not "mattering" to one another - these are possible ways of solicitude. And it is precisely these last named deficient and indifferent modes that characterise everyday, average Being-with-one-another.' (Heidegger, 1962, p.158)

The mode of being of planning, in its early modern days planning seems to have been involved not so much with people as with things, it could be said that it was not planning –with, but rather planning-of. So the expression of solicitousness was more like the privative modes; planning for but not with them, as can be seen in Abercrombie and most dramatically in Le Corbusier. People become more like the things they inhabit and use – houses, roads, cars, mere sociological statistics.

The revolution of the so called 'post-modern' movement has been to force planning back into a condition in which the Other matters in all diversity. This revolution in planning can be further specified. Heidegger (1962, pp.158-9) introduces two different bands on the wavelength of solicitude. On the one hand solicitude can mean caring for someone by 'leaping in' so to speak and 'taking over'. 'In such solicitude', Heidegger remarks, 'the Other can become one who is dominated and dependent, even if this domination is a tacit one and remains hidden from him'. On the other hand solicitude can mean not taking over 'care' but handing it back to the Other. Heidegger says, ' This kind of solicitude pertains essentially to authentic care – that is, to the existence of the Other, not as a "what" with which he is concerned; it helps the Other to become transparent to himself in his care and to become *free for* it' (Heidegger, 1962).

It hardly needs emphasising that this mode of solicitousness introduces great complexity into the worldview of Planning, throwing open the difficulties of the planning task, the formation of a collective will out of the diversity, and the waywardness, stubbornness, distractedness, ignorance and *the-they*-directedness, just as much as the insightfulness, compassion and selflessness of the Other. There is a by now a huge planning literature on how to achieve this difficult task using various means (for instance see Healey, 2006). Facing those difficulties head-on, however, is what makes *planning* distinctively what it is, and not a branch of economics, political science, sociology or geography. Not shrinking from human complexity is something planners should wear proudly as a badge of honour.

Recently a new agent which we could be -with (have a kind of solicitude of authentic care) has emerged. An undeniable reality beyond the human has emerged which suggests once again that there is an 'out there' which can generate a world which occurs. The degradation of Nature through the very success of its exploitation for human purposes, and a long term public interest in bringing it under control, has created the conditions in which Nature is occurring as itself. Manifesting most clearly and dangerously in climate change, the 'limits to growth' have begun to appear across a spectrum of global ecological processes despite our repeated insistence that it does not have to occur that way (Meadows et al. 2005; Steffen, W. et al. 2005).

## 7. Truth and Reality

Experience is that of Dasein, and without Dasein no concepts of 'reality', 'being' or 'truth' are possible. As Heidegger puts it, '"There is" truth only in so far as Dasein *is*. Entities are uncovered only when Dasein is; and only as long as Dasein *is*, are they disclosed' (the quote marks and emphasis are in the text). Put another way, The 'isness' of truth is entirely dependent on the 'isness' of Dasein. Thus if planners are to find solutions to problems in the world they have to trust a kind of knowledge

beyond mere opinion. Given that everything that 'is' is constructed, and things as they really are, are concealed in that construction, what is beyond opinion? Recall that Dasein is 'thrown' into an 'everyday' world imbued with 'the they'. 'Its absorption in "the they" means that it is dominated by the way things are publicly interpreted' (Heidegger, 1962, p.264). Dasein, even more today than in Heidegger's time, is always immersed in an ocean of public communication in which 'proximally and for the most part Dasein is absorbed in the "they" and is mastered by it' (Heidegger, 1962, p.210). This idea approximates that of 'stories' or 'storylines' about which much has been written in the planning literature (Hajer, 1995; Sandercock, 2003). To find truth in these stories requires that we are reminded that they are stories and that we are the story teller.

All attempts to 'uncover'(find truth) must start from the understanding of Dasein's being-in-the-world. That is the necessary point of departure for the struggle to uncover the truth of entities. Despite being embedded in a world structured by the they, Dasein's Being is not completely predetermined. Dasein has a choice through an awareness, first of the constructed world it is in, and second, of its own authentic potentiality for Being. Since Dasein's being is characterised by 'care', Dasein can project (think) itself out of its pre-structured world as it becomes aware of it. At this point we are brought back to the potential for authenticity. 'Dasein is always beyond itself' [*über sich hinaus*] not as a way of behaving towards other entities which it is *not*, but as Being towards the potentiality-for-Being which it is itself' (Heidegger, 1962, p.236).

Essentially this means that everything I know is already given by the human world I am born into and later insert myself into (my profession, my role, my job), but planners can still choose the standards by which they discriminate amongst all that given knowledge. The choices I make also make the person that is myself. My knowledge that makes 'the world' – my world view – also makes me as a person.

The problematic of climate change provides a demonstration of the need for a kind of truth finding. There are conflicting opinions on climate change, and then there is the science of climate change which claims access to a truth – 'an inconvenient truth' – beyond opinion. In the question of what to do, there is an existential choice involved in what knowledge to trust and act on. (on science see Mulhall, 2013, p.172) (Heidegger, 1962, p.409). The arrival of Nature as an entity which we can be – with is acknowledged, then a collective truth, which includes Nature as one which creates an occurring world, becomes logical.

Equally, to assume that consultative planning is now the only kind of ethically acceptable planning is to fall into the trap of listening only to 'the they' (including all the aforementioned planning literature) instead of consulting one's own judgement and knowledge. To do so is to sacrifice authenticity. In fact there may well be times, and perhaps not so far ahead, when sovereign action is needed *without consultation* to address exceptionally urgent or otherwise intractable urban problems. Reconstruction of Europe after WW2 was one such occasion. While we should try to avoid the planning mistakes of the past, looking ahead it is possible that tackling climate emergencies for instance might well be another such occasion (see for example Gilding, 2011; Moriarty and Honnery, 2011; Christoff, 2014).

## 8. Conclusion

In this paper we have demonstrated that being is a product of an occurring world. The occurring world is based on the three types of being we give to entities in the world, being present at hand, ready to hand and being with. The occurring world, or world view, is created by, but also reflexively

creates us. We have seen that the planning worldview relies on a world that is out there, which will progress somehow, planned or not. It is a world upon which we can impose our will, and which will be improved by the imposition of a vision upon it.

The question of whose world view is to be imposed upon the world has been uncovered. Such a vision should be created in the plurality of beings which have the capacity to generate an occurring world. Those with whom it is possible to be with. We have seen that this being with can result in a social world, one in which it is possible to merge and lose oneself. But we have also seen that we retain the capacity for authenticity. We can create an occurring world which aligns with our experience and in which we can express some generated self. This fabrication of ourselves requires no more nor less than our willingness to speak it, and a set of people to listen to it. This can be done in a social world, indeed we are freer to do so than ever, because the social world does not hold us to account. Tomorrow we can say ourselves anew and who would gainsay us? If we are no more than who we say we are, why not change that as we would?

The public realm, the realm we have lost, is the place where what we say develops an existence of its own. In losing it we have lost the ability to fabricate a world that lasts beyond the saying of it. The institutions which used to hold the world in some sense fixed, that mediated which sayings would last and which would not, have disappeared. Nothing lasts, all is mutable, 'all that is solid melts into air' (Berman 1982). The lack of a public realm expands the complexity of planning, because the public realm is what provides the ground for a lasting collective vision. Just as we seem on the edge of solving the question of how to create a valid, pluralist vision, the ground in which such a vision could be planted and expected to grow has blown away like so much dust. The question then becomes who will hold the vision while it is fabricated into the entities occurring as present to hand, and ready to hand. Who will generate the stories of what is present to hand and what is ready to hand that will fix a certain occurring into what is fabricated? Since we have lost the institutions of nation states, and liberal democracy, we can no longer rely on the old structures of the public realm. Perhaps instead coalitions brought into existence for the purpose of creating a vision, must also take up the burden of carrying that vision, and ensuring it is embedded in an occurring world that lasts beyond one human saying.

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# City Crafting in a Contested World: An Elected City Councilman's Perspective

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**Abstract**

*Very few planning scholars have served as elected officials. I have, twice: first in the mid-1990s and most recently from 2012 to the present. Service as an elected official generates a very different perspective from the one typically available to planning scholars and professional practitioners. In brief, it enables one to see that urban planning as typically practiced (at least in the U. S.) addresses only some of the factors that shape the transformation of cities. This broader perspective available to elected officials might point the way toward inventing a new practice, which could be called "City Crafting." This paper explores city crafting in a small city located in the Midwest of the United States, with a special focus on a rapidly redeveloping area just south of the city's downtown. After briefly explaining what I mean by city crafting and how it differs from conventional planning, I narrate a story based on my own personal experiences as a scholar engaged in practical action. The story focuses primarily on the City Council's May 20, 2014, meetings and the Council's consideration of a several interrelated topics, including proposed adoption of a new "Form Based Code" for the new "Riverfront Crossings District" south of downtown. After briefly recounting the aftermath of this new Code's adoption, I conclude by considering the implications for planning and planners.*

## 1. Introduction: From City Planning to City Crafting

I taught urban and regional planning at the University of Iowa for 24 years before retiring in the summer of 2010. For 26 months in the mid-1990s I also served as an elected city councilman in Iowa City, Iowa, which is where the University of Iowa is located (Throgmorton, 2000). And from the start of 2012 through the present (May 2015) I have been serving in that position once again. This gives me unique perspective shared by very few scholars of urban planning.

The practice of urban planning in the United States is driven by a belief, or should I say the hope, that planners' plans can shape the future of cities. They do, at least in part. But, when seen from an elected city councilor's point of view, the planners' plans appear far from comprehensive.

Here is the nub of the issue: *plans mean nothing until people act*. Such actions unfold step by step, with each step affecting other actors who respond in ways that are consistent with their own values, interests, and (I would say) stories. Those actions in turn imply or produce effects that bleed across jurisdictional and functional boundaries, and hence escape the control of the planners and their plans. Unable to control the action of others, actors use a variety of means to influence those actions. One of the means often used is for actors to tell stories about the past (how things came to be as they are), or about the future (what is likely to happen if a particular action is taken). Sometimes these stories are designed to manipulate other actors, but they can also take the form of what I would call *ethically-sound persuasive storytelling*. This, and mobilizing a political constituency around an ethically-sound persuasive story, is precisely what I take to be the role of good elected officials. Whichever form they take, persuasive stories have significant implications for the *identity and demographic composition of places*.

Let me explain just a bit further. The fact that action unfolds step-by-step has significant implications for professional planners, at least in the United States. Regardless of how skillfully professionally-trained practitioners plan for the future, and regardless of how useful and important their efforts, they will be able to convey no more than a partial version of what must be done to craft the future of existing cities. They will—on any complicated topic being contested in the public realm—discover that their analyses and plans are rendered inadequate or insufficient by a combination of disciplinary blinders, avoidable and unavoidable errors, intentional exclusion of unwelcome perspectives, politically-motivated falsifications and obfuscations, unexpected events and unanticipated consequences, technological changes, shifts in budgetary and legislative priorities, the emergence of unforeseen opposition, demographic and cultural transformations, limitations imposed by jurisdictional and functional boundaries, and other factors. They will also discover that disciplined inquiry and practice cannot authoritatively specify how particular issues *should* be framed or how specific problems *should* be defined, for those tasks are normative in character and hence go beyond the reach of the empirical scientist and the technical expert.

On first glance, it might appear as though this simply restates the tiresome lament about the ways in which politics damages, undercuts, and corrupts the plans and evidence-based recommendations that professional planners and other experts provide. Having worked in both the scholarly and political worlds, however, I prefer to reformulate that lament and take it in a different direction: that is, to emphasize the power of stories and persuasive storytelling. When confronted by the circumstances described above, professional planners and other experts consistently find it necessary, even against their own inclinations, to invent and tell stories that explain the need to do as they advise. Their stories, moreover, have to be told to other people, people who inhabit, tell, and enact different stories. The quality of this interaction between this diverse array of tellers and recipients is crucial, for the interaction can help the people of a place live together amicably and possibly construct a shared sense of community and identity.[1] Conversely, it can divide tellers and recipients of stories into hostile camps. In a contested world such as ours, deeds become words and words can become wars.

By saying storytelling has this potential, I am not claiming that storytelling is the only activity that matters, that all stories told in the public realm are true or effective, or that stories commonly repeated within narrowly bounded communities should necessarily be assigned higher priority than professional plans or analyses. Nor am I claiming that that everything I have to say applies equally to all cities throughout the world. My experience, expertise, and focus is limited to cities within the formally democratic regimes of the West, especially in the United States and parts of Europe. Finally, I do not mean to be contributing exclusively to the scholarly literature within my home discipline, urban and regional planning. I hope, instead, to probe how stories and storytelling affect action in the public realm, especially with regard to the inherently political tasks of *city crafting* and *place making*.

By "city crafting" I mean action that produces real outcomes in physical design and social relationships at the street level within cities and the city-regions within which those cities are embedded. Of all the categories of action related to such outcomes, I think most about "wicked problems" (Rittel and Webber, 1973) involving major "matters of concern" (Latour, 2004), especially: global climate change and species extinction, extreme inequality in income and

[1] In making this claim, I fully recognize that persuasive storytelling is often used as mere manipulation. This manipulative use of storytelling (and the "noble lies" associated with it) should be resisted. But I believe that an ethically sound version of persuasive storytelling also has the potential to link the technical and political spheres, the sciences and the humanities, the secular and the religious, into a pragmatic and democratic way of building better cities and crafting a shared life in a contestable world.

wealth, ethno-nationalist impasses associated with transnational movements of people; the role of religious beliefs in public affairs, seemingly intractable debates over race and social justice, and techno-biological transformations associated with computerization, biotechnology, robotics, and nanotechnology.

I believe good city crafting requires actors to draw upon the best available research generated by a diverse array of professions and scholarly disciplines. Likewise, I believe good stories can be made stronger by using scientific evidence as tropes that can turn a story in a preferred direction (Tilly, 2002; Throgmorton, 2008). But skillful research, professional expertise, and dispassionate reflection are not sufficient. Crafting a better world also requires a willingness and ability to learn from stories that come from diverse sources, especially those rooted in the practicalities of ordinary life and including those that articulate the birth, development, ambitions, and boundaries of the disciplines and professions.

In brief, I want to make space for elected officials *within* planning (that is, city crafting), not treat them as intruders who can only wreck good planning, and I think ethically-sound persuasive storytelling is a crucial part of the emergent practice.

I now want to explore this relationship between story telling and city crafting to life by narrating a story based on my own personal experiences as a scholar engaged in practical action. The story focuses primarily on the City Council's May 20, 2014, meetings and the Council's consideration of a several interrelated topics, including proposed adoption of a new Form Based Code (FBC) for the new Riverfront Crossings District south of downtown. Narrated in first-person present tense from one city councilman's situated point of view, the tale is unavoidably subjective and limited in a variety of ways.[2]

As suggested above, the tale suggests that city crafting requires acting on a complexly interwoven mix of topics that cut across institutional, professional, and disciplinary boundaries. It also suggests that a city unfolds step by step, and that each step changes the context for subsequent actions.[3] And it suggests that storytelling—especially the interaction between community storytellers and professional experts who are enacting the deep stories of their professions and disciplines—plays a key role in this process of unfolding. Last, while at least hinting at how complex public action can be even in one small city, this story also introduces questions of community identity that we U. S. Americans and you in Europe face early in the 21st Century: Who are *we*? Where did *we* come from? And where are *we* headed?

## 2. Two Days in the Life of an Elected City Councilman

To help you make sense out of the tale I am about to tell, I must first give you a sense of the city in which I serve and the political structure of the city's government.

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[2] This poses a serious very practical challenge for an elected official like me, namely: how can one find time to craft a rigorous theoretical argument about engaging in practical action while simultaneously engaging in that action? It may not be possible, for the challenge returns with every passing day. But if one doesn't try, the truths of practical action will remain deeply mysterious and easily manipulated.

[3] This unfolding is related to "path dependency" wherein a sequence of decisions and actions radically constrain subsequent actions. In the worst case, such a sequence can produce a "rigidity trap" that inexorably leads to the "predictable surprise" of catastrophe. The practical challenge is to figure out how to turn away from such destructive paths, step-by-step. This is an enormously difficult political task, primarily because interest groups and political constituencies have over time been assembled around the ways things are and hence resist substantive change except on their own terms.

Iowa City is a city of roughly 68,000 residents (2010) located in east-central Iowa near the middle of the United States. Most residents of the city like the fact that it combines the virtues of a small town with—because it is the home of The University of Iowa—the cultural attractions of a much larger city. According to the City's recently modified Comprehensive Plan (City of Iowa City, 2013a), several key events since the late 1990s have presented the city with an array of new challenges and opportunities. It further indicates that application of the concept "sustainability" will enable "the community" to "strike a balance between preservation [of the city's small town character] and change [growth and investment that brings big-city vitality]." The Update does not, however, indicate how this balance should or will be achieved. The City Council is formally responsible for resolving these tensions and ambiguities and for striking the balance, and it does so by exercising discretion within constraints imposed by existing laws and codes. But, for reasons described below, City Councilors are strongly inclined to defer to the professional staff's recommendations. The Update implicitly treats this staff-led process as a "black box."

One cannot understand why the City Council is so strongly inclined to defer to the professional staff's recommendations, or indeed even understand how politics work in Iowa City, without knowing that the city has a Council/Manager form of government. Voters elect the Council, the Council elects the Mayor, the Council hires and, if necessary, fires the City Manager, the City Attorney, and the City Clerk, and (supposedly) the Council sets policy while the Manager executes it. I say "supposedly" because most Council members almost always do as the City Manager and staff recommend. As a practical matter, therefore, the City Manager has most of the power in Iowa City government; I often feel as though we Council members are but puppets on a stage, with a skilled City Manager manipulating our actions. Plato might be pleased.

Now entering the 42nd month of a 4-year term as an elected city council member in Iowa City, I've grown used to hearing questions such as: "What's it like being a council member?" "How much time do you spend on the job?" And "how has the job changed since you were on the Council 20 years ago?" I usually respond by saying it's much harder being a city councilor now than it was back then. The population of the city and surrounding area has diversified considerably; the percentage of residents who are black, Latino, or Asian has increased significantly over the past ten or more years. The city faces much stiffer competition from communities near and far, especially from the neighboring cities of Coralville and North Liberty. Social media have radically transformed how people communicate their interests and concerns, and the politics of the state are far more polarized than they used to be. As a result, the issues we have to deal with are far more complicated they were when I first served as a city councilor in the 1990s. This is especially true for anything having to do with the juncture of schools, housing, race, and poverty, largely because the Iowa City Community School District includes Iowa City and its two largest neighboring cities.

But describing the context is not quite like experiencing the action. Picture a brightly lit City Council's chambers, and imagine yourself accompanying me as I prepare for and participate in one of the City Council of Iowa City's regular bi-monthly meetings. These meetings begin with a work session, which starts at 5 p.m. and typically ends at 6:30. It is followed by a formal meeting, which begins at 7 p.m. and ends anywhere from 8:30 to 11 p.m. or later depending on the number and complexity of topics on the agenda. The formal meetings are televised live and rebroadcast on the City's Cable TV channel. Normally, the work sessions are not.

It is Monday, May 19, 2014. I spent most of the weekend at home reading the ~100-page information packet for the work session and the much longer ~550 page packet for the formal meeting, and now I'm sitting in one of the coffee shops downtown trying to finish. One can't (and

I don't) read all the material the city staff gives us. Inevitably I must sort through it, focusing on what I consider important. Tomorrow night's agenda includes three such items. I'm feverishly trying finish reading the packet and drafting notes to use during the meetings. I feel as though I've run out of time and don't feel adequately prepared.

"You talk too much," a now-retired member of the council told me a couple years ago. To an extent, she might be right. I do prepare quite thoroughly. This leads me to ask far more questions and to challenge the staff's recommendations far more frequently than the others do. No surprise there. I'm a 69-year old retired professor who has a clear set of priorities that often reflect those of a large proportion of the local electorate. I am here, first, to do the best job I can for the people of the city and, second, to empower people who feel their concerns are being marginalized or ignored.

So, yes, maybe I do talk too much. But maybe the other Council members talk too little and are far too deferent to the City staff. It is very easy to see why this might be the case: they have varying types of full-time jobs and often have parental responsibilities at home. Mayor Matt H., for example, is a handsome, personable, and smart but (in my view) very cautious young lawyer who is married, has three children, and comes from an Iowa City family that has deep roots in the city. I have a great deal of respect for him and my five other colleagues, partly because I recognize that they bring diverse kinds of expertise to issues confronting the city. Susan M., for example, is a financial analyst and Rick D. is medical doctor who works for the University of Iowa's Hospital. But I am also aware that none of them have the same knowledge and experience I have concerning urban planning and public policy making.

During tomorrow night's work session we're going to discuss a proposal sent to us by the Chair of the City's Planning & Zoning Commission. (We call it the P&Z Commission.) That Chairperson recommends that we ask the School District's Board to incorporate a "walkability clause" into a "Diversity Policy" the Board adopted a year ago. During the formal meeting we will also vote on the second reading of a proposed ordinance to adopt a new Form Based Code for the recently created 76-acre Riverfront Crossings District south of downtown (Figure 1). This new Code was explicitly intended to implement a "Downtown and Riverfront Crossings Plan," which the City Council had adopted in January, 2013. And we will vote first consideration on an ordinance creating a new Conservation District for an older core residential neighborhood, which is located just northeast of the downtown and the main part of the University of Iowa's campus.

Figure 1. The Downtown and Riverfront Crossings Plan (North is on the left).

The proposed walkability clause raises difficult issues. Many parents who live in the city's core neighborhoods currently walk their children to nearby elementary schools. They want to ensure that the District's new diversity policy – which is intended to achieve greater socio-economic balance among the District's 19 elementary schools – won't compel their children to attend a more distant school. In emails and public statements they have typically emphasized the virtues of neighborhood schools and have often highlighted the value of walkability for the sustainability of neighborhoods and the city as a whole.[4] But many of these parents are actually upset because their children would have to attend a school that has one of District's three largest percentages of low-income students, as measured by Free and Reduced Lunch (FRL) rates.[5] It also has one of the largest percentages of African-American students. Other residents have stressed the importance of sticking to the School Board's Diversity Policy, even if that means requiring some students to attend a more distant school. I have advocated *both* walkability *and* diversity, not either/or, and I want our Council to take actions that will reduce socio-economic imbalances among our city's neighborhoods. The staff and other Council members typically respond that we can do that only if the other cities in the School District agree to reduce socioeconomic imbalances within the region's neighborhoods, which has thus far produced a seemingly endless cycle of unproductive intergovernmental debate about the merits of mandating "inclusionary zoning" and dispersing federally-subsidized housing for low-to-moderate income households.

The second issue, adopting the new and quite complicated Form Based Code for the Riverfront Crossings District, raises related complexities. Our Council approved the first reading on the Code 7-0 two weeks ago after hearing comments that night and two weeks previously from only a few residents. (I wasn't really surprised that so few people showed up. The FBC is a very complicated topic, which would entail a large shift away from conventional zoning. More important, there had been virtually no coverage of the proposed code in the local news media.)

At that earlier meeting on May 6, one of the City's planners (Karen H.) had displayed lots of appealing photos and images to help Council members and others envision what the Form Based Code would hopefully produce. The Code, in turn, was proposed as a key means of implementing the "Downtown and Riverfront Crossings Master Plan," the text of which also contained a large number of very compelling images (Figure 2). In a sense the images and the planners' vision might have been too appealing, for it was not at all clear (at least to me) how the transition from the present day place to the planners' vision for its future would be achieved. So I asked the staff how they thought the transition from existing zoning to the FBC in that area would occur.[6]

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[4] Although Iowa City is hardly the kind of city Jane Jacobs had in mind when she wrote *The Death and Life of Great American Cities* in 1961, many residents seemed to be inspired by, or at least aware of, her work. For Jacobs, cities are "problems in organized complexity" (p. 438). To really understand them, she wrote, "You've got to get out and walk" (Jacobs, cited in Allen, 2011, p. 41).

[5] The School District uses participation in the FRL program as a surrogate measure for poverty. In 2013, 33.8 percent of all students in the School District were enrolled in the program. FRL rates for elementary schools ranged from 5.9 percent at Lincoln in Iowa City and Wickham in Coralville to 72 percent at Kirkwood in Coralville, and 77.1 and 78.6 percent at Grant Wood and Mark Twain respectively on the southeast side of Iowa City (CITE SOURCE).

[6] In *Planning Matter*, Bob Beauregard (forthcoming) states, "Plans erase what exists in order to propose what has been imagined" (p. 4). The Riverfront Crossings District contains several notable older buildings and quirky structures, some of which might have to be erased to make space for that which our city planners have imagined. It also includes the University's new Music Building, the County's small Jail and beautiful old Courthouse, and the site of a proposed and now twice-rejected County "Justice Center."

NOTE: Fig 2 goes here.

Figure 2. Birds-eye view of southern half of the Riverfront Crossings District

I couldn't know for sure, but it seemed to me that the question caught the planning staff by surprise. When asking this question, I was fully aware that the process by which plans are developed is like a "black box": the planning staff solicits public participation and obtains many ideas and recommendations, but then translates those ideas and recommendations into a final plan without fully explaining to the public the technical and political judgments involved in making that translation. Also aware of this "black box" phenomenon, attentive local residents know that "politics" influences what the staff submits. Hence they often do not trust that the planners are truly offering expert advice and recommendations.[7]

Who knows what really will emerge in the District? I think of Riverfront Crossings' future not as something that anyone can fully foresee, as if one were designing a new bridge, but as a place that is, and will always be, in the process of becoming.[8] Architect Christopher Alexander (2002-04) calls that process *unfolding* (or "wholeness-extending transformation"); transformations occur step-by-step. I like that concept, for it expresses the core idea that it is action and interaction that truly matter, not merely formal plans and decisions. For me, the whole process is a matter of city crafting in which the city planners and I are actors in what Bruno Latour and others have described as an "actor-network" or "assemblage."[9]

There were many other topics I wanted to probe during that May 6 work session. They concerned the very large increase in development density that would accompany the FBC; the likelihood that Tax Increment Financing (TIF) would be used to provide an additional development incentive; the use of density bonuses to encourage construction of Class A office space, workforce and affordable housing, LEED certified buildings, and preservation of historic structures; and other topics. But our mayor likes to run a tight ship and keep our work session discussions within the allocated 90 minutes, so I had to leave some questions unasked. I agreed to submit a written version of my questions to the planning staff so that they would have time to

[7] I was also thinking about urban theorist David Harvey's (2001) comment about utopia: "Utopias of spatial form are typically meant to stabilize and control the processes that must be mobilized to build them. In the very act of realization, therefore, the historical process takes control of the spatial form that is supposed to control it" (p. 173).

[8] If adopted and fulfilled, the Plan could produce a built form akin to what Jacobs advocated in *Death and Life*: short blocks, mixed uses, old buildings mingled with new, and sufficient residential density, and it could facilitate the kind of economic development that, in her view, produces great cities. But the Plan and FBC would also use financial incentives to encourage construction of buildings considerably taller than ones she advocated and considerably out of scale with current buildings in the city. The proposed use of these incentives recalls a question posed in one of Jacobs' later books: how can local governments play a significant role in city development without becoming or creating a "monstrous moral hybrid"? (Jacobs, 1994).

[9] According to Latour's (2004) Actor-Network Theory, facts become matters of concern when they gather around themselves a variety of human and non-human actors. Such an "assemblage" exists when humans, non-human things (whether living or not), and technologies (or tools) are brought together into a functioning whole. These grouping might be fleeting, are always heterogeneous, and constantly evolve as they enroll other actors and lose allies when conditions change and successes or failures accumulate. In later work, Latour (2010) later argues that scholarship and social practices are "compositional" activities; they put things together to enable intellectual positions and desirable conditions to become stable and endure.

prepare a written response for the whole Council. In other words, we Council members did not discuss and probably did not understand the complexities of what we were on the verge of adopting. In the end I too voted for the FBC that night primarily because I thought it had the potential to greatly improve the quality of urban design in the area, at least in relation to the existing zoning code.[10] This Riverfront Crossings Plan is not so massive a project as, say, New York Mayor Bloomberg's Willets Point Redevelopment, nor is it as important as the redevelopment of New Orleans after Hurricane Katrina in 2005. But for the people and businesses in Iowa City, adoption of the Code for Riverfront Crossings could be a very big deal.

Now, on May 19 and having just read the staff's response to my questions, I intend to focus on just a few key topics during tomorrow night's work session and meeting. I intend to move that we amend the proposed Form Based Code in three specific ways: to increase the minimum amount of time that affordability must be maintained for projects that receive an affordable or workforce housing density bonus; to reduce the maximum post-bonus building height in two sub-districts from 15 and 12 to 10 stories; and to reduce the density bonus for Class A space. I also intend to move that we amend an amendment that has been proposed for the Downtown and Riverfront Crossings Plan. The proposed amendment contains some very weak language about considering affordable housing in the area. I want to strengthen it. To ensure that my amendment even gets considered, I've asked another Council member to second my motion.

The emphasis on affordable housing is connected to the discussion about walkability and the School District's diversity policy. Knowing that other Council members think I talk too much and ask too many questions, and having already posted my ideas on this topic in an email to the Mayor and City Manager, which appeared in our Council packet for the meeting, I plan to remain quiet, let other Councilors express their thoughts, and then ask questions to clarify the consequences of their own proposals. At that point, I expect to offer my own ideas.

The third topic, creating a new conservation district, emerged out of long-standing concerns of homeowners that landlords and developers who profit from the lucrative student housing market are undermining the long-term health of the Northside neighborhood. Located within easy walking distance of the downtown and the University, the neighborhood contains many ~100 year old homes, streets lined with mature trees, an elementary school, and three successful neighborhood parks. But it also contains homes that have either been converted into rental units or else replaced by banal apartment structures. The proposal sailed through the Historic Preservation Commission and then the P&Z Commission, and now looks like it will pass the Council's scrutiny very easily.

It's now 5 p.m. on the 20th. Our work session begins and I immediately find myself caught off guard. The Mayor surprises me by proposing that we defer action on the very modest amendment to the Downtown and Riverfront Crossings Plan. The amendment is untimely, he says, because we had, in our May 6 meeting, instructed staff and the P&Z Commission to investigate the possibility of including affordable housing into the Form Based Code. Oh good grief! I've completely forgotten about that. What is it we instructed the staff to do? No one seems to remember exactly, and we don't have the exact text in front of us.[11] Surprised, unclear about what

[10] Inspired by Jacobs' words, "you've got to get out and walk," and thinking of her ideas not as ideology but as a source of inspiration, I led a "Jane Jacobs Walk" through the northern part of Riverfront Crossings back in May 2012. I wanted my fellow walkers to see the area's present and planned future through Jacobs' eyes, and to imagine ways to make the area into an even more attractive, diverse, and lively place.

[11] A few days later I read the actual text. It instructed the staff and the P&Z Commission "to discuss or consider inclusionary zoning and other affordable housing incentives in the form-based Code and report

we had actually instructed the staff to do, and possibly not fully prepared, we become confused. Suddenly I realize that at least four other councilors are willing to defer action on the amendment indefinitely, and to wait instead for the staff to talk to the Home Builders Association about the proposal to include affordable housing into the FBC. Having expected the amendment to pass easily, and having prepared to introduce a modification to the basic amendment, I become quite flustered. From whom else, I ask impatiently, would the staff solicit advice? Who counts as a meaningful stakeholder? I see some proponents of the amendment in the audience and know they expect to speak during the public hearing, but indefinite deferral will mean they won't be able to. Hearing four votes in favor of deferring, the mayor indicates no public hearing will take place tonight and the topic will be deferred indefinitely.

The more I thought about this over the next 24 hours, the more steamed I became. Those residents had paid a fee of approximately $150 to introduce the amendment, had labored hard to marshal an effective case on its behalf, had persuaded the P&Z Commission to pass a watered down version of their proposal, and had come to the Council Chambers to speak at the public hearing, which the Council cancelled. I could not imagine the Council responding in the same way to the Home Builders Association or the Chamber of Commerce if they had proposed a similarly minor amendment to the Plan. We could have opened the public hearing, listened to what people had to say, and then deferred action on the proposed amendment to some future meeting. In my view, the Council's action was not fair, not just, and an insult to those people! And yet, I had contributed to the confusion by not remembering what we had said to the staff two weeks earlier.

As for the walkability clause, the mayor says he is very leery of telling another government body what to do. The rest of us agree. But I emphasize as strongly and as clearly as I can how important it is that we take responsibility for our own actions and not shift the burden onto the School District. If we want to support the District in its efforts to achieve greater economic balance among the *elementary schools*, we need to achieve greater economic balance among *the schools' neighborhoods*.[12] But nobody else responds, other than the mayor, who briefly recounts all the things he claims the city currently is doing to promote greater balance. I can't tell whether he really believes what he says, knows something I don't know, is wearing rose-tinted glasses, or is talking the talk while being completely unwilling to walk the walk.

Soon, thankfully, the work session ends. I feel agitated, partly because I am annoyed at myself for becoming confused early in the work session, and partly because I don't believe the other Council members really want to increase the economic balance among our neighborhoods. I need to cool off by walking to the nearby New Pioneer Co-Op and eating a cookie. As I walk, I'm thinking: the public seems to be presenting us with an either/or choice between walkability and diversity and, more generally, between sustainability and justice. This reminds me of Susan Fainstein's (2010) recent book *The Just City* and Michael Sandel's (2010) *Justice*. But, what is justice? Oh, wait a minute. I'm suddenly in Plato land. Back toward City Hall I go. One of the other council

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back to the City Council with a recommendation." No one, myself included, seemed to notice that the modest amendment concerned the Riverfront Crossings *Plan*, not the Form-Based *Code*.

[12] I argued that we needed to explicitly state or improve policies that promote economic diversity within Iowa City neighborhoods, especially by adopting policies that distribute new affordable housing units throughout the city by using inclusionary zoning and economic incentives. I further argued we should ensure that all new neighborhoods built in Iowa City are designed to be walkable in a strong sense, especially in the areas surrounding the two new elementary schools. And, lastly, I argued we should enhance the (strong sense) walkability of existing post-1970s neighborhoods, especially ones that currently have a disproportionately high concentration of very low-income households.

members, owner of a downtown jewelry store, is sitting outside smoking a cigar. I cross the street and sit next to him. We start chatting about the local Catholic high school, which quickly leads me tell him about my recent visit to my *alma mater*, Notre Dame. Departing, I walk to City Hall's entrance. There I chat briefly with two members of the Human Rights Commission and the director of our new Department of Development and Neighborhood Services, and then go into the Council's chamber. I greet dozens of Northside neighbors, most of whom are friends, five members of the Telecommunications Commission, a man whose young son would be receiving an award, the director of the Senior Center, and several others.

A few minutes into our formal meeting, members of the general public begin speaking (as is the usual practice) about topics not on the formal meeting's agenda. Mary G., an older African-American woman who often appears at our meetings, speaks first. She seems unusually upset and angry tonight. Once again she draws our attention to the lack of a bench at the new bus shelter near a new grocery store, to a cut we made in funding for SEATS (the local paratransit service) many months ago, and to the many ways in which we let our socio-economic class position affect our decisions. Sally S. from the Affordable Housing Coalition speaks next about our inaction on the affordable housing amendment. Affordable housing is, she said, a building block of sustainable communities. Having lived in Baltimore for years, she remembers how deeply divided that city had become in terms of race and class, and she urges us not to let our city become like that. We should instead strive to ensure that our economic success is inclusive. She agrees that affordable housing should be a *regional* priority, but she doesn't think we have to wait for other communities in the region to agree; we can take the lead and show how it can be done well in Iowa City. Lauren B. of the Telecommunications Commission then shows us a video about a cable TV education campaign the commission has produced. Mark P. of Habitat for Humanity gives us a handout about the relationship between local wages and affordable housing. The last person to speak is Roger K., a youngish heavy-set man in a wheelchair who, like Mary G., often appears during these periods. "You guys couldn't care less for this community," he says. "You tend to care only for the rich." He disparages a local developer and two 14-story structures he has built downtown. Downtown "is absolutely horrible," he says; "You guys are catering to the students."

We turn to items on the formal agenda, the first of which is the proposed conservation district. A city planner describes the neighborhood, indicates who proposed creating the district, and reports that it has been reviewed and approved by two commissions. During the public hearing on the proposal, 10 people support creation of the new district and no one opposes it. The Council votes unanimously in favor of creating the new district, and the Council chambers erupt with neighbors clapping and cheering. They exit toward the antechamber and excitedly celebrate their victory while we council members proceed to work our way through the other items on the agenda.

Immediately after voting on the Conservation District, we turn to our second reading of the Form Based Code. I speak only briefly, basically summarizing the ways I think the proposal should be amended and indicating that I would defer introducing the amendments to our next meeting in order to give the staff time to provide feedback. I don't want to do this, and worry that we would end up adopting the Code with very little discussion or understanding, but I recognize that the mayor and other Council members don't want to discuss the amendments tonight. I am only one of seven, and cannot control what the Council as a whole chooses to do. So, despite many misgivings, I vote for the new Code along with the other Council members.

The meeting ends after a few other items are considered, and I depart rather quickly to walk the mile to my home in the Northside neighborhood. As usual, I feel agitated and worn down by the complexity and emotional intensity of the experience. My "monkey mind" is chattering away. I

need to be much more nimble when encountering the unexpected during meetings. But I also want to learn how to get out of my own way. As a long-time professor, I have a very strong tendency to let myself become tied down to carefully crafted written words, to lecture, to claim the moral high ground. This simply does not work well in these meetings with other elected officials. I want to ground my words more in what *I* think and feel rather than tell other Council members what *they* should think, feel, or do. I also want to be much more deft in helping publics form around major matters of concern such as affordable housing. Are all these heated debates merely about the *shadows* of justice? The calm of engaging in stimulating intellectual discussions with philosophical friends beckons yet again. More important in the short run, my wife and daughter await. I continue walking through the dark, toward home.

## 3. Urban Renewal: The Sequel

Embedded in the story just narrated are brief summaries of the City Council's short discussions about the proposed Form Based Code for the Riverfront Crossings District. In June 2014, the Council adopted the Code as originally proposed; i.e., none of my concerns or proposed changes were included. Eleven months have now passed. The subsequent unfolding of action in the District might be called "Urban Renewal: The Sequel," for those actions have begun changing the District rapidly, not through old-style, large-scale slum clearance by the government but through a series of incremental but still profound steps. One might initially think that the "Downtown and Riverfront Crossings Master Plan" would have guided this unfolding. It has in part, but the actual unfolding has differed in important ways from that Plan. An interwoven series of actions involving a multitude of actors both near and took place in the months after the "Two Days" meeting, many of which were either not anticipated or not explicitly considered by the formulators of the Plan. These actions, in turn, strongly influenced what actually took place on the ground. I cannot detail them here, but the most important ones include the following:

- In Spring 2013 the State Legislature adopted property tax reforms that, according to City staff estimates, would reduce Iowa City's commercial and industrial property tax revenues by $37-52 million over the next 10 years. These tax "reforms" have compelled City government to find ways to decrease its costs and/or increase its revenues.

- Also in June 2014 the State Board of Regents adopted a new funding model for the Regents' universities. This new model has caused the University to begin recruiting new in-state students quite energetically and to begin foreseeing 2,000 additional students over the next four years while adding a net increase of only ___ dorm beds over the next 4+ years. The University's planned increase in enrollment in turn led local developers and public officials to begin anticipating a large increase in demand for student housing near the University.

- In the summer of 2014 the City Council proposed a 1% Local Option Sales Tax to replace the revenues lost due to the State's action, but voters rejected the proposed tax in November 2014. Many opposed the tax because they believed it would transfer income from ordinary people to wealthier property owners, including owners who were already receiving property tax cuts as a result of the State's reforms.

- The City has become much more active in using Tax Increment Financing (TIF) as a means of stimulating new development, primarily in response to the very aggressive use of TIF by a neighboring city, Coralville.[13]

- An unanticipated and very contentious debate emerged over the future of three historic working class cottages on S. Dubuque Street in the Riverfront Crossings District.

Of these many actions, the last may well be the most revealing. The full tale about those three cottages is quite complicated and must be deferred to a future paper. However, a quick synopsis can convey the essence of its relationship to the core claims of the present paper.

The Riverfront Crossings Plan explicitly stated, "preservation of these structures should be a goal" (Figure 3). Moreover, the new Form Based Code authorized a density bonus and a transfer of development rights in return for preserving historic structures such as the cottages. Shortly after adoption of the Form Based Code, however, a private developer applied to have the site of three cottages rezoned from its current CC-2 to a new Riverfront Crossings zone, RCD-CX. If approved, that rezoning would be likely to increase the assessed value of the property from about $3.6 M to about $14.2 M. Friends of Historic Preservation hurriedly applied to have the cottages

Figure 3. The Three Cottages in the Riverfront Crossings District Master Plan

designated as historic landmarks, and, after contentious public hearings, the Historic Preservation Commission and the P&Z Commission both recommended approval of the designation. The issue went to the City Council. The property owner objected to the designation, claiming he was being victimized. Many dozens of people weighed in, with builders, realtors and developers on one side, and preservationists on the other. Passions ran high, hyperbole abounded, and positions became polarized. Needing a 6-1 vote to pass, only a 3-4 minority of the City Council voted for designating the cottages as historic landmarks. The majority condemned "11th hour" efforts to preserve the structures, emphasized the rights of the property owner, and cited other language in the Riverfront Crossings Plan, which stated, "The plan is simply a vision, highlighting certain areas. The decision to redevelop is ultimately up to the property owner." The first cottage was

[13] In December 2014, the Council approved a 7-story density bonus for a professionally managed mixed-use building near the corner of Burlington and Madison Sts. It would contain 248 units of student housing. The bonus resulted in a 15-story building instead of doing what the Downtown and Riverfront Crossings Master Plan called for; that is, four 4- to 7-story buildings organized around a quadrangle. In February 2015 the Council subsidized that project with a $4.7 M TIF. Also in December 2014 the Council approved a $1.8 M TIF for a 96-unit housing project on S. Riverside Dr. In January 2015 it approved a $976 K TIF for 28 townhouses on S. Dubuque Street at the site of the soon-to-be-demolished Sabin School building. And in March it approved an $8.8 M TIF for a 12-story hotel on S. Clinton St.

demolished during the night of December 25-26, 2014 (Figure 4). As one locally prominent real estate appraiser said during a public hearing, “In short, it is about the money.”

Figure 4. Cottage demolished on December 25-26, 2014. [Photo by Tom Gilsenan]

## 3. Conclusions

As I hope the tale just recounted reveals, the role of City Councilor is not an easy one to enact. The work can feel rewarding, as it did when Northside neighbors responded so happily to our vote on the Conservation District. But it is hard work, both intellectually and emotionally, and it can often feel quite fruitless and frustrating. Engaging in this particular kind of practical action poses a unique challenge that I have not yet mastered and maybe never will. More important for present purposes, meetings such as the ones just described are only part of the never ending and complicated process of co-crafting how the future of a city will unfold. Plato would have us believe that everyone involved in such a process inhabits a world of shadow and illusion. Unlike Plato, I don’t see people in chains mistaking shadows for reality. Instead, I see people who possess many different kinds of knowledge, expertise, and ways of valuing, all of which need to be brought to bear in the here and now, over and over.

Recognizing that the tale just recounted is open to many interpretations, I would hope readers find within it at least four key elements pertaining to my claim about the importance of storytelling in the crafting of cities: first, multiple actors-storytellers have legitimate claims to be actively involved in co-crafting the future of their cities (and the regions within which their cities are located); second, these community-based storytellers interact with professional experts who are enacting the deep stories of their professions or disciplines, and are thereby living out the Platonic fantasy that professional planners (and other experts in narrowly defined domains) know more than others and hence can actually plan a city’s future; and third, powerful actors use their skills and resources to shape how that fantasy is actually executed.

At a deeper level the tale also reveals, fourth, that the decision about the three cottages ultimately involved two key questions of city crafting and community identity: who are *we*, and where are *we* headed? Our answers to these questions in the Council’s Chambers and throughout the full range of place-making and city-crafting activities were being influenced in no small part by stories and the narrative imaginations of the storytellers. In the case of Riverfront Crossings, one story dominated: the need to make space for the so called “creative class,” a concept that in a place like Iowa City would not instantly be mocked. Other relevant stories, such as those directly pertaining to the city’s African-American and Latino residents, the area’s small businesses,

lower-income people in general, Libertarians, and Fundamentalist Christians were scarcely visible and had no meaningful effect on either the city planners' or the City Council's vision of Iowa City's future. And yet, commonly shared stories about the dangers associated with having lower-income black people live in mostly white neighborhoods or attend mostly white schools, or about black kids being the ones who always get bused, lurked prominently just below the surface of the debates over "walkability" and affordable housing. And the Libertarians' and Fundamentalist Christians' stories were exerting considerable influence over State and National elections, policies and budgets, which in turn were altering the incentives and constraints within which our City government acted.

But mine is only one telling of this tale. Other versions can be told and, in fact, are currently circulating around town. Those circulating stories are, in turn, likely to play a major role in this coming November's City Council elections. This fact indicates how storytelling influences the co-crafting of cities.

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# TRACK 02

# Territorial Cohesion in the Multi-Actor Arena

## Track description

Co-chairs: **Dominic Stead**, **Juho Luukkonen**

The EU concept of territorial cohesion is being increasingly used to frame spatial planning and regional development policies at different spatial scales across Europe (and beyond). Addressing the issue of territorial cohesion (and also social and economic cohesion) often involves multi-actor and/or multi-level approaches. This track aims to provide a forum for discussing the multi-actor and multi-level nature of policies to promote territorial cohesion, particularly in discussing the role, contribution and responsibility of planning in fostering territorial cohesion in the multi-actor arena. The track welcomes theoretical, methodological and/or empirical (either qualitative or quantitative) contributions. Comparative studies will be particularly welcomed. These might include papers on policy analysis, policy transfer, institutional analysis or lesson drawing related to territorial cohesion, spatial planning and/or regional policy.

**Not to Split Hairs: EU Territorial Cohesion a Contradiction in Terms**

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Keywords: Territorial cohesion, State territoriality, The EU construct

*Abstract: Amongst various territorial cohesion 'storylines', 'Coherent EU Policy' is its unique selling point. State territories as frames are unsuitable for spatial relations and functional areas crisscrossing state boundaries. However, if they were considered in earnest, states would become concerned. If this were to happen –which so far it has not and will not unless we change our thinking about the EU construct– then his would challenge their control over their territories. A defining characteristic of states being this, their 'territoriality', EU territorial cohesion policy would undermine their very existence as sovereign states, so it will always hurt itself on the wish of member states to sustain their control their territories, people and resources. Also, states will always have considerations other than managing various spatial networks in mind. Their integrity and prosperity and, importantly, their administrations retaining power depend on electoral consent articulated in and by territorially defined constituencies. Networks come second. Without splitting hairs, therefore, we may say: In an EU seen as a collection of member states, territorial cohesion is a contradiction in terms. One would have to consider another form, like an EU as an archipelago or as a cloud.*

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## 1. Introduction[1]

The call for papers posits the increasing use at different spatial scales of the concept of territorial cohesion, but at the EU scale the framing of spatial planning and regional development policies would cast doubt on the sovereignty of member states. The levying of customs duties and many other issues are of course EU competences, but an overall EU territorial cohesion policy would come up against state territoriality. Of course, an EU as a real federation would make an overall frame for spatial planning and regional development policies conceivable, but this is unrealistic. My ultimate purpose is not, however, to debunk EU territorial cohesion but to lay the groundwork for speculating about other, more diffuse EU constructs than what we have now. Under those constructs, the meaning of territorial cohesion would shift from integrating developments with territories to their management within relational networks.

Part 2 discusses territorial cohesion as a 'shared competence'. Of the various 'storylines' (Waterhout 2008) articulating what it might mean, 'Coherent EU Policy' represents the unique selling point of territorial cohesion (Faludi, 2010). It implies looking at the EU territory as a whole, thus questioning the privilege of member states to exercise control over their territories, what is called territoriality. State territoriality is what Part 3 is about. It implies a view of the EU as consisting of a set of containers. Networks beyond state borders are secondary to what happens within those containers. To

[1] In the Netherlands there is concern about self-plagiarism: without due acknowledgement recycling previous works. Part of an ongoing quest, this essay builds on others on multi-level governance (Faludi, 2012), subsidiarity (Faludi, 2013a) and on further attempts to synthesise relevant literature (Faludi, 2013bc), sometimes in terms of the governance of places (Faludi (2015). This paper, too, may become yet another building block for future essays on matters which concern me.

the 'hard' view of space which this implies the literature juxtaposes a soft, 'relational' view. It implies a negotiated territoriality. Part 4 discusses negotiated territoriality in terms of 'soft' planning, but where does this leave democratic legitimacy? Part 5 explores this issue, including the example of Switzerland where democratically legitimated territorial and functional administrations coexist. In the Conclusions I introduce two alternative metaphors for the EU construct as we know it: the 'EU archipelago', with member states islands in a sea of spatial relations and the 'EU cloud' with neither clear-cut internal nor external borders. Under either, territorial cohesion would mean something different from what it does for boxed-in territories.

**2. Coherent EU Policy**

Taken seriously, 'Coherent EU Policy' would mean coordinating regional, environmental, agricultural and transport and also other EU policies where they affect space. The current reasoning that EU policy should not be 'space-blind' (Barca, McCann & Rodrígues-Pose, 2012) supports this. Nonetheless, the dominant frame for pursuing territorial cohesion is not the EU but each of the member states individually. Not all give due attention to the cohesion of their territories, but if the EU were doing this for them, all would feel concerned. Any such policy would first of all imply more procedural and substantive requirements, as for instance the requirement to conduct territorial impact assessments to meet. The trouble of having to implement them apart, the more fundamental reason for opposing the idea is that EU territorial cohesion policy would interfere with state territoriality.

True, in the EU, member states do surrender some of their powers, and well in a two-step process. As the masters of the EU treaties, they first of all agree on some competences to be surrendered in principle. The next step comes in the form of what is called the 'ordinary legislative procedure'. Its choreography involves the main EU institutions, with a key role reserved for representatives of member states sitting on the Council of the European Union. Their decision as to whether to effectuate a shared competence already listed in the EU treaties is subject to the subsidiarity principle. It means that the case for EU directives and regulations must be proven. So, subsidiarity gives the Council of the European Union an opportunity to reconsider the issue. Importantly, with this hurdle taken it becomes difficult for member states to 'repatriate' any competence, making them ever more reluctant to take this last step.

Territorial cohesion s of course a shared competences, so it could potentially lead to relevant regulations and directives being adopted following the path as outlined. Albeit under the flag of spatial cohesion, the European Spatial Development Perspective (ESDP) of the 1990s (Faludi & Waterhout, 2002) has already pursued its 'Coherent EU Policy' storyline, but the ESDP foundered because spatial planning was not an EU competences. So the ESDP has never been the object of the procedure as outlined. In fact, the Commissioners have never had the opportunity to even consider whether to exercise their exclusive right of initiative in the matter. There was no legal basis. Rather, member states respectively their planners were in charge.

Now, a new French Commissioner, Michel Barnier, proposed a shared competence, if not for spatial planning, then for territorial cohesion to be included in the next EU treaty. To him this meant '*aménagement du territoire*': the integration of various public regional development policies based on multi-annual agreements between French national and regional authorities. In France, this happens under the tutelage of the '*Délegation à l'aménagement du territoire et à l'action régionale*' operating under the Prime Minister. EU regional development policy has always been prominently shaped by this example, and this has been influential also in formulating the very notion of territorial cohesion (Faludi, 2006).

The eventual adoption of the Lisbon Treaty with territorial cohesion in it does not, however, mean that territorial cohesion is a live issue. Estimating that the hurdle of the 'ordinary legislative procedure' would be too high, the Commission has not so far taken the requisite initiative in the matter and Barnier's initiative has altogether lost momentum, but this is not what this paper discusses. The paper is rather about the concept of territory in territorial cohesion. Where states are concerned, the meaning

of territory is taken for granted. Ignoring arguments about '*La fin des territoires'* ('The End of Territories'; Badie, 1995), states conceive of their national territory as the fixed container for all the resources to sustain their governments and the citizens on whose consent their governments depend. Thinking in these terms, they would find it hard to accept the EU territory as the relevant frame.

The reason is not only subsidiarity in the EU treaties. If the case were proven, territorial cohesion might very well be taken to the EU level. The reason is that its wielding power over its territory –its territoriality– defines the sovereign state (Ryngaert, 2009). As Storey (2012, p. 40) says: 'Sovereignty implies the existence of geographic space over which control is exerted; territory is produced and claimed.' Any serious EU policy on territorial cohesion would thus be a direct challenge to a core belief of member states of what they are. They may of course share their territoriality with sub-national administrations, but unless this takes the form of claims for independent statehood, this nowhere affects their sovereignty. Under international law, it is states and not regions that have it. The many arenas, identities, interests and power relations criss-crossing state boundaries are of secondary importance. So where, as might be useful, state functions could be devolved to cross-border agencies, the states draw a clear line: State functions may not be devolved (Evrard & Chilla, 2012). In another paper on cross-border regions, Chilla et al., (2012) doubt even whether cross-border regions may be said to have territoriality. Anyhow, the 'logic of government' always trumps the 'logic of interdependence' which according to his biographer, Jean Monnet as 'The First Statesman of Interdependence' (Duchêne (1976) invoked. In the EU, conflict between these two logics is endemic.

In all this the focus is on vertical relations between member states and the EU which is, for instance, where EU subsidiarity come into its own. Horizontal subsidiarity respecting the autonomy of associations and corporations, what Delors identified as the *forces vives* (Ross, 1995) tends to be forgotten. The same is true in discussions of multi-level governance. The concept has been applied first in studying EU regional policy. As originally conceived, multi-level governance stands for the cooperation between levels of government from the EU down to the regional and local one. Hooghe and Marks (2010) describe this since as multi-level governance Type I. What is less common is to consider is its horizontal dimension: Type II multi-level governance referring to the role of single-purpose agencies for functional areas criss-crossing administrative territories. In Faludi (2012, 2013a) I have shown that discourses both on subsidiarity and on multi-level governance fail to properly address the different notions of territory and territoriality.

**3. Alternatives to State Territoriality**

Territoriality is communicated via boundaries. Under international law, boundaries apportion space, thereby effectuating state territoriality. Boundaries "…indicate territorial control and, hence, power over prescribed space" (Storey, 2012, p. 20). According to another prominent source, Sack (1986), territoriality is about controlling resources and people by controlling area. Being about reducing border thresholds, European integration presents states with a problem. Witness the discussions about rolling back the free movement of labour. Witness Germany discussing whether foreign truckers in their country should be paid the German minimum wage. Witness also the intention of levying tolls on foreign private car users crossing the German border. Witness finally discussions over roaming charges and geo-blocking of on-line services. All this has to do with territoriality.

Maintaining borders is important for the 'territorial administrative complex' in each state: members of its government and administration owing their power and quite likely also their livelihood to the exercise of state territoriality. However, look also at recent thinking in geography challenging the prevailing, what Murphy (2008) calls metageography underlying the state system. It enforces the view of territory as a container with fixed boundaries. Scholte (2000, p. 47) talks about this as territorialism: macro social space being seen as '…wholly organized in terms of units such as districts, towns, provinces, countries and regions.' Without invoking that term, where he continues saying: 'In times of statist territorialism more particularly, countries have held pride of place above the other kinds of territorial realms…', Scholte, too, means state territoriality. This state territoriality is what the EU challenges.

Scholte, and this is where spatial networks come in, points also to connections that are at least partly detached from any territorial logic. In global transactions, 'place' is not necessarily territorially fixed, distance is covered in effectively no time, and boundaries present no particular impediment. Think once more about online services. He may not yet have had those in mind, but according to Castells (1996) the 'space of flows' is overgrowing the 'space of places.' Social space cannot, therefore, be understood in terms of territorial geography alone.

Murphy (2008, p. 9) discussed the power aspects involved: The current 'cartography of social life' is the outcome, he says, '…of efforts to achieve particular ends with concrete implications for how things are organized and how people think about the world around them.' Other than Scholte, he continues by invoking the term territoriality. Thus, he says that the '…territoriality of the European state system helped to produce a geographical imagination that privileges the 'nation-states' over river basins, vegetation zones, population concentrations, or other possible regionalizations…' Storey (2012, p. 66) says on this point that states '…reflect processes through which territory (and those living in that territory) is controlled. … This state-centred approach reifies current political-territorial structures and tends to ignore the fact that, rather than being permanent features, they are historically contingent.' Scholte (2000, p.57) himself holds that '…we need to develop an alternative, nonterritorialist cartography of social life', one that does not treat jurisdictions with their fixed borders as the inevitable building blocks.

However, there is the loss of democratic legitimacy as a perennial threat, but at the same time representatives eying nothing but their re-election may become 'rent-seeking elites' (Barca, 2009) diverting attention and resources away from solving real problems. Their chief concern may be to please their constituencies and their time horizon limited to the time until the next elections. Wishing to maintain the territorial-administrative complex, politicians sustain the belief as if democracy was only viable within closed territories. They are celebrating an ideology of territories-as-containers for citizens with identities shaped by imagined homelands and histories reaching back to, often fictional forebears. Where history and geography do not conform, they attempt to shape either of both, and the populations also whom they are supposed to serve accordingly (Loriaux, 2008). This is the story of common school curricula and of national languages, like where Weber (1976) writes about turning 'Peasants into Frenchmen'. It is the story also of welfare and social policy (Lascoumes & Le Gales, 2012; Chevalier, 2012). Relevant measures are always and necessarily particularistic, with the territorial-administrative complex focusing on the territories and the territorial constituencies that sustain them.

However, there are also non-state actors, including service providers, and there are functional logics. Seeking to formulate coherent policy, as territorial cohesion would require, would mean reconciling functional with territorial logics. It would also imply sharing territoriality: thinking outside the box of state territoriality, in fact, outside any box, any territory with fixed boundaries. Taking territorial cohesion seriously would mean thinking, not of territory but of territories in their complex and dynamic configurations.

European integration has started by addressing specific functional interrelations: French post-war steel production needing German coal. At the same time, German integration into a Western alliance promoted by a United States concerned about defence against a real or perceived Soviet menace depended on French consent. This has been the time of United-States-of-Europe-type enthusiasm. Conceivably, it might have led to a form of supra-state territoriality, including common European defence: a large box containing the EU territory as a whole. Territoriality would then mean giving primacy, as in federal systems, to the joint territory. Elements of this exist: the Eurozone; the area in which the 'Four Freedoms' are operative; the Schengen Area, neither of which coinciding with the territory of the EU. Rather, the areas concerned overlap. They even overlap the EU's external borders. So, where it exists, European territoriality is a hotchpotch, a diffuse form of negotiated territoriality complementing an interconnected world. In the conclusions I reflect upon this further. First I discuss how all this reminds of the planning literature discussing soft spaces and soft planning.

**4. Soft planning for soft spaces**

In a case study of Thames Gateway, Allmendinger and Haughton see the literature reflecting '… an apparent predilection for promoting new policy scales, initially at least through the device of fuzzy boundaries' (2009, p. 3). In Faludi (2012, 2013ab) I discuss this and other studies conceptualising soft planning for the soft places marked by them. Much of this is going on under the Cohesion policy objective 'European Territorial Cooperation' (Ek & Santamaria, 2009). Under the authority of the European Council, the European Commission coordinates relevant policies and brokers agreements on concrete actions, also under the macro-regional strategies for the Baltic Sea Area, the Danube Area, the Adriatic and Ionian Sea Region with one for Alpine Space in the offing and more being contemplated (European Parliament, 2015). They are soft because their boundaries are not clearly marked. Also, they involve no new EU legislation, no new EU money and no new EU institutions. Sociologists would say that the meetings, exchanges and, where they occur, mutual commitments entered nonetheless mean institution-building. However, this is institution-building of an informal kind, one which may in due course lead to more formal arrangements even so. For instance, under the current Financial Framework 2014-2020, where one exists, Cohesion policy must pay regard to a macro-regional strategy. So, they soft arrangements may be hardening, something that, writing about the Baltic Sea Strategy, Metzger and Schmitt (2012) have already noted.

From all this it is clear that territory is not necessarily the envelope of all major aspects of social and political which state territoriality assumes it to be. Academic research, mainly in geography, has explored the meaning of territory and like concepts. Part 3 has already referred to Murphy. The debate is not couched in terms of soft and hard but in terms of relative, or relational, and absolute space, terms already invoked by Harvey (1969) in his 'Explanation in Geography'. A special 2007 issue of Regional Studies focused the debate on the regional scale, with another one of 2013 seeking to come to conclusions. According to Varró and Lagendijk (2013, p.21) this 'relational versus territorial debate' , in particular in the UK where this related to regional policy and regional reform, but the arguments are of more general relevance, opposed 'radicals' to 'moderates'. So, instead of '... the misleading celebration of self-reliant regions that actually remain entangled in centrally orchestrated policy frameworks, radicals have called for a more radical revision of the UK territorial management'. Whilst sympathising, '…moderates (…) have pointed out the need to be aware of the persisting relevance of the territorial dimension of socio-spatial processes'. In the same issue, Harrison (2013, pp 71-72) comments on a backlash, therefore, against the 'relational' view, concluding that what is needed are '… ever-more-complex configurations in order to make emergent strategies compatible with inherited landscapes of socio-political organization, and for new conceptual frameworks capable of theorizing the 'inherently polymorphic and multi- dimensional' nature of social relations'. He alludes to Jessop, Paasi and Jones (2008) reviewing relevant discussions in geography. Nilsson, Eskilsson and Ek (2010) draw attention to the fact that all this involves the re-negotiation of socially and historically constructed regional identities.

Be that as it may, this chimes well with the observation by Healey of what she calls place governance being complex, with arrangements cutting across government boundaries. The outcome of places being mixed in with administrative areas is '...a tangle of complex relations and arenas, in which particular actors come together.' (Healey 2010, p. 71). Accountability is an issue. In any case, soft spaces places are surely different from, necessarily hard, administrative territories. They not only have definite boundaries, they are also the constituencies to whom politicians are accountable. Where places rather than territories are concerned, accountability is a problem, therefore. Commenting on 'localism' in England, Davoudi and Cowie (2013) are concerned, for instance, that under 'localism' addressing places called 'community planning areas', with ad-hoc boundaries drawn around them, issues relevant to the entire jurisdiction may be neglected.

As 'ambiguous' lands, places thus throw the democratic legitimacy of their governance into relief. Voting in and by territorial constituencies is the accepted way of arriving at legitimate decisions. The underlying assumption is that society can be neatly apportioned into boxes, the 'container view' I criticise (see also Faludi 2010). In reality, in a networked world, functional areas form places of many shapes and sizes. Even macro-regions, the object of strategy-making in the EU, may be described as places. Indeed, Jessop et al. (2008, p. 395) talk about 'globalities' like macro-regions in such terms. All this leads to anxiety about the democratic legitimacy of place-governance.

**5. Democratic Legitimacy?**

Is voting by territorial constituencies the only way to produce democratic legitimacy? Surely, one may ask this question without leaving oneself open to the charge of being undemocratic. After all, none of the conventions for arriving at democratically legitimate decisions is self-evident, which is above all true for the very idea of electing representatives (Manin, 2012). This and other current practices have been invented and argued over before becoming routine to the extent that governments are now measured against standards of inclusiveness and fairness thought to be universal. Nonetheless, that democratic legitimacy comes from majority voting in territorial constituencies may be questioned.

As is well-known, the rallying cry of the American Revolution was that taxation without representation was tyranny (Pitkin, 1976, p. 3). It was in this context that representation became identified with territorial self-government. A key authority on the matter, Pitkin does not discuss representation being territorially bounded. One of her concerns is rather whether representatives are bound by what constituents want, or whether they their duty is to pursue the interest of the nation as a whole. It would be possible to also argue that the representative must take broader, territorial or functional areas into account, and not just his or her constituency. Ignoring current requirements of gender-neutrality, Pitkin says, indeed, that the '…representative is, typically, both special pleader and judge, an agent of the locality as well as a governor of the nation. His duty is to pursue both local and national interests, the one because he is a representative, the other because his job as representative is governing the nation.' (Pitkin, 1976, p. 218) However, this may reduce the chances of being re-elected, this being the crux of territorial representation. So it is relevant to critically examine the situation created by territorial constituencies forming the exclusive frames of reference.

According to Rehfeld (2008, p. xv) '...the use of territory for representation has never been explained or justified ... In never having been contested ... territorial constituencies qualify as an arbitrary institution... ' Discussing elections US congressional elections, he argues for random constituencies instead. Urbanati and Warren concur, saying that '...when represented geographically, the people are only a 'demos' insofar as their primary interests and identities are geographical in nature. Nongeographical constituencies ... are represented only insofar as they intersect with the circumstances of location, producing only an accidental relationship between democratic autonomy ... and forms of representation'. They conclude that the '…geography-based constituency definition introduces an arbitrary criterion... Exclusion works not on people ...but rather on issues, since residence-based constituencies define residency-based interests as most worthy of political conversation and decision...' (Urbanati & Warren, 2008, pp. 396-397). Amongst excluded issues, there are those –which they do not mention– relating to places within, or cross-cutting the boundaries of territorial constituencies.

There are, of course, action groups and NGOs articulating neglected issues, including those relating to places, but the default condition is that territorial representation prevails. Apparently being unfamiliar with alternative understandings of space, the writers above do not consider configurations other than territorial containers. Maybe, though, there is no alternative! The planning and human geography authors discussed above offer none beyond saying that the situation is complex.

Maybe the example of Switzerland can help. Apparently, there the tangle of relations and arenas which Harrison and Healey talk about is a lived reality, but without raising concerns about accountability. Accountability is simply spread over issues and institutions. The authors whom I am referring to, Eichenberger and Frey (2006), discuss territorial and functional issues being treated on an equal basis. Their key concept is what they call functional, overlapping and competing jurisdictions (FOCJ). These exist next to, and sometimes in opposition to what in this paper I call territorial-administrative complexes. Drawing on the economic theory of federalism, Eichenberger and Frey describe FOCJ as expressions of 'functionalist federalism'. With areas of responsibilities and powers which are task-specific, They follow a different logic from any territorialist meta-geography.

The same authors also address the issue of democratic legitimacy. Thus, individuals and/or communities who join school districts, water purification services, refuse collection services and so forth, have a say in running FOCJ. They may even take the initiative to set up new ones. They can also leave them for alternative providers. This, their right of exit mimics market competition. Also, they elect the management, so there is political competition. In this way, each of the FOCJ is a democratic governmental unit. Importantly, once citizens or communities who can also be members have joined, FOCJ exercise authority over them, including the power of taxation (Eichenberger & Frey 2006, p. 160). Citizens or communities must, however, be relieved form having to paying the same tax to territorial governments.

There are plenty of details in the paper under discussion, using one of the 26 cantons of the Swiss Confederation, Zurich, as an example. Eichenberger and Frey report people there to be generally satisfied to a point where they usually defy attempts by cantonal bureaucracies and politicians to suppress any of the FOJC. So, the '…example of Switzerland –which is generally considered to be a well-organised and -administered country– demonstrates that a multiplicity of functional jurisdictions under democratic control is not a theorist's wishful thinking but has worked in reality.' (Eichenberger & Frey, 2006, p. 168)

Their proposal reminds of 'directly deliberate polyarchy' of which Cohen and Sabel claim that it has '…problem-solving capacities useful under current conditions and unavailable to representative systems….[C]ollective decisions are made through public deliberation in arenas open to citizens who use public services, or who are otherwise regulated by public decisions.' (Cohen & Sabel, 1997, pp.313-314) Something which Eichenberger and Frey themselves emphasise is also true: Their proposals have a bearing on the EU. Multi-level governance, the governance turn, democratic experimentalism referred to by Piattoni (2011; see also Sabel & Zeitlin 2010), but see also studies of the 'comitology system' preparing and managing many an EU policy. Comitology in particular represents an '…uneasy fit with the idea of principal-agent democratic accountability through parliamentary representation...' (Smithmans, 2008, p. 875). Indeed, all these deliberative governance structures indicate how the purported democratic deficit, also and in particular in the EU, could be reduced. As Joerges and Neyer (1997, p. 621) say, the '…majoritarian models of democracy are primarily suited for decision-making at the level of the nation-state and face serious normative difficulties when adapted to the European level.'

**5. Conclusions**

Much of the above has a bearing on territorial cohesion at the level of the EU where the nation-state seems, perhaps wrongly, the all-pervasive measure of European integration. This makes the unrealistic option of a United States of Europe seem the only alternative. Whether this has been Jean Monnet's view is a moot question. He did talk in terms of a United States of Europe, but whether he really

meant something like a federal or super-state is doubtful. One can read in his ´Mémoires' (Monnet 1976) that he was aware of the problems of representative government, and there is of course the accolade, already mentioned, of Duchêne (1994) of him as the first 'statesman of interdependence'. This brings him closer to the governance of overlapping places than to the management of territories as containers.

Nonetheless, the container view and attendant notions of how to govern remain dominant. Thus, the European Parliament fancies itself as a parliament in-the-making and has arrogated appointing the President of the European Commission to itself, as if the Commission was destined to be the EU government. At the same time, the members of the European Council of heads of state and government consider themselves as the legitimate representatives of their national jurisdictions. The context thus remains one between different levels within a territorial hierarchy. There is insufficient appreciation of functional institutions cross-cutting the territorial boundaries in and around the EU.

Alternatives, looking at the EU as a 'sui-generis' construct, do exist. Consider authors like Zielonka (2006) writing on the EU as an empire. Roche (2012, p.40) comes to a view of Europe as a 'socio-political complex': 'The image of the EU ... as a puzzling socio-political UFO has guided the discussion towards models which visualise Europe and the EU in socio-spatial terms as a network society and as a neo-imperial system.' The EU is thus said to be '…both an international and supra-state organisation, an organisation which has multinational and multicultural characteristics, and in which the governance system is multi-level and multi-form'. On this basis, Roche notes '…the inadequacy of the 'super-state' and nation-state analogies' (Roche 2012, pp. 40-41). If true, then maybe not only macro-regions, but also the EU as such is more like a place without fixed boundaries than a territorial block. The implication for the EU territory would be that it is fuzzy, with less structure internally and less clearly separated from its neighbourhood than generally assumed. Come to think about it, this may by more accurate as a description of reality than maps showing an EU of twenty-eight state territories.

Indeed, a wider 'EU-orchestrated Europe' reaching beyond the external borders comes close to what has been described as a 'place'. In any case, it is more complex and fluid than a jurisdiction. Also, EU policies often address spatial configurations cross-cutting local, regional, and national boundaries, encouraging the areas and the stakeholders concerned to conceive of new identities. The reflections above on the production of democratic legitimacy may be relevant here. They suggest that Europe as a place deserves better than being forced into the straightjacket of a container. As I suggest elsewhere (Faludi 2013c; 2014), if and when broad and searching discussions along such lines about the nature of the EU project take place, then, with experience in place governance, spatial planning may even have a contribution to make.

In their paper discussed above, Eichenberger and Frey discuss implications for the EU which support the view of it as a new type of governance and of territoriality. Rather than approximating a federal construct with a fixed *acquis communautaire* which newcomers have to accept, they suggest that members and also non-members should be encouraged to establish FOCJ. Going '…beyond the proposal for a multispeed integration of some 'chosen' countries into a 'core Europe'' (Eichenberger & Frey 2006, p. 170) this indicates a looser, more complex negotiated territoriality and a more subtle approach to territorial cohesion. The result would be state territories, each with borders enclosing 'absolute' spaces, alongside a multitude of 'relative' spaces cross-crossing their boundaries. Such relative spaces would be constituted, not by borders, but by networks. And each would imply its own, tailor made form, just as its governance is tailor made, of territorial cohesion.

What this all comes down to is that the fixed territories that we know are in fact islands in a sea of malleable functional territories: an archipelago. The wave patterns caused by the interaction of the many functional territories form that imaginary sea unremittingly re-model the islands' shorelines. Remaining within this metaphor, territorial cohesion may thus refer to, but this is only part of the story, how well the activities on the islands are integrated. It may equally well refer, and this would also be true for the other metaphor of the EU as a cloud, to how the islands and their inhabitants

manage their relations with the sea of functional territories around them. So conceived, the pursuit of territorial cohesion would mean conceptualising and re-conceptualising territorial relations, amounting to ever-new spatial visions, the tool-in-trade of soft, non-binding strategic spatial planning (Zonneveld 2005; Ek and Santamaria 2009). Such spatial visions are not intended to replace the hard analysis of the shape and structure of the islands. Rather, their purpose is to better cope with the many interrelations between the islands and the sea and to prepare for changes, including changes to the shapes of the islands themselves, as well as the situation and identities of the islanders.

# SPATIAL PLANNING AND HEALTH POLICIES: SYNERGY OR FRAGMENTATION? EVIDENCE FROM PORTUGAL THROUGH THE LENS OF THE TERRITORIAL COHESION CONCEPT

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## Abstract

*The significance of spatial planning for health and well-being is well recorded. While there has been recently an increasing body of literature in academic circles and public policy guidelines illustrating the importance of both fields working closely, evidence shows that cross-sectoral integration between spatial planning and health policies is still scarce. This article aims to develop a deeper understanding of how this integration can be considered in conceptual terms and how it is actually embraced in practice by health decision-makers. Drawing upon the concept of territorial cohesion, the new EU political objective which highlights the importance of considering the spatial dimension for public policies cross-sectoral integration, the article presents and discusses the results of a research held in Portugal aiming to understand how territory and spatial policies taken into account in health decision-making processes. Face-to-face semi-structured interviews to current and former national and regional health decision-makers were conducted for this purpose. The research also comprised the analysis of the main national and regional health policy guiding documents. Findings show that, although decision-makers and policy guiding documents value the importance of promoting a cross-sectoral integration of both domains, there is still a long path ahead to integrate in a comprehensive manner the spatial dimension in health policies. The article concludes by pondering on the added value of using the conceptual framework proposed based on the decision-makers perspective and on the new institutional EU policy context.*

Keywords: Health, Territorial cohesion, cross-sectoral integration

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## 1. Introduction: context and aim

The economic and social crisis that several European Union (EU) member states have been facing this past years has led to a number of public administration reforms regarding more efficient organizational models for the provision of public services. Although the importance of these services to both citizens' quality of life and social and economic development of different territories is long recognised, the debate around the role of public policy in their provision has gained increased visibility and centrality in political, academic and media agendas. There are multiple reasons that can explain these circumstances: political changes, particularly in the last two decades, aimed at the liberalization of markets, the transition from the idea of a service user for the consumer/client logic or even the current economic and financial crisis are usually pointed out as examples.

Much of the discussion concerning public services, however, has been done in a comprehensive but a-territorial way. "[There is] a curious partial sightedness concerning the role of public services. (…) public services are frequently powerful placeshapers, and that their role in this regard has been largely ignored by most of the relevant academic literature. (…) Public services – health care, education, the police, social services, defence - they feature only rarely in the spatial planning literature (…) most of these services have their own spatial planning procedures and routines – hospitals are sited in relation to other hospitals and schools in relation to other schools rather than in relation to any more unified vision of the spatial disposition of the whole suite of public services and their integration with a wider plan for spatial development" argues Pollitt (2012, pp.33, 37-38). "The lack of an integrated strategy across policy areas serves to perpetuate and possibly increase the [existing] disadvantages (…) While separate working in silos continues, it will be harder to address these issues and tackle inequalities" add Geddes et al. (2011, pp.35). Indeed, pointing out the narrow view that is traditionally adopted in the discussion around these services in relation to its potential for transformation of the territories and calling attention to the apparent lack of coordination between the different areas of intervention, with the consequent perpetuation of existing inequalities, these authors confirm the observation previously made.

The health sector is a good example of the importance of this debate and creates the necessary conditions to ponder on the way the territorial dimension is included in decision-making processes. According to Barros (2013), health appears regularly at the top of the main concerns expressed by citizens in what they consider essential. However, particularly in the Portuguese case, citizens express frustration with the health system, in general, and the provision of healthcare under the National Health Service, in particular. This is mainly a result of the difficulty experienced in accessing healthcare due to the costs, the time travel and waiting lists, and even the spatial distribution of services.

The Portuguese health system is based on a National Health Service (NHS), Beveridge model - the principle of universal coverage, with mandatory funding through taxes, whose institutional management is public (Simões, 2009) -, in which all the Portuguese population has access to by constitutional precept (Boquinhas, 2012). Following the Portuguese Constitution, the health system is based on a centralised control and decentralised management: the Ministry of Health and its central level institutions are responsible for the Planning and regulation whereas five NUTS II Regional Health Administrations, though accountable to the Ministry of Health, are responsible for the strategic management of the population health, supervision of hospitals, management of primary care and implementation of national health policy objectives (for a comprehensive account of the Portuguese health system see Barros et al., 2011). However, as Oliveira and Pinto (2005) claim, in practice a centralised structure tends to prevail as most powers are still exercised at the central government level.

The discontent with respect to how health policies are being conducted has been observed at several moments. For example, in 2013, the presidents of the national medical association and other personalities of Portugal and three other member states signed an open letter to political leaders and health authorities in Europe invoking a quick reversal of the austerity policies to "urgently avoid further deterioration of health and health services." Arguments as the reduction of access to appropriate health services, the existence of poor working conditions for health professionals and a decrease of health resources while increasing health needs in the community were presented as warning signs for a deep consideration on the path health policies should take.

The fact that the health system is seen financially unsustainable by the present government, having the NHS no excuse to not contribute to a greater containment of public expenditure given the existing deficit, has actually been one of the main arguments widely broadcast by the media to sustain such worries. Though the government discourse is also focusing the idea of an improvement of care quality, policy guidelines regarding the concentration of health services, the closure of certain healthcare units or increased user fees, to name a few, have engendered enough controversy and misunderstanding not only among the population but also among health professionals in academia and in the political arena.

Indeed, little is known about which principles and criteria sustain health policy decisions and the role the territory plays in this process. In Portugal, studies tend to focus on the historical-political context of the major reforms that have taken place since the creation of the NHS in 1979, describing in some cases with enough detail the purposes, processes and outcomes achieved by each government decision. Examples can be found in Campos (2008), Barros et al (2011), Campos and Simões (2011), and Fernandes and Barros (2012). Other studies, discussing the implications of certain reforms in the health sector regarding certain social groups, such as health professionals, can also be found. This includes the research published namely by Carvalho (2009) and Teixeira (2012). One common feature that marks the majority of these studies, however, is the scant analysis of the role of the territorial dimension in health policies.

It is in the health geography field that the relationship between health and territory is mostly analyzed. In Portugal, the studies published by Santana (2005; 2007; 2014) and Santinha (2013) are considered a conceptual and analytical reference in this field. Still, in such studies, the analysis and discussion of decision making processes and governance mechanisms regarding the relationship between the two fields is usually not taken into account. How and under what circumstances the territorial dimension is taken into account in health policy decision making processes? Which criteria are used? Is the territorial dimension of health considered occasional or systematically? And from an institutional viewpoint, which synergies between agents and instruments of health and spatial planning fields are there in order to design and implement integrated policies? The aim of this paper is to address these issues and accordingly contribute to this debate in the public policy and spatial planning domains.

## 2. Linking territory to health in light of the territorial cohesion concept

From a conceptual viewpoint, territorial cohesion, the new EU development paradigm and political objective, is used as a framework of analysis for the purpose of this paper. With a central and strong position in the Treaty of Lisbon, territorial cohesion has been placed explicitly in the core of EU territorial development agenda (CEC, 2011) and has emphasised the spatial dimension of Europe 2020 Strategy (CEC, 2010a). As such, Member States are encouraged to adopt the principle of territorial cohesion in their policy agendas and strengthen territorial objectives in sectoral policies. The argument draws on recent debates on territorial cohesion and links the concept to health. It is suggested that the main lines of action underpinning the concept of territorial cohesion, which combined add value to public policy decisions, when transposed to the health policy domain can be observed in four different ways:

- In terms of the geographical nature of accessibility to healthcare;
- In factors of a broader nature beyond the healthcare per se, such as the social, economic and political impacts of health services at local and regional levels or even citizens' behaviours and lifestyles within a public health perspective;
- In the importance of health as an export sector, a job-creating activity and a means to promote social, economic and territorial development (with links to other activities, such as medical and health tourism);
- In the promotion of more coherence between different actors and policies (i.e. addressing territorial governance), in which health policies can benefit not only from cooperating in a joined up manner with other areas, namely spatial planning, but also from inserting a spatial dimension into the process of integrated policy development.

## 3. Methodology

The arguments made are empirically grounded in a study developed in Portugal between 2012 and 2013, comprehending two phases of data collection.

Phase I consisted of face-to-face semi-structured interviews to 23 key actors in the area of healthcare, at the governmental level, as well as in central and regional administrations. The sample of the interviewed decision-makers comprised current and former health ministries and secretaries of state (from both social democrat and socialist governments), directors/presidents of central level institutions (e.g. Directorate-General of Health) and independent administration entities (e.g. Health Regulation Authority), and presidents of Regional Health Administrations. Consistency was addressed by means of interview topic guidelines to make sure that significant issues regarding the concept of governance were covered systematically, while allowing participants freedom to describe their own experiences. The line of thought of this approach is to understand the processes from the voices of those who are or have been involved in health policy-making.

Phase II draws on documentary sources, namely on the main health policy guiding documents. The policy documents were chosen by the own decision-makers during the interview process. Four types of documents were analysed: documents of governmental nature (the XIX Government Programme and the Memorandum of Understanding signed by Portugal), documents of strategic nature (the National Health Plan 2012/16 and NUTS II Regional Health Plans) and documents for health planning and organisation (the Hospital Chart proposed by the Health Regulation Authority and the Hospital Referral Network available for most medical specialities).

With this double approach, qualitative evidence about the spatial dimension of health policies in light of the new EU political goal is provided.

## 4. Main findings

Several lines of debate emerge from this study. First, spatial issues do not emerge spontaneously in the discourse of health decision-makers (who tend to emphasise issues like hospital management, clinical aspects and the pharmaceutical market) and are sporadically addressed by health policy documents.

Second, the relationship between health and spatial issues is thought over in narrow terms and when discussed the geographical access to healthcare services tended to be highlighted. The idea of creating opportunities from local specificities and endogenous assets is clearly not a priority in the health policy agenda (for both decision-makers and policy documents) and when considered is seen as a separate goal.

Third, health decision-making processes are basically of political nature (questions such as which criteria should be used to determine the need to positively support certain less developed areas or where should healthcare facilities close remain unanswered) and accordingly verdicts tend to be made on a case-by-case basis and scarcely based on decision support methods.

Fourth, health decision-making processes are very centralised and sectoral. The pyramidal structure of the health sector like a one-way passage tends to reduce the capacity of taking stock of local specificities, as well as the social acceptance of policy decisions.

Fifth, health policy makers have a negative perception of spatial planning and plans, partly explaining why almost no institutional collaboration between the two fields exists. In fact, the few moments of cooperation occur due to financial reasons, such as applying for new infrastructures/facilities through structural funds.

## 5. Conclusion remarks

This paper aimed at understanding how spatial issues are taken into account in health decision-making processes in Portugal. Findings show that the spatial dimension of health policies is scarcely considered in decision-making and looked in a reductionist way. Nonetheless, from an optimistic viewpoint, health decision-makers acknowledged that the adoption of the territorial dimension in health decision-making processes in light of the framework presented in this study can be of added value to make decisions more fair and at the same time more efficient, not only concerning health but in a global public policy perspective. This assertion provides an additional hint to include the territorial cohesion political objective in the public policy agenda as it brings further elements to debate in an integrated manner that are usually not taken into account in health policy-making.

This research is but one qualitative study of governance in one country (Portugal), but findings do provide valuable insights that open the door to significant questions to be explored in future research and accordingly derive lessons for theory and future practice. For future research, findings should now be compared with other countries to see if patterns emerge.

# European Union Cohesion Policy and the (Re-) Production of Centrality and Peripherality through Soft Spaces with Fuzzy Boundaries

Stefan Telle[1]

**Abstract** *The paper discusses the co-evolution of the mode of governance of the European Union (EU) and the rationale of EU Cohesion Policy. It is argued that the process of European integration has led to the challenging situation of heightened complexity of decision-making at the EU level under the community method. As a consequence, consensus-seeking deliberation and policy-experimentation are becoming increasingly important in EU governance. In this context, the paper argues that the alignment of Cohesion Policy with the EU 2020 objectives of smart, inclusive, and sustainable growth may be explained by a shift toward a post-political mode of multi-level metagovernance. Adopting Neil Brenner´s spatialized version of Bob Jessop´s strategic-relational approach, the paper analyzes EU Cohesion Policy as a spatial strategy and spatial project in the period from 1988 to 2014+. The main finding is that EU territoriality is markedly different from the territorial arrangement of the Keynesian-Welfare-National-State. Crucially, EU territoriality appears more flexible and issue-driven, which is interpreted as a consequence of a more experimental way of decision-making at the EU level. Future research will use the framework developed in this paper to investigate effects of the making of this soft European space on the (re-) production of socio-spatial polarization in Central and Eastern Europe.*

## Socio-Spatial Polarization, EU Integration and EU Cohesion Policy

With the "Big Bang" of the 2004 enlargement of the European Union (EU), economic disparities between EU member states are now larger than those between U.S. states (Majone, 2005). Thus, with regards to EU Cohesion Policy (Adams, Alden, & Harris, 2006), the eastern enlargement poses a challenge to the objective of "reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions" (TFEU, Art. 174). In fact, it has been argued that socio-spatial polarization has become a "striking feature" of the settlement system on the subnational scale, especially in Central and Eastern Europe (Lang, 2011, 2012).

This paper investigates the link between EU enlargement and regional polarization. Viewed from the perspective of Stein Rokkan's (1999) theory of boundary building and political structuring (see also Bartolini, 2005; Ferrera, 2012), political systems can be understood as being structured by a membership boundary and a territorial boundary. The relative openness of these boundaries conditions the structuring of the internal political system. Therefore, EU enlargement can be expected to have a discernible structuring effect on the EU governance architecture in general, and on EU Cohesion Policy in particular.

Indeed, the emergence of new modes of governance (Bache & Flinders, 2004a; Marks, Scharpf, Schmitter, & Streeck, 1996; Piattoni, 2010; Puetter, 2006b; Sabel & Zeitlin, 2008) can be seen as driven by the desire to achieve efficient solutions to political coordination problems by

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accommodating the diversity of the political and social systems of an ever growing number of member states. While some authors (Sabel & Zeitlin, 2008, 2010; Zeitlin & Vanhecke, 2014) are optimistic about the potential of experimentalist forms of governance to deliver on social objectives, others point to the weaknesses of open forms of coordination and question the possibility of a European Social Model (Scharpf, 2002; Smismans, 2008).

In fact, aspirations of becoming the most competitive knowledge-based economy in the world (Lisbon Agenda) through smart, inclusive and sustainable growth (EU 2020) seem to emphasize economic over social objectives, or, at least, suggest that the latter follows from the former. Following Majone (2005) the paper argues that European integration by stealth is leading to inconsistent policy paradigms (or hegemonic projects Jessop, 2002) which are nevertheless imposing a specific spatial selectivity (Brenner, 2004) on EU Cohesion Policy. *Soft spaces with fuzzy boundaries* (Allmendinger & Haughton, 2009; Haughton, Allmendinger, Counsell, & Vigar, 2010) are seen as distinct expressions of new modes of governance, which mediate the tensions between the inclusiveness (Social Europe) and the growth (Competitive Europe) objectives on the discursive level. Nevertheless, this does not necessarily mean that these tensions are also resolved on the empirical level. Indeed, soft spaces have been described as "spaces of neoliberal experimentation" (Haughton et al., 2013) and as such their fuzzy character may, in fact, facilitate socio-spatial polarization by funneling Cohesion Policy funds into the production of spaces of global competitiveness.

The paper is divided into three parts. The first section will discuss the relation between European integration and the structuring of governance, arguing that EU Cohesion Policy can be seen as a form of multi-level metagovernance. In the second section, the development of the spatial selectivity of EU Cohesion Policy is discussed, suggesting that making Cohesion Policy a delivery vehicle of EU 2020 is conducive to prioritizing competitiveness and efficiency objectives over cohesion. This is expected to translate into a spatial selectivity where the production of competitive spaces is becoming more important compared to assisting backward regions. The third section will briefly investigate how EU Cohesion Policy is constructing soft spaces with fuzzy boundaries to redirect local and national planning strategies toward the competitive logic of the Single Market. It is suggested that the growing importance of urban regions / poly-centric urban networks in the EU discourse may be an outcome of the alignment of EU Cohesion Policy with the EU 2020 Strategy. Finally, some concluding remarks will be made to indicate a few points of departure for a future research agenda.

**New Modes of Governance: EU Cohesion Policy to Deliver EU 2020?**

This section will investigate the link between European Integration and the emergence of new modes of governance. In view of the available budget and the political objectives of EU Cohesion Policy, it is remarkable that there seems to exist no agreement on its effectiveness (Molle, 2007, ch. 10, Leonardi, 2005, p. 92). However, the paper is not questioning the rationale of creating a policy to alleviate socio-spatial disparities across the EU. Indeed, the degree of disparities following the 2004 enlargement reinforces the need for a European-wide redistribution mechanism, from an economic (competitiveness), political (legitimacy, trade-offs) and moral perspective (solidarity, equity). Nevertheless, it is argued that socio-spatial polarization may occur not only despite of, but also due to EU Cohesion Policy intervention.

The argument in a nutshell: in the absence of a European demos that would lend democratic legitimacy to EU policy-making, interest representation at the European level is one of the main legitimizing mechanism of EU integration (Majone, 2005). Due to a multiplication of political and social systems, and hence an increase of national and regional actors and interests seeking representation at the European level, repeated EU enlargements are posing a challenge to policy coordination under the community method. This has encouraged the emergence of new modes of governance – like the open method of coordination (OMC, see Borrás & Jacobsson, 2004; Smismans,

2008). These, however, may be premised on logically flawed, overly optimistic assumptions about the relationship between efficiency and inclusiveness (Peters & Pierre, 2004; Scharpf, 2002; Smismans, 2008). This is characteristic of a "post-political" way of consensus seeking, wherein conflicting interests are reframed as mutually reinforcing (Laclau & Mouffe, 2001; Metzger, Allmendinger, & Oosterlynck, 2015a; Mouffe, 2005). In this sense, the EU 2020 Strategy is seen as an inconsistent policy paradigm or hegemonic project, redirecting the rationale of EU Cohesion Policy towards efficiency/competitiveness objectives. In consequence, because EU Cohesion Policy is currently based on inconsistent "post-political" paradigms, it may become ineffective or even facilitate socio-spatial polarization.

## EU Enlargement, Interest Representation and New Modes of Governance

In accordance with Majone (2005), it is argued that that overly optimistic expectations about the prospects of EU integration have led to a pro-integration bias imposing upon the institutional architecture of the EU a logic that prioritizes interest representation over problem-solving. The problem is that the essentially open-ended nature of European integration is restricting the possibility for a European demos to emerge and, thus, limits the scope for redistributory policies based on solidarity among the European citizens. Therefore, EU enlargements pose a significant challenge to the consolidation of one particular mode of policy making, or, indeed, politics (see contributions in Metzger et al., 2015).

Especially since the 2004 enlargement, the community method of integration is increasingly seen as being too inflexible in facing the pressures resulting from the multiplication of interests at the European level (Scharpf, 2002). Attempts to reach consensus on the future development of European integration under conditions of increased diversity and uncertainty have resulted in a shift towards more open, informal, experimentalist and deliberative forms of coordination. New modes of governance can be seen as attempts to create channels of interest representation (Bartolini, 2005; Rokkan, 1999), through which the EU attempts to increase the legitimacy of its policy-making.

Thus, while new modes of governance may improve the representation of interests at the European level, it is not clear whether they constitute a more efficient solution to political problems. Indeed, there seems to be no agreement as to the efficiency of more open modes of governance. On the one hand, the EU's practice of policy coordination and learning through "trial-and-error" strategies and feedback-mechanisms has been seen as evidence of a new experimentalist governance architecture (C. F. Sabel & Zeitlin, 2010) that has a positive impact on the social dimension of EU policy making (Zeitlin & Vanhecke, 2014). Others discern a trend towards a consensus-seeking deliberative (Hajer & Wagenaar, 2003) intergovernmentalism (Bickerton, Hodson, & Puetter, 2014; Puetter, 2012), which may circumvent the inflexibilities of the official EU institutional architecture by referring to informal governance practices (Puetter, 2006a, esp. ch.2).

On the other hand, Peters & Pierre (2004) view the informalization of governmental functions in multi-level governance arrangements as a Faustian-Bargain where democratic accountability and political control are traded for seemingly more efficient governance solutions. Indeed, one of the most eminent theoreticians of European governance now seems to be rather wary that the representation of the interests of a continuously growing number of member states may, in the absence of a European demos, lead to a democratic default (Majone, 2005, 2012, 2014a, 2014b). Moreover, while new modes of governance may be seen as attempts on the part of various local, national and supranational actors, to institutionalize channels of interest representation (Rokkan, 1999), doubt has been cast on the problem-solving capacity of participatory governance (Heinelt, Getimis, Kafkalas, Smith, & Swyngedouw, 2002; Smismans, 2008).

Hence, more skeptical evaluations about the extent to which the OMC may facilitate the emergence of a European Social Model (Scharpf, 2002) should not easily be dismissed. What can be stated is that the multiplication of interests as a consequence of EU enlargement seems to have led to a transformation of the political process of EU policy-making. This lends renewed salience to the old question: "What is Politics" (Satori, 1973) and what is "the Political"(Metzger, Allmendinger, & Oosterlynck, 2015b, p. 8-10; Mouffe, 2005)?

## Post-Political or Multi-level Metagovernance? Aligning EU Cohesion Policy and EU 2020

To explain the alignment of EU Cohesion Policy with the EU 2020 objectives, it is useful to introduce some elements of Bob Jessop's strategic-relational approach (1990, 2004, 2007), which understands the capitalist state as social relation/process. From this perspective, capitalism is based on two major social relations: the capital relation and the *state form*. The articulation of these relations determines their precarious functional unity and institutional coherence by enabling historically specific strategies and projects (Jessop, 1990 in Brenner, 2004, p. 86). *State projects* are initiatives that "endow state institutions with organizational coherence, functional coordination, and operational unity". In other words, they produce a "state effect" (ibid., p. 88). *State strategies* are initiatives to "mobilize state institutions in order to promote particular forms of socioeconomic intervention" (ibid.). In other words, they can be seen as "hegemonic projects" or policy paradigms. In Jessop's view, the articulation of state form, state project and state strategy results in a *strategic selectivity* of the state that privileges "particular social forces, interests, and actors over others" (ibid., p. 87). How can this help to explain the alignment of EU Cohesion Policy with the EU 2020 Strategy?

The paper previously argued that the new modes of governance in the EU emerge from the trade-off between interest representation and attempts at efficient political coordination[2]. Therefore, the search for new modes of governance that aim to resolve this dilemma can be seen as a *European political project*. In the context of this paper an understanding of the current EU "state" *form* as a Schumpeterian Workfare Postnational Regime (SWPR) is proposed (Jessop, 2002b). The mode of governance in this regime may be characterized as multi-level metagovernance (Jessop, 2002a, 2004), as the "key issue" of EU governance is

> "the manner and extent to which the multiplying levels, arenas and regimes of politics, policy making, and policy implementation can be endowed with a certain apparatus and operational unity horizontally and vertically; and how this affects the overall operation of politics and the legitimacy of the new political arrangements" (Jessop, 2004, p. 73).

According to Jessop, meta-governance is the management of the complexity, plurality, and tangled hierarchies of existing modes of governance (ibid., p. 66, see also Bache & Flinders, 2004b, p. 97). Nevertheless, he cautions that, eventually, it is unrealistic to expect meta-governance not to fail in the face of growing complexity. Hence, an ironic approach - characterized by "continuing experimentation, improvisation, and adaptation" (ibid., p. 72) – is proposed as a remedy. It is argued that multi-level metagovernance equips the "multiplying levels, arenas and regimes of politics, policy making, and policy implementation" (Bache & Flinders, 2004a, p. 8) with a certain operational unity.

[2] In this sense, EU integration is dominated neither by the member states, as liberal intergovernmentalists would argue (Moravcsik, 1998), nor by the supranational level, as in the opinion of (neo-) neo-functionalists (Haas, 1968; Schmitter, 2003). George (2004) states that the concept of multi-level governance is often viewed as an attempt to overcome this theoretical divide, since it claims that decision-making power in the EU is effectively distributes across various scales.

Multi-level metagovernance is, therefore, characterized by an unstable equilibrium of compromise rather than by the systematic application of one method of coordination.

Moreover, since the available *political strategies* in a political system depend on its distinct historical form, inconsistencies in these strategies "may be part of an overall self-organizing, self-adjusting practice of metagovernance within a complex division of government and governance powers" (Jessop, 2004, p. 71). Therefore, the EU 2020 Strategy can be seen as a *political strategy* that activates the capacity of the multi-level metagovernance regime to act in a coordinated, but not necessarily consistent, fashion.

This is because the articulation of *political project* (trade-off between interest representation and policy efficiency = search for new modes of governance), *political strategy* (EU 2020) and *form* (SWPR with multi-level metagovernance) imbue the EU with a peculiar *strategic selectivity*. This paper argues that the strategic selectivity of the EU can be understood as the forging of a "post-political" consensus, in which inconsistencies between policy objectives are discursively erased. According to this perspective, the "political" is understood as an arena where actors are struggling with each other in the pursuit of their (at least potentially) *conflictive* interests, while respecting the general rules of the game. In the "post-political" situation interests are made *commensurable* by restructuring the arena and the rules under which interests encounter each other (Mouffe, 2005).

In the preface to the second edition to their 1985 book Hegemony and Social Strategy, Laclau and Mouffe (2001) argue that the political *is* the primary (indeed, the only) mode in the formation of *hegemonic universality*. In this sense, hegemony is understood as the "very condition" in which "a *particular* social force assumes the representation of a *totality* that is radically incommensurable with it" (ibid. x). The establishment of hegemony depends on the political articulation of the social division of society. However, according to Laclau and Mouffe, the "internal frontiers within society" also reveal the "limits of all objectivity" (ibid. xiii-xiv). Therefore, *antagonism* is the central category of articulation. They disagree with proponents of a "Third Way", who argue that with the end of communism, the emergence of the network society and globalization, antagonisms have disappeared. Specifically, they do not agree that a "politics without frontiers would now be possible – a 'win-win politics' where solutions could be found that favoured everybody in society" because this would imply "that politics is no longer structured around social division, and that political problems have become merely technical" (ibid. xiv-xv). Here is their argument:

> "According to Ulrich Beck and Anthony Giddens - the theorists of this new politics - we are now living under conditions of 'reflexive modernization' where the adversarial model of politics, of us versus them, does not apply any more. They affirm that we have entered a new era in which politics needs to be envisaged in a completely different way. Radical politics should concern 'life' issues and be 'generative', allowing people and groups to make things happen; and democracy should be envisaged in the form of a 'dialogue', controversial issues being resolved through listening to each other.
>
> There is much talk nowadays of a 'democratization of democracy'. There is nothing wrong, in principle, with such a perspective, and at first sight it seems to chime with our idea of a 'radical and plural democracy'. There is, however, a crucial difference because we never envisaged the process of a radicalization of democracy that we were advocating as taking place within a neutral terrain, whose topology would not be affected, but as a profound transformation of the existing relations of power. For us, the objective was the establishment of a new hegemony, which requires the creation of new political frontiers, not their disappearance" (ibid. xv).

Thus, instead of accepting the "neo-liberal orthodoxy"-discourse of globalization and the tight fiscal constraints it imposes on the state as a necessity without alternatives, Laclau and Mouffe argue that "the present conjuncture, far from being the only natural or possible societal order, is the expression of a certain configuration of power-relations" (ibid. xvi). The reality of a not-so-level playing field and the "ineradicability of antagonism" foreclose the possibility of a "deliberative democracy" in the sense of Habermas: There is no final resolution of conflict and/or reconciliation of divided interests through dialogue. However, the existence and acceptance of an 'outside' to every consensus that prevents its full realization, is part of a radical conception of democracy[3].

What this means in terms of EU governance can be indicated by looking at 2001 Commission White Paper on "European governance" (European Commission, 2001). In the preface to the white paper, Jerome Vignon has made the point that "a strict separation" of the executive, legislative and judicative powers, characteristic of the nation-state institutional systems, "cannot function at the Community level" (in Leonardi, 2005, p. 14). Instead, cooperation between these branches is essential and the participation of relevant political and social actors "has to be sufficiently broad and capable of taking into account the great diversity of interests and views that exist within the Community" (ibid.). In this sense, he concludes that "[i]t is not by accident that the territorial dimension, which is inter-sectoral by nature and conducive to participation, is imposing itself upon the new European governance" (ibid., see also Hajer & Wagenaar, 2003).

The heightened importance of the territorial dimension in multi-level metagovernance, based on territory's perceived potential to improve interest representation of EU governance, makes it attractive and susceptible to the intrumentalization for a specific *political strategy*. The "discovery of territory" (Leonardi, 2005, p. 6) by the Commission makes possible new ways for conceptualizing the relationship between territorial cohesion and economic competitiveness. Talking about "impossible sustainability", Erik Swyngedouw (2007) cautioned that post-political concepts and the political agendas they justify, while allegedly offering inclusive and efficient solutions, are in fact based on the logically flawed assumption of commensurable interests[4]. Instead of truly open and deliberate reasoning, participatory modes of governance are often plagued by an "elitism" in which "fundamental political questions often curiously appear to have already been determined 'somewhere else' on the basis of some 'general interest' which no-one in his or her right mind can supposedly disagree with" (Metzger et al., 2015b, p. 7). In turn, this framing of political objectives (as growth or equality) as unproblematic, according to Allmendinger & Haughton (2015, p. 31) is leading to a "blurring of institutional responsibilities, accountability and legitimacy".

Thus, this process of reframing interests as commensurable, rather than conflictive, allows the European Commission to portrait EU Cohesion Policy as a delivery mechanism of the EU 2020 Strategy:

[3] For a critical reading see Grange (2015), who argues that the political is not restricted to conflictuality, but should be seen as the actualisation of potentials through identification.

[4] The emergence of this post-political way of policy making may be seen as part of a broader "Condition of Postmodernity" (Harvey, 1989) wherein the limits of Enlightenment reasoning (Horkheimer & Adorno, 2002) are overcome by the replacement of the idea of progress through eclectic amalgamations of meanings into *in situ* paradigms. In this sense, it may be argued with Ernesto Laclau (2011) that post-political concepts can be understood as working on the level of *doxa* (common-sense), while the logic of Enlightenment worked at the level of rationality: "If the level of *doxa* constitutes a continuous fabric which absorbs and articulates every possible meaning, the level of [Enlightenment] philosophy aspires to reconstruct the totality of meaning of this fabric *in a necessary order and through rational links*" (ibid. p. 9).

> "Cohesion policy and its structural funds, while important in their own right, are key delivery mechanisms to achieve the priorities of smart, sustainable and inclusive growth in Member States and regions" (European Commission, 2010, p. 20).

The post-political consensus formation of the EU may, therefore, conceal and/or reinforce the reality of socio-spatial polarization by discursively obscuring the conflict between the competitiveness objectives of the EU 2020 Strategy and the equity objectives of EU Cohesion Policy. Consequently, the contradictions between interests at the EU level are not completely resolved, but managed in a way that displaces them temporally and spatially (Habermas, 1977; Harvey, 1982).

In sum, the previous discussion offers an explanation as to how the logic of the European integration produces inconsistent political strategies/hegemonic projects in an attempt to accommodate a multiplying number of interests. In this context, two question are important for this paper: (1) How does this influence the *spatial selectivity* (Brenner, 2004) of EU Cohesion Policy? (2) How is the discursive alignment of EU Cohesion Policy objectives and EU 2020 objectives implemented? These questions will be dealt with in the following two sections.

## The Development of the Spatial Selectivity of EU Cohesion Policy

The following section will look at how changing political projects and political strategies influence the spatial selectivity of EU Cohesion Policy. The argument is that the decision to make Cohesion Policy a key delivery instrument of the EU 2020 strategy may divert the Cohesion Policy rationale from redistribution to lagging regions towards an increased spatial concentration of socioeconomic activities in spaces that are relevant for the competitiveness of the Single Market.

### Spatial Selectivity

This section will look at the spatial implications of the alignment of EU Cohesion Policy and EU 2020. The paper follows Neil Brenner's (Brenner, 2004) adaptation/spatialization of Bob Jessop's strategic-relational approach (Jessop, 1990, 2004, 2007). Importantly, state space and the state spatial process, according to Brenner, should be understood as the spatial expressions of the *political strategy* (Brenner, 2004, ch. 3; see also Harrison, 2010; Heley, 2013; Raco, 2009).

In analogy to strategic selectivity, *spatial selectivity* "refers to the processes of 'spatial privileging and articulation' through which state policies are differentiated across territorial space in order to target particular geographical zones and scales" (Jones, 1997 in Brenner, 2004, p. 89). Making reference to Harvey (1982), Brenner suggests that while state institutions may be equipped with a spatial selectivity that helps to temporally displace capitalism's inherent contradictions, this outcome is not pre-given. Instead, he contends that "insofar as state institutions may also be harnessed in ways that exacerbate uneven spatial development, they may seriously exacerbate, rather than displace, capital's endemic crisis-tendencies and contradictions" (Brenner, 2004, p. 96).

To conceptualize the evolution of spatial selectivity, Brenner formulates a set of parameters. He develops a two-by-two diagram where state spatial project and state spatial strategy each have a scalar dimension and a territorial dimension (see Table 1, overleaf). The four cells, he argues, contain some of the "core tensions" as well as the "scale and area-specific patterns of state territorial organization and state spatial intervention that may emerge through such struggles" (ibid., p. 98).

Each cell contains two polar alternatives for the spatial selectivity of the state. In this way, he arrives at a four-dimensional matrix, indicating possible directions for the evolution of the state spatial selectivity (see Figure 1, 9). Importantly, Brenner asserts that, in the period from WWII until the late 1970s, the (1) state spatial projects were oriented toward centralization and administrative uniformity,

while (2) state spatial strategies were oriented toward scalar singularity (the national) and the territorial balancing of socio-economic activities. Following Jessop (1990, 2002), this type of state is characterized as the Keynesian Welfare National State (KWNS).

In Jessop's view, this state form is currently being superseded by a new type of state – the Schumpeterian Competition State[5] (SCS). This path-dependent process, Brenner (2004, p. 105f.) hypothesizes, involves the reorientation of (1) state spatial projects "toward administrative differentiation and decentralization" and of (2) state spatial strategies "toward the differentiation of socioeconomic activities within a national territory and toward the management of scalar multiplicity" (ibid., p. 106f.). According to Brenner, this process has resulted in the emergence of "new state spaces" with urban region becoming the primary spaces within the "Rescaled Competition State Regime" (RCSR) (ibid., p. 295).

Table 1: State Spatial Projects and State Spatial Strategies

| | **STATE SPATIAL PROJECTS:** geographies of state territorial organization and administrative differentiation within a given territory | **STATE SPATIAL STRATEGIES:** geographies of state intervention into socio-economic life within a given territory |
|---|---|---|
| **SCALAR DIMENSION:** the *scalar articulation* of state policies and institutions among different levels of political-economic organization within a given territory | **(1) Centralization vs. decentralization**<br>• *Centralization* of state operations: tends to concentrate political authority at one over-arching scale of state administration (generally the national)<br>• *Decentralization* of state operations: transfers various regulatory tasks away from the central coordinating tier of state power (generally to subnational levels) | **(3) Singularity vs. multiplicity**<br>• Privileging of a *single* dominant scale (for instance, the national) as the overarching level for socioeconomic activities<br>• Distribution of socio-economic activities among *multiple* spatial scales |
| **TERRITORIAL DIMENSION:** the *territorial articulation* of state policies and institutions among different types of juridical units or economic zones within a given territory | **(2) Uniformity vs. customization**<br>• Promotion of *uniform* and *standardized* administrative coverage in which broadly equivalent levels of service provision and bureaucratic organization are extended throughout an entire territory;<br>• Promotion of *patchy, differentiated,* or *uneven* administrative geographies in which *customized, area-specific* institutional arrangements and levels of service provision are established in specific places or geographic zones within a territory | **(4) Equalization vs. concentration**<br>• Promotion of an *equalization* of socioeconomic activities and investments within the state's territorial borders: goal is to spread socio-economic assets and public resources as evenly as possible across a national territory and thus to alleviate territorial inequalities<br>• Promotion of a *concentration* of socioeconomic activities and investments: goal is to promote the agglomeration of socioeconomic assets and public resources in particular locations, places, and regions within a territory |

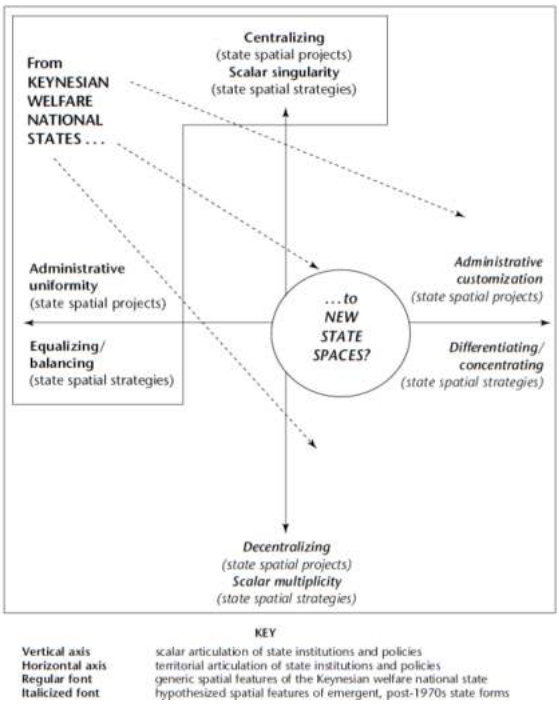
Source: Brenner (2004): 97

[5] Later on Brenner, Peck, & Theodore (2010) have described this process as "variegated neoliberalization", where the logic of the capital relation is seen to have become more dominant relative to the capacity of the state to implement socio-political objectives. In this view, the uneven regulatory development under the neoliberal regime is a constitutive part of neoliberalization.

This model will be used to study the spatial selectivity of EU Cohesion Policy under the EU 2020 Strategy (see Figure 2). In order to extract the spatial implications of the alignment of EU Cohesion Policy with the EU 2020 Strategy, the objectives of Cohesion Policy in previous programing periods will be compared to the reformed post-2014 Cohesion Policy. Furthermore, the objectives of the EU 2020 strategy will be scrutinized and evaluated according to their spatial implications.

The *political strategy* will generally remain in the bottom right corner as, following Majone (2005), the integration-bias of the EU generally tends to frame political strategies in terms of "Europeanization" (scalar multiplicity). Furthermore, (negative) integration is assumed to have a negative effect on socio-spatial equality due to the superior competitiveness of the core countries.

Figure 1: The Evolution of State Spatial Selectivity

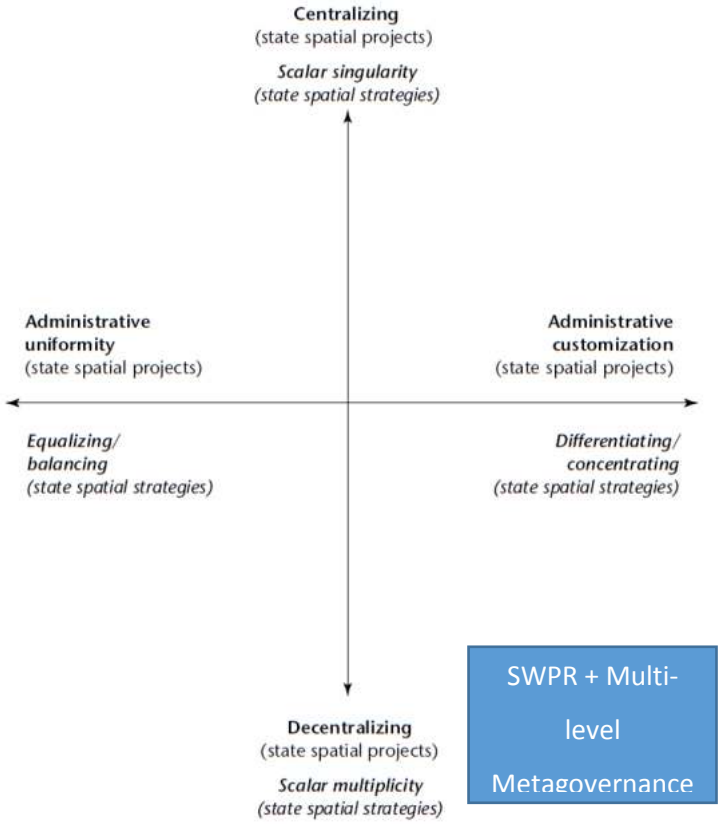



Source: Brenner (2004): 106

This was, indeed, the main rationale for the institutionalization of EU Cohesion Policy as a mechanism to equalize and balance the socio-spatial impact of integration (which is why it will initially be situated in the bottom left corner). Importantly, what is determined by the *political project* (mode of governance) is the framing of the relationship between the *political strategy* and the *spatial strategy*. In other words, what is the relation between the *objectives* of EU Cohesion Policy and those of the single market program, the Lisbon Agenda and EU 2020? Finally, the *structure* of EU Cohesion Policy is understood as an expression of the *spatial project*. As discussed above, the emerging *form* of the political system of the EU can best be characterized as SWPR + multi-level metagovernance, which can be situated at the opposite to the KWNS in the matrix[6].

[6] In fact, the EU has attributes similar to the Schumpeterian Workfare Postnational Regime (SWPR)(Jessop, 2002b). SWPR seems more appropriate than RCSR because it not state-centric.

Figure 2: The Dimensions of EU Spatial Selectivity




Source: Brenner (2004): 106 with own contributions in color.

## The Development of the Spatial Selectivity of EU Cohesion Policy

The table below (see Table 2) shows how the objectives and instruments of EU Cohesion Policy have evolved between 1988 and 2013. Based on the table, the relation between EU enlargements and the development of Cohesion Policy will be discussed. Three periods are identified: the birth of Cohesion Policy (1988-1999), the 2004 enlargement (1999-2013), and the alignment of Cohesion Policy with EU 2020 (2014-2020). Following the previous discussion of EU enlargement and interest representation, it is argued that subsequent enlargements had a structuring effect on the *EU political project* (governance), which in turn influenced the way in which the *EU political strategy* and the *EU spatial strategy* are articulated[7].

[7] It is apparent that the 1995 enlargement (Austria, Finland, and Sweden) did not have a major impact on the objectives and distribution of Cohesion Policy. This may be explained by the high level of socio-economic

Table 2: Development of cohesion policy; change of objectives and distribution of aid (billions of euro) by objective, 1988–2013

| *1988–93* | | | *1994–99* | *2000–06* | | | *2007–13* | | |
|---|---|---|---|---|---|---|---|---|---|
| *Objective* | *Instruments* | *Amount* | *Amount* | *Objective* | *Instrument* | *Amount* | *Objective* | *Instrument* | *Amount* |
| 1 Lagging | CF<br>ERDF<br>ESF<br>EAGGF | 43 | 102 | 1 Lagging | CF<br>ERDF<br>ESF<br>EAGGF<br>FIFG | 136 | 1 Convergence (and competitiveness) | CF<br>ERDF<br>ESF | 251 |
| 2 Restructuring | ERDF<br>ESF | 9 | 22 | 2 Restructuring | ERDF<br>ESF | 23 | 2 Regional competitiveness and employment | ERDF<br>ESF | 49 |
| 3 Unemployment | ESF | 8 | 15 | 3 Social (former 3 and 4) | ESF | 24 | | | – |
| 4 Social<br>5 Agriculture<br>6 Ultra-peripheral | ESF<br>EAGGF<br>ERDF | | | | | | | | |
| Other programmes | | 5 | 11 | INTERREG | ERDF | 1 | 3 Territorial cooperation | ERDF | 8 |
| Community initiatives | | | | URBAN<br>EQUAL | ESF | 10 | | | |
| Innovative programmes | | | | LEADER, etc. | EAGGF | 1 | | | |
| Adaptation to EMU conditions | | – | 10 | EMU | Cohesion Fund | 18 | | | |
| Accession | Phare, Cards, ISPA and Sapard | x | x | Accession | Phare, Cards, ISPA and Sapard | x | Accession | IPA | x |
| Total resources | | 65 | 159 | | | 213 | | | 308 |
| SCF | | | | | | | | | |

*Notes:*
n.a. non applicable
x only for completeness of the picture; no figures as designated sums are not part of internal cohesion efforts of the EU
Figures for the 2007–13 period in 2004 euros

Source: Molle (2007): 143

The general argument is that with the development of more open methods of interest coordination (multi-level metagovernance), Cohesion Policy has experienced a move toward delivering political objectives that are contradictory to the attainment of economic, social and territorial cohesion.

## The Development of EU Cohesion Policy: The Birth of Cohesion Policy 1988

The development of EU Cohesion Policy has always been closely connected to the process of European Integration and, in particular, to the creation of the single market (Manzella & Mendez, 2009). After a period of relative stagnation of the integration process in the 1970s and early 1980s, the Single Market program (the dominant *political strategy* at the time) under Commission President Jacques Delors and the accession of the less competitive Mediterranean countries (Greece (1981), Portugal and Spain (1986)) became important triggers of the 1988 reform, which ushered in a "new era" for Cohesion Policy (ibid., p. 13). As a counterweight to balance the negative effects of market integration, the establishment of a supranational redistribution mechanism – the Europeanization of Cohesion Policy – has been called a "revolutionary change" (Leonardi, 2005, p. 1). Significantly, in this new peculiar arrangement, political responsibility was to be distributed across the regional, the national and the European scale, which has been captured by Gary Marks and Liesbet Hooghe (Hooghe, 1996 Marks & Hooghe, 2004; see also George, 2004) in the concept of multi-level governance.

In terms of Brenner's model, the *political project* at the time can be described as "integration through regulation" (Majone, 1996), whereby the dominance of the community method tends towards Europeanizing competences (centralization) through legislation and treaty modification

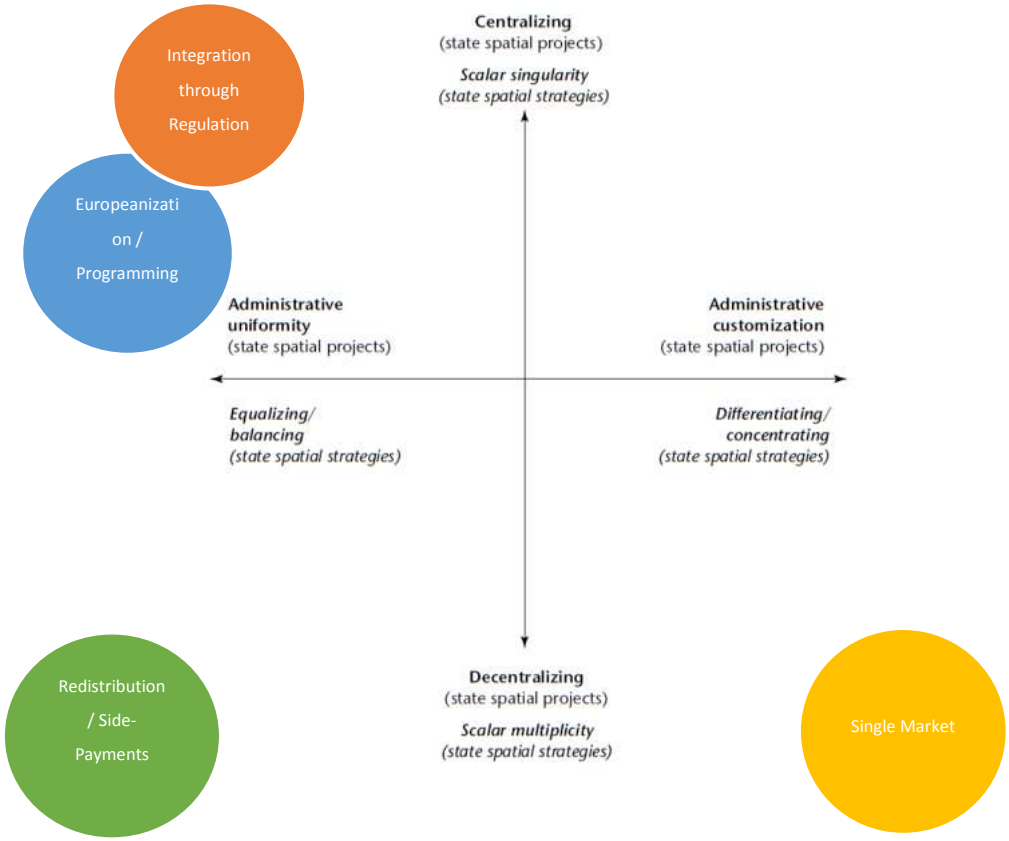
development in these countries, which did not significantly alter the allocation patterns, as all three countries are, since their accession, net contributors to Cohesion Policy (Molle, 2007, p. 148).

(administrative uniformity)[8]. However, the Single European Act (1986) had already introduced the cooperation procedure and extended qualified majority voting in an attempt to remove barriers to further harmonization (administrative customization). The *political strategy* of market integration (negative integration) was met by the opposition of the less developed Mediterranean member states, which, were successful in pushing their interest in a supranational redistribution mechanism (positive integration): the birth of EU Cohesion Policy (Leonardi, 2005). Structurally (*spatial project*), the new EU Cohesion Policy was to be characterized by its firm establishment at the Community level (centralization), which was expressed inter alia by the principle of programming (administrative uniformity). According to Leonardi (2005, p. 36) this Europeanization of Cohesion Policy has "significantly changed the nature of relations between institutions and has led to the emergence for the first time of sub-national institutions as significant actors" (scalar multiplicity). Politically, the objectives of EU Cohesion Policy (*spatial strategy*) can be understood as a side-payment to the new member states (to gain their consent to further market integration). Socially, however, the rationale was one of solidarity with the least developed regions within the expanding Community (equalizing/balancing of socioeconomic activities)(see Figure 3). In the words of Leonardi, the

> "challenge posed by the Single Market allowed the Commission to fully assume the responsibilities transferred to it by the SEA; national governments on the periphery were given access to the financial resources necessary to counter the economic shock that was expected to be produced by the Single Market; and regions were empowered to become involved in a policy process that allowed them to fulfill their constitutional responsibilities and have a say in determining their response to challenges posed by the realization of the Single Market" (2005, .p 19).

[8] The 1992 Maatricht Treaty can be seen as the beginning of a new "era" wherein treaty amendments became less inclusive with the *opt-outs* by the UK and Denmark of the EMU.

Figure 3: Spatial Selectivity of EU Cohesion Policy 1988-1999



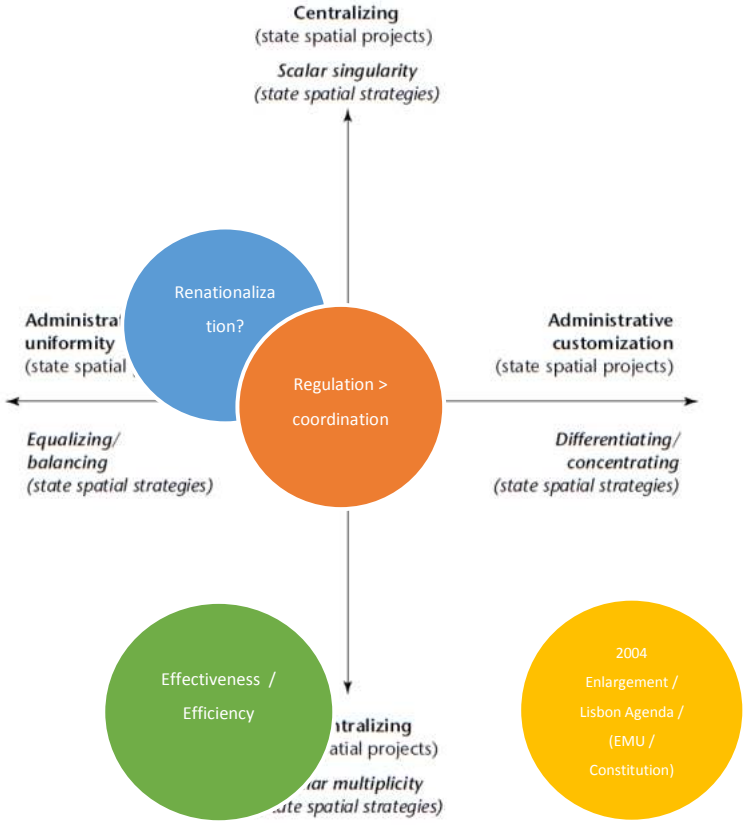

## The Development of EU Cohesion Policy: The 2004 Enlargement

Like in the context of the accession of the Mediterranean countries in the 1980s, EU enlargements since the 1990s were paralleled by changes in the instruments and objectives of Cohesion Policy (see Table 2). New instruments for particular issues (pre-accession assistance, urban regions, peripheral regions, cross-border cooperation) were launched, many of which were later mainstreamed. The budget of Cohesion Policy grew continuously and came to constitute roughly one third of the total EU budget. However, Manzella & Mendez (2009, p. 15-17, see also Leonardi, 2005, p. 21-22) have characterized the 1993 and the 1999 reforms as efforts in "fine-tuning, decentralization and effectiveness".

The 2004 enlargement can be seen as the next watershed moment. While in 1992 twelve "western" member states signed the Treaty of Maastricht to form the European Union, over the subsequent two decades a further sixteen states were to join, out of which thirteen were countries with a post-socialist legacy, situated in the far less developed eastern periphery. In addition to the numerical increase in interests, the poor socio-economic conditions in the new member states would make all of them net recipients of EU funds with a severe negative impact on the allocation of funds to the older member states (most of which would become net contributors (Molle 2007, p. 148)).

The 2004 enlargement had a major impact on the *political project* of the EU. The massive increase and divergence of interests made consensus seeking under the community method cumbersome, and led to the introduction of the OMC in several policy fields (administrative customization). This gave increased weight to the member states (decentralization). Thus, in terms of the structure of EU Cohesion Policy (*spatial project*), a debate about its renationalization developed (Bachtler & Mendez, 2007; Bruszt, 2008; Faludi, 2009, 2010; Leonardi, 2005; Manzella & Mendez, 2009). Indeed, the 2006 reforms can be seen as a move toward administrative customization and decentralization of Cohesion Policy (*spatial project*), as the new planning framework involved the steering of interests through Community Strategic Guidelines (CSG) and National Strategic Reference Frameworks (NSRF) (Manzella & Mendez, p. 19).

Figure 4: Spatial Selectivity of EU Cohesion Policy 1999-2013




Furthermore, an increased emphasis on efficiency considerations led to a concentration of support and a reduction in both priority objectives and the proportion of population eligible for support under the territorial Objectives 1 and 2 (ibid. 16f., see also Table 2 above). Parallel to the efforts to make the EU "the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion" (Lisbon Agenda), increased thematic concentration saw the European Social Fund "increasingly [being] tied to the European employment strategy" (ibid. p. 17). Thus, Manzella & Mendez, (2009) have argued that the programming-period 2007-2013 can be characterized as a turn to a more "strategic approach for targeting EU priorities, centered on the Lisbon strategy" (p. 19). Furthermore, competitiveness and efficiency considerations have gained in importance relative to social and redistribution issues.

Therefore, in terms of objectives (*spatial strategy*), a tendency away from equalization/balancing and toward a convergence with the thematic objectives of the Lisbon Agenda can be detected[9] (see Figure 4).

## The Development of EU Cohesion Policy: 2014-2020

Willem Molle (2007) has made the point that horizontal coordination of Cohesion is far from ideal. He argues that the existence of large funds for Cohesion Policy relative to the size of the funds available for other EU objectives (notably competitiveness and sustainability) has led to a "blurring of objectives", where Cohesion Policy is made instrumental to these other objectives (p. 285-287). In accordance with Jessop's point that metagovernance should be seen as an unstable equilibrium of different coordination methods, Molle continues to say that while policy coordination depends largely on the OMC, the financial instruments of the Cohesion Policy delivery system attach strong conditional ties to the distribution of funds. Thus, Molle concludes, the present coordination mechanisms "are in need of review and that more adequate mechanisms are to be found to produce lasting and balanced results (p. 287).

However, then came the crisis and with it Europe 2020: a European strategy for smart, sustainable and inclusive growth. In the words of former Commission president Jose Manuel Barroso:

> "The crisis is a wake-up call, the moment where we recognise that "business as usual" would consign us to a gradual decline, to the second rank of the new global order. This is Europe's moment of truth. It is the time to be bold and ambitious" (European Commission, 2010, preface).

Primarily, the EU 2020 Strategy (*political strategy*) "is about delivering growth". Growth is framed as "smart, sustainable, and inclusive", defined by a set of quantified targets (see Annex 1) and operationalized through seven Flagship initiatives (see Annex 2). The implementation of the EU 2020 Strategy is shared between the EU, the member states, regional and local authorities and civil society. Coordination is implemented through the "European Semester" based on Annual Growth Surveys and Country-specific Recommendations (Annex 3).

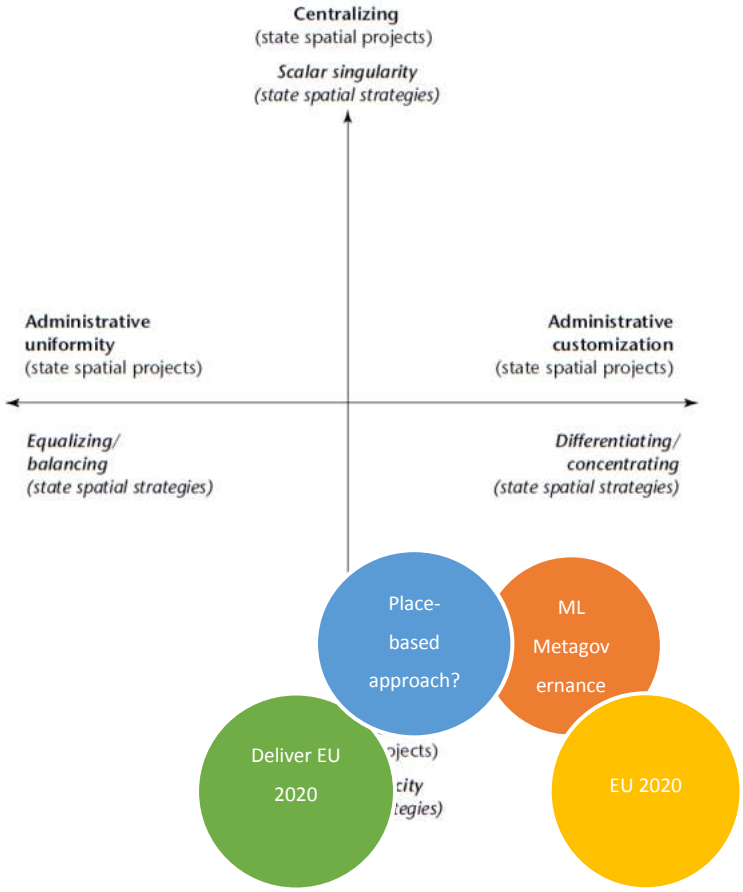
This open form of coordination, based on the constant monitoring and evaluation of the performance of the member states in achieving their non-binding targets, can be understood as multi-level metagovernance (*political project*). As discussed, this form of coordination is conducive to the emergence of a *post-political consensus* where contradictory interests are reframed as commensurable. Evidence for this claim can be found in the framing of growth as "smart, sustainable and inclusive" whereby it effectively becomes the panacea to prevent Europe's "gradual decline" to the second rank of the new global order. Furthermore, the deepening of the single market is seen as important to overcome the crisis (*integration bias*). Crucially, EU Cohesion Policy is presented as "the principle investment tool for delivering the Europe 2020 goals" (European Commission InfoRegio: http://ec.europa.eu/regional_policy/ what/future/index_en.cfm). Hence, in addition to and in deviation from its initial rationale as a counterweight to the single market, EU Cohesion Policy is now seen as the primary tool for delivering growth and competitiveness (*spatial strategy*).

Thus, while the majority of the funds will still be allocated to the less developed peripheral regions (especially the new member states and Portugal), the focus on "Key Growth Priorities"[10] seem to tilt

[9] The problems of the European Monetary Union (EMU) and the ineffectiveness of the Stability and Growth Pact (SGP) in the context of the economic and sovereign debt crises, as well as the failed attempt of a European Constitution, can be seen as examples of how the discursive framing of interests as commensurable (integration bias) may have unexpected results.

the *spatial selectivity* of EU Cohesion Policy toward spaces with greater potential to contribute to smart, sustainable and inclusive growth. This may partially explain, why EU Cohesion Policy was ineffective in preventing socio-spatial polarization in the new member states (Darvas, 2014). Indeed, there is the possibility that focusing Cohesion Policy on the thematic/key growth priorities of EU 2020 prioritizes urban over rural regions, which is in accordance with Brenner's (2004) finding that the urban is becoming the primary spatial unit for capital accumulation and, thus, the driving force in the re-scaling of regulatory landscapes (Brenner, Peck, & Theodore, 2010). The creation of a specific instrument for urban regions (urban innovation actions) and the growing importance of place-based interventions (Barca, 2009) can be seen as evidence for a changing spatial selectivity of EU Cohesion Policy (see Figure 5), where efficiency and equity objectives become increasingly framed as mutually constitutive (Demidov, 2015, p. 45-46).

Figure 5: Spatial Selectivity of EU Cohesion Policy 2014+




[10] These are research and innovation; information and communication technologies; enhancing the competitiveness of small and medium-sized enterprises; and supporting the shift toward a low-carbon economy (http://ec.europa.eu/regional_policy/what/future/index_en.cfm, accessed 11/01/2015).

**Governing Polarization through Soft Spaces with Fuzzy Boundaries?**

The final section of this paper will indicate how the spatial selectivity of EU Cohesion Policy under the EU 2020 Strategy is influencing the (re-) production of socio-spatial polarization. The point is that the post-political consensus of *cohesion cum competitiveness* is articulated spatially through "soft spaces with fuzzy boundaries" (Haughton et al., 2010).

### Socio-Spatial Polarization as the (Re) Production of Centrality and Peripherality

As Brenner's (2004) model indicates, the space of a political system is the outcome of a socio-political process. In this context, political institutions may be geared toward territorial cohesion or may contribute to socio-spatial polarization. Therefore, polarization can be understood in terms of the production of space (Lefebvre, 1991). More precisely, polarization may be understood as the process of simultaneous centralization and *peripheralization* (Kühn, 2014, see Table 3).

Table 3: From *Periphery* as a condition to *Peripheralization* as a process

| Periphery | Peripheralization |
|---|---|
| *Pre-given spaces—with social implications*<br>Fringes, edges, outskirts, borders | *Social relations—with spatial implications*<br>"Production" of peripheries |
| *Status: static*<br>• Distance to centres<br>• Remote location<br>• Sparse population | *Processes: dynamic*<br>• Political<br>• Economic<br>• Social<br>• Communicative |
| *Fields of application: non-urban*<br>• Rural regions<br>• Border regions<br>• Suburban fringes | *Fields of application: open*<br>• Developing countries<br>• Urban regions and cities<br>• Rural (non-metropolitan) regions<br>• Urban neighbourhoods |
| *Conditions for actors: fixed*<br>• Determined by structural deficits<br>• Periphery as "destiny" | *Conditions for actors: changeable*<br>• Role of periphery in a system changes<br>• Actor networks matter |

Source: Kühn (2014): 3

Rather than perceiving of *periphery* as a pre-given and static space, *peripheralization* looks at the spatial implications of social interactions. These interactions are understood as unfolding dynamically at different scales and in different spaces, driven by interactions among actors within continuously changing networks.

Following Lang (2013), the simultaneity of metropolization and urban shrinkage can be understood as a process of peripheralization in which centers are "are constantly portrayed as 'core' spaces of modernity and progress" while peripheries experience a "stigmatization in public discourse" (p. 228). Thus, while Lang assumes that center-periphery relations are a "system-immanent part of the capitalist economic system" (ibid.), he adds that they "are not constituted structurally but emerge discursively" (p. 230). Based on the postcolonial notion of *difference* and *otherness*, Lang suggests to look at peripheralization as a process through which "knowledge" about a specific space is constructed "through formations of power, which is replicated through discourse by individuals, organizations and

institutions" (p. 231). In the German context, he argues, *metropolitan regions* have emerged as "a current paradigm of spatial planning" (p. 229). However, the borders of these central spaces are characterized by Lang as vaguely defined "in-between-spaces", where political conflicts about belonging to core or periphery are fought out.

Viewed from this perspective, Cohesion Policy can be understood as a tool of center-formation (Bartolini, 2005), selectively privileging some spaces over others. The point is that the alignment of Cohesion Policy with the EU 2020 Strategy may contribute to the process of peripheralization. It has been argued that the establishment of policy priorities centered on economic growth (rather than social-spatial equity) is impacting on the spatial selectivity of Cohesion Policy. This entails that the discursive construction of a space as central or peripheral is dependent on the overall logic of the political system (multi-level metagovernance). In this sense, the primacy of interest representation (coordination) at the European level, discussed above, has a structuring effect of the spatiality of the member states and of the EU as a whole (articulated through EU Cohesion Policy).

EU Enlargements play an important role in this structuring process. This may be explained by Stein Rokkan's theory of boundary-building and internal structuring (Rokkan, 1999), which assumes an intimate link between the establishment of control over the external demarcation and the internal differentiation of political systems. Rokkan's concept of *boundary* refers to the mutual constitutiveness of the territorial and the membership dimensions of the political system. Indeed, processes of "bounded structuring" (Ferrera, 2003) at the national level are increasingly challenged by European Integration, which according to Ferrera "rests on opening: on weakening or tearing apart those spatial demarcations and closure practices that nation-states have built to protect themselves" (Ferrera, 2012, p. 258).

Therefore, looking at European integration through the lenses of Rokkan's theory suggests that enlargements are be crucial in the de-structuring of existing nation-state borders and functions and their contingent and selective re-structuring at the European and the regional levels (Bartolini, 2005). This restructuring, it is argued, occurs through the creation of problem-centric *soft spaces with fuzzy boundaries* (Allmendinger & Haughton, 2009; Haughton, Allmendinger, Counsell, & Vigar, 2010). In sum, it is argued that EU Cohesion Policy - as an EU-wide redistribution mechanism - gears the logic of regional development away from the national level by superimposing a strategic-spatial selectivity that follows the logic of the internal market (Conzelmann, 2006). In other words, this may be described as the Europeanization (Bache & Jordan, 2006) of spatial planning (Dühr, Stead, & Zonneveld, 2007; Kunzmann, 2006).

### Soft Spaces with Fuzzy Boundaries

Leonardi (2005, p. 36) has argued that the emergence of multi-level governance "has had an impact on the reconfiguration of linkages among national, regional and local levels within member states and has reinforced the regional devolution of policies". In the UK, he continues, the existence of Cohesion Policy has supported the devolution of the regions of Scotland and Wales after the Labour victory in 1997 (see also Conzelmann, 2006).

He attributes this to the "revolutionary nature" of EU Cohesion Policy (ibid., p. 74). According to Leonardi (ibid., p. 74), the multi-level governance process of Cohesion Policy is characterized by a decision-making and implementation process that is characterized by a "series of interactive learning loops", incompatible with any of the pre-existing national regional policies. Following Leonardi, this "lack of fit"[11] requires "substantial institutional adjustment and learning on how to use the policy"

[11] For a brief discussion of the idea of "misfit" or "mismatch" in the Europeanization literature see Bache & Jordan, 2006 (based on Radaelli, 2000).

(ibid.). The decision-making process of *national* developmental planning did usually not involve great responsibilities for the regional level. Indeed, the phases of decision-making and implementation characteristic for Cohesion Policy (learning loops) were normally not a part of national regional policy formulations (ibid., p. 75).

Talking about the new member states, Leonardi (2005) states that while there are no provisions in the Cohesion Policy *acquis* prescribing a particular institutional setup at the subnational level, what is seen as crucial in the transition is the possibility for "institutional learning and the ability to implement the policies according to prevailing procedures and norms" (p. 148). He concludes that the entry of the new member states increased the importance of the efficient and effective management of Cohesion Policy (p. 172).

This paper suggest, that EU Cohesion Policy is an important driver of the emergence of soft spaces with fuzzy boundaries. In this context, the conditionality attached to the EU funds has been seen as a major driver for institutional change, particularly in the New Member States (NMS) (Bache, 2010a, 2010b, Alden et al. 2006, Grabbe 2006). The concept of soft spaces with fuzzy boundaries has been developed in the context of the devolution of the UK and Irish spatial planning systems. This suggests that the emergence of soft spaces is linked to the opening up of the territorial boundedness of the nation state in order to achieve efficient political interventions in the context of an increasingly competitive and complex global arena. The emergence of soft spaces, therefore, can be seen as a reaction to greater social complexity, which has resulted in "governance systems becoming more functionally differentiated [as well as in] an increased fuzziness of institutional boundaries, the multiplication and rescaling of spatial horizons, and a need for reflexive knowledge and understanding to cope with this complexity" (Haughton et al., 2010, p. 49). Thus, soft spaces are seen as a deliberate attempt to "insert new opportunities for creative thinking" at the interface between public and private engagement. Additionally, they are "deliberately fluid and fuzzy in the sense that they can be amended and shaped easily to reflect different interests and challenges" (ibid., p. 52).

The impact of EU Cohesion Policy on the decision-making process and the rationale of policy making can be illustrated by shortly introducing the examples of Ireland and Northern Ireland discussed by Haughton et al. (2010). First, Haughton et al. (2010) argue that EU funding had a significant impact on the decentralization of the Irish planning system. After the 1988 reform, Ireland as a whole qualified as an Objective 1 region. However with high rates of economic growth continuing throughout the 1990s, the Irish government decided (1999) to divide the country into two NUTS 2 regions in order to sustain eligibility for EU funds in the economically weaker southern region. This meant the introduction of a "regional approach" to planning in a country that was traditionally highly centralized. Thus, Haughton et al. (2010) conclude that "the lure of European funding" was essential "to bring about a more enduring set of regional structures" (p. 58). The "pragmatic desire to attract European structural funds" rendered the regional governance structures into "largely bureaucratic creations" that not sitting well with the entrenched regional identities (ibid.). Subsequently the authors illustrate their claim by looking at the case of the Cork metropolitan area. They maintain that the combination of (1) uncontroversial policy guidelines rather than legally binding statutory plans and (2) widespread "mistrust" toward the new regional authorities (which were perceived as representative of a hierarchical system of government) prevented the problems of congestion, urban sprawl and socio-spatial polarization from being tackled effectively.

Second, discussing the 2001 Regional Development Strategy of Northern Ireland, Haughton et al. (2010) find that it picks up the "conceptual language" of the European Spatial Development Perspective (ESDP, 1999) of hubs, corridors, gateways and polycentric development. However, in focusing on consensus-building around the "neutral concepts" of territorial equity and balanced development, substantive debates about "hard issues" (i.e. concentration vs. dispersion) were avoided (Ellis & Neill 2006, in Haughton et al., 2010, p. 88). According to one interviewed academic "keeping

everybody on board and everybody happy with it", was the political rationale behind the strategy. Thus, Haughton et al. (2010) conclude that "EU thinking […] provided a means for accommodating and hiding from view underlying tensions" (p. 88).

The point is that EU Cohesion Policy may destabilize regional development practices at the national level by *constructing* and *injecting* soft spaces with fuzzy boundaries, whose logic is increasingly geared toward competitiveness in and of the single market. The Baltic Sea Region can be named as a rather successful example (Metzger & Schmitt, 2012), while the more recent Danube Region seems to require more time and commitment by the participants to get off the ground. However, soft spaces can be created at different spatial scales. In fact, the EU itself could be described as a soft space with fuzzy boundaries, a complex governance system with rather fluid and evolving responsibilities. However, what can be concluded from the previous discussion is that the alignment of EU Cohesion Policy with the EU 2020 Strategy may increase the importance of urban regions. In this sense, the emergence of a poly-centric metropolitan network (Hamza, Frangenheim, Charles, & Miller, 2014; Meijers & Sandberg, 2007; Meijers, Waterhout, & Zonneveld, 2007; Molle, 2007) might be a result of the refocussing of EU Cohesion Policy toward the delivery of "smart, sustainable, and inclusive growth".

## Conclusion

In conclusion, the paper has attempted to indicate how the process of European integration under the primacy of interest representation at the EU level, is leading to a transformation of the political process. The emergence of multi-level metagovernance, understood as the management of disparate modes of coordination, is presented as a source for the emergence of inconsistent post-political strategies. Here, interest are framed as commensurable rather than conflicting, which allows the discursive framing of cohesion and competitive objectives as mutually reinforcing. This enables the depiction of EU Cohesion Policy as a delivery mechanism of the growth objectives of the EU 2020 Strategy and, in opposition to its treaty rationale of enhancing social, territorial and economic cohesion, shifts the *spatial selectivity* of Cohesion Policy toward spaces that may contribute to the competitiveness of the single market – including, but not exclusively, poly-centric metropolitan regions.

Based on the framework developed in this paper a future research agenda will investigate the construction of poly-centric metropolitan regions and its impact on socio-spatial polarization, with a focus on Central and Eastern Europe (CEE). Due to the large share of EU Cohesion Policy in the total budget for regional development of the new member states, the construction of soft spaces, geared toward the competitiveness of the single market, have a great potential to contribute to socio-spatial polarization.

## Acknowledgement

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**Annexes**

Annex 1: EU 2020 Targets

- **Employment**
  - 75% of the 20-64 year-olds to be employed
- **R&D**
  - 3% of the EU's GDP to be invested in R&D
- **Climate change and energy sustainability**
  - greenhouse gas emissions 20% (or even 30%, if the conditions are right) lower than 1990
  - 20% of energy from renewables
  - 20% increase in energy efficiency
- **Education**
  - Reducing the rates of early school leaving below 10%
  - at least 40% of 30-34–year-olds completing third level education
- **Fighting poverty and social exclusion**
  - at least 20 million fewer people in or at risk of poverty and social exclusion

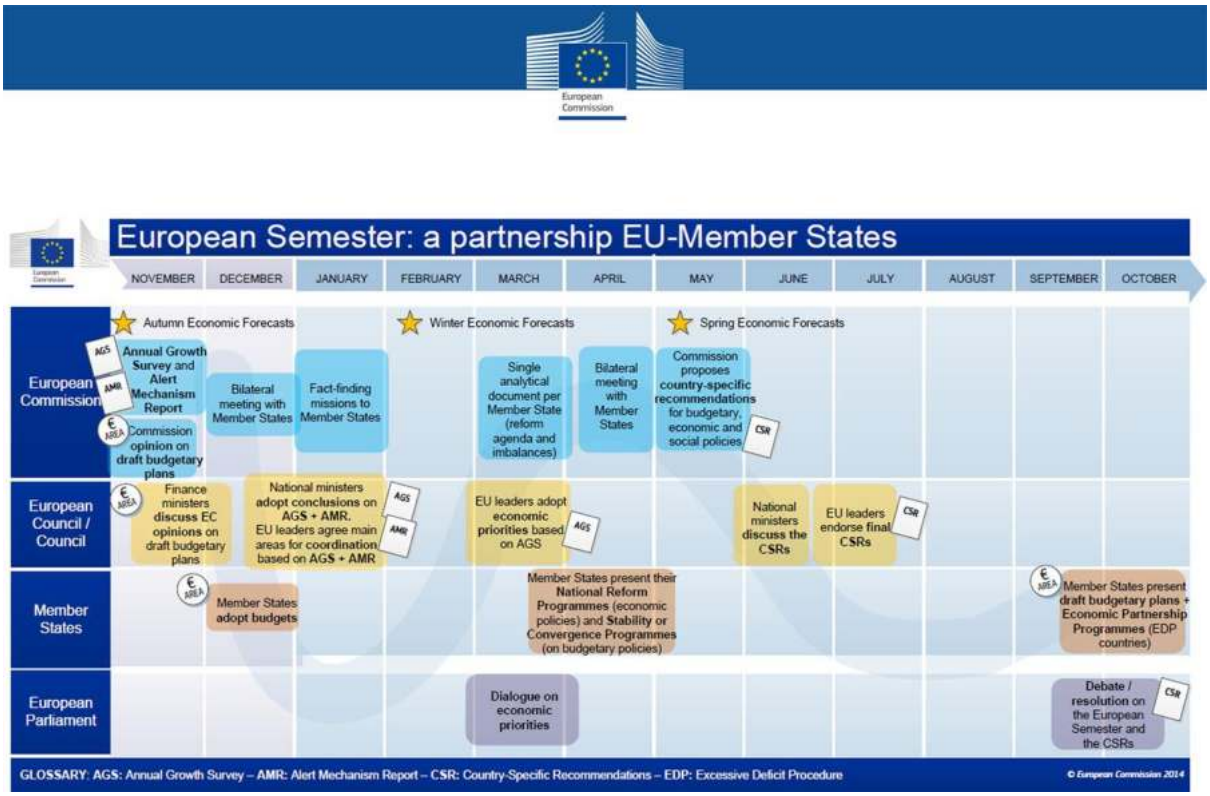
Source: http://ec.europa.eu/europe2020/index_en.htm, accessed: 11/01/2015

Annex 2: Priorities and Flagship Initiatives of EU 2020

| Priorities: Growth | Flagship Initiatives |
|---|---|
| Smart | Digital agenda for Europe |
| | Innovation Union |
| | Youth on the move |
| Sustainable | Resource efficient Europe |
| | An industrial policy for the globalisation era |
| Inclusive | An agenda for new skills and jobs |
| | European platform against poverty |

Source: http://ec.europa.eu/europe2020/index_en.htm, accessed: 11/01/2015

Annex 3: The European Semester




Source: http://ec.europa.eu/europe2020/index_en.htm, accessed: 11/01/2015

Annex 4: Other Tools for Growth and Jobs

| "Other tools for growth and jobs" | |
|---|---|
| Deepening the single market | Growth and job creation depend on healthy, well connected markets, where competition and consumer access stimulate business and innovation.<br><br>Several **obstacles** have still to be addressed:<br><br>• bottlenecks to cross-border activity<br>• insufficiently interconnected networks<br>• uneven enforcement of single market rules<br>• legal complexity from having up to 27 different sets of rules for some transactions<br><br>Work is also needed to improve access to the single market for small **businesses** and to develop **entrepreneurship**, e.g. by<br><br>• simplifying company law (bankruptcy procedures, private company statute, etc.) |

| | |
|---|---|
| | • allowing entrepreneurs to restart after failed businesses.<br><br>Individual consumers should be able to buy goods and services from other EU countries with greater ease and confidence, in particular on-line. |
| Investing in growth | The financial crisis has had a major impact on the capacity of European businesses and governments to finance investment and innovation projects. To achieve its objectives for Europe 2020, the EU needs:<br><br>• a **regulatory environment** that ensures effective, secure financial markets<br>• innovative instruments to finance the necessary investment - including public-private partnerships.<br><br>These long-term growth priorities have been taken up in the Commission's proposals for the next multi-annual financial framework (2014-2020) of the EU.<br><br>At present, the European Regional Development Fund, European Social Fund and Cohesion Fund together account for more than one third of the EU's overall budget.<br><br>These tools help to ensure that money is invested effectively in order to support smart, sustainable and inclusive growth.<br><br>EU funding is helping to support:<br><br>• More and better jobs<br>• The development of new technologies<br>• Cutting edge research<br>• High-speed internet access<br>• Smart transport and energy infrastructure<br>• Energy efficiency and renewable energies<br>• Business development<br>• Skills and training |
| External policy instruments | To foster growth, the EU must encourage trading in open, fair markets worldwide, within a rule-based international framework. It will promote:<br><br>• **external aspects** of various **internal policies** (e.g. energy, transport, agriculture, R&D)<br>• trade and international **macroeconomic policy** coordination<br>• assertive and effective **participation in international fora** such as the G20, to shape the future global economic order.<br><br>The EU also wants to build strategic relationships with emerging economies, to discuss issues of common concern, promote cooperation on regulation and other matters, and resolve bilateral issues. In this context, the Commission presented a new trade strategy in November 2010.<br><br>The EU is already developing a **real partnership with developing countries** to help eradicate poverty, promote growth and fulfil the Millennium Development Goals. |

Source: http://ec.europa.eu/europe2020/index_en.htm, accessed: 11/01/2015

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# TRACK 03

# Responsibilities in Planning Education and Practice

## Track description

Co-chairs: **Andrea Frank**, **Anna Geppert**

Planning programmes teach students about planning legislation and professional responsibilities of planners with a prevailing view that the governments of cities, municipalities and nation states take on the responsibility for sustainable spatial development. Yet, the move from public leadership in development to ever greater private sector dominance in urban planning and development introduces a new constellation of powers and responsibilities. Does planning education prepare students adequately to perceive the ethical dimension in respect to their professional actions? What are the ethical challenges the future planners will have to cope with? Are the future challenges recognized and analysed sufficiently in the teaching and curricula to prepare students and practitioners for the new complexities and confrontations?

# Encountering the Unfamiliar in International Studies in Planning

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*Abstract*

*The opportunities of internationalised planning curricula are manifold. For students this includes scope to expand their horizons for planning careers and to develop more reflective understandings of planning issues in their 'home' environment (Yigitcanlar, 2013). For educators, it provides a fertile environment for exploring cross-cultural encounter, a space to investigate varied planning traditions, and to situate examples for teaching. Within planning education, professional and academic discourse offers a way for students from diverse backgrounds to communicate and conceptualise field studies within a common (universal) understanding of traditions of planning practice and public policy solutions, but also to consider those contingent on place and culture (Healey, 2012). The ethical and political implications of working internationally can, however, be masked within the seeming familiarity of planning language, concepts and techniques. Planning is inherently political and contextual, yet the explicit dilemmas of the political and economic setting can appear hidden during a field project where the apparently universal notions of effective spatial planning are central to the dialogue amongst a diverse student group. Using the example of four joint field/project visits (2010-2014) involving Australian and Sri Lankan planning students in tsunami and conflict affected areas of Sri Lanka, this paper draws on student reflections and observations to explore the explicit encounters with ethical dilemmas and political settings. It then considers the implications and transferability of these lessons for ethical reflection in planning practice within the home setting.*

***Keywords****: cultural literacy, international study*

## 1 Introduction

Zygmunt Bauman (1990:15) contends, "familiarity is the staunchest enemy of inquisitiveness and criticism". Yet using and guiding discomfort and confusion into the unfamiliar requires student planners not just to encounter the unsettling 'other', but to learn from this encounter, despite its challenges. This offers a significant opportunity for a planning education that is reflective and challenges normative (and localised) assumptions of practice and of problem fomation. Planning's own inherent tendency towards universalism in problem-setting and practice is challenge to this. These received logics of practice often mask the value of cross-cultural encounters; planning problems and solutions can look and feel familiar to students and practitioners from elsewhere, despite vastly different cultural and economic settings.

Internationalising the curriculum for planning educators provides a pathway into these learning opportunities as well as offering attractive options for students seeking possibilities in a globalising profession. There is capacity to demonstrate diversity through various education settings. Yet while these objectives can often be interwoven through the classroom setting, international field studies provide a most effective way to explore the practices of planning in 'other' settings, and also to provide examples for reflection in the 'home' setting. Activities including student exchanges, overseas (travelling) studio projects and study tours provide instances of this approach within tertiary study.

The planning student experience of these activities is wide-ranging, and strongly personalised, but typically includes an expanded awareness of the scope of professional planning practice and the development of a *critical reflexivity* in relation to previously assumed norms of planning and urbanism at home. Further, an often-reported outcome relates to learning from the encounter of difference with consequent benefits for engagement and communication in planning practice in diverse communities (Abramson 2005, Yigitcanlar et al 2009, Butt et al, 2011). This suggests a range of questions regarding the cultural, political and socio-economic setting of the international experience.

This paper focuses the way in which Australian planning students consider the ethical and political setting in relation to project activities and personal encounter in a developing nation. The paper will report on student feedback and supervisors' observations over four annual international field studies programs from an Australian university to Sri Lanka undertaken alongside local planning students. It considers the planning values and knowledge that appear universal to the discipline and those that are contingent upon the cultural, economic and political setting and the ways that students engage with this contrast and its consequences for scholarship and professionalism in planning.

## 2 Planning and Internationalism

Planning as an international field of practice, with consequent modes of policy transfer, has a long tradition. Whether in its visionary and value-laden inception in the early Twentieth Century, during the zenith of the rational and instrumental methods of comprehensive planning, or through the more recent consideration of collaborative modes within neo-liberal agendas, transitional flows of practice, ideals and education have persisted. While contemporary planning practice is ostensibly more reflexive and pluralistic in its intent – recognising the highly contextualised settings for negotiated and collaborative processes – institutional traditions, developmentalist tendencies and the transnational process of politics and information gathering each operate in a complex network of transfer. Such flows are neither unitary nor one-way, but they are important to planning systems and to professional self-identity.

The dilemma of planning as a universal, while local, project has been identified in regard to the suitability of policy transfer (Burke, 1967; Ward, 2000; 2010), with developmental phases of the post-colonial era being the most acute examples of where context, cultures and priorities have collided with an international (usually developed world) agenda for planning. While difference has become increasingly acknowledged (Sanyal, 2010), this has not necessarily reduced the individual (ethical) dilemma of identifying what useful and universal professional knowledge suits international transfer and what is culturally contingent, or (best) based-in-place. Recognizing and unravveling this difference is important not of international relevance, but is also central to communicative and engaged practice at 'home'.

Healey (2012) identifies that the decline in the unitary 'modernisation' myth in planning has allowed, and indeed required, reconsideration of the directions and necessity for the transfer of knowledge, practice and techniques. However, despite this, packaged and decontextualized examples remain prominent in contemporary planning practice – ideas are seen, taken-up and reproduced through global education approaches. She contends that while ideas and assumed 'good' practices still flow, they continue to risk a new hegemony at the expense of locally-developed invention.

Yet rejecting such transfer potentially results in extreme localism – hence the need for universality of some ideas, with others being contingent on context. Planning practice remains a largely normative exercise, concerned with how things *ought* to be, and examples of this are often best sought, and presented through comparative example from elsewhere. Healey concludes that a 'dynamic contingency' or reflective consideration of universal planning ideas is necessary – however this throws up new challenges for internationalised education and students and professionals negotiating this dynamism by making choices regarding the suitability of transfer for their developing planning knowledge. The crucial questions appear to relate to the capacity to make judgments regarding an appropriate stance or action (or planning practice) that is neither ill-suited nor lacking cognisance of the setting, while recognising that elements of 'good' planning practice are potentially pervasive, including those relating to an ethical stance such as equity, justice, as well as aspects more technical in nature.

The internationalisation of planning practice and planning education is challenged by dilemmas of understanding, assumptions of professional norms and challenges to the value of knowledge. Yet these

experiences potentially serve three important purposes. They create reflection in values and cultural literacy in engagement and encounter, create a sense of participation in a 'globalised' profession. Ultimately they expand and deepen students' knowledge, skills and experience, which are valuable for students' personal and professional development and relevant in any setting. They require students/planners to consider and separate *aconscious* knowledge and practice from contextually contingent aims and values and international immersion offers this opportunity most readily.

### 2.1 Internationalised Planning Curricula

The forms that this 'internationalisation' takes vary and could be considered to include attention to 'global' issues of population, governance and urbanization, the encounter provided by international student cohorts I various education markets globally and also the opportunities to study abroad as a studio/project or on exchange. International engagement opportunities exist most strongly in relation to the attraction of international (fee paying) students, but also through the recognition of the relevance of international research linkages, student exchanges and student mobility. Harman (2005) describes the emergence of an internationalisation *imperative* within Australian higher education in recent years, and while dominated (perhaps fleetingly) by an international education 'market', the benefits of encounter and outward movement are seen positively. This is in line with the global formation of corporatized models of higher education, linked to its *economization* and the mobility of labour markets (Spring, 2015). The counter-flows from developed economies to less-developed regions are typically in the form of exchange, field studies and comparative research.

Internationalised planning curricula have been identified as a product of an expressed need and awareness from staff and students. Ali and Doan (2006), for example, identify emergent strategies for internationalisation in their survey of planning curricula in the United States. Goldstein et al (2005) suggest a globalisation in the planning academy, and describe a multi-national collaborative project where, despite some limits to 'direct relevance' of the experience, the development of culturally aware professionals was enhanced. Dandekar (2009) offers support for international encounter and collaboration in smaller planning schools due to more limited opportunities for encounter. Similarly, Absolum and Vadura (2006: 332) recognise that "simply adding international content is not enough" in their study of students at the University of South Australia; students consider *interaction* to be a critical part of their education. Clifford (2009) identifies that less 'pure' disciplines are able to contextualise these experiences well – a seeming advantage for planning education.

### 2.2 Ethics, Politics and Experiential Learning

In disciplines such as planning, experiential modes of teaching and learning are often common and have a long history through fieldwork and studio/project activity. A primary intention of such experiential approaches is to explore a range of themes and issues through the context of a project, problem or encounter. Consequently (and evidently), context matters; with the social, environmental and political setting being entangled in the project space. For students, this means that such factors are central to the project task, rather than a potentially decontextualized example in the classroom. Such approaches, while potentially powerful, also assume and rely on this understanding, notwithstanding the preparation and pre-briefing that is typically associated with these activities. In this regard, the ethics, cultures and politics of doing planning are in fact given prominence in informing and guiding method and practice. In an international setting these elements are amplified through cross-cultural understanding, or lack thereof, and familiarity with the agenda for planning practice and priorities.

Consequently, for students involved in international settings, ethical dilemmas exist not only in knowing, and in learning from habits in practice grounded in culturally contingent settings, but also in reflecting on suitable lessons for transference – an issue that extends in both directions. In this regard, we consider a range of potentially 'contingent' issues that consistently confront our Australian planning students in Sri Lanka: (i) the exercise of patronage politics and power, (ii) the resources and priorities of development and (iii) the nature of informality in the use of space and the development of

the urban environment. At times each of these issues have confronted and confounded students, requiring navigation and negotiation of ethical questions of the application of lessons and knowledge from elsewhere and the applicability of 'universal' planning ideals, all while operating in the familiar context of (nearly) familiar planning language, historical conventions and administrative structures. We outline these issues below.

## 3 Sri Lankan Planning: from post-colonial lessons to globalisation

The modern Sri Lankan planning system has links to British colonial planning system, as does Australian planning. In early 20th century, British colonial government introduced planning regulations and practices to Sri Lanka. Based on these Colonial procedures, localised plans and development projects were progressively implemented in cities as well as some regional areas, firstly through the *Housing and Town Improvement Ordinance* 1918 and the *Town and Country Planning Ordinance* 1946. Reflecting international trends, the early planning approaches in Sri Lanka tended to emphasise comprehensive master-planning. This produced a centralised, rigid, and top-down planning approach that dominated in 1930s until the 1980s – a legacy that continues today.

The involvement of international planners such as Patrick Abercrombie and agencies including the United Nations Development Program (UNDP) reinforced the 'borrowed' planning of the colonial era even after Sri Lanka gained independence in 1948 in projects such as the UNDP *Colombo Master Plan* (1978*)* The desired outcomes of past master-plans and regional plans were not well contextualised within local cultural and economic settings and did not deliver expected physical and social development at the ground level (Steinberg 1984, van Horen, 2002). This has been attributed to the often-identified drawbacks of master planning processes; inflexibility, lack of fluidity, inability to tackle uncertainty and inability to cope with the rapid urban growth that occurred in urban areas during 1980s (van Horen et al, 2004). These approaches also raised questions about the suitability of broad planning goals for local problems, especially where local problems and solutions were identified through Euro-centric or universalist lenses rather than from an insider's point of view. Additionally Sri Lanka's political challenges since the 1980s have hindered the implementation of urban plans.

From the 1980s economic liberalization policies were introduced in Sri Lanka resulting in unprecedented urbanisation and urban development. This resulted in significant population growth and new urban forms with linear development along main roads and slum settlements becoming common features in urban areas. In order to manage urban growth, promote integrated development and to effectively enforce the statutory planning framework, the *Urban Development Authority* (UDA) was established in 1980. The UDA planning process provided a new framework to prepare much needed strategic plans with a more flexible structure planning and developmentalist perspective. Accordingly, local level development plans for urban and regional areas were progressively prepared for almost all urban areas under the guidance of UDA. Additionally, the UDA has also prepared regional level framework plans such as the *Colombo Metropolitan Regional Structure Plan* (UDA, 1998, Munasinghe, 2009). These plans indicate emergent flexible planning approaches extending beyond conventional master-planning processes.

Planners and policy-makers further adapted emergent modes of strategic and collaborative planning during the last two decades. Accordingly, the *National Physical Planning Department* (NPPD) was formed in 2001 to offer a statutory framework for preparing national, provincial and regional level structure plans through the *Town and Country Planning (Amendment) Act*, 2001). The subsequent *National Physical Structure Plan*, (2005) proposed nationally important strategic development projects including ports, domestic and international airports and highways. Since 2005, the incumbent government has taken measures to implement identified strategic projects (often through foreign direct investment) particularly evident in the Southern Growth Centre area under the *Hambantota Regional Development Plan* (UDA 2007) and development and renewal projects in Colombo Metropolitan area. The Hambantota plan received considerable political patronage from the previous Sri Lankan

President and mainly involved direct investment from Chinese government agencies (De Alwis, 2010). More recent planning and development projects have been undertaken within the strongly directional objectives of post-conflict reconstruction and the involvement of a range of state agencies, including the military.

## 4 How is Sri Lankan planning familiar and unfamiliar to Australian planners?

As Healey (2012) describes, the universal knowledge and practice of planning is contrasted with elements that are contextualised in place. For students in both places, apparently 'universal' ciphers of planning exist in the form of a common British legislative tradition, the language of planning and the shifting modes of practice from past comprehensive master-planning to current developmentalist and neo-liberal approaches that have become typical in both places. Yet from an Australian planning perspective, the 'contingent' or 'unfamiliar' roles of planning and the conception of planning relate to issues including the visible exercise of power and patronage, the collisions of traditional and introduced models of administration, resources to realise planning outcomes and the informality of urbanization and development in general.

### 4.1 Politics, centrality and economic resources

Like many other developing nations, Sri Lanka has a highly centralized political and administrative structure and planning operates within this framework. Planning and politics are visibly linked through political and development agenda. Similarly to many developing nations, planning in Sri Lanka is a project of a state-directed future (Rakodi, 2001) and, while planners are equipped to operate in a neutral way, Sri Lankan provincial council and local authorities have organised along sectoral lines with relationships to central power. They do not have autonomy to guide their future in policy making, nor do they have a fiscal base to realise development plan proposals. The prevailing provincial and local government systems has resulted in dependency on the central government. Instead of implementing proactive plans, provincial and local government have become agencies to disseminate central political agendas and strengthen the voter base of the centre.

Of course planning is a political and value-laden process in Australia, and as elsewhere "the boundary between the technical and the political regularly moves" (Murdoch and Abram, 2002: 11) despite preferences for expert techniques. Planners in Australia, as elsewhere, often imagine themselves in the mode of Baumann's (1987) 'legislators', rather than as actors within the active policy-networks described by Hajer (2009). What is different in Sri Lanka however is the visible exercise of patronage politics without consequent enframing narratives of planning rationality and the resource limitations and centralization with a resulting disjuncture between plans and on-ground outcomes.

### 4.2 Formal and informal development and planning practice

The formal and informal distinction in planning is a fundamental feature in contemporary urbanism in cities and that plays a fundamental role in urban imagination and practice especially in global South. This is perhaps the most different and unfamiliar feature of planning and urbanism for students from developed economies. Understanding seeming informality as a part of the process of planning networks, alongside the administrative cultures this implies is difficult for students from the global north. Likewise the physical informality of place, with its initial surface appearance of disorder, despite the legible signs and codes apparent to insiders, is taken as a physical manifestation of the informal city by visiting students.

The formal-informal distinction is a complex and multifaceted phenomenon. Traditionally, informality was understood as one of the key problems facing cities, offending the foundational legalities of urban development, rooted in property rights and regulated settlement (UN-Habitat, 2009). Informal practices were seen to belong to the global south while the *formal* was practiced in the global north.

Alternative perspectives suggest that both processes coexist in each part of the world (Roy, 2009). Behind the seeming rigidities of official procedures in first world cities, there are uncertified negotiative networks of hidden influence and deal-making "subterranean" politics take place (Gaffin & Perry, 2012). For example, Alexandroni (2007) argues there is nowhere else in the world that deals with more corrupt money than the City of London with implications for urban development. Generally, informal agreements and forms of valuation and negotiation drive urban development and urban life in the north as much as they do in the global south (McFarlane, 2012).

Consequently many scholars emphasize neither pure informality nor formality, but rather a spectrum (Innes et al, 2007). In Sri Lanka, slum settlements, illegal constructions and development deregulation have been identified as informal practices (REEL, 1998; The Sunday Times, 2012). Further, patronage politics in planning for those with political contacts or directly through bribery are considered as features of informal practice in Sri Lanka. Yet informality can also be identified in a more organized and functioning form through the negotiation and institutional devices that allow service provision and resource allocation. As elsewhere, decisions are made within networks of policy, power and practice.

In Sri Lanka, outsiders may consider the visual form and flows of urban settlements as chaotic but there is a functioning order to be seen, eventually. Such conditions, however, are not clear on the surface to the visitor. There are functional networks even within informal settlements and they become the everyday lived experience of the city, and of the claims to space within it. Informality is not an aberration, but rather a mode of urbanism in Sri Lanka. Since formal plans and regulations cannot respond to adaptive urbanisation, planners and politicians, often in good faith, identify flexible collaborative and adaptive solutions to urban problems. While illegal or informal, these activities are an engine of growth through formal organisation in many Asian cities. They respond to realities of spatial practices and the to right to city (Lefebvre, 1996) and recognize that life in these settlements *is* urban life (Gaffin and Perry, 2012).

These practices are internalized in the planning and administrative culture as a form of 'institutionalised regulation' (Castells & Portres, 1989) imagined as a 'para–legal' (Chatterjee, 2004) or 'extra legal' processes (de Soto, 1989). Therefore, local planning students can easily comprehend these hidden dynamics and its relationship to development in the local built environment. However, foreign planners and planning students need to realise this hybridity: the formal functioning planning system backed by legality and the informal, unwritten and invisible system that has strong links to politics. Visiting students and planners may see this as "chaos" or "illegality" in the development process in Sri Lanka, but this apparent duality and complexity in the context is the everyday reality of urban planning in the hybrid cities of the region.

## 5 The international planning project: Australian students' encounter with ethical challenges

Between 2010 and 2014 the authors have designed and co-ordinated four annual planning projects involving Australian planning students travelling to Sri Lanka for short (2-3 week) visits. Each has involved regional and local strategy development projects and included Australian students coupled with students in an undergraduate program at a Sri Lankan University. Project locations and focus sought to engage in the processes of local communication, data collection and strategy development. While focusing on spatial planning issues, the activities have sought to encompass elements of community engagement, local economic development and exploration of local governance issues. Some learning outcomes and students experiences from past activities have been reported elsewhere (Butt et al, 2011, Butt and Ratnayake, 2012) and are considered to include negotiating varied cultures of planning practice, developing cross-cultural literacies and building a reflective approach to planning activities at home. The authors of this paper have a background in planning practice and planning education in each country, and had been previously involved in exchange activities between Australia and Sri Lanka as participants in a Planning Institute of Australia/Red Cross post-tsunami project.

The four visits involved students jointly undertaking field studies, survey activities and community meetings over various years in a number of non-metropolitan locations in Sri Lanka. These have included rural Uwa Province, Hambantota which is a tsunami-affected city in the south where significant new investment in metropolitan-scale infrastructure is occurring, Trincomalee, a city on the east coast where both post-tsunami and post-conflict redevelopment remain priorities and Weligama on the south-east coast where an expanding tourism industry is reshaping economic potential after tsunami recovery. The project field activities were supported by lectures, seminars and workshops before the trip, in the field and on return to the Sri Lankan university. The project design and partnership has been framed through consequent visits to Australia from Sri Lankan staff and students and ongoing staff and student connections.

Over 75 students have visited Sri Lanka with responses obtained through pre and post visit surveys, interviews, student reports and author observations for each visit and additionally, in early 2012, an independently-facilitated focus group comprising a sample of students and graduates from each of three project visits (2010-2012) and student discussions and reflective-journal reviews in 2014[1].

Student feedback has identified that the project activities and shared experiences, while not always familiar, have been supported by the shared knowledge and the language of planning theory and practice (Healey's 'universals'). Familiarity with planning history and consistent use of specific language and analytical techniques were often seen as common in both cohorts. However, the Australian students have also identified that they have been challenged by the different understandings of critical issues (culturally contingent) in development and the local agenda for planning practice. These issues include housing, transport, cultural practices in the use of public space, informal development, the seemingly overt intrusion of political objectives and the priorities for planning policy in a developmentalist state undergoing transformation.

### 5.1 Understanding planning transference and ethical encounter

Student responses reveal a desire to learn fro unfamiliarity and that this was a motivation for participation. Students often saw this mainly as a chance to become 'internationalized' planning professionals, but some recognized the usefulness at 'home' in this exposure. In part this reflects self-selection amongst willing participants seeking an international experience, as the subject is not a core unit of the planning program. However, on return, perspectives vary in two critical ways; in terms of the capacity to offer planning input in an unfamiliar setting rather than to simply 'observe', understandings of how this experience is relevant for planning practice back in Australia.

Working along with Sri Lankan planning students confronts Australian planning students. For some students disjuncture between their own planning knowledge and local practice lead them to understand the complexity of the way things work and called for further inquiry of the planning system. Therefore, students dedicated considerable discussion and response to their preparedness for identifying planning priorities and for understanding the limits and boundaries to planning in Sri Lanka. The unfamiliarity of development (informality) contrasts with the familiar language and structures of planning as expressed through the legislation and strategy that is a focus of formal education. Walking between these extremes is a challenge identified by many participants.

> *"…the issues are so different, I couldn't see what to do." (Student Response 2010)*

[1] These review activities have been conducted and reported subject to Faculty Ethics Approvals 1012/12 and 20131/13

*"…no matter where planning is practiced the fundamental planning principles are the same, however the manner in which it is practiced and implemented must reflect the local situation." (Student Response 2011)*

*"What works in one country may not work in other - one solution is not the only solution" (Student Response 2012)*

*"Then I realized…the beach is not conceptualised in the same way as in Australia!" (Student Response, 2014)*

Critically, students are often strongly aware of the lack of direct applicability of their own (Australian) planning project examples, however *expressing* relevant planning ideas within the mixed student team in the project setting often emerges as a greater challenge. Many identified that the modes of communication and indeed of cultural practices of working in group-settings and the roles and status of participants, including local agencies, are more fundamental. Survey and interview findings tend to indicate that while students are aware of the need to develop cross-cultural literacies the skills in this area their pre-tour expectations appeared to under-estimate this challenge when in Sri Lanka. Many students indicated their literacies were not as developed as they had hoped. In this regard, student responses included:

*"…Australian students tend to speak first, rather than listen." (Student Observation, 2012)*

*"The experience reminded me that all you can do sometimes is sit and watch, instead of trying to influence activities…in a cross-cultural situation." (Student Observation, 2012)*

*"A lot of the time I don't think they understood our ideas and we did not understand theirs. The differences in ideas were drastic despite the fact we are studying the same profession" (Student Observation, 2014)*

The authors observed a range of student responses including those who adamantly attempt to apply their 'Australian' planning knowledge and techniques, to those who appear to retreat from participation – and of course many participants operating between these extremes. Each student has had to negotiate his or her capacity to actively participate socially within the group and in relation to their knowledge of planning within the local context. Some students take on a different identity within the group than they are accustomed to, while others enact a familiar or accentuated role in group-work as they adjust to the different modes and expectations of student group work, a cultural factor in the practice of planning. For some, the experience represents an opportunity to influence projects with assumed 'universal' planning knowledge – for others it suggests they lack useful contribution.

### 5.2 Reflecting on practice

Similarly, contrasting views are held in relation to transferability *to* Australian planning practice. While a most students consider the experience useful for reflection on practice at home, others consider the differences too great to extract value and transferable lessons. For some, the starkness of the Sri Lankan situation challenges explicit linkages between power, politics and planning in ways that are masked and implicit in an Australian context.

The authors observed students who were aware of politics in decision-making and the power relationships evident in the built-form of the urban landscape – particularly the informality of development and land use, but did not always see how a planning system actually existed in this setting. The informality of certain planning procedures, the hybrid and negotiated nature of dialogical decision-making and the direct political intervention in planning practice present significant dilemmas for students, but become clearer after discussions with Sri Lankan students and planners, and through field observations.

> *"…I have gained an appreciation of the bureaucratic and social barriers to planning in a developing country" (Student Response 2010)*

> *"…there were developments that we would have considered to have not worked [and] some that you would wonder why they were put there. Some [were] organic development that just worked and fitted together" (Student Response, 2014)*

For students, the ethical challenges of conceptualizing these processes as being either immovable problems, a opportunities for change, or as culturally appropriate responses to local circumstance arose consistently during in-country discussions and also in post-visit debriefings. Student responses reflect both their unease with the seeming informality of space, and surprise and a desire to understand how such systems and places function despite the apparent lack (to them) of order and formality typical in urban Australia.

> *"…with less order and structure in the public realm including roads, shopping strips, and other civic spaces can still actually function efficiently" (Student Response 2011)*

> *"Being in an unfamiliar and at times uncomfortable environment was challenging. (Student Response, 2011)"*

> *"It posed the questions in my mind what happens when there aren't planners? What happens when planners can't do what we considered their job to be? And what happens when planners fail to get it right?" (Student Response, 2014)*

The way in which these reflections on spatial patterning are linked to understandings of power and politics in Australia is less clear from student responses. Australian students typically view the role of planning in Sri Lanka skeptically, with a difficulty in seeing a role for the institutions and systems of planning in what appears to be a chaotic built environment. Further, the role of 'non-planning' stakeholders (both public and private, powerful and powerless) in influencing development is more apparent in many locations, although this of course has parallels in the entrepreneurial or neo-liberal models of contemporary Australian planning. This understanding indicates a different reading of the way in which forms of development occur and the representations of urbanization, with a consequent planning response.

Longer-term reflection indicated that many students understood that their learning only emerged in time. In part this may be a product of the immediacy and short-term encounter of the fieldwork activity. Perhaps this indicates a dilemma in Healey's "dynamic contingency" (2012) insofar as the recognition of issues of difference is not always immediately evident. Student reflections may also be an indication of the uncertainty associated with developing confidence in professional knowledge experienced by students anyway (although many have professional experience to some extent), and consequently the challenge of applying and extracting appropriate planning 'practices' in an otherwise unfamiliar setting. Comments from students reveal:

> *"…there were hidden learning outcomes…" (Student Response 2011)*

> *"One of the main things I learnt from this study tour was to look at a problem and explore what is causing the problem, as well as to know how to fix it" (Student Response, 2014)*

> *"…what you learn you don't find out until you return to Australia." (Student Response 2011)*

## 6 Lessons for cross-cultural encounter and local planning

Healey (2012) challenges planners to recognise a pathway between assumptions of universal knowledge and the surrender of any applicability beyond narrow local contexts by the development of *dynamic contingencies*; she calls for a *reflexivity* in applying what planners know and do to new circumstances. This, while sensible, proves difficult to know and learn. For Australian students

undertaking joint projects in Sri Lanka, it is apparent that while planning offers some universal possibilities, there is a general acceptance that local priorities and problems may not be best addressed with practice examples from elsewhere. This creates a dilemma for students in discovering what useful and transferable knowledge and skills they have.

The authors, over several visits, have found that students are able to best uncover this through engagement with local students and planners and through participation in data collection, discussions with local stakeholders and through broad and wide-ranging discussions regarding history, politics and culture. These are approaches that take time however, and building relationships beyond the overseas project period is essential to students recognising similarities and differences in approaches to planning. Reflection, dialogue and cultural awareness each play a part in refining and defining how their developing planning knowledge has a role in a new place. These steps present challenges relating to modes of communication (not simply language), expectations of project work and time constraints for students in a full curriculum in both countries.

Over the period of three annual visits, we have sought to increasingly emphasise engagement and dialogue, using planning examples and practices as an important, but in some ways secondary, vehicle for these activities. The universality of planning knowledge and language, while useful, at times appears to mask difference, whereas skills in communication, engagement and thorough observation and reflection appears to serve students better in equipping them to participate while away, and bring useful learning back to Australia.

Planning internationally presents significant ethical challenges that include those relating to the transferability of knowledge and practice. In educating students through international encounter, these challenges are heightened through the development of a 'planning' literacy, in additional to cultural literacy. The experiences of international study offer scope to learn adaptive and reflective practice, and typically students are aware of the limitations of a universal approach to planning, despite the historical tendencies in this regard and the shared language and understandings of planning students from different countries. Further, students began to understand and appreciate informal form of urbanism and direct politics in a more positive and practical framework. However, moving from this awareness to making effective choices about applicability of practice approaches and examples, and understanding the potential positive roles of international practice is challenging for students (and no doubt for practitioners).

Engagement between visitors and local planners and planning students helps is important to achieve an international perspective, but additional engagement with communities, local data collection and shared group project activities present ways for students to truly reflect on what they actually know about planning, how this can be applied and what is transferable or adaptable. Discussions before, during and after international field visits covered a range of issues of concern for students. Understanding of politics, historical land management, culture and economic structures – in addition to planning knowledge – is required to take students through a process of ethical encounter with their own knowledge and culture, albeit in another place, and the recognition of adaptive 'dynamically contingent' approaches to planning practice in new contexts and settings.

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**Lessons learnt from teaching practices of participatory neighbourhood planning in China**

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Keywords: planning education, participatory planning, Urban China

Abstract: Healey (2010) has questioned the limitations when planning theories and ideas travelled fro m developed countries to other places. In 2006, there is a new international university opened in Suzhou China, with close cooperation with Liverpool University in the UK. Since 2010, a new programme of Urban Planning and Design (was called Civic Design as the same as the parent department at Liverpool University) was started and in the spring of 2013, a new module of Neighbourhood Planning was taught. During this module, participatory planning methods (Barton, 2010; Sanoff 2000) were introduced and assessed for the group work at local community.

This paper will introduce the teaching practice of Neighbourhood Planning, with a focus on how participatory planning methods were taught, received, developed and applied in the context in urban China. At the end, an evaluation was made based on students' and residents' feedbacks. Lesson and experiences will be concluded for future teaching and practices in China.

## 1. Introduction

This paper summarises and reviews and teaching practice in the course CDE110 Neighbourhood Planning as it was offered in the spring of 2012-13 at Xi'an Jiaotong-Liverpool University in Suzhou, China. It was delivered by Dr Ying Chang and Dr Raffaele Pernice. Fifty students participated. A live project methodology was employed to develop students' participatory neighbourhood planning skills. Neighbourhood consultation events with about 50 families were organised by students to collect information effectively. The learning outcomes were evaluated by assessment, peer review, student feedback in 2013, interviews with local residents and a separate follow-up feedback in 2015. The conclusion offers a reflection on the experiment of transplanting an international concept to a Chinese context and applying it to Chinese students and Chinese community. It also discusses the benefits and challenges of employing life project methodology in conducting group assessment.

## 2. Course Summary

The module has two main aims to achieve: firstly, to develop student's appreciation of the importance of planning at the neighbourhood scale with a focus on understanding local needs; secondly, to equip them with relevant planning skills, particularly with an understanding of the value of community engagement in the plan making process. The assessments include two parts, one is an individual critique (60% of the final mark) of neighbourhood planning theories, and the other task is group work (40% of the final mark) consisting of a comprehensive neighbourhood appraisal and proposal for improvements. The neighbourhood planning skills were taught workshop style, and combined with field visits, tutorials, field work, and neighbourhood consultation events with local community. For the purposes of group work, the 50 students were divided into teams of five each.

## 3. Pedagogical goals

The whole design of the participatory neighbourhood planning workshop is to follow the international trend of the communicative turn in planning practice and accordingly in planning education (Forester 1985, Healey 1992, Jiang and Jiang 2008, Cao and Wang 2009, Hu, de Roo et al. 2013). As early as in 1970's, there was a trend towards the exploration of new perspectives, processes and approaches of planning and the new role of planners as a quick leaner, a facilitator, and a mediator among complicated reality in which individuals, society, built environment, economic development, and environmental issues are intertwined with each other. As diagrams below show, different from the traditional top-down model of planning, the process of planning is an evolving learning process, in which both planners and clients contribute to the mutual learning they develop together, in which planners learn intimate knowledge of context, priorities, and realistic alternatives from clients; and clients learn concepts, processed knowledge, and new perspectives from planners. In addition, the international trend of planning has shifted from bold and visionary physical planning and design into process oriented development of collective vision and consensus building, mainly through higher level of participation and innovative participatory methods.

Figure 1: Concept of transactive planning

Source: Friedmann, J. (1973). *RETRACKING AMERICA; A THEORY OF TRANSACTIVE PLANNING.*

## 4. Challenges

### From the UK to China, will it work in local context?

During the design of the module specifications, the module leaders tried to match the pedagogical approach adopted in the University of Liverpool, which is to put people and their demand in the centre. Thus it is very different from the top-down approach that is the norm of planning education in China. In China, there is a lack of empirical evidence of successful consultation with local people on affairs that matter their own neighbourhoods. Transformed from early socialist society, Chinese society is undergoing a transitional period to form new local communities based on private homeownership. Nevertheless, there is an absence of public sphere that is fundamental to achieving mutual understanding.

**Were our students ready?**

At the time of the live project, it was the second semester of the first year of the professional programme of students enrolled in BA Civic Design. Other modules taught in the first semester included foundation courses, such as Planning in the UK, Planning in China, History of Planning and Urban Economics. CDE110 was the first module that has narrowed down to neighbourhood scale, with specific tasks of practical skills and fieldwork. After traditional high school education which focus on entry exams, students are lack of life experience and people skills to work with real clients, particularly those who were senior to them.

**Work with uncertainty-Live project and partnership**

The risks in employing live project methodology lay in time management and coordination with clients. The workshop had a rigid weekly syllabus to follow, which was decided as part of the module specification before the semester started. However, many uncertainties existed: firstly, the consultation event with local residents also required a good fit into the existing plan of community regular programme and to avoid the time conflict with other events with same scale; secondly, the level of cooperation of local residents could only be anticipated and not be promised or controlled; thirdly, weather conditions, other preparation work such as advertisement, music equipment also increase the uncertainties and accordingly, the stress to both teachers and students.

## 5. Creative Approach and to Overcome Difficulties Together

The initial site visit was organised by teachers and an introductory talk by the developer was given to the students. The first step in participatory neighbourhood planning is the building of trust. Bearing all the challenges in mind, students started ice-breaking activity to get closer to the local community. It was student's idea to organise activities for children to use Lego to build their ideal home. Teachers from LC were invited to participate in the event too. Through the success of this activity, local community got to know students from XJTLU. Students have used this opportunity to promote the forthcoming neighbourhood consultation event and some parents have already expressed strong interests in participating.

Figure 2: site visit and ice-breaking activity at Living Bank neighbourhood

One month later, a neighbourhood event was organised to collect residents' opinions and suggestions about their community. Before the event, teachers have delivered the lecture on participatory neighbourhood planning skills and provided resources for student self-study. Each group has developed their own innovative way to engage local residents. Tutorials were given during the

workshop. Student leaders also met with community leaders to discuss details of the neighbourhood consultation event, including its programme, advertisement, invitation, table settings, etc.

Figure 3: Left and middle: student discussion in class; Right: students discuss with community leaders

On the day, 50 families worked with the ten teams of students. Students used various methods to encourage the participation of local residents of all ages, including model making, walking tour, interactive iPad presentation, post-it notes, and a message wall, etc. Dr Rebecca Kiddle joined in the event and made the following comments:

'From what I can see, the kids really enjoyed making models, I am sure they really like to see how the whole thing, pieces together, at the end. I think students come out with some really creative ideas, about how they create buildings, using sand and grass, etc. So the young kids obviously have their hands on to making models. This experience is really a good one. I really like the ideas of the board at the back, on which parents can write down what they really like and the whole range of different tools you try to use, that board, questionnaire, things like this, I think they did really well. '

## 6. Effects on students and society

### Capacity building as individual, as group and as a community

The success of the neighbourhood consultation event enabled students to collect information efficiently. With the aid of models, drawing, maps, sticky notes, iPad and message wall, residents

Figure 4: various methods innovated by students have facilitated efficient communication with local residents

were able to express their opinion openly and more importantly, collectively, which is impossible if it was individual interview or survey. Student's communication skills have been greatly improved during this practice.

In addition, it can be observed that because it is a live project which demanded intensive preparation, organising and communication tasks, each student has been commissioned to some sorts of tasks and there was no "free rider" could be found. Instead, a strong spirit of team working was developed when students have to work under stress, and with uncertainties. Teachers also asked each group to choose a team name for them and local residents to have a shared identity. Students have made logo for their own team and their invited guests too.

Figure 5: Left top: group meeting before the event; Right top: group memory after the event; Bottom: gala event with local residents after the consultation

The head of the community committee, Mrs Su, said, 'I think it really turned out very well, the students really have brought many new ideas to our neighbourhood and it was much more interactive than our activities before.' A young father said the activity: '…can reduce the distance between children and our home owners with our neighbourhood'. This event also helped build the sense of community of local residents. One young mother said: 'I like this community very much and here is my real home.' One young father said: ''I feel this place is my home.'

After the event, trust and partnership has been built with local community and students were invited again to facilitate another two participatory neighbourhood planning workshop on the decision making of the new use of community centre. A documentary video[1] was made with help from staff and students of ECC department, to record the series of events and its significance in China.

## 7. Assessment and peer review

[1] Video of the Living Bank Community Project
Youtube: https://www.youtube.com/watch?v=yqE18zJTw4Y
Youku: http://v.youku.com/v_show/id_XODA0OTAwODg4.html
XJTLU Media Centre: http://media.xjtlu.edu.cn/Play/686

Figure 6: Left: students are delighted to use sticky notes to give comments to other groups
Right: students are learning from each other by group peer review

At the end, the information collected at the neighbourhood event turned into part of the key findings of their group poster, in addition to the spatial analysis, road network, etc. The methods they have used during the events were not assessed but the outcomes generated from their methods were evaluated, which minimised the uneven outcomes cause d by uncertainties, for example, some groups have fewer family members on the day, and different group has created their own methods which was impossible to define a clear marking criteria beforehand. Group peer review was undertaken to give students extra points or deduced points according to their contribution to the group. In addition, after the final presentation, teachers have invited all the groups to give comments to other group's work. Students appeared to have enjoyed the peer review very much and benefited from learning from each other.

**8. Feedback: the first and second order effects of learning outcomes**

Student feedback was collected via two methods: XJTLU standard module questionnaire survey in 2013 and Survey Monkey in April 2015. Because the MQS at XJTLU did not separate the workshop from the entire programme, only written comments related to the workshop have been used for the purposes of analysis. The purpose to have a follow-up feedback survey is to evaluate the second order effects of learning outcomes of this new pedagogy.

In the student feedback survey in 2013, many students had given positive feedback such as:

*'what I enjoy most in this module is that I can work as a group and go to the local neighbourhood to participate some activities with the local residents'*
*'workshop is the best! This module really put theory into practice.'*
*'we can have real world practice, it's very helpful. I enjoy fieldtrip and the neighbourhood activity most.'*
*'a direct contact with local neighbourhood and residents.'*
*' I enjoyed the participation as groups and the involvement of local neighbourhoods.'*
*'Everyone could participant in and the activities were interesting.'*
*'Communication with local residents.'*

However, it is also found out that some students did not like live project because it is too stressful or they did not agree with the whole pedagogy, for example:

*' it is unnecessary for us to 'play' with children.'*
*'some of the procedures of class are too fussy. The teacher is too annoyed.'*
*'I guess Ying Chang could relax herself a little bit. Sometimes she is too worried, yet it is not necessary.'*

The negative feedback could be a result as immediate emotional reaction after working under stress. Thus, we undertake another survey in 2015 for students both at XJTLU and those who have studied at Liverpool for two years. Questions include the process, growth of social capital, skills, employability,

as well as the contribution to other modules in the last two years. By April 17th, there were 20 students who have completed the survey, seven of those are studying at Liverpool.

The table below has shown that higher credits are given to the active involvement, team building, usefulness to future career, less credits for improved communication skills and overall value of the learning process. Owing to it was a one-off activity, students did not feel strongly that they became closer to the community.

Table 1Score from student feedbacks 2015

| | | Strongly Disagree (1) | Disagree (2) | Neither Agree Nor Disagree (3) | Agree (4) | Strongly Agree (5) | Weighted Average | (Do not know) |
|---|---|---|---|---|---|---|---|---|
| *Involvement* | **I have enjoyed the activity.** | 5.00% | 0.00% | 10.00% | 40.00% | 45.00% | **4.2** | |
| | | 1 | 0 | 2 | 8 | 9 | | |
| *Social capital* | **Feel closer to my classmates** | 5.00% | 10.00% | 0.00% | 45.00% | 40.00% | | |
| | | 1 | 2 | 0 | 9 | 8 | **4.05** | |
| *Employability* | **Useful for future career** | 5.00% | 0.00% | 15.00% | 45.00% | 30.00% | | 5% |
| | | 1 | 0 | 3 | 9 | 6 | **4** | 1 |
| *Intellectual capital* | **improved communication skills** | 5.00% | 0.00% | 25.00% | 45.00% | 25.00% | | |
| | | 1 | 0 | 5 | 9 | 5 | **3.85** | |
| *Learning Process* | **Overall a valuable learning experience** | 5.00% | 5.00% | 10.00% | 60.00% | 20.00% | | |
| | | 1 | 1 | 2 | 12 | 4 | **3.85** | |
| *Community* | **Feel closer to local community** | 5.00% | 15.00% | 35.00% | 40.00% | 5.00% | | |
| | | 1 | 3 | 7 | 8 | 1 | **3.25** | |

About the question on to which modules this workshop has contributed, the answers from XJTLU and Liverpool are very different. It seems that it has contributed to more various courses which are more project-based in Liverpool and more theory-based courses at XJTLU.

Table 2 Related courses at Liverpool and XJTLU

| At XJTLU | At Liverpool: |
|---|---|
| • Planning methodology<br>• Environmental sustainability II (rural planning )<br>• Spatial design and the built environment I and II,<br>• FYP<br>• Planning Theory | • ENVS384 Urban and Regional Regeneration Project<br>• ENVS256: Urban Design<br>• Urban regeneration project, urban design, it helps me understand the needs of community and the difference between Chinese community and UK neighborhood.<br>• Environmental sustainability;<br>• Urban regeneration |

## 9. Conclusion

### Transplanting new methods from the UK to China

All in all, the participatory neighbourhood planning workshop at Living Bank was a success to both students and teachers. Students valued it as a well-structured, well-organised and enjoyable learning process. The success of this experiment is also because the case study neighbourhood is already a very vibrant community with high level of trust among residents. The methods we learnt from textbook all proved to work well, for example, the trust building at the beginning, the innovative participatory methods, people skills etc. Students have learnt that local residents are really knowledgeable about their own neighbourhood and have learnt how to listen and respect their voices.

### Real clients, work with uncertainty and work together

Students have shown positive attitudes and have taken active actions when they work with real clients and work with uncertainties. Every team had shown strong team work spirit to share the workload and tasks, help and support each other. Students, as a team, were able to think strategically, concisely, and carefully to make the whole programme to be implemented successfully. For example, students have shown very impressive ability to innovate new methods from other resources, including the use of Lego, iPad, and the costume play of Brother Mario.

In addition, from the supporting letter from students at Liverpool, students really have appreciated the collaboration between teachers and students because we have faced the challenges together, found the solutions and overcome the difficulties.

### First and second order effects

The most interesting part is students' different reaction regarding their experience to play with children and work under stress. However, the follow-up survey shows that most results have turned into the positive side over time and students trust more after they found same pedagogy in other modules. As one student wrote in 2015:

> *'Real practice is really good even though it is tired.'*

### Sustainable?

The course was repeated in 2013-14 and 2014-15. Owing to the large class size of 120 to 130 students, it became impossible to organise neighbourhood consultation event as for 2012-13 cohort. However, the documentary video made from the teaching practice in 2013 became a useful reference resource and demonstration to other students. An appropriate size of class and good partnership with local community are crucial to achieve same quality.

### Acknowledgement

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# The Teaching Practice Research of International Student Urban Design Course in China UniversitynaInternational Urban Design Course in HKU and TJU as Cases

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**Key Words:** International Student, Urban Design Course, China University

## Abstract:

*In recent years, more and more international students are coming to china as exchange students or pursuing dual-degrees. Some of them choose to study in urban planning or urban design course while their undergraduate background are architecture, sociology, engineering or geography and so on. More and more architecture and urban planning schools began to start the urban design course for international students. Most of them choose the project approach as the teaching method which can kindly fit for a three months or half a year course schedule. But they also notice the problems as coordinating the group design work, guiding the design direction, supplementing the design expertise or understanding the planning policy of china.*

*This article take the urban design course teaching process in the University of Hongkong and shanghai Tongji University as cases. It will address different approaches in urban design teaching for international students and compare the work of students. The teaching process combine diversified teaching modes like lecture teaching or social survey but all around a real design project. The participants of the course including the professors from different background, the manager or designer of design company and the local government. The article try to provide a new method for other Chinese university which can be used in future teaching.*

## 1. Introduction:

In the age of globalization, talents also flow all over the world. In the process of rapid urbanization, with its booming and large architecture market, China attracts not only numerous large-scale international design agencies to expand their business in the mainland, but also thousands of foreign students to study and work in China. The policy of education internationalization has become a key focus of Chinese colleges and universities in this new period. An increasing number of Chinese universities conduct joint-teaching programs, exchange programs and other programs with internationally known universities, which not only promote the Chinese students to go abroad, but also create a more diverse platform and environment to attract overseas students to study in China.

Planning and design is an industry with a strong local flavor, and the international teaching of this major is facing a problem of localization. China's architectural planning education system has shifted from meeting basic needs to dealing with rapid urbanization, sustainable development and social changes of over 1.3 billion people and so on(Bryson,B.W, 2012). Especially in China's current unique

political, economic and social development environment, a key problem faced by Chinese colleges and universities in setting international student-oriented design course is to make the overseas students gain an correct and accurate understanding of the differences in the development of China and overseas countries in a short time, and build a design thinking system with compatibility of global vision and local context in the development of thought. Due to differences in urban planning education course at home and abroad, the international students, who studying planning and design courses at Chinese universities, have relatively diversified backgrounds, coming not only from different countries and regions, but also from different specialties such as architecture, landscape architecture, geography, sociology and engineering design. This also makes the students and teachers face more challenges.

The author once attended the Faculty of Architecture in The University of Hong Kong, studying urban design postgraduate course, and now works as a part-time teacher in College of Architecture and Urban Planning in shanghai Tongji University, teaching international student-oriented urban design courses. By experiencing international teaching as both student and teacher, the author has developed a profound feeling of Chinese educational practice under this special historical background, and also identifies a lot of problems and challenges which exist in this area.

## 2. Status Quo of International Student-Oriented Urban Design Course Teaching at Chinese Universities

With the booming of Chinese design market and the increased support of Chinese government's various policies to attract foreign students to come to China, more and more foreign designers and students swarm into China, gathering in Hong Kong, Shanghai, Beijing, Shenzhen and other cities. Take Tongji University for example, in 2013, it recruited a total of 5123 overseas students, with an increase of 33% compared to 2010; the number of overseas students recruited accounted for 13.9% of the total number of students in Tongji University. Among them, there were 1227 students to study in including the majors of architecture and urban planning, accounting for 24% of the total number of overseas students, and this number is growing rapidly. In response to the rapid growth of the overseas students, it is the addition and promotion of various special courses by each university to meet the need of overseas students.

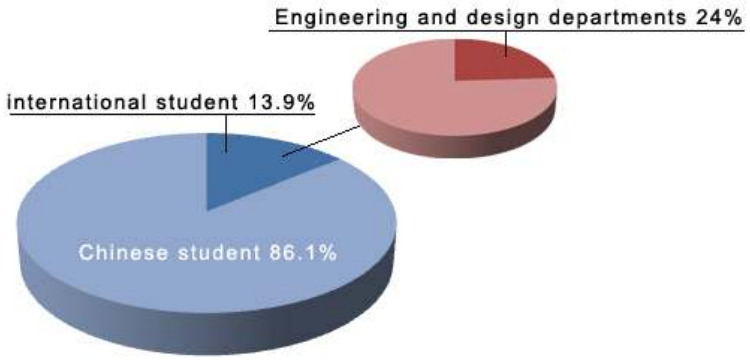


Figure 1. The student composition of Tongji University

Urban design course is an important component of urban planning professional education. Due to China's unique urban planning system, compared with overall planning, detailed planning and other courses needing a lot of expertise and understanding of national, local laws and regulations, urban design has greater flexibility, inclusiveness and innovation, which is of higher compatibility with architecture, landscape and other specialties and is easier to be used into internship or work by overseas students after graduation. Thus, urban design has become one of the most popular courses in overseas students in China during the study of planning and design.

Early in 2008, The University of Hong Kong has noticed the development trend of urban design. The university has opened a post-graduate course of urban design within its Faculty of Architecture and run it as an independent department with class hours of one year, becoming China's first university to set master degree in major of urban design. Enrollment targets are selected in a balanced way from the students coming from Hong Kong, the mainland China and overseas countries. By now, the university has awarded more than two hundred students majoring in urban design a postgraduate degree.

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香港大学城市规划及设计系硕士班招生

香港大学城市规划及设计系（DUPAD）前身是1980成立的香港大学城市规划及环境管理研究中心（CUPEM）。2008年中心改组为城市规划及设计系。我们诚邀优秀本科毕业生申请以下我系的硕士班课程：

理科硕士（城市规划）

理科硕士（城市规划）是一个为期两年的全日制硕士学位课程，它提供关于城市和区域规划的理论、方法和实践的专业培训。该课程毕业生具有两年相关的工作经验后将有资格成为香港规划师学会（HKIP）和英国皇家规划师学会（RTPI）的会员，并成为香港专业注册规划师。交通专业的学生在完成交通主题的毕业论文后也可以成为物流与交通学会（MCILT）的专业会员。

城市设计硕士

城市设计硕士是一个为期一年的全日制硕士学位课程，旨在满足希望以后从事城市设计和物质空间规划的建筑师或景观设计师的教育需求。

申请要求

1、香港大学及同等大学的学士学位。城市设计硕士特别欢迎有建筑、环境设计、景观规划、城市规划和建筑行业学术背景或工作经验的人申请。

2、英语要求：托福（TOEFL）纸考（PBT）成绩550以上、机考（IBT）成绩80以上，或雅思（IELTS）成绩6以上。

奖学金

1、理科硕士（城市规划）和城市设计硕士的大陆申请人有机会有资格申请亚洲开发银行（ADB）奖学金。该奖学金包含学费和生活费用。详情请查询http://www.adb.org。

2、所有交通政策与规划硕士的大陆申请人均有资格申请该课程的奖学金。申请人须在本科学业或硕士学业中有优秀荣誉。获奖人将在第一个学年的第一个学期内获得通知。

申请截止期

ADB奖学金申请截止期：2010年1月31日

申请截止期：2010年3月31日

Figure 2. 2010 Admissions Advertisement of HKU Urban Design Post-graduate Course in Magazines

Since the 1990s, led by College of Architecture and Urban Planning in Tongji University, some universities' professional departments in the mainland China have begun to try to conduct joint design collaboration on a regular basis with some universities that are famous all over the world. With the deepening of internationalization, the joint design courses are increasing in frequency and expanding in scale. These joint design courses usually take residential design, urban design and conceptual planning as the main contents. For instance, during the planning period of the 2000 Shanghai World Expo, Tongji University carried out a joint design competition in the theme of World Expo together

with a number of universities in various foreign countries, receiving student works from 28 universities in 14 countries. Among the student works, the proposed plan to arrange the Shanghai World Expo along the Huangpu River aroused great attention and contributed to selection of the final World Expo site after being submitted to the Shanghai municipal government.(Wu Changfu,2011) From unscheduled joint design work camp, regular summer school of international students to long-term joint teaching with double degree, Tongji University has gradually been improving its international teaching system, become a front runner among universities with design major in mainland China, and continuously delivers relevant experience to other universities. Different from The University of Hong Kong, colleges and universities in mainland China cultivate a larger number of students and are more diverse in course selection. Compared with the full English teaching system of The University of Hong Kong, however, Tongji University and other domestic universities are faced with many difficulties, including the transition from Chinese teaching system to English teaching course system, the lack of teaching materials of relevant courses, and the absence of senior experience.

Figure3.The Historical Process of Tongji University International Architecture & Urban Planning Education (Wu Changfu,2011)

## 3. Framework and Practice of Urban Design Course in The University of Hong Kong

### 3.1 Background of course setting

The University of Hong Kong has formed a high international teaching system at an early time due to its unique geographical location, historical and political context. Many international students, who are interested in China, would like to choose Hong Kong as a spring board to understand China. The inheritance of full English teaching system and the British education system make international students encounter no obstacles in studying in The University of Hong Kong basically. Thus, The University of Hong Kong does not open the same courses specialized for international students as universities in the mainland, and stresses the diversification of the student composition. The

University of Hong Kong has been laying emphasis on enrolling students with different nationalities and professional backgrounds from the opening of postgraduate course of urban design course, with students from Hong Kong, the mainland China and overseas countries each accounting for one-third of proportion respectively. Its courses are also considerably diverse, taking into account the needs of the students with different expertise and capabilities. This paper is to focus on the comparison of representative graduation design courses.

### 3.2Basic framework of course teaching

The period of graduation design course is about 16 weeks, substantially occupying one third of the entire duration of postgraduate course, with a focus on guiding students to summarize the research methods and design techniques that has been learned during the entire phase of postgraduate study and comprehensively applying what learned into the graduation design. The course is divided into five phases: topic selection and research, Site investigation and analysis, design concept generation, work production and graduation presentation. The specific aspects of operations are: topic selection and discussion with teachers → literature reading and preliminary research report → freedom to choose study site and field research →presentation of site study report →concept development and discussion →improve the design outcomes →final presentation and report submission

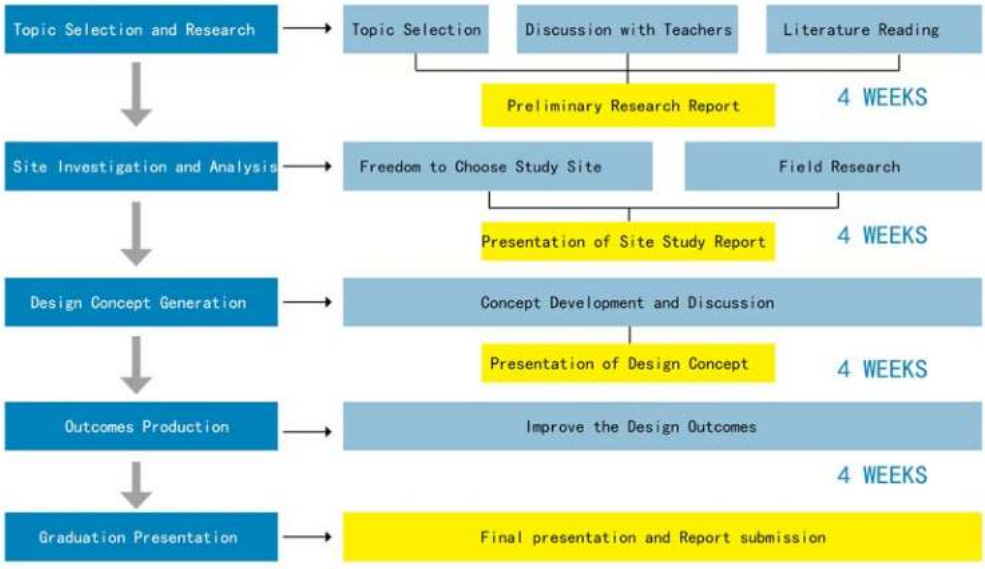


Figure 4. Schedule of Progress for Graduation Course in HKU

### 3.3 Features of course teaching methods

#### (1) Topic selection of design: freedom and independence of topic selection

The topic of graduation design course is determined by teachers, which is not limited to specific research direction, and the research framework is discussed by teachers and students together. For example, a teacher proposes the theme of "South China Factory City", and students in the class jointly select five cities in the Pearl River Delta class as the focus of research; what's more, the students are free to form five groups with members from 3 to 4 students, and each group is responsible for the

study on a city. Each member in the five groups jointly completes the research missions, while they also select their own design sites respectively and put forward their own topics, which will be reviewed by the tutor to ensure that their research topics do not depart from the general theme. Such a way of feely selecting topics without client makes the students conduct pre-research on the topics proposed by the teacher, collect all kinds of related material on their own and read relevant literatures, and select the their interested direction to conduct in-depth research, greatly improving the students' autonomy and active learning ability.

Compared with the traditional way of selecting a "site" before determining a "topic", this way of selecting a "topic" before determining a "site" can better combine research and design, and motivate students to make proactive observation and consideration on the city. In order to select a suitable site, students are automatically to study the fields related to the entire city or region, so as not to confine their thinking by the red line boundary of the "site". If the traditional site-based design were a tailor, then this topic-based design would be like a costume designer taking responsibility for fashion shows. Selecting a site is like choosing the right model in order to fully demonstrate their creativity.

### (2) Work pattern: group research and independent design

The work pattern of this course is basically equals to the mode of design work camp. Given that it is a graduation design and a personal achievement to be submitted, the course builds a model combining independent work and cooperative research. Before determining their own design sites, students must conduct research and studies in groups. Students of different nationalities and majors within a group can complement each other. For instance, when conducting investigation and interviews in mainland China, mainland students enjoy a language advantage and can help the ones who cannot speak Chinese; when looking up international literature or network data, international students can use English, Japanese, French and other familiar ways to find richer information. At the same time, different professional backgrounds can also give the students in a group multiple perspectives. 1 or 2 teachers work as tutors for each group to conduct daily guidance, adopt heuristic education method and guide the direction of group research. At the presentation of phased research achievements, all tutors debrief the students together and give guidance on more aspects, which can also form a competitive atmosphere among student groups.

In the subsequent phase of independent design, the students conduct design based on the site selected by themselves and finally submit personal graduation design results. In the phase of personal design, since the topics of each group member are in correlation, group members still can make cooperation, help and offer advices to each other. In the final phase, all students in a class complete together the general report of the research, during which members of the class and groups share out the work and collaborate with each other. Members in a group are free to choose a group leader, get the task and work in cooperation with a due division of specialization, in which the tasks involves aspects including the preparation of report framework, making of drawings, writing of contents, typesetting of report and so on.

Such a work pattern can complete and deepen the achievements of every student and make their achievements as a part of the overall results, which can not only ensure each student to independently finish their own design, but also stress the importance of cooperation and collaboration in process of design and research.

Figure 5: Pictures of the Urban Design Course in HKU

**(3) Tutorial mode: joint teaching and diversified guidance**

The University of Hong Kong not only has the most powerful and qualified teachers in China and Asia, but also can leverage external forces. In terms of teachers of graduation design course, in addition to the teachers within faculties, it also hires designers in outside organizations or companies to work as part-time teachers, constituting teacher groups with 5 to 8 members. 1 or 2 teachers work as the tutors of each student group to deliver guidance, achieving the teaching level that each teacher can guide 2 or 3 students and realizing full exchange between students and teachers. In the whole course duration, phased achievement report will be held every two to three weeks and student groups need to report to all students and teachers, which allows students to get more guidance from different angles. In the mid reporting and final reporting phase, in addition to the fixed members in teacher groups, teachers in other departments, owners of design agencies outside the university, real estate developers, famous designers and other well-known experts in different fields are invited to debrief the students and provide comments and advices. Experts' opinions are different at times, even contrast sharply with each other, which process can also develop critical thinking skills of students.

## 4. Framework and Practice of Urban Design Course for International Students in Tongji University

### 4.1 Background of course setting

On the basis of years of experience in holding international urban design work camps, the Department of Urban Planning of Tongji University officially in 2010 opened urban design course for double-degree, jointly cultivated international students with full English teaching method. The students are mainly from Bauhaus-Universität Weimar, Berlin Institute of Technology, Georgia Institute of Technology, University of Hawaii, University of Colorado, Polytechnic University of Milan and other universities, with nationalities covering a total of 12 countries on four continents. This course is also a public elective course for postgraduates in Tongji University.

Figure 6: Sources of International students

### 4.2 Course teaching objectives and framework

Given that the target students of this course are mainly the international students who just come to China, the main objectives of the course is to encourage students learn courses, seminars and courses design, apply cutting-edge design methods and tools and think the planning and design methods against the rapid development of Chinese cities on the basis of understanding China and local environment. At present, the course duration is 17 weeks in all, divided into three phases and six parts. The three phases include observation and analysis of site, generation of design concept, design outcomes production and final review, and six parts are visit to site → site analysis report by groups → personal design conception → regrouping of students according to the plan, submission of group achievements and conduction of midterm presentation → modification, improvement and deepening of planning and design → final defense and design comment at the end of term.

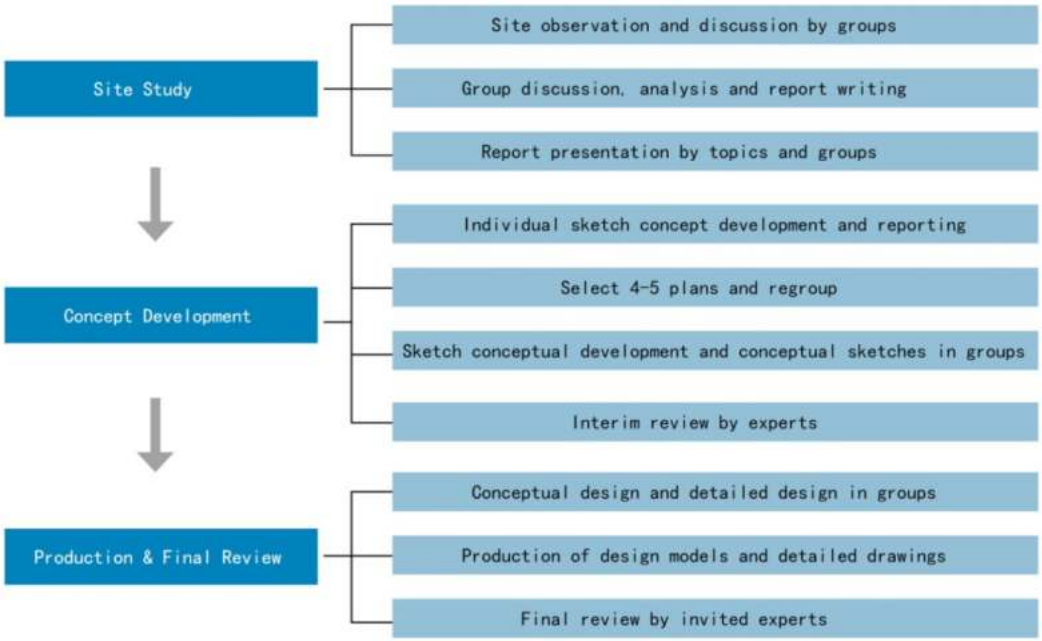


Figure 7. Schedule of Progress for International Student Urban Design Course in Tongji

### 4.3 Features of course teaching methods

The course continue to adopt free design and learning environment of design work camp in terms of teaching methods, and achieve innovations and breakthroughs in many aspects including design topic selection, work pattern, auxiliary lectures, design assessment methods, etc.

### (1) Topic selection: real topic design and real client

In each year, before the starting of the course, the university communicates with Shanghai planning administrative department or other proprietors with need of practical research and design, and chooses a real and convenient design site. After the starting of the course, the client publishes the design task. In the process of scene teaching, real design topic and real client can better stimulate students' interest and responsibility. The selection of design topics also pay attention to representative sites and instances, for instance, the design topic in 2014 is urban design of cruise port in Baoshan District of Shanghai. For China's current rapid growth of cruise tourism industry, Baoshan Port, the current largest cruise home-port in China, is faced with the problem that how to conduct the construction of related facilities. Such a topic leaves a plenty of imagination space. The real client of this topic - Shanghai Baoshan Cruise Port Company, has great interest in that how the overseas students, coming from areas with more mature cruise culture, design the cruise port in China. During the past four years, the topic of the course cover from macro scale - such as Scenario of Shanghai in 2040, middle-scale (50-80 ha) - such as transformation and renovation of Tinglin Town to microscopic scale –such as Core Open Space in Central Jinshan District of Shanghai (about 10 hectares) and other distinctive topics. Cooperative client includes multi-types of organization covering from governmental planning administrative department to actual construction organizations.

Teaching groups and client agree not to strictly limit the design works submitted by students, but the client can make their own opinion on the design requirements and design achievements of students throughout the process. One hand, it does not limit students' thinking and innovation; on the other hand, it can guarantee certain reality constraints, avoiding ideas without any border. This flexible design assignment can allow students to combine their interests, specialties and field awareness, to further refine the design conditions and always immerse in the active process experience.

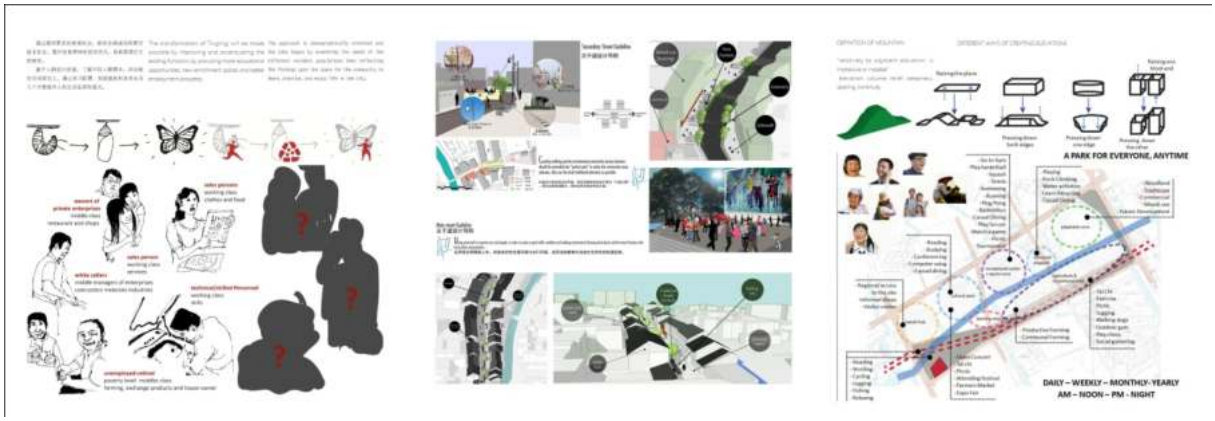


Figure 8. Some Student Works while Express Their Concepts

**(2) Work pattern: personal creativity and group cooperation**

The course takes the work pattern combining independent work and group work. At the phase of site research, teachers arrange 4 to 5 students with different professional backgrounds to form a group, and make them carry out site research and analysis from different perspectives of society, economy, space and humanity. In the successive phase of concept generation, each student works independently to show individual creativity by using drawings, text, hand-painting, video and other means, forming a kind of "brainstorming" effect. This process is also a process of mutual learning and inspiration among students, between students and teachers.

Teachers choose 4 to 5 creative ideas with great potential and features in all ideas proposed by students, encourage students to choose the idea they interested in, and ultimately form design teams with 4 to 5 members. Teachers consciously guide students to form groups according to different professional backgrounds and different nationalities, to take advantage of mutual learning in the context of cross-cultural and inter-professional environment. Students in different design teams can work together, assign tasks on their own, and independently reconcile the differences. For planning and design industry, this collective studio model is common in the future works of students. Therefore, students are required to form a sense of cooperation with mutual respect, coordination and convergence. In this process, teachers are mainly responsible for coordination and guidance, using heuristic teaching method to break the traditional step-by-step teaching method of planning and design course, carrying out work around developing students' independent thinking skills, innovation ability, practical ability and spirit of cooperation.

**(3) Auxiliary lecture: expanding thinking and understanding**

Since the courses set for one class once a week with only 3 to 4 hours each class, this decides that most students should complete their design works in spare time and the class time is quite valuable. In addition to centralized communication and teachers comments, courses introduce a mode of auxiliary lecture to more fully utilize class time. Many professionals are invited to offer seminars. Composed of Professionals includes teachers in other schools, such as departments of landscape and architecture, some experts in field of urban problems outside the university or executives of design companies and the like. Lecture topics are freely chosen by professionals, basically related to design tasks of students. These lectures provide students with a broader vision and more diversified perspectives, greatly stimulating students' creativity. For example, in course of design of Tinglin Town in Shanghai, a sociology expert, who specializes in Chinese urban and rural changes, is invited to talk about the changes in urban and rural life styles and spaces during the process of China's rapid urbanization, to make students who just come to China understand the uniqueness of Chinese urban and rural areas. In subsequent design, a student analyzes the spatial characteristics of Tinglin Town in the perspective of changes in human composition, and thus forms an interesting concept.

**(4) Assessment method: scenario professional review team**

Throughout the course, students have many opportunities to report the results, and make phased reports to client in accordance with the needs of the client. In the phases of mid-presentation and final presentation, professional review teams, composed by teachers in other schools, clients, designers from design companies and course teachers, make comments on students' achievements from various perspectives and areas of expertise.

Students are grouped to make report, and express their programs mainly in the form of PowerPoint. The limited time of group presentation is 20 to 30 minutes. Each member of the group is required to participate in presentation to promote cooperation and specialization among team members, as well as foster and examine students' oral presentation ability. After the group reports, the professional review teams propose questions or suggestions respectively in the defense of 5 to 10 minutes. In the process of teaching over the years, this part is usually fully exciting, and the confident and excellent expressive skills of international students leave a deep impression on reviewers and teachers.

Professional review teams give scores after hearing the reports and defenses of each group according to groups' design concept, achievement presentation, field reporting, group cooperation and other aspects. The rankings submitted are a part of students' final achievement assessment. This assessment method is a part of scenario teaching, so that students have the opportunity to showcase their ideas and listen to various views.

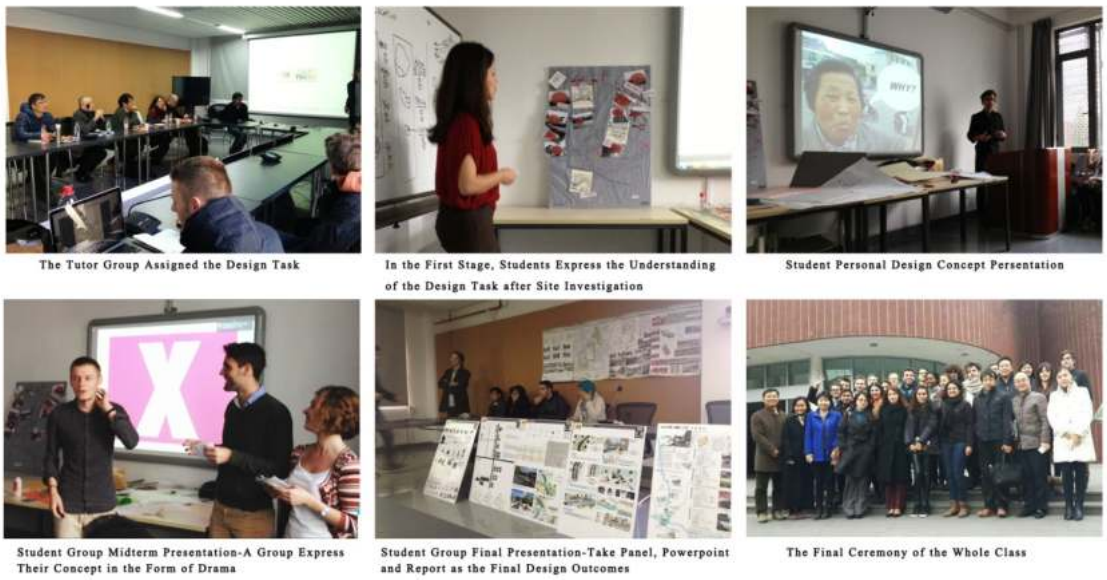


Figure 9: Pictures of the Urban Design Course in Tongji University

## 5. Demonstration and Dissemination of Teaching Results

### 5.1 Combing design task and research, forming and publishing special reports

In the urban design course of The University of Hong Kong, the design topics are without so many constraints and most designs are no-client tasks, which prefers to conduct research and interpretation of the spatiality of some cities. The whole design course consists of research and design. Students need to submit not only design results, but also research reports on the design bases. Students and students groups are closely linked in research contents and share out works in a cooperative manner. In this process, design results of each student, and research results of student groups and common outcomes of all students together constitute a final report on the selected topic with rich contents and diverse perspectives. Such achievements already have detailed first-hand research data and professional analysis and demonstration. With the students' individual designs, questions proposed can be solved in various and creative ways. The final reports are different from the books compiling students' assignments, but a research report with a certain depth and height.

In design courses conducted in The University of Hong Kong in the past few years, several books are compiled and published in themes of "the South China Factory City", "Urban Villages in Pearl River Delta" and other topics, and these books get a good social feedback. As an attempt to combining teaching and practice, the students also participated in compilation process of books while doing design tasks, which greatly increase their interest in the course, since their achievements are not just "assignments", but also published "works".

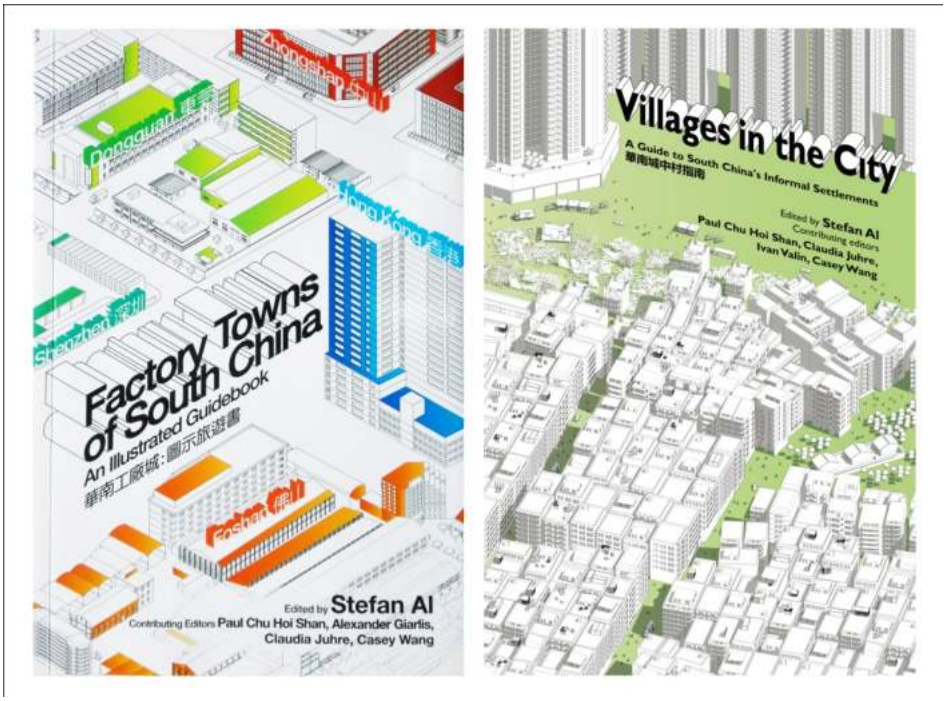


Figure 10: Published Special Reports of the Urban Design Course in HKU(Stefan.A.L,2013)

It is worth noting that in order to compile a book containing some expertise and attracting to the public with readability, students and teachers can design and formulate framework and template of contents to be published when students' researches and designs enter a certain phase. At the time of completing the final designs and researches, students should take into account the contents to be published and fill the achievements of their own and groups into the template in order to ensure books to be published in a more unified form. In addition to the content of students' work, a number of experts are invited to make comments on the writing of topics, so that the final book is more professional.

### 5.2 Publishing the teaching process and experience of design course as the teaching materials

Compared with the experimental and social study of design course of The University of Hong Kong, international student-oriented urban design courses in Tongji University are the pioneer and pathfinder in mainland China, and pay more emphasis on the normalization and instruction of course setting. Tongji University sums up relevant experiences of course by educational innovative practices in recent years. It summarizes the international student-oriented design course in terms of course description, framework, content, teaching methods, teaching achievements, etc., and publishes what summarized in the form of thematic teaching materials. This paper shares the experiences of Tongji University with other domestic colleges and universities, to better promote the construction of international course and platform in domestic design colleges and universities, and make up for the lack of teaching materials in this field. Selection of design works of gradated students in the teaching materials also can be used as references for students to understand the requirements of design course.

## 6. Summary of Experience and Anticipation of Future Development

### 6.1 International student-oriented urban design course — problems and experience

In recent years, educational work for international students in China has achieved remarkable development, but the author still detects some problems based on the hands-on experience. Domestic universities, like Tongji University, still fall behind their foreign counterparts in teachers, sources of students, and educational resources, though they have established a course system for international students.

Teachers responsible for the course oriented to international students are mostly graduates of domestic universities or overseas returnees, while teachers who have working experience in foreign schools are difficulty to introduce. In addition, international teachers are lacking and only a few participate in the teaching activities in the form of short-time exchange or lectures. What's worse, unlike in Hong Kong, it is difficult to introduce social forces, such as part-time teachers into teaching international students, and there is no such educational fund. In terms of the source of students, most international students study in China in the form of educational aid or cooperation and the proportion of self-funded international students is relatively low. Besides, the existing courses are designed to meet the requirements of double-degree and international exchange students. Some universities lack a long-term plan for the education of international students, and do not attach importance to the number of students to be enrolled, majors, student backgrounds, and source of students. (Li Xiangning,2010) As a result, the source of students is unstable, student backgrounds vary, and it becomes difficult to teach students in accordance with their aptitudes. Moreover, compared with foreign universities which provide a great many auxiliary materials or a complete librarian system for students, in domestic universities, international students often have trouble in finding books or materials to learn more about China and they find it impossible to access some foreign websites which are blocked by the government for security while they stay in china.

In an international appraisal of the globalization work of the Faculty of Architecture and Urban Planning, Tongji University, international expert advisors, apart from affirming the achievements the School has made, proposed that globalization level should be further improved by setting one international language as the uniform language used in teaching and research, increasing the number of international teachers, and putting more emphasis on the link between teaching and social practice. (Wu Changfu,2011)

### 6.2 Development trend for the international student industry in China

The deepening of economic globalization has made the international education service industry among the major industries of a country. Owing to the political, economic, and cultural benefits brought by international students, countries around the world makes the development of the international education services a significant national strategy. For example, the nearly one million international students flocking into the UK not only bring enormous economic benefits to the country, but also help to elevate the technical strength and resolve the lack of high-level technicians. Compared with

developed countries, the education work of international students in China is still at its early development stage. Among the postgraduates in top universities around the world, international students usually account for 20% to 40%, sometimes even higher than 50%. However, this proportion at the most famous Chinese universities is only around 20%. With Chinese universities paying more attention to the internationalized education, the number of international students is expected to be on a sharp rise in the future. To improve the competitiveness of Chinese universities in the international student market, designing focused and attractive courses plays an importance role.

In this process, indiscriminately copying the educational system of western countries does no good to improving the competences of Chinese universities. For instance, as for planning education, the original purpose of selecting overseas students in China stems from the increased demand of understanding and research on Chinese cities. Some scholars believe that the universality of globalization and English in the teaching of international planning makes planning, design and related teaching more susceptible to the traditional design thinking way of English-speaking countries. The non-English speaking countries have few opportunities to demonstrate and disseminate their planning experience and knowledge to the international community. (Klaus R. Kunzmann,1999)Therefore, in the era of globalization, assimilation of international experience and exploration of local experience have become two key points, which has received increasing attention in today's China. Various colleges and universities in the guidance of internalization of university management also have shifted from unidirectional learning of international experience to bi-directional development of both output and input. In this paper, The University of Hong Kong and Tongji University are different in course setting and same in combination of international advanced educational philosophy and local practical education ideas, which can be used as case study for China to explore the international education.

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# THE USE OF STUDIO PEDAGOGY IN ENVIRONMENTAL PLANNING EDUCATION

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## Abstract

*Teaching environmental planning is challenging at the best of times with wicked learning and teaching issues such as diversity of skills and knowledge required, the role of science and values in environmental decision making and political viability but periods of rapid political and economic change can present additional difficulties. This paper overviews the current state of environmental planning education and the challenges it is facing as well as suggestions on how and what to teach environmental planners. While the benefits of studio pedagogy which involves a student-centred, collaborative, inquiry/problem-based approach based on a 'real world' project is well documented, particularly in the United States and Australia these courses are becoming less prominent in the planning curriculum. We argue that studio pedagogy is an ideal learning and teaching environment and approach to overcome the challenges of environmental planning education in particular because studio pedagogy teaches students how to work successfully, in a collaborative way, with 'wicked', complex issues. Evidence from planning studios are used to illustrate how studio pedagogy can be useful in overcoming the wicked learning and teaching issues that arise in environmental planning education and producing successful environmental planning graduates that are leaders in their field.*

## 1. Introduction

The interdisciplinary nature of urban planning requires basic knowledge in many different fields and involves difficult choices in curriculum planning. Environmental planning education is even more complicated as it requires high level understanding of biophysical sciences. While there is substantial amount of literature on urban planning education in general there is little on the environmental component of urban planning education or teaching environmental planning in particular.

Designing environmental planning courses pose particular challenges in planning curricula (Deknatel, 1984) as it requires great diversity of skills and knowledge (Niebanck 1993). In addition to the number and diversity of topics that need to be covered in an environmental planning course, including the basic science behind environmental issues, two other problems complicate environmental planning education further (Vos, 2000). The first of these problems arises from the fact that scientific information is much more important for environmental decision making than other policy arenas and the science behind environmental issues is not only complicated but also continuously changing and quite often involves uncertainty. The second problem is related to the tension between the triple bottom line of sustainability, namely environmental quality, economic growth and social equity. The values that underlie the trade-offs between these add another layer of complexity to teaching environmental planning. There is no easy way to prepare the students to handle the conflict between environmental, economic, and equity values but they need to be able to understand all three perspectives and consequences of proposed actions on each. Another challenge of teaching environmental planning is related to the political viability of proposed solutions. Students feel frustrated when they realise political realities might not allow what they as planners

think is the right course of action. What if you cannot communicate the consequences of actions and choices to the decision makers or the society in general effectively (e.g. what is happening with climate change at the moment in many countries)?

This paper argues that studio pedagogy is an ideal learning and teaching environment and approach to teach students environmental planning. Secondary data from environmental planning and studio pedagogy literature are used to construct our argument. First, a review of the literature relating to environmental planning establishes the context and illustrates the complexities of the discipline area. This then leads into a review of the Australian planning education curricula to identify the degree to which environmental planning is incorporated into it. Next, the wicked learning and teaching issues related to environmental planning education are highlighted and the knowledge and skills necessary for an environmental planner is identified. The paper concludes with a discussion on the beneficial links between studio pedagogy and environmental planning education.

## 2. Environment in the Australian Planning Education Curricula

Environmental planning has a substantial impact on social, economic and environmental welfare and getting it right is a complex challenge facing governments, the private sector and communities around Australia. Over time, the complexity of planning has grown and planners today are asked to address a wide range of pressing problems in a context of constantly changing community preferences and demands. Some of the issues confronting planners include managing and responding to significant population growth, an ageing population and demographic change, urban congestion, transportation of goods and services, ensuring adequate energy and water supplies, adapting to climate change, managing hazards, responding to disasters, preserving natural and cultural heritage and the growing expectation that residents should be consulted on changes to their neighbourhood (Productivity Commission, 2011, p.XXI). Complex environmental planning problems present significant challenges for policy, institutions and management. Environmental problems are multi-dimensional and often not well understood. They involve spatial and temporal disparities between cause and effect and the effects of planning interventions on people and environments and decision making in complex systems are difficult to predict. Environmental planners need to find ways of dealing with complex problems in multi-scalar natural and human systems (Rittel and Webber, 1973; Holling, 1973; 1995).

In complex policy and institutional contexts such as this, scholars and practitioners advocate for innovative arrangements that are holistic (Berkes et al., 2003; Folke et al., 2005); integrated across public and private sectors and decision-making at multiple scales (Lane and Robinson, 2009); and collaborative to engage different kinds of knowledge for social learning and build mutual understandings of problems and solutions (Pahl-Wostl et al., 2007; Armitage et al., 2009). Scholars and practitioners also emphasise adaptive ecosystems-based approaches to deal with issues of uncertainty (Walters, 1986; Williams, 2011). These approaches accept that the suitability of policy and management approaches are unknown, treat interventions as hypotheses to be tested and learned from, and employ policy ‘experiments’ to trial, evaluate, and adapt institutional arrangements (Johnson, 1999). Although widely advocated, adaptive approaches have had limited implementation in practice (Walters, 1986). This is because there is little information available to planners on how to actually undertake adaptive management (Eberhard et al., 2009). The quality of biophysical, social and economic benchmarks and evaluative information against which to assess the performance of planning arrangements is poor (Kenward et al., 2011). Multiple forms of knowledge (e.g. scientific, local, customary, traditional owner, policy) are often not effectively integrated into decision making at various stages of adaptive management cycles (Hillman et al., 2005; Hill et al., 2010).

Concepts of resilience, particularly social-ecological resilience are also gaining momentum in environmental planning to better understand the social, economic and governance vulnerabilities, adaptive capacity of communities in managing and overcoming the environmental problems facing them (NOAA Science Advisory Board, 2009; Marshall et al., 2010). Resilience and related concepts however are conceptualized in a number of different ways according to the different disciplines, problem contexts, scale, and objectives (e.g. resisting change, bouncing back, or transforming in response to environmental or social perturbations).

Thus, environmental planning, which is characterised by complex problems, requires planners to integrate multiple forms of data to make decisions transparently under conditions of uncertainty. As described above, the theory about how to resolve environmental problems points to adaptive ecosystems based approaches, which build social and ecological resilience, and take a holistic, flexible, collaborative and dialogic approach to planning and decision-making. Achieving this requires considerable reorientation of current planning and decision-making systems. Current systems are not flexible or holistic across scales and issues. Planners need skills in big picture thinking and analysis to support systemic reform and critical research and evaluation skills to address current shortfalls in the evidence base. Planners need to have the capacity to build and analyse information to undertake adaptive planning and to understand and monitor the impact of planning interventions on social and ecological resilience. They require skills in managing complexity. They need to be able to evaluate planning options in the context of decisions and actions at multiple-scales of decision making to ensure that strategies help rather than hinder solutions. Planners also need to know how to work with stakeholders to negotiate reforms within and across political systems. Finally, environmental planners need coping skills to deal with personal and professional fatigue in dealing with difficult and contested problems, which can seem never-ending, and to deal with ethical dilemmas. So how well do we prepare young planners to this kind of work environment?

To ensure professional graduate outcomes the professional body, Planning Institute of Australia (PIA), implements a stringent accreditation policy. The objective of this policy (PIA, 2011, p.4) is ‘to encourage and support students … to become planning professionals, who can think creatively, analytically and critically, undertake independent research, communicate effectively, and act ethically.’ In addition, the accreditation policy (PIA, 2011, p.7) ‘identifies core and desirable capabilities, competencies, skills and knowledge, and ethical standards, which are expected to be demonstrated in all accredited planning programs.’ Three components related to skills and knowledge defined in the accreditation policy include generic capabilities and competencies, core competencies and supporting knowledge areas. *Generic skills* include problem identification and the formation of creative solutions; critical thinking and spatial analysis, understanding and the application of theory to practice and written, verbal and graphic communication and team work. *Core skills* include professionalism, practice and ethics; plan making, land use allocation and management, and design; and governance, law, plan implementation and administration.

Inclusion of environmental issues and sustainability into the planning curricula has been limited in Australia and New Zealand (Gunder, 2006; Hurlimann, 2009). Gunder and Fookes (1997) found that on average in 1995, accredited planning-school curricula in Australasia focused less than 5 percent of their total programs on environmental issues. While over a quarter of all programs had no environment-orientated courses the most any program had was only 12 percent of overall course content focused on environmental issues. Sandercock (1997) called for a paradigm shift in the role of planners to prepare them for the twenty first century and included ecological literacy among the needs of planners to work effectively in the changing environment. In contrast to Australia the

percentage of accredited planning programs in North America offering environmental planning as an area of specialization increased from 48% in 1984 (Deknatel 1984) to 86% in 2000 (White and Mayo 2005) and Association of Collegiate Schools of Planning (2000) describes environmental planning as one of the five primary areas of planning practice.

A more recent survey of planning professionals in Australia (Hurlimann, 2009) identified perceived gaps in environmental knowledge of planners in the areas of climate change and water management and skills gaps of critical thinking and independent inquiry. This is not surprising if we consider how little environmental planning is emphasized in the Accreditation Policy of PIA (PIA, 2011). The only allusions to environmental issues in core competency areas is in performance outcomes: 'Capacity to make appropriate choices in ethically ambiguous situations based on knowledge of social, economic, *environmental*, and cultural aspects of planning' and 'Knowledge and theories of urban and regional planning and systems, including but not restricted to principles of land use, urban form, infrastructure, *natural systems*, transport, the integration of land use and transport, heritage conservation, landscape and human settlement patterns' [p.11, emphasis added]. This level of focus on environmental concerns does not go beyond using environmental planning as an element of land use planning to increase sensitization of land use planning to natural systems variables (Deknatel, 1984).

Environmental planning is one of the five main supporting knowledge areas PIA Accreditation Policy identifies and elaborates on, however, it is made clear that these areas are not intended to be mandatory and individual planning programs may include all or some of these areas or substitute others if they see fit. The competency objective PIA (2011, p.20) identifies in environmental planning is: 'Planners take a collaborative role in the production and implementation of environmental plans, whether these are discrete plans, components of other plans, or by providing environmental planning analyses of others' plans or actions.' The four performance outcomes expected include:

1. Knowledge of the main principles of sustainable development, ecological systems and key issues such as climate change.
2. Knowledge of natural hazards and planning approaches to managing those hazards.
3. Capacity to produce basic environmental plans at a level demonstrating understanding of broader principles and policy implementation.
4. Capacity to practically and critically link plans into wider frameworks of environmental action and influence at a variety of scales (PIA, 2011, p.20).

In 2007 the Australian Research Institute in Education for Sustainability (ARIES) published a report entitled *Shifting towards Sustainability: Education for Climate Change Adaptation in the Built Environment Sector* that focussed on planning, engineering, architecture and landscape architecture and was supported by the relevant professional organisations including PIA (Lyth et al., 2007). It suggested that graduates in the built environment area should have nine competencies that would enable them to:

1. think about problems holistically and through the 'prism' of climate change
2. understand principles of sustainable development
3. problem solve using lateral and integrated thinking
4. comprehend the significance of the climate change problem
5. interpret information about climate change from a range of sources and disciplines
6. effectively interpret information about impacts and vulnerabilities specific to the locality, region or sector they are working in to develop appropriate problem solving strategies for climate change adaptation

7. make judgements for decision making based on interpretations of degrees of uncertainty associated with scenarios for local and regional impacts
8. think beyond social and professional practice norms to develop creative climate change adaptation strategies
9. demonstrate resolve to make decisions despite uncertainties about local and regional climate change impacts (Lyth et al., 2007, p.7).

With regards to the current state of climate change adaptation knowledge and skills around the country, the ARIES research found that planning graduates had an 'inconsistent level of knowledge and skills' and they gained these skills in something of an ad hoc manner; there was a lack of professional development programs for existing planners; and teachers needed more training, resources and experience with climate change adaptation (Lyth et al., 2007, p.26).

## 3. Wicked Learning and Teaching Issues of Environmental Planning

The scant literature on environmental planning education highlights a number of challenges: diversity of skills and knowledge that needs to be covered, the role of science and values in environmental decision-making, and political viability of solutions.

### *3.1 Diversity of Skills and Knowledge*

Linking of planning and science is one of the central dilemmas in designing environmental planning programs (Deknatel, 1984). While pure science courses such as ecology are not within the scope of most planning programs, the need for increased scientific and technical knowledge for environmental planning is acknowledged and these types of courses may be the most appropriate foundation for environmental planning education (Deknatel, 1984). When there is such a variety of subjects to be covered tough decisions need to be made regarding what to include in the curricula. In environmental planning education the key question is whether environmental knowledge or general skills of implementation and analysis are more important (Hurlimann, 2009) as including courses from other fields would reduce the coverage of traditional planning subjects (Cardew, 1999). *Environmental or foundational knowledge* includes theoretical principles and provides scientific and ideological perspectives to analyse the issues. White and Mayo (2005) identify five foundational knowledge topics in environmental planning as ecological concepts, environmental economics, environmental philosophy, environmental psychology, and sustainability. They also identify areas that have *general skills or implementation methods* to apply these principles as environmental design, geographical information systems, environmental impact assessment, environmental policy and law, and site planning. Foundational topics are usually taught at the beginning of the program and applied skills are toward the end.

Which one of these is more important for an environmental planner depends on a number of factors such as the type of job a planner is likely to have. Hurlimann's (2009, p.655) study found that 'for a significant number of respondents, skills are more important for planners to possess than specific knowledge in order to address environmental problems... However, it could also be argued that planners must have sufficient environmental literacy to be able to adequately and accurately apply their skills to these issues. It is argued that possession of research and analytical skills, accompanied by specific knowledge in one or two environmental areas will equip planners well with the skills to address environmental challenges.' White and Mayo's (2005) findings for North American planning schools are similar: For students, applied knowledge skills are more important for getting employment and succeeding initially in practice since most new planners are expected to perform as technicians. However, as they move toward management positions foundational knowledge (i.e. understanding of

ecological concepts), philosophical knowledge and political skills gain importance. The changing needs of the practicing planner in time indicate that the challenge does not finish within tertiary education but continue throughout their career. Like all professionals continued education is crucial for a successful career.

### *3.2 The Role of Science in Environmental Decision-Making*

Understanding ecological processes is a prerequisite to identifying solutions to environmental problems (White and Mayo, 2004). While planners will not necessarily undertake environmental research themselves they should have enough environmental literacy to understand the technical and science-oriented members of the interdisciplinary teams they need to work in as well as understand and recognize key issues in technical reports (Vos, 2000). Cardew (1999) argued for the importance of integrating environmental management into urban planning education focusing on the key questions of how much environmental science planners need, how is it to be taught, and by whom (generalists or specialists). Generally science courses are taught independently from planning courses but discussion of the role of science and uncertainty in environmental decision-making is also necessary. Hurlimann (2009) noted the two major approaches of design of specific courses versus integration throughout the curriculum and challenges to each approach.

### *3.3 The Role of Values: Balancing Environment, Economy, Equity*

One of the earliest challenges environmental planning education faced was to incorporate normative and social factors in what was viewed as a technical field and including public participation into the planning process (Deknatel, 1984). One of the toughest challenges planners face every day is balancing the competing claims of environment, economy and social equity. This requires knowledge in all three areas of environmental decision making (Vos, 2000), environmental science, economy and the actual costs of all the decisions made, and equity, the social implications of the decisions and how they affect people. But having this knowledge does not mean value-free, scientific and objective decisions will be made, ultimately the decision is based on which one of the values weighs heaviest at the moment the decision is made. Gunder (2006) reminds planning educators of their responsibility to ensure that the tension between market efficiency and environmental protection is not resolved at the expense of social justice.

Back in the 1970s Ian McHarg (1978) claimed that planner's most important role is to elicit the value systems of the people who are seeking to solve a problem because these values would ultimately determine the planning solutions. Planner's job in this sense is to help the community make its values explicit. McHarg further defined an ecological planner as one who identifies alternative solutions with attendant costs and benefits based on an understanding of both biophysical and social systems. Planning is not a value-neutral applied science but 'an inherently social, communicative, and ethical undertaking' (Klosterman, 1995, p.247). A planner is not a value-neutral technician and it is important for planning students to understand the importance of values in planning decisions as well as planner's own values. Hence, one issue to discuss with students in the classroom is their own values, the roles they may take as a professional planner and their ethical responsibilities in upholding planning principles. Are there going to be some that become the advocate planner and do advocacy on behalf of certain groups or certain issues?

### *3.4 Political Viability*

Planning students are challenged particularly by looking for realistic and politically viable yet effective solutions. We try not to stifle their creativity and expect them to stick to their principles and

invariably face with questions such as what is the point of this exercise if the recommendations are not politically viable. They may feel particularly hopeless and discouraged during periods such as now when planning is not looked at all that favourably. What tools can we equip them with to deal with these situations in real life?

The political nature of planning is an important issue planning students need to come to terms with. Planners are not decision makers but they advise the decision makers. In their capacity as advisors they can influence events through their capacity to articulate viewpoints and develop consensus and coalitions (Levy, 2003). Discussing the kinds of powers planners have (persuasion, logical argument, communication skills) with planning students will prepare them for the realities of the workplace.

## 4. Toolbox of the Environmental Planner

So how do we prepare future planners to deal with this complicated work environment and the challenges they will face at their work place? The scant literature on environmental planning education contains plenty of suggestions in terms of specific knowledge and skills an environmental planner should have. The literature reviewed highlights a number of foundational knowledge topics that are important including environmental ethics (Martin and Beatley, 1993; Niebanck, 1993; Beatley, 1995), environmental justice (Washington and Strong, 1997; Gunder, 2006), and sustainability (Martin and Beatley, 1993). The skills that are identified to be important for environmental planners include negotiation, arbitration and conflict resolution (Deknatel, 1984; Niebanck, 1993; Susskind, 2000), and critical inquiry (Gunder, 2006).

### *4.1 Environmental Ethics*

Beatley (1995) views an understanding of environmental values and ethics as an essential underpinning not only for environmental planners but all planners since 'value-neutral discussions of management tools and techniques such as environmental impact assessment, growth management, or carrying capacity are simply not possible' (Martin and Beatley, 1993, pp.123-124). As such, Beatley (1995, p.321) argues that environmental ethics is 'an especially important component of any environmental planning curriculum or concentration.' However, Martin and Beatley's (1993) survey of planning curricula in North America found that in the early 1990s only three out of 87 responding programs offered a separate environmental ethics course, though 64 percent indicated that the subject was covered to some degree in other courses.

Beatley (1995) claims that tertiary education is one of the last opportunities for students to engage in informed moral reflection and to clarify and critically assess their personal values and moral convictions before entering the 'world of professional practice, political compromise, and economic expedience' (Klosterman, 1995, p.248). As such, exposure to ethical literature is necessary to help students develop their own personal ethical frameworks (Beatley, 1995). He further suggests that rather than relegating environmental values and ethics to a single course, consideration of ethics should be injected wherever possible.

### *4.2 Environmental Justice*

Washington and Strong (1997) argue for an emphasis on environmental justice in the planning curriculum as the issues raised by the movement are within planners' professional responsibility, yet neither planning practice nor education has paid much attention to it. They claim that planning education should provide students with an understanding of planner's role in decision making (i.e. they are not neutral experts) and values, norms and rules of professional practice. Washington and

Strong (1997) suggest that environmental justice can provide a framework for examining both planner's own personal and professional values as well as those of the stakeholders. Gunder (2006, p.218) points out planning educators' additional responsibility to ensure that 'social justice is not swept aside in the dualistic tension between market efficiency and environmental protection, even if economic growth always continues to seem to prevail'. His suggestion is to achieve this through developing core skills of critical inquiry and ethical judgment in planning students.

### *4.3 Sustainability*

Martin and Beatley (1993) argue that given the focus of planning on managing land use and human settlement patterns, coverage of sustainability in planning curricula in addition to environmental ethics is essential for providing normative guidance to planners. Their survey of planning programs in North America found that only two-fifths of the programs offered courses that explicitly addressed issues of sustainability at that time. In conclusion they suggested in the early 1990s that sustainability needs to be incorporated into the planning curricula more explicitly and directly. White and Mayo's (2004) research found that sustainability was considered to be one of the most important knowledge topics by the faculty in environmental specialization of North American planning programs. With sustainability becoming a dominant concept in planning education by the new millennium concerns on its conceptualization arose and led to warnings that triple bottom-line based sustainable development is quite different than ecological sustainability (Gunder, 2006). This shifted the focus of the discussion to which sustainability planning education should emphasize.

### *4.4 Negotiation, Arbitration and Conflict Resolution*

The roles and skills an environmental planner needs have to go beyond procedural organisation to structuring and coordinating decision making processes involving many interests much like a mediator or a coordinator. An environmental planner needs to have increased substantive knowledge as well as ability for interdisciplinary teamwork (Deknatel, 1984).

Niebanck (1993) suggests previously neglected skill areas of negotiation, arbitration and conflict resolution should be included in environmental planning education. He argues that one form environmental planning takes is targeted action and in addition to negotiation and communication skills this needs advocacy planning. Ethics and values underlie planning as principled action.

### *4.5 Critical Inquiry*

The importance of balancing environment, economy and equity values in making environmental planning decisions has already been discussed. Gunder's (2006) warning of the dangers of the way sustainability is perceived and taught in planning schools has also been mentioned. His specific concern is that even though economic growth always continues to seem to prevail in particular social justice may bet swept aside in the dualistic tension between market efficiency and environmental protection. To prevent this he suggests that planning education must develop in its students core skills of critical inquiry and of ethical judgment.

## 5. Studio Pedagogy and Environmental Planning

Adding to the complexities of the special requirements and challenges of environmental planning education is the significant shifts in advanced economies from manufacturing and knowledge services which create demand for a different set of skills in the workforce compared to what came before.

Binkley et al. (2012, pp.18-9) provide a list of ten a list of twenty-first century skills across four categories:

*Ways of Thinking*
1. Creativity and innovation
2. Critical thinking, problem solving, decision making
3. Learning to learn, Metacognition

*Ways of Working*
4. Communication
5. Collaboration (teamwork)

*Tools for Working*
6. Information literacy (includes research on sources, evidence, biases, etc.)
7. ICT literacy

*Living in the World*
8. Citizenship -local and global
9. Life and career
10. Personal and social responsibility- including cultural awareness and competence

How can environmental planning educators respond to the challenges they are facing while delivering the twenty-first century skills Gen Y needs? In designing environmental planning program curricula the tough choice between environmental knowledge and general skills/implementation methods can be overcome by striking a good balance between them. However, this is easier said than done. Experiential learning and project-based courses such as studios can deliver environmental knowledge and principles along with the practical skills that will lead to jobs while stimulating ways of thinking, and working, tools for working and living in the world. Properly conceptualised, designed and delivered, planning studios can provide students with substantive knowledge about environmental planning and a range of generic skills including communications skills, creative problem solving and critical thinking. The feedback received from students in Mid-semester Student Experience and Student Evaluation of Course Surveys for studio courses taught at Griffith University indicate that studio pedagogy is effective in overcoming some of the challenges of environmental planning education and delivering twenty-first century skills.

One of the difficulties of environmental planning education is integrating environmental science content into the curriculum. As foundations of the advanced planning content, these courses are usually delivered in the initial years of the degree and this may put off students who have a particular understanding of what planning is and what it involves. Even students who persist in the degree complain about the perceived irrelevance of these subjects. Alumni who work in resource management agencies or environment focused jobs appreciate that knowledge later on but one way to illustrate its relevance early on is integrating it with planning knowledge in studio projects. One of the key benefits of studio is integration and synthesis of knowledge and skills in a field example (Hollander and Thomas, 2009). Planning studios require students to draw upon personal knowledge and experiences as well as their academic learning from all their courses. Testimonials from students confirm that students acknowledge and appreciate the studio pedagogy because it gives them opportunity to see the linkages between the knowledge they gained through their previous coursework and allows them to integrate these in a studio project and put it into practice: ‘Through the studio course the lecturer was able to link the information we had received and the skills we had developed in our degree and put them to use in the development of a professional document.’

Studio projects also provide the perfect opportunity to illustrate the role of science and scientific information in environmental decision making. Using real world problems in hypothetical or real settings also allow students to see the role of values and the need to balance competing claims of environment, economy and equity. Discussions on political viability of proposals illustrate the difficulties planners face in the workplace to planning students in the studio.

The literature highlights negotiation, arbitration and conflict resolution (Deknatel, 1984; Niebanck, 1993; Susskind, 2000), and critical inquiry among *generic skills* important to environmental planners. Plan making, evaluation and related tasks that are at the heart of planning studios involve creative and critical thinking and analysis (Higgins, 2009; Balsas, 2012). Developing critical thinking ability is among the learning outcomes of studio courses (Németh and Long, 2012). Furthermore, studio pedagogy often involves team-based learning through which students learn to collaborate, understand group dynamics and develop interpersonal cooperation skills (Németh and Long, 2012; Senbel, 2012). Problem solving element of the studio pedagogy helps students develop skills in negotiating oppositional viewpoints and dispute resolution (Higgins, 2009; Németh and Long, 2012) and 'dialogical experience' in the negotiation of solutions within and across teams (Senbel, 2012).

Studio courses may include dealing with ethical issues as a learning outcome (Balassiano, and West, 2012) and aim at teaching students to assess planning outcomes based on a set of values such as justice or sustainability (Németh and Long, 2012). As such, through the selection of projects, *foundational knowledge* areas of sustainability, environmental justice and environmental ethics may be explored through a studio course. Project discussions are a valuable way of discussing role of values in decision making. Through the projects in a planning studio students are challenged to balance the competing claims of environment, economy, and equity and how science is included in the process. In this simulated planning environment they understand the various roles of the planner and develop their personal professional ethics (Németh and Long, 2012).

Studio pedagogy is also effective in integrating the twenty-first century skills. Planning studios are student centred learning and teaching environments characterised by problem based learning and learning by inquiry pedagogies which emphasise active independent student-focused learning. Students are required to work collaboratively with input from the profession and staff where the staff: student ratio is typically high (see Zehner et al., 2009). The main value comes from shifting the role of the student from passive receiver of information to an active and engaged learner. Studios provide the opportunity for teachers and students to explore problems and identify and reflect on solutions in a reiterative way. Students learn from their teachers' experience, from their peers, their application of concepts and they develop deep understanding by doing. While the learning by doing nature of the studio projects can initially be frustrating to students who are used to being told how to do things, once they get used to it they appreciate the freedom this gives them and enjoy being creative and innovative: 'I found the detailed, useful, and carefully-selected feedback regarding projects beneficial to my learning, as feedback would guide and develop my thinking as opposed to provide me the "correct" answer'. Students also enjoy the practical nature of the studio projects that allow them to 'problem solve real and relevant issues' and 'require critical and strategic thinking'.

Studio pedagogy relies on group work and through this teaches communication and collaboration skills (Higgins, 2009; Hollander and Thomas, 2009, Long 2012). When groups work students enjoy the experience and cite group work as one of the things they enjoyed most about the studio: 'Group work as you get to have different people's opinions and ideas you might not have thought off'.

One essential learning outcome of studio courses is improving students' research and communication skills (Long, 2012). Project based nature of the studio and its focus on a real project makes the learning directly relevant to the professional workplace and makes students highly employable.

## 6. Conclusions

The scant literature on environmental planning education highlights a number of challenges: diversity of skills and knowledge that needs to be covered, the role of science and values in environmental decision-making, and political viability of solutions. Added to this is changing economic structure and the rising need for a workforce equipped with a different set of skills. Studio type courses relying on project-based learning where foundational knowledge and planning principles can be integrated as well as practical skills and principles are applied to a real project can provide an efficient way of teaching the two sets of knowledge and skills necessary for an environmental planner.

Recommendations on dealing with the other challenges focus on the topics and skills that should be included in the environmental planning curriculum. A review of the literature on suggested emphasis in the curriculum shows agreement on the core themes that are deemed important in environmental planning education. Social and environmental justice forms one of the three pillars of sustainability. Both environmental ethics and environmental justice emphasize the importance of values in planning. Planner's role in the process is also a recurring theme. The skills that are emphasized include critical inquiry, negotiation, arbitration, and conflict resolution.

While recommendations are aplenty in terms of what should be included in the curriculum, there are no studies that confirm or reject the importance of these topics and skills in relation to environmental planning education. This points to a need for additional studies that can not only test these suggestions but also evaluate them. It is notable that of the three foundational knowledge areas of sustainability, environmental justice and environmental ethics found to be cornerstones of environmental planning education PIA accreditation policy mentions only principles of sustainable development in its discussion of supporting knowledge are of environmental planning and does not mention environmental ethics or justice at all.

In this paper we have argued for the importance of a studio teaching and learning environment as an important and valuable component of environmental planning education. The studio, we suggest, is just as relevant today for teaching environmental planning to Gen Y students as it ever was in previous times, as a method of teaching planning to generations of Boomers and Gen X students. And it will remain core to educating environmental planners in future generations.

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# DILEMMAS IN THE DEVELOPMENT OF A CURRICULUM FOR URBAN PLANNERS IN A GLOBALIZED WORLD

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Key words: planning education; curriculum development; international development agenda

*A number of dilemmas present themselves in the development of a new curriculum for urban planning and management for a changing target group from the global south. These dilemmas include the definition of a proper balance between general planning knowledge and skills versus specialized knowledge and skills; between theory and practice; between an academic versus a more professional orientation; and between examples and case studies from developing countries versus examples and case studies from European and North-American countries.*

*Based on actual experiences, this paper discusses the dilemmas in designing a curriculum for a changing target group as well as the challenge to develop a curriculum for the urban planner in a globalized world. It further discusses the potential of the international development agenda as a structuring element for the development of such a 'global' curriculum.*

*A number of good arguments exist to use the international development agenda in the development of such type of curricula. At the same time it underlines the importance of the development of a critical view towards the same agenda to ensure a proper link with the local practices of urban planning and management.*

*The paper invites for a further exchange of experiences and a debate on the dilemmas to develop a global curriculum for a global target group.*

## 1. The challenge of a global course in urban planning and management

Planning education programmes and curricula, and urban planning and management courses in particular, vary around the world and present them in many different dimensions, including disciplinary orientation; academic level and orientation; curriculum contents; adopted planning models; level of contextualization; importance given to technical, analytical and communication skills among others.

Over the years urban planning and planning curricula world-wide have seen an evolution form a design, survey and architecture orientation towards a more comprehensive curriculum including social and economic scientific concepts and methods, as well as the integration of the use of modern technologies like GIS to various degrees (e.g., UN-Habitat, 2010; Frank, A. I. et al., 2014).

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At the Faculty of Geo-Information Science and Earth Observation (ITC) of the University of Twente, urban and regional planners world-wide have been educated with a strong emphasis on the acquisition, analysis and use of geo-information.

Educational programmes at ITC have been constantly adapted and modified to cater for the changing needs of the target groups from mainly developing countries and emerging economies. Given this background the recent review of the MSc course Geo-information and Earth Observation for Urban Planning and Management (UPM) is used as a case to illustrate and analyze the challenges in the development of a curriculum in the field of urban planning that wants to be attractive, up-to-date and relevant in an international global context. Major questions addressed in this paper:

- What are the challenges for a developing a curriculum on urban planning and management for a wide international audience, particularly for individuals coming from the south?
- What is the potential of the international development agenda to offer a frame and point of reference for the contents and setup for such a curriculum?

One of the obvious challenges facing the development of a curriculum that is relevant to a wide international audience is satisfying the needs of a group with major differences in economic, social and cultural background; legal planning framework; levels of technological development; and human and financial resources. In other words a curriculum for a wide international audience encounters the difficulty to embed the contextual knowledge, which “”…….*is comparatively easy to relay in a one nation-focused classroom; but when students come from many countries, teaching of context becomes much more difficult* ..(UN Habitat, 2010).

This challenge is further enhanced when the students enrolled in such a programme have less of a professional background coupled with working experience. A recent change at ITC is the swift of the student population from a highly motivated mid-career professional to a fresh graduate with a strong academic ambition, i.e. students who recently have completed their BSC and immediately continue with their Master degree, often with the further motivation to pursue a PhD.

The so-called mid-career professional has the potential to bring his or her own working experience and challenges, which if appropriately utilized in the implementation of the course contributes to contextualize the learned knowledge and skills and increase the relevance of the learning process. Furthermore the mid-career professional stimulates the teaching staff to remain critical towards the taught curriculum as he or she demands knowledge, skills and competences relevant for their further professional and academic development.

A growing gap between theory and practice as identifief by Kunzmann, and Koll-Schretzenmayr (2015b) is a further challenge in the development of a contextual relevant curriculum. This growing gap is attributed by the authors to the decline in appointments of planners with a professional experience in academia as well as to accreditation and internal university evaluation, which often favours theory rather than practice.

## 2. Urban planning at ITC

Urban and region al planners world-wide have been educated since decades in the acquisition, analysis and use of geo-information at the Faculty of Geo-Information Science and Earth Observation (ITC) of the University of Twente.

Educational programmes at ITC have been constantly modified to cater for the changing needs of the target groups from mainly developing countries and emerging economies.

Urban planning at ITC is not a stand-alone planning course but an orientation and specialization of a MSc degree programme on Geo-information and Earth Observation. The MSc programma offers a 118 EC programme in a modular setup in 18-months (most MSc programmes of a similar study load in Europe are offered in 2 years). The programme consists of 23 modules: the first three modules are dealing with the core of the MSc degree programme, i.e. geo-information and earth observation; followed by a block of 7 modules properly dedicated to the specialization, e.g. urban planning and management (5 other specializations are being offered, see: http://www.itc.nl/Pub/study/Programmes/Master-of-Science-degree ). The subsequent 5 modules deal with academic research skills and advanced MSc subjects (elective). The last half year of the programme is dedicated to individual research through eexecuting research (often with fieldwork and/or information collection in the home country or country in the south where on-going projects with staff involved provide the frame for the MSc research).

Predecessors of the ITC MSc degree programme on Geo-information and Earth Observation for Urban Planning and Management in previous decades were very much focused towards surveying, mapping and data collection on human settlements. Throughout the years this focus has evolved towards more spatial analysis and decision support in the context of urban planning and management. Where core elements of the programme always remained s the use of spatial data and its specific aim at students from countries that are “economically and/or technologically less developed”.

The latest curriculum departed very much from a twin set of objectives of urban planning and management: i.e. the understanding of the nature and dynamics of the urban area and the development of interventions, which were taken as part of the main objectives for the new course. At the same time these two elements (analysis and developing interventions) were also an important structuring element in domain block of the course. Although for the lecturers and staff these twin objectives provided a logic structure, students did not recognize very clearly this structure and did not consider it very supportive in their learning process. Moreover, also staff over the years did not adhere very strictly anymore to the main structuring logic of the programme and elements of analysis and planning were interwoven in a number of thematic subjects.

Since 2006 the latest curriculum of the MSc degree programme on Geo-information and Earth Observation for Urban Planning and Management (UPM) has been implemented relatively successfully (positive evaluations from students; joint education with universities abroad, particularly Indonesia,; and a positive assessment as part of the renewal of the former accreditation of the MSc degree programme). However, since 2006 structural changes have not been introduced and particularly staff of the programme considered it opportune to have a closer look at the present curriculum to maintain and to maintain and where possible increase its relevance, attractiveness and quality.

## 3. Development of a new curriculum – description of process

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To achieve the objectives of the development of a new curriculum a working group was formed consisting of 4 staff members, who together developed the following activities:

- Review of the present curriculum. The strong and weak points of the present curriculum were analyzed, among others based on previous course and module evaluations and curriculum development workshops as well as on the suggestions and feedback from the accreditation process 2014-2015
- Review of the research agenda in the field of urban planning and management in order to identify themes and research developments, that could be considered in a new UPM curriculum
- Review of the International Development Agenda. Review of the International Development Agenda should identify the main relevant issues and trends in the field of UPM which could to be addressed in the revised curriculum. Particular attention is given to those themes and sectors that have a clear opportunity for funding and sponsorships.
- Review of comparable curricula. Objective of this review was to identify interesting innovative contents and alternative educational approaches that possibly are interesting to be adopted within the modules 4-10 of UPM. Similar courses in Anglo-Saxon countries, the Netherlands, Germany; elsewhere in Europe; and in Latin American context were evaluated. This review also include the identification of relevant GI topics to be considered in the UPM course
- Alumni consultation. In December 2014 a set of questions was made available on-line to a selected group of alumni who all had taken part in the UPM course during last 8 years.
- Curriculum development workshop with staff and students in May 2015

In the following a number of results from these activities are being discussed; after which the latest proposed structure of the course will be presented.

## 1. Alumni survey – most salient features – some figures

In the review of the curriculum a survey was conducted among a selective group of alumni. A total of 92 UPM alumni (graduated in period 2008-2014) was purposively selected and approached by those staff members who still had some contact with these alumni. This approach certainly introduce some bias in the survey; but also made it possible to receive serious responses and noticeably very elaborated answers on the open questions. 52 UPM alumni responded , i.e. a response rate of 57%. The age of the respondents was mainly in the category 30-40 years (71%) and gender distribution was 50:50.

The respondents came predominantly from research, teaching and academic organizations (60%) and a considerable smaller group from public agencies (25%). This might be due to bias in the respondent selection, i.e. staff particularly maintains contacts with alumni through joint research projects or PhD research rather than with alumni from the professional field.

Further, the field of employment is predominantly urban planning (75%) followed by infrastructure and transport (41%). Architecture (25%) and land administration (19%) are reasonably represented. Functions vary from planner to academia. Almost 20% of the respondents were in leading positions.

These fields of employment are in line with the background of the students of the last 3 academic years. Students of the last 3 academic years have either an background in urban and regional planning (28%) or in architecture and planning 23%, followed by civil engineering.

Surprisingly, academic skills were mentioned most frequently (40% of the respondents) as one of the most useful elements of the course, followed by GIS and spatial analysis. Planning, policy and management was mentioned by about 20% respondents as the most useful. Remote sensing came clearly out as the element that was mostly mentioned as the least useful element of the course.

The above outcome in relation to the usefulness of GIS and RS respectively was largely in line with the response on the use of GIS and RS in the current of the respondents: 71% use GIS regularly or most of the time (RS: only 31%), while RS is used sporadically or not at all by 70% of the respondents.

Interesting enough among the missed subjects "planning-planning systems-planning theory" was most mentioned, followed by "land use (change) modelling" and "policy studies and urban policies". Particularly the call for more attention to subjects as "planning-planning systems-planning theory" and "policy studies and urban policies" was surprising as the respondents and the common target group applies for education at ITC because of the use and application of geographical information (in the context of for the urban planning).

The survey endorsed a number of assumptions and points of departure of the most recent curriculum review. The main motivation and aim of the UPM course was clearly reconfirmed through the survey, i.e. the main focus is on the application of geographical information in urban planning and management. That is students apply to study urban planning and management at ITC not to study urban planning as such, nor the geographical information technology as such. The use and application of geographical information is the clear niche of the UPM course offered at ITC, where the alumni very much appreciate the balance between theory and practice. Students expect to learn the advanced use and new development and application areas of GIS and RS technologies.

Furthermore the real world orientation coupled with the learning of practical skills is seen as an asset of the curriculum. It was repeatedly suggested to maintain and where possible enhance the use of real-world experiences through case studies, field research on location, study trips; guest speakers; and internships. Learning academic skills and critical thinking were explicitly mentioned a number of time as assets of the course.

Finally, it became very clear that the applicability of the course for developing countries and the international learning environment were very much appreciated by the alumni and they reiterated various times that these elements should be maintained and where possible further enhanced.

## 2. International Development agenda – sources; how and what to incorporate into the curriculum

As was outlined in the introduction one of the obvious challenges facing the development of a curriculum that is relevant to a wide international audience is the embedding of the contextual knowledge. As Habitat (2010) states: "the *'one-world' approach to planning education seeks to bypass these challenges by fundamentally altering planning school curricula to provide internationally relevant training regardless of the anticipated future location of the student's practice"* In the redevelopment of the UPM curriculum

it was decided to explore the international development agenda as a structuring element and content area to make the curriculum relevant for a wide audience.

Why is it interesting to look at the international development agendas in relation to the redevelopment of the UPM course?

These agendas kind of represent the thermometer of what, according to the international donor community, are the key problems and challenges in contemporary urban development in the south. They are the result of a continuous debate among donors and recipients on where to put budget priority for development in general and the urban sector in particular. They therefore offer an interesting perspective of what the most stressing issues to be addressed are. By design, these are (or at least should be) those issues that cities in the south are trying to come to grips with. UPM, being a programme that aspires to educate people to be able to analyse and solve problems in the urban sector, particularly in developing countries, has a clear problem orientation, which is why it is interesting to take note of this perspective.

It is also interesting to look at international development agendas in a broader sense. If we base ourselves on the principle that our work in research, education and projects needs to be aligned thematically, it makes sense to look at which themes are "hot" and where therefore funding opportunities may exist. A thematic development of UPM that aligns with some of the big themes in the international development agenda can help direct our thematic development and can help mobilize projects and resources, for research and capacity building, but potentially also for student fellowships.

In reviewing these international agendas we are looking for themes that are emerging, that are of interest and that are related to the expertise of the faculty involved. The overall agendas and specifically urban agendas of the following organisations have been reviewed: The Netherlands Ministry of Foreign Affairs, The World Bank, UN Habitat and the UN overall Sustainable Development Goals.

The word clouds below gives a graphical representation of themes extracted from these overall development agendas (left) and the urban development agendas (right) (words that appear more often in these agendas are in a larger font).

Fig. 1 Key words of overall development agendas and of urban development agendas [**proper sources to be added**]

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Looking at these word clouds, it is interesting to note a couple of things:

In the general development agendas the traditional theme of poverty is still very prominent, however, there is equal attention to the theme of equality, which can be interpreted to have a similar meaning, but may also be interpreted a bit more broadly to be connected to all kinds of sectoral issues such as living environment, access to basic services of water and sanitation, health, transport etc. This has been an area of focus for the UPM course since its inception and is still of interest.

Moving to the urban agendas, we can basically observe a lower, varied level of words and a higher level with a limited number of words that feature prominently. At the lower level we can distinguish between words that represent more qualitative notions such as liveable, inclusive, green, safe, and words that represent more sectoral areas where challenges need to be overcome such as the economy, land, transport, infrastructure, buildings etc. These represent the more traditional sectoral areas that still draw a lot of attention in the development agendas.

The prominent themes are a mix of key challenges that cities need to overcome or refer to a desired future urban state. Here we see more traditional ones such as slums, housing, services, planning and governance, but also with contemporary ones that feature very prominently, most notably risk and resilience, reflecting the increased challenges of cities to respond to climate change and other hazards. In order for UPM students to be able to better plan cities and making them more resilient to hazards, and thus reduce urban risk, these themes warrant inclusion in the new course.

## 3. Research agenda

Various authors have analyzed recently emerging research agendas in spatial planning, including both novel areas of research and important shifts in the direction of a research area (Banco et al. 2009a, Blanco et al. 2009b). They claim that the challenge for planning schools is to reflect critically on these changes and develop long-term research agendas that can better position the domain of spatial planning field in society and academia, and providing a basis for state of the art educational programmes. The following new and emerging research topics are to be included in a the new ITC urban planning programme.

The first and probably most relevant issue is the increasing number of occurrence and severity of natural disasters including climate change. Worldwide the number of disasters has almost quadrupled during the past 30 years and there is a widespread consensus that urban disasters are increasing exponentially. Moreover, the role of cities has changed from places of refuge and buffers against environmental changes to hotspots of disasters and risk (Wamsler, 2014).

Secondly and strongly related to the former in several aspects, the world is becoming urban. Since 2008 more than half the world's population is living in cities and urbanized areas and this trend is continuing. It is expected that 60 percent of the world's population will live in cities by the year 2030 and 70 % by 2050. Moreover, also the number of large cities and the size of the world's largest cities are increasing. The number of cities in the world with populations greater than 1 million increased from 75 in 1950 to 447 in 2011. Consequently, an state of the art educational programme needs to put a strong focus particularly on

the relationship and interplay between these two emerging issues, which are in turn also strongly affecting other important sectors of urban planning, such as health, poverty, and spatial equity and justice issues.

Both issues mentioned above are particular relevant in the rapidly growing cities of the global south. Much of the disasters are taking place there resp. having more severe impacts, and particularly climate change adaptation is a burning issue in global south countries and cities. On the other hand, we have to acknowledge, that the "urban planning ideals and the corresponding organisational and planning models of e.g. African cities are inherited from the Western countries that colonised them". With respect to this Watson (2009) points out that national to local planning systems of the global south "have changed very slowly and some hardly at all, with many approaches and systems reflecting planning ideas from the global North simplistically transferred to Southern contexts through complex processes of colonialism and globalisation". Contemporary debates on a new planning agenda for the global south and instruments such as south-south collaboration for mutual learning and knowledge transfer are to be considered in a new curriculum.

Another upcoming new research relevant in the global north as well as in the global south is labelled with the slogan 'health in all policies' (Ottawa Charter for Health Promotion 1986). Traditionally urban planning has had a strong focus on health issues (Rodenstein 2012). One goal of planning was to provide more or less healthy living conditions for the rapidly growing cities during industrialization since the 19th century. Nowadays we see this primal vision of planning having a strong renaissance. Several studies and publications related to health issues stress the importance of place and space in health related research and the need for a better integration of public health and spatial planning (Barton and Grant 2013, Abernethy 2014).

## 4. Other comparable curricula

As a first part of the curriculum redevelopment, other MSc programmes in the field of urban planning were reviewed. Starting in the Netherlands, the review covered several Msc programmes that offer MSc courses with an urban focus to Dutch and international students in English language. The main key figures and setups of the Dutch Urban MSc courses are (March, 2015):

- IHS Rotterdam: MSc in Urban Management and Development
  Duration 12 months (72 ECTS)
  The programme is divided in three periods, i.e. a core period, the specialization period and the thesis period.
- UVA Amsterdam: MSc Urban and Regional Planning
  Duration 12 months (60 ECTS)
  The program is split in several planning topics, e.g. planning methodologies, innovative international planning practices, and ends with a thesis project
- UVA Amsterdam: MSc in Urban Studies (Research Master)
  Duration 24 months
  Prepares students for PhD, the setup is multidisciplinary, the programme is a mix between core topics, electives and contains an exchange semester abroad, it ends with a thesis or a research article.
- Delft University: MSc of Science Architecture, Urbanism and Building Sciences
  Duration: 24 months (120 EC)

Students can choose between five tracks, the programme contains elements of scale in planning (neighborhood to region) and topics based on upcoming trends (e.g. congestion, climate change).

- University of Groningen: MSc in Environmental and Infrastructure Planning
  Duration: 12/24 months (120 ECTS)
  It is also offered as double degree course for Indonesian students (24 moths). This students spent the first twelve months in Indonesia and the second twelve months in the Netherlands. Planning topics are treated at different levels from local to central planning.
- University Utrecht: MSc Human Geography and Planning
  Duration: 2 years (120 ECTS)
  The course is split into theory and planning methods, with also a study abroad element, Master's thesis research project. The course ends with a scientific paper.

The course durations range from 12 months to 24 months. In particular research oriented MSc courses that aim to prepare students for a future academic carrier have durations of 24 months. Innovative or at least interesting aspects in the reviewed courses are the inclusion of academic exchange (semester abroad) and to end the course with an academic paper. The extent to which these courses deal with urban planning in the Global South vary, only IHS has a very specific focus on the Global South but the course focuses on planning theory and practices and does not cover much the use of geo-information for planners. The set-up of the courses has often elements of core mixed with elective topics. However, the structure of the courses differ, some have a sequence of topics, other follow a planning cycle or a addressing planning topics at different scales.

To get a better overview the review was extended to examples beyond the Dutch MSc. But focusing on MSc taught in English language. Also in the UK courses have often the setup to include core and elective topics, e.g. at UCL the course is having 75% core components and 25 % electives where students can choose from a large set of topics. Also many programmes in the UK offer MSc programs within 1 year, but they also offer the option of a flexible duration. It is possible to study full time (e.g. 1 year) and part-time (2-5 years). A very similar programme with a strong focus on the Global South is offered by SPRING Dortmund University as a 2 years master. The setup is a 1st year in Dortmund, 2nd year at a partner universities (Chile, Ghana, The Philippines, Tanzania). The programme structure follows very much the planning cycle from analysis, planning to implementation. The Urban Management Program of the Berlin Institute of Technology (TU Berlin) has a similar focus. Within a period of 1.5 years to course focuses on development situations in the South and transition countries. The Mundus Urbano programme, advanced Master of Science programme specialising in International Cooperation in Urban Development, is jointly offered by four European Institutions and promotes internships.

Based on a review of some further European MSc courses in the field of urban planning and management, a further list of important and upcoming topics for planners in the Global South was identified:

- Gender and development with a geographical perspective
- The politics of housing and informality and low cost housing
- Spatial economic analysis
- Crime and control
- Urban design for development

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- Disaster risk reduction in cities and post disaster recovery planning
- Critical issues in mega infrastructure investments
- Adapting cities to climate change in the Global South
- Transport policy and finance
- Territorial governance and policy analysis
- Smart Cities

Besides a review of planning courses also GIS course were included into the review to derive a list of GIS topics that have gained importance in the last year. The following topics have been extracted to have potential to be relevant of urban planner and young planning academics:

- Geodesign and Geovisualisation
- 3D GIS
- Web & Mobile GIS
- Open Source GIS
- Big Data
- Artificial intelligence
- Machine learning and decision trees for image analysis
- Web Based GIS

Based on the review of other MSc programmes, interesting and relevant ideas for structuring an urban programme were synthesized:

- Structure based on planning cycle/process
- Structure based on major planning topics (e.g. mix between theories and methodologies)
- Structure based on scales in planning (national, regional, local, neighborhood)
- Structure based on future city models – to deal with global challenges
- Semester versus module structure or mix (e.g. Berlin)
- Core versus optional/elective modules (e.g. UCL)
- Mix between theory and studios
- Integration of study abroad and/or internships

Thus in conclusion the structure of programmes vary, some following a topic structure or according to scales while others structure according to the planning cycle. Some programmes are more professional oriented while others have a very strong research focus and aim preparing students for research and a PhD. Most programmes mix core and elective topics and mix theory and methods. Many programmes have study aboard, exchange or internship components, which brings an added value for students and increases future employment opportunities of graduates.

## 5. Inputs from present students

Students recognize and reiterate that there main objective for studies at ITC is the learn GI in the context of urban planning and do this in a truly international environment. The niche is learning geo-information science in a context of urban planning and management

## 6. A new set up of curriculum Master of Science degree in Geo-information Science and Earth Observation in Urban Planning and Management (UPM)

Based on the analysis of the various reviews a curriculum is being proposed which is relying to a large extent on themes of the international development agenda. This curriculum is further endorsed by the research agenda in the field of urban planning and management, from which we can learn the importance of addressing the link between growing cities and the interrelationship with disasters and climate change; but also the need to build in mechanisms of mutual learning and knowledge exchange to contribute to a relevant planning agenda. From other curricula a further list of important and upcoming topics for planners in the Global South as well emerging GIS topics that have gained importance in the last year and are of relevance for urban planners.

The proposed structure consists of the following modules:

M4: Introductory module discussing the urban planning and policy process, the roles of different actors in this process and the use of spatial methods and techniques. Introduction to the themes and contents of modules 5-10.

M 5-10: 5 thematic modules and a project module. Methods and techniques are interwoven in such a way that a whole palette will have been offered at the end of M10.

Module 5. The sustainable city

Module 6. The inclusive city

Module 7. The competitive city

Module 8. The compact city

Module 9. The resilient city

Module 10. Final project module

As UPM is meant to be a planning programme, we want to start off module 4 with a focus on planning. It is important that students get a sufficient and shared understanding of historical and contemporary thinking on planning and how it is practiced in different contexts and how spatial information is contributing. We also want to develop process thinking with our students. Not only do they need to be aware of abstractions of the planning process and what is commonly done in different parts of this process, they should also recognize the role of various actors and appreciate GI based methods and techniques that can be used. The experience in module 4 is also meant to help the students to better understand the policy directed thematic discussions in the consecutive modules and the linkages between them.

Although the sustainability concept has been around for some time, it is still a useful concept for students. It helps them to appreciate the multi-faceted nature of development and to understand that development has different connotations. The SD idea is still very much central in the new development agenda of the

UN and in that sense of particular importance to students from the developing world. Students need to be made critically aware that there are many ways to measure sustainability and that the concept is therefore rather difficult to make concrete, but that it has its value in the urban policy arena.

A key scientific and policy issue is the creation of inclusive cities. A lot of work is ongoing in the PGM department in terms of how we can analyse, evaluate and improve the position of disadvantaged groups in society in terms of their overall well-being and perspectives and their access to basic services. In this work a variety of spatial and statistical techniques are of use that students need to be made aware of and that have value for other parts of the curriculum.

In a globalizing economy, cities are increasingly challenged to be competitive and offer a high quality living environment, affordable housing, attractive conditions for businesses and a varied set of accessible services. A key condition to achieve this is a proper functioning of the land market. Questions of access to land, land taxation, flexible land arrangements, tenure security and the functioning of the housing and rental market are all underlying the promise of success for urban development strategies. On top of this, strategies of infrastructure and residential, commercial and industrial development will be the key determinants of achieving economic growth. Understanding the anticipated effects of these proposed interventions through a variety of economic and environmental appraisal techniques is essential learning for our students.

A central discussion in urban planning relates to how we shape our cities. Where do we plan the different functions to achieve our strategic objectives? Students will learn that various spatial configurations of cities have great impact on the spread of activities and the demands placed on the transport system but also that it works the other way around: how the transport system is developed has a great influence on how cities are shaped and functions located. This understanding, in a dynamic urban growth context, will be addressed in the compact city module. Students will get acquainted with relevant theory and practical application of land use and transport models that will help them to analyse and quantify the current situation and future development scenarios.

Urban dwellers are increasingly under threat from natural and man-made hazards. Cities need to develop strategic choices to avoid high levels of hazard and target development in such a way that risks are contained and are manageable. It is important therefore that urban planners are able to understand and analyse urban risk and are able to direct spatial planning at making cities more resilient.

In a final project module, the students will work in a real case setting on an urban development/planning problem in which a number of important concepts/methods and techniques that have been addressed in the curriculum can be brought into practice. In this work, the students need to demonstrate that they are able to describe, analyse and discuss a planning problem and come up with well-motivated plans. The emphasis will be on students' ability to critically to discuss and explain the choices made and to critically reflect on their proposed course of action.

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## 7. Remaining dilemmas and challenges in curriculum development and implementation

In this paper we identified a number of challenges in the development of the a curriculum on urban planning and management for a wide international audience, particularly for individuals coming from the south. The challenges were illustrated with the experience of the development of a 18-month MSc curriculum on MSc course Geo-information and Earth Observation for Urban Planning and Management at the Faculty of ITC, University of Twente, Netherlands.

- Applicability and contextualization of the knowledge and skills
- A changing audience from less professional towards more academic
- Growing competitive global environment
- Tightening demands from accreditation frameworks
- Weakening links with the planning practice, i.e. a growing gap between practice and theory
- Higher priority given in academia to research excellence rather than to education
- Accreditation and quality control schemes
- The tension between rational comprehensive planning approaches and the planning practice with prevailing uncertainties, power relationships, conflicts and complexities.

The paper shows the potential of the international development agenda as a frame and point of reference for the contents and setup for such a global oriented curriculum. International development processes and debates set an agenda for a number of academic and policy developments that provide the frame in which the graduates have to operate. Funding schemes on which graduates and their organizations depend to a large extent are guided by the themes and priorities set in the international development agenda.

Departing from the international agenda to identify the main relevant topic areas in the curriculum poses the risk of implanting the agenda of the elite in international development policies. As said above, many alumni are confronted with the international development agenda. This requires students being conversant with these themes in a critical manner. A global oriented curriculum should therefore offer ample room for developing a critical attitude so that students could relate these themes to their own local needs as well as linking their local planning needs to the international development debate.

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# NEW PERSPECTIVES IN PLANNING EDUCATION: HOW PLANNERS CAN COLLABORATE IN INTERDISCIPLINARY WORK ENVIRONMENTS

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## Abstract

The ever-networking contemporary society has impacted on urban areas, making their physical, social, economic and organizational dimensions more complex. Consequently, sustainable spatial development has become a challenging aim, which requires planners to collaborate with professionals from other disciplinary domains. Many urban sustainability problems necessitate joint action of different practitioners/researchers (representing public and private institutions and/or non-governmental organizations). Their involvement may range from the physical/design dimension to technical/engineering, sociological, economic, environmental and organizational dimensions. These public and private actors explicate their standpoints, negotiate, and develop a common response to a specific problem.

Given the increasing need for collaboration with different professionals, planning education should be improved in such ways to prepare students for interdisciplinary work. Furthermore, today city planners increasingly work in international projects/ institutions requiring a global as well as a multicultural understanding of urban problems. Both interdisciplinary and multicultural approaches should be incorporated into planning education.

This study portrays the findings of an international interdisciplinary programme (an Erasmus Intensive Programme), where 45 master students from 9 different countries with different disciplinary backgrounds (city planning, architecture, sociology, geography, territorial sciences) came together. They worked in teams to develop sustainable spatial development projects for an urban area in Ankara. Based on questionnaires with students, the study shows students' perspectives about interdisciplinarity; what new perspectives they learned from one another, what challenges they faced. The outcomes help us understand the achievements and challenges that interdisciplinary experiences present, provide lessons in preparing similar programmes, and better prepare planning students for interdisciplinary work environments.

## 1. Introduction

The ever-networking contemporary society has impacted on urban areas, making their physical, social, economic and organizational dimensions more complex. Consequently, sustainable spatial development has become a challenging aim, which often requires planners to collaborate with professionals from other disciplines. Many urban sustainability problems necessitate joint action of different practitioners and researchers from public and private institutions and/or non-governmental organizations. Their involvement may range from the physical/design dimension to technical/engineering, sociological, economic, environmental and organizational dimensions.

Obviously urban planning and design does have a domain of its own, it involves in the physical organization of urban space starting from the regional scale and going down to the neighbourhood

and even smaller spatial scales (Balaban et al. 2014). The increasing need for joint action with other professionals does not make planning an "interdisciplinary" area; planners collaborate with others keeping their disciplinary position and expertise like other professionals do. Having said that, given the increasing need for collaboration with different professionals, planning education should be improved to prepare students for interdisciplinary work. Furthermore, today city planners increasingly work in international projects and institutions requiring a global as well as a multicultural understanding of urban problems. There is a need to incorporate both interdisciplinary and multicultural approaches into planning education.

Today many problems do not clearly fall into the research and practice of one single discipline; they stand in a place where several disciplines could intervene. There are three different modes of collaboration of multiple disciplines so as to tackle such problems and phenomena: First is the *multidisciplinary* approach, involving researchers from two or more disciplines who work jointly on a common problem, without modifying disciplinary approaches or developing synthetic conceptual frameworks. The second is the *interdisciplinary* approach that uses an innovative conceptual framework to combine and modify two or more disciplinary approaches. The third is the *transdisciplinary* approach which involves non-academic practitioners working with academics on real-world problems (Tress et al., 2003; cited in Graybill et al., 2006).

Another set of definition is developed by Rosenfield (1992). He defines multidisciplinary projects as the ones in which researchers from different fields contribute methods and ideas of their own disciplines towards a research question. Meanwhile, interdisciplinary projects require closer collaboration of researchers from different fields who work together on a common problem. In transdisciplinary projects, researchers from different fields work closely together on a common problem for a longer period, and develop a shared conceptual model that integrates and transcends their disciplines (Rosenfield, 1992; cited in Mitrany and Stokols, 2005).

There are obviously certain differences in these sets of definitions. For some other study, it would be necessary to differentiate between the approaches and discuss them separately; however, this study aims at emphasizing the increasing "collaboration" of planners with other professionals for multi-, inter- and/or transdisciplinary purposes. Therefore, it brings these approaches together since all of them imply collaboration of professionals from different disciplines, and uses the term "interdisciplinarity" to refer to all of them.[1]

This study, after reviewing the literature on interdisciplinarity in planning education, elaborates the achievements of an interdisciplinary and international programme (an Erasmus Intensive Programme) in this respect. The programme was held twice in Ankara, each of which was organized with the participation of approximately 45 students with different disciplinary backgrounds from 9 different countries. They worked in teams to develop sustainable spatial development projects for an urban area in Ankara. Based on questionnaires with these students, the study shows students' perspectives about interdisciplinarity in a work environment; what new perspectives they learned from one another, and what challenges they faced. The outcomes help us understand the achievements and challenges that interdisciplinary experiences present, provide lessons in preparing similar programmes, and better prepare planning students for interdisciplinary work environments. The study concludes with implications and recommendations for planning education.

[1] There are also other terms in the literature such as interprofessional and cross-disciplinary collaboration. We have chosen interdisciplinarity, as it is more commonly used in Turkey.

## 2. Interdisciplinary approach in planning education

As mentioned before, complex urban problems require collaborative work of different professionals. Sustainable development, environmental degradation, and brownfield redevelopment are among this kind of problems and phenomena (Mitrany and Stokols, 2005). As Davoudi (2010, 34) argues, *"interdisciplinary perspectives provide a useful means of dealing with complex or 'wicked problems' which cannot be addressed satisfactorily by a single discipline"*. Stating that in the real world, interesting and complex questions are left at the interfaces between disciplines, she suggests that addressing them requires synthetic and integrative approaches and that it is this need for integration which puts spatial planning in a position of strength. While some consider the interdisciplinary basis of the planning discipline as a weakness, others see it as a key strength (Davoudi, 2010).

There are two major arguments that support the interdisciplinary approach. The first one suggests that it fills the gaps that disciplinarity leaves empty, or surpasses what disciplinarity cannot achieve. The second argument mentions that interdisciplinarity already exists within disciplines. That is, disciplinarity and interdisciplinarity have evolved in an interlacing manner, with latter growing within disciplines. The interactions that are created via boundary crossing are seen as central to the production of knowledge as boundary formation and maintenance (Chettiparamb, 2007 cited in Balaban et al., 2014).

Those who advocate interdisciplinary learning in university education justify it with the following arguments (Woods, 2007):

- Student engages in his/her own discipline critically by viewing it from another perspective,
- Contemporary working patterns increasingly call for interdisciplinary team work,
- Present global challenges require new, holistic approaches.

Essential to the interdisciplinary attempts is the *ability to understand and be understood* in a diverse group of specialists. Woods (2007) states that interdisciplinarity, by implication, is all about communication. Experience of this type of collaborative problem-solving holds potential for developing students' abilities in effective interdisciplinary interaction after graduation.

Since the complex spatial phenomena often require an interdisciplinary analysis and problem-solving approach, planning schools have to play a major role in providing students with skills for interdisciplinary work. Here, it is important to underline that interdisciplinarity in planning education refers to many different levels and types: It may refer to developing a new interdisciplinary graduate programme in which urban planning is a significant contributor; it may refer to a specific course in the undergraduate/graduate planning curriculum which is conducted cooperatively by teachers from different disciplines; it may be a joint course of more than one department including urban planning; it may be a temporary activity/summer school/workshop where both teachers and students are from different professional backgrounds, etc. The content of interdisciplinary courses or programmes, and the extent that planning schools adopt them certainly vary from one context to the other, depending on specific needs and priorities.

Planning has a strong interdisciplinarity in its root: in addition to the knowledge of planning, knowledge of other disciplines that closely influence the built environment, the society and all socio-spatial processes are relevant to a planner, and hence addressed in most planning education curricula. However, only delivering the knowledge of other disciplines does not necessarily help an education programme to equip its students with the skills and experience of working in interdisciplinary

environments. Sandercock (1999) argues that the profession is in danger of becoming irrelevant if it does not adopt a more interdisciplinary approach to the problems of the urban habitat but that there are difficulties in adopting more interdisciplinary studies, often related to the fears of not satisfying professional requirements for accreditation. Doebele (2007) also states that true interdisciplinary efforts in universities are difficult to achieve due to the pressures of time and conflict of basic interests.

Urban planning education is composed of theoretical as well as practical courses. Planning studios are of the second type, where students exercise what they are going to do in practical life. The Planning studio models after the approach of "learning by doing" and it is the platform where theory and practice comes together, with theoretical courses feeding the studio. Studio can also be considered as an ideal platform for facilitating interdisciplinary work environments. It is common that instructors with different disciplinary backgrounds come together as the members of the studio teaching staff. This may help reflect, albeit only to a certain extent, the interdisciplinary perspectives that may be considered in handling an urban problem. This is also supported by a survey made with head of planning schools in Turkey, in which the results reported showed that studios were seen as the main arena for providing an interdisciplinary study experience for students, and that this was achieved through the participation of teachers from different disciplines or through role playing by students (Balaban et al., 2014).

Planning studio courses often comprise a field trip, and this may be another tool in creating an interdisciplinary experience as Doebele (2007) suggests. Tackling a specific field problem by a group of students from varying professions can be challenging but the results rewarding. According to Doebele, field trips can also be a means for bridging the cultural gap between different members of the class. The research below also proves that the field survey performed in the Intensive Programme was very useful for the analysis of the same problem from different disciplinary angles: students mention that they analysed the case study area with the approaches and tools of their own disciplines, but in their interdisciplinary teamwork they were amazed by the fact that the approaches of students from other disciplines were also meaningful for the very same case study area, and synthesizing the outputs of all of these perspectives enriched their team project.

The way fieldtrips are used in planning schools also point to an international experience (Peel and Frank, 2008) in addition to an interdisciplinary one. These fieldtrips provide an opportunity for students to learn about urban problems and processes in a different urban setting, but also experience different perspectives on how urban problems tackled in a given locality. The research below also supports this idea: Participants of the IP found it useful to get in contact with local culture.

Bringing together opportunities for interdisciplinary and international work-environments, the Intensive Programmes implemented through Erasmus deserve attention. Balaban et al. (2014) also mention in their research depicting the interdisciplinary study opportunities in Turkish planning schools that Intensive Programmes were highly valued by chairpersons and instructors who experienced them. Such experiences were limited in number for the case of Turkey, but they created a work environment where planning students were required to work with team members from other disciplines, often architects, in order to prepare the final product of the Intensive Programme. Building on these arguments, the current study focuses on an Intensive Programme in Ankara that brought students not only from city planning and architecture programmes, but also departments of geography, sociology, social and territorial sciences.

## 3. Evaluation of the interdisciplinary aspect of an education experience: An Intensive Programme held in Turkey

The research below was conducted with the students who participated in the Intensive Programme held in Ankara twice. Each of them was organized with approximately 45 students from 13 different schools across Europe for a duration of 14 days. The programme focused on two case study areas in the city. It was held in the form of a short studio course, where study teams were composed with students from different disciplines and different countries. These groups worked on one of the case study areas, analysed its problems and potentials, and developed strategies and policies through a sustainable urban development perspective. Schools were from 9 different countries (Belgium, France, Netherlands, Portugal, Slovakia, Spain, Sweden, UK, and Turkey) and include fields of city and regional planning, architecture, geography, social and territorial studies, and sociology. The analysis regarding this interdisciplinary and international experience is described below.

*3.1 Findings of the Questionnaire Survey*

The questionnaire survey was responded by 35 students with an average age of 26 (11 male and 24 female). 27 of them were enrolled in a graduate programme, while 8 of them were undergraduate students when they participated the IP course. They represent 13 schools from different countries; namely 10 students from Italy, 8 from Turkey, 4 from Greece, 3 from Belgium, 3 from Netherlands, 2 from France, 2 from Portugal, 1 from Sweden, 1 from UK, and 1 from Slovakia. Their disciplinary domains are displayed in the following figure:

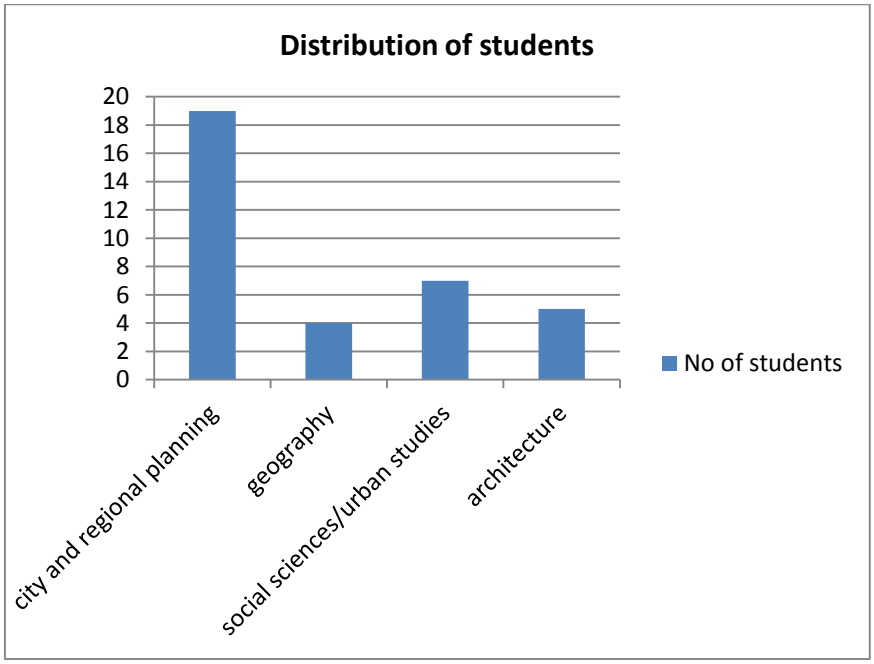


Figure 1-Disciplines of students who participated the questionnaire survey

The participants of the IP were asked a number of questions on the interdisciplinary and international nature of the programme: how they viewed the experience, what challenges they faced, and how they thought it impacted on the final product were few of such questions. Below, the replies of respondents are described under headings that correspond to each of these questions:

*3.1.1 Working/studying with those from other disciplines*

The first question regarding interdisciplinarity was whether the participants found it important to work/study/collaborate with those from other disciplines. The results reveal that the entire participants

consider it important to collaborate with people from different disciplines. The benefits of interdisciplinary collaboration that the participants have mentioned in the survey can be categorized as follows:

- **Learning different perspectives and achieving more innovative outcomes:**

Seventeen students believe that interdisciplinary work allows learning new perspectives, new terminologies and methods. They mention that through interdisciplinary work, a given problem can be handled from different points of view which can complement one another. Four students (of the 17), together with the significance of different perspectives, also express that interdisciplinary work leads to innovative conclusions/outputs. One participant states that such work not only helps to understand other dimensions of the topics at hand, but sometimes to discover new ones. Another student explains that different points of view help understanding the given problem in a larger perspective and adds that interdisciplinary work also provides an opportunity to assess one's own understanding.

- **The subject matter, namely cities/settlements, requiring interdisciplinary collaboration:**

Eight participants emphasize that interdisciplinary analysis is useful to analyze the dynamics and characteristics of cities. The "complexity" of the object necessitates a team with different skills.

- **Improving teamwork skills:**

Six students mention that interdisciplinary educational activities improve their teamwork abilities. Three (out of 6) students say that these experiences are useful, because practical life often requires to work in teams.

- **Improving one's skills in his/her own discipline:**

Six students believe that interdisciplinary work, via sharing knowledge and experience, contributes to their own professional skills and knowledge. One student states that a too specialized knowledge might limit the horizons, and thus we must draw inspiration and contribution from others. Another one mentions that interdisciplinary work helps to develop a more interdisciplinary perspective in his own field of research.

- **Understanding and responding to multifaceted problems:**

Two students highlight that the results of interdisciplinary work are stronger in order to face the multivariable social, economic, cultural and political spheres.

Consequently, the most highlighted benefit of interdisciplinary working is learning new approaches and methodologies to understand a given problem in a larger perspective, and provide better and more innovative solutions. The figure below shows the entire benefits mentioned by the participants of the survey.

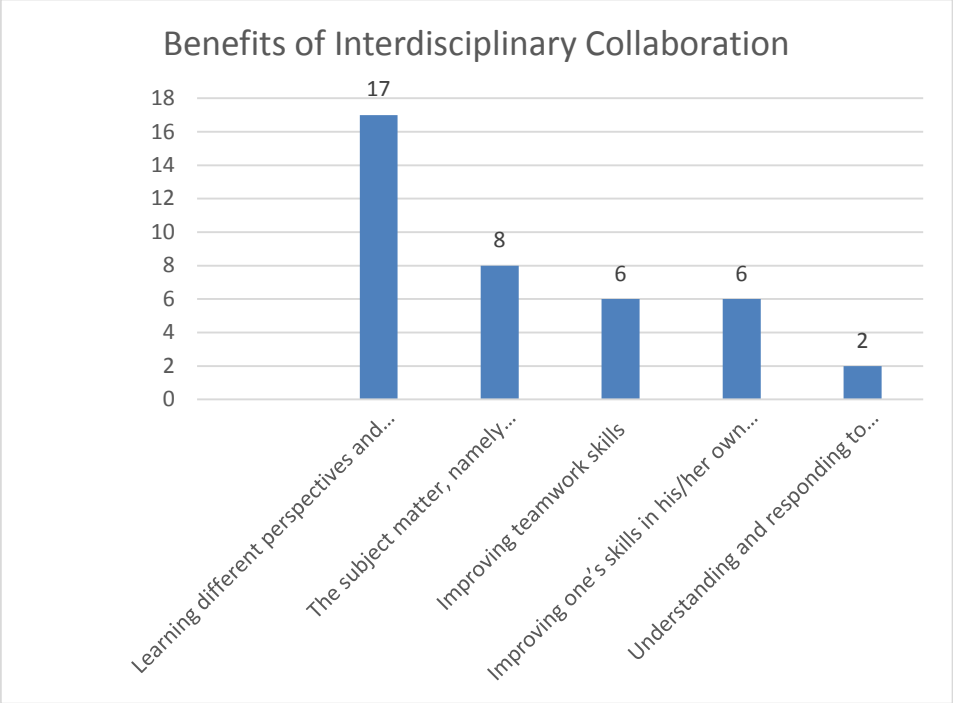


Figure 2-Benefits of interdisciplinary collaboration in students' views

*3.1.2 Courses for interdisciplinary working/studying*

Students have been asked whether there are such courses in their undergraduate/graduate programmes that provide them with the opportunity to work with people from other disciplines. Participants of the 11 schools (out of 13) answer positively to this question. The courses which provide them with interdisciplinary experience represent a very large variety that include planning theory, anthropology, economics, ecology, history, sociology, chemistry, GIS, research methods, study trip, and so on. As mentioned in Section 1, the approaches to interdisciplinarity in education can differ from one context to the other. Responses of students reflect that they have experienced interdisciplinary learning environments in different courses.

*3.1.3 Interdisciplinary working/studying experience within the IP course*

The questionnaire asked the participants whether the IP course in Ankara provided them with a useful learning experience in terms of working with people from other disciplines. All of them respond positively to this question. They have been asked to elaborate particularly what aspect(s) was/were useful in the course. Their answers are grouped as follows:

• **Learning different perspectives and approaches:**

27 participants express that it was useful to learn different perspectives, approaches and methodologies of other disciplines during the IP course. Their responses reveal that the interdisciplinary work provided them with the opportunity to deeply understand the object of the project. One student mentions that it was particularly interesting to arrive at a common point of analysis with inputs from multiple disciplines which resulted in a holistic understanding of the subject of development. Another one states that the final projects also highlighted various expertise of students from different backgrounds. Six students (of

the 27) give examples in their responses, eg. how different disciplines see problems and in what aspects they complemented one another in their teamwork during the IP.

**• Learning teamwork, time and conflict management**

Nine students emphasize the challenging aspects of the interdisciplinary teamwork and how they learned to tackle with them. Different views may arise in a teamwork and time constraints may be stressful. Their responses reveal that during the IP course they participated, they learned to communicate and collaborate in order to produce the demanded work in a short time.

**• Learning in a multicultural work environment**

The IP course provided students not only with an interdisciplinary learning experience, but also with an international work environment. Nine students point to this aspect as a useful experience. Two students also point to the importance of working in a different planning context. One of them explains that conducting questionnaires at the work field and getting in touch with local people were useful.
The benefits of interdisciplinary learning experience in the IP with respect to the responses of students are summarized in the following figure:

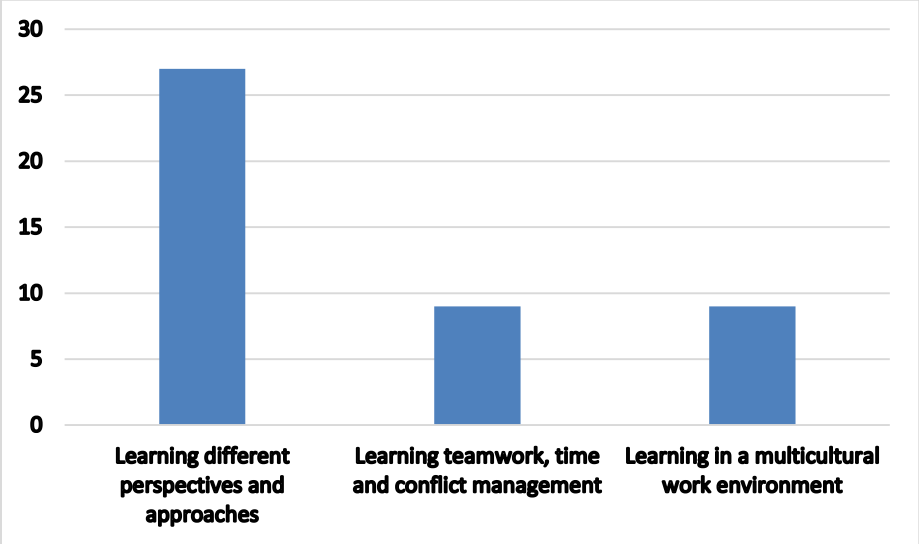


Figure 3-Benefits of interdisciplinary learning experience in the IP in students' views

*3.1.4 Disciplines that were productive to work with*

The participants were also asked which other disciplines they found it particularly useful and productive to work with. They were free to indicate as many different disciplines as applied. The analysis of the replies shows that both city planners and sociologists are indicated by 23 of the 35 participants. Architects and Geographers are indicated by 18 participants. Five of the respondents state that all of the disciplines involved were equally productive to work with.

The answers to this question was also analysed by separately observing the replies given by city planning students and students from other departments. 18 of the students of city planning departments cite sociologists as useful and productive to work with; 14 of them indicate geographers, 13 of them architects, and 12 of them city planners. Among those who were from other departments (non-city planning departments), 10 of them indicate city planners as useful and productive to work with; 6 of

them indicate sociologists, 4 of them architects and geographers. In short, it is interesting to note that those from planning and sociology schools are considered as particularly productive to work with.

### *3.1.5. Learning experience due to the international multi-cultural nature of the IP*

As described before, the IP Course was carried out in multicultural working teams with both students and teachers from different countries. The participants were asked whether they found this particular aspect useful, i.e. whether they learnt different academic perspectives from those coming from different countries. In this question no options/answers were offered to students and they were just asked to explain their experience and thoughts on this multicultural environment. Only three participants say that multi-culturality was not something they observed and felt strongly during this programme; but remaining 32 participants gave answers and made comments about what they took from this multicultural working environment. Their answers can be grouped under two categories: those who commented on the different academic perspectives they learnt from team-members and teachers coming from different countries; and those who commented on different teaching/learning models they realised that existed in different countries.

- **Different perspectives due to different country/cultural backgrounds**

Twenty-one respondents stress that it was a very enriching experience to realise that same topics were treated, understood, analysed and solved in different ways by those who came from different countries, because due to their cultural, social and political context they interpreted phenomena differently. There were similarities too, and seeing both differences and similarities between those from different countries and different cultures was considered as a valuable experience. Some respondents say that even the style of working, in terms of time management, creativity, effectiveness in team work, and visualisation of ideas would differ from country to country. One participant particularly stress that to witness this multicultural environment of working and to learn different perspectives from those coming from different countries and schools were in fact the most important opportunity that the IP provided. Below are some quotes worth highlighting:

> *"Naturally, the way of thinking on planning and also more general issues is different in different regions of Europe (or the world)... It was interesting to see what the hot topics are in some countries as people from these countries (sub)consciously pushed these agendas. So, in a way, one could observe "the evolution of (planning) thought" in real world practice."*

> *"Planning is vested in the culture of a country and this became apparent in the way different participants of the IP worked and also the solutions they brought forth. My own cultural background is known for its strong governmental role in urban planning, while other cultures have a different role for the government in planning. The combination of these views on planning were very interesting and made me realize not only that there are difference in perspectives on planning, but also to combine these views which can make a planning policy stronger."*

> *"It was very interesting to see that many of the students and professors shared the same concerns especially about the (real estate) "development" industry, politicians, and executive powers. It was helpful to see how different planners and architects in different parts of the world have dealt with very similar issues."*

- **Different styles of teaching, learning, and student-teacher relations**

11 respondents comment not on the variety of academic perspectives but the differences they realised in the teaching and learning styles, and in student-teacher relations due to different cultural backgrounds of those from different countries. Some comment on the differences in training styles and how different learning outcomes this could result in. It is stated by one participant that "in the IP programme, one could easily understand the differences of education systems in different countries". Two of them note that there were "different kinds of communication between teachers and students" in different countries. Most of them valued this realisation regarding the differences in teaching styles.

*3.1.6 Challenges*

Participants were asked whether they faced any challenges in working in an interdisciplinary and international environment during the IP; and if they did they were asked to choose among a number of possible answers. They were able to indicate as many challenges as applied. 9 out of 35 students state that they did not experience any challenges. The remaining indicate a number of challenges. As seen in Figure 4, the difficulty in communicating in a language that was not their native tongue, is indicated as a challenge by 10 students. This shows that rather than the interdisciplinary environment, the international context was found challenging. Following this challenge, the difficulty to reach a consensus in team work is indicated by 9 students as a problem they faced in this IP experience. This may not necessarily be related to the interdisciplinary aspect but to the students' familiarity with teamwork although only one of them state that this was their first time in carrying out a teamwork. The difficulty in understanding the approaches and perspectives of those from different disciplines is indicated by 7 students. Similarly, the difficulty in understanding different perspectives of those coming from different countries (due to differences in local context) is indicated as a challenge by 7 students. It is seen that 6 students found it difficult to explain to others their disciplinary approach and methods.

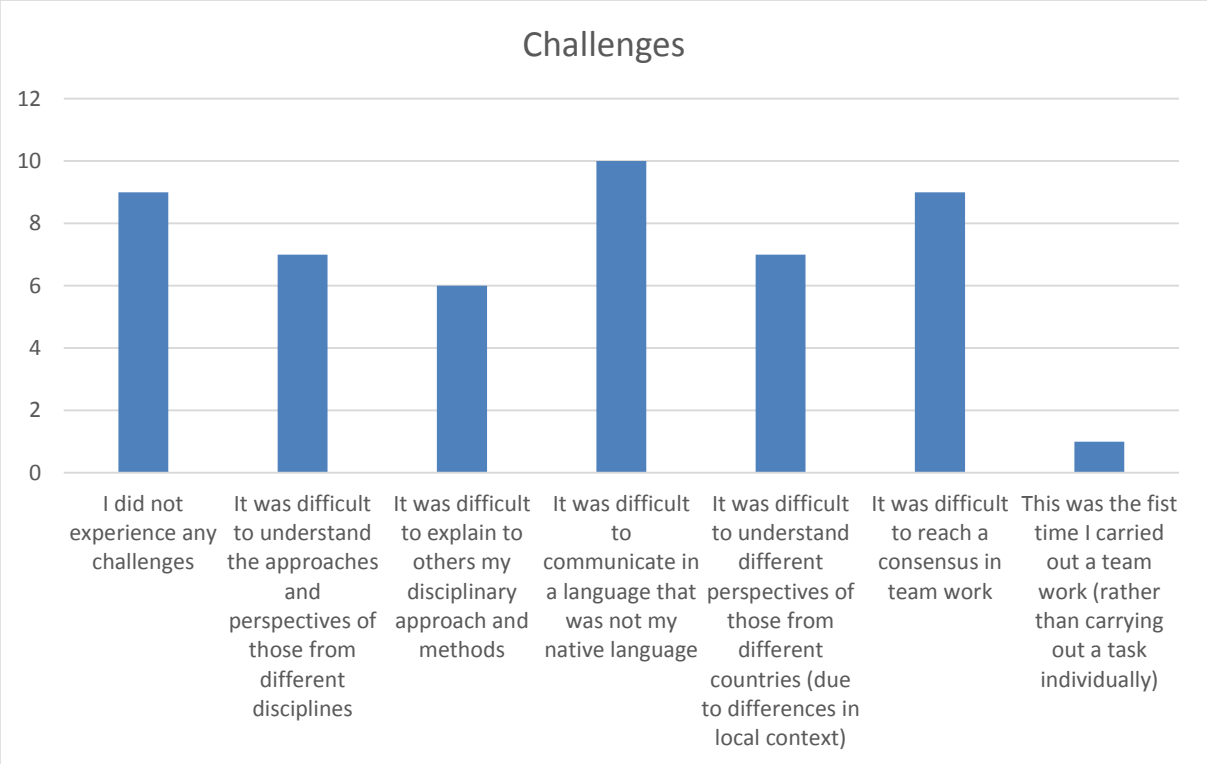


Figure 4-The challenges that students experienced in the IP

In spite of these challenges faced, all of the city planning students state in the next question that there should be similar programmes and courses in the city planning education curriculum to prepare students for interdisciplinary work. Similarly, all other students (those in schools other than city/urban/spatial planning) state that they found it useful to be involved in a city planning project and that the lectures and student projects in planning contributed to their own disciplinary perspective.

*3.1.7 The final product*

Finally, the respondents were asked whether they thought that working with people from other disciplines and other countries/contexts contributed to the quality and richness of the final product, i.e. the plans and projects that they prepared. Apart from only one respondent, who did not have an opinion on the matter, all participants said that they thought this interdisciplinary international environment contributed to the quality of the final product.

While about half of the respondents focus on the content and quality of the output in terms of richness, a variety of issues covered, in-depth solutions on certain aspects, such as architecture and real estate development, it is interesting to note that about one-third of the respondents comment on the way that the final product was easier to describe, and more realistic to implement. Those who made comments in this latter category stress that having addressed concerns of people from different disciplinary and cultural backgrounds, the final product was comprehensive and would be acceptable to a majority, and hence more easily implementable. Some of these respondents also state that because they had to explain why they made certain choices throughout the process to each other and to the rest of the IP, they learnt explaining things in simpler words so that both those from different disciplinary backgrounds and those with limited language skills would understand their argument. They state that this was a valuable contribution as explaining the proposed solutions in the simplest and most clear way possible was a challenge but once done it ensured a mutual understanding.

## 4. Main Findings and Conclusion

The questionnaire results show that the participants to the Intensive Programme held in Ankara valued their experience due to both the interdisciplinary and multicultural working environment. While a variety of the findings has already been described in the previous section, some of them deserve attention as they underline the potential contribution of such experiences in the academic and professional development of those who participate them.

According to the questionnaire results, the interdisciplinarity aspect in an education programme, such as the IP, enable the participants to better handle complex and multifaceted problems. The different perspectives in approaching a given problem result in different views and solutions that either require negotiating and consensus building or result in a richness of opinions that complement one another. The latter may sound more preferable although the former is also a positive experience since the questionnaire results show that this experience improves the participants' skills in team-working and conflict management. It is clear that reaching a consensus is amongst the major challenges of this interdisciplinary experience, but facing and dealing with this challenge is a learning outcome in itself as it contributes to a major skill and competence that planners need to be equipped with.

With regards to multiculturality, this aspect helps develop a better understanding of both differences and similarities between those from different countries and cultural backgrounds in approaching a given problem. Seeing different approaches is likely to enrich options when handling a problem, while witnessing similarities underlines the common problems that are faced by cities and planners throughout the world; and the realisation that planners try to solve these problems with similar understandings and

approaches can help reinforce the commitment of young planners to such approaches and solutions that they are being taught about. In terms of multicultural work experience, it should also be noted that language can be a clear barrier and a challenge. However, it can ultimately help the outcome of the project work too: the need to describe viewpoints in the most straightforward and clear way is not only a valuable skill to learn, but also a helpful contribution to the quality of the final product in terms of its clarity and presentation.

The final product in such working/studying environments is positively influenced by both the multiculturality and the interdisciplinarity. Both aspects seem to have an impact on the final outcome by making it richer, more creative and innovative. In addition, the interdisciplinary aspect is likely to force team members to address different viewpoints through the process of consensus building and hence the final product is more likely to be acceptable by the community. This is a finding stressed by many participants: they felt their final project was more realistic and implementable due to the interdisciplinary preparation process, highlighting a valuable learning outcome in such education programmes that bring together participants with different disciplinary backgrounds.

Based on the findings of this study, it is clear that incorporating such courses and programmes that provide interdisciplinary study settings into the planning curricula would significantly help prepare students for interdisciplinary work environments that they will inevitably work in. However, making such courses as integral parts of the curricula is not an easy task precisely because of its interdisciplinary nature: it would require different departments, such as city and regional planning, architecture, sociology, economy, political sciences, etc., to formulate a common course in which students from these different departments come together to tackle issues in an interdisciplinary study environment. Such cooperation between departments is not impossible, and has many examples in the shape of graduate interdisciplinary programmes. However, without attending a full graduate programme too, planners and those from other disciplines could come together for a specific programme or course, and ways and methods to enable this should be sought for.

There is no single method of creating such programmes and incorporating them into the curricula. The case described in this study is an example of only one possible format. The way in which such interdisciplinary courses are formulated and the degree to which they will be made integral to planning education would inevitably vary from country to country and from school to school. The local context is important both in formulating possible course/programme formats in a given curriculum, and in identifying which disciplines to create a cooperation with. Therefore, a global recipe is not being sought for and each school can explore possibilities for creating interdisciplinary learning environments within their own education programme. Having said that, some practices are global and may be formulated with a view to capture such interdisciplinarity. For example, there are many experiences with summer schools in planning departments, and they are also valuable in their international character, which can help equip participants with learning outcomes that were mentioned above in relation to multiculturality. Ensuring and encouraging the participation of those from different disciplines to such summer schools would help provide the learning outcomes regarding interdisciplinarity too. In addition, projects in the format of the programmes that were previously named Intensive Programmes and now currently referred to as Strategic Partnerships under Erasmus+ should clearly be encouraged and supported in planning education in view of the findings of this study since they can bring together both the interdisciplinarity and multiculturality experiences, which were shown to be valuable contributions for the academic and professional development of participants.

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# COMPETENCIES REVISITED
## AN EDUCATIONAL APPROACH TO CONCEPTUALISE PLANNING AS A BOUNDARY DISCIPLINE

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*The paper presents a systemic view on the purpose and impact of planning education. We introduce a system model, which bases upon the assumption that the objective of planning education is equipping students with competencies to resolve current and future challenges. Planning education has always focussed on instruments for this purpose. Among other reasons, established statutory instruments have become less effective in steering urban development due to a shift of power from public towards private stakeholders, e.g. in terms of funding. Thus, we propose a shift from formal qualifications suited for public planning control towards a problem-based and impact-orientated approach. The educational term 'competence' serves hereby as a measure of employability.*

*The 'wicked' nature of planning problems distinguishes knowledge in planning. Knowledge is contextual and constantly transforming. It can however be deconstructed in a defined context. Then, we can assign an observable impact to a certain state of problem or intervention. These constructs of knowledge can help us to make informed decisions. The challenge is to apply and transform these contextual constructs to other settings. This requires proficiency in analysing, evaluating and creating constructs. Public planning control and its instruments consist of normative goals, which dictate the reason and extent of planning. In case of a problem-based approach, it is the role of a planner to recognise situations, in which his knowledge helps making an impact towards intended futures.*

## 0. Introduction

The paper presents a systemic view on the purpose and impact of planning education. The introduced system model serves as a foundation for a framework for designing 21st century planning curricula. A new approach to curriculum design in planning seems to be desperately needed as a rapid diversification in degree programmes over recent years demonstrate. In section 1, we trace back this diversification to fundamental changes in employment structure and a loss of importance of public sector as well as an increasing complexity of planning challenges due to the wickedness of social policy problems and the lack of an underlying disciplinary conception. As a result, educators have developed a pick-and-choose mentality selecting a variety of learning contents without any standards. The common ground of planning has shrunken down and employers are confronted by varying unlike qualifications.

In section 2, we hypothesise that a competent use of knowledge will become more important for employers than formal training in using statutory planning instruments. The concept of competency supersedes formal qualifications as measures of employability. The paper will investigate the term's use in context of European Higher Education Area (EHEA) and operationalize its meaning in order to be used as an aid for selecting the knowledge to be taught in class. We argue that hereby schools can design curricula with the intent to solve current and future challenges. This requires the selection of

‚powerful' disciplinary knowledge. Evidence-based content selection replaces hereby the existing normative pick-and-choose practice. This does however require conceptualising planning as a boundary discipline, in which evidence-based disciplinarity and impact-orientated transdiciplinarity complement each other.

Section 3 discusses potential implications for the educational practice. We question the existence of consecutive bachelor-master-degrees in planning as they focus on normative concepts with a significant lack of scientific evidence. Instead, we propose that schools should teach urbanism on a post-graduate level. Urbanism bases on all spatially relevant disciplines. Urbanism education then focuses on equipping graduates with the competence to combine constructs of knowledge from a variety of disciplines.

## 1. Research Background

### *1.1 Diversification of Planning Education*

The first professional degree programme in planning emerged in the early 20th century. "Initially just a few institutions offered planning degrees at postgraduate level" (Frank et al. 2014: 33). The education followed the ideology of an engineer-planner (Frank et al. 2014: 38). The University of Liverpool's degree in civic design among others at University of Karlsruhe and University College London were post-professional degrees founded around 1910 (Frank et al. 2014: 37). Students had been practitioners in architecture or civil engineering before. The development of these programmes is closely linked to the establishment of professional bodies and advanced vocational planning. The underlying mentality of planners as engineers goes along with early modernist planning theory.

Modernism stands at the end of the long-term believe of constant advancement. Many scholars have conceptualised this myth of modernisation, similarly to architectural theory, in form of movements or historical periods with distinct normative concepts. Albers (1993) describe four phases starting in the late 19th century with planning adopting to social, economical and ecological effects of industrialisation and ending with planning developing prospects for the future since the 1980s. Selle (1995) generally agrees with this conception, however, adding the notion that these phases each develop an own layer of knowledge, which continues to be relevant until today. Both scholars share the view of constant advancement. As "most planning practitioners and scholar lived primarily in 'national' planning policy cultures" (Healey 2012: 192), these concepts claim to have universal validity. Albers and Selle mainly draw their view from spatial planning practice in Germany. And indeed, German planning has developed a growing arsenal of instruments and legal mechanisms with the intent to prepare for current and future challenges. They all base on the German federal planning law (BauGB), which haven't had any major renewal, only several additions and remain in its core the same planning system. Putting urban planning into a wider context and looking besides statutory planning, we will however see major breaklines in planning practice. Schönwandt (Schönwandt 2008) identifies two of these breaklines (cf. figure 1). Until the mid of the 20th century, planning has been based on the idea of rationality. McLoughlin (1969: 81) describes planning as the regulation of errors appearing in a 'machine-like system'. Rational planning theory characterises cities as comprehensible systems. Planners can foresee and evaluate all possible developments and weigh up assets and drawbacks of each planning solution. The understanding of planning clearly stands in the tradition of engineering and hits its peak with modernism in the 1960s. At that time, "a critique emerged that the planning and design of the modern cities was blueprint of placelessness, of anonymous, impersonal spaces, massive structures and automobile throughways" (Ley 1987). Consequently, the community of urban thinkers abandoned the rational-modern idea.

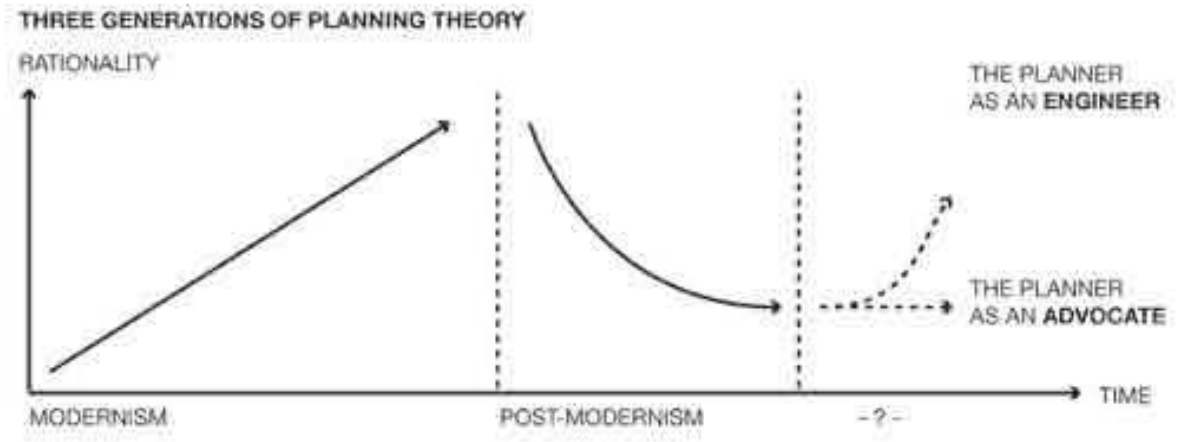


Figure 1. Three Generations of Planning Theory. Author's graphic

At that time, planning emerged as an independent discipline. Planning had "received a considerable boost […] as part of the reconstruction and rebuilding efforts post WWII" (Frank et al. 2014: 33). The growing demand for planning but also the growing critique of the engineer-driven modernist cities led to the establishment of the first independent planning department at TU Dortmund in 1969. The formation was in the time of the 'radical' 60s. Major societal changes occurred. So-called 'reform'-universities stood out due to flat hierarchy, autonomy of student administration and the decline of academic authority. In many ways, independent planning degrees adopted post-modern ideas and cultivated debate and critical discourse.

Schönwandt (Schönwandt 2008: 13) defines postmodernism by its critique of the rational planning theory. An underlying general theory of planning doesn't exist. The discourse has largely split within the architectural urban design and the planning community. Many architects rediscovered the city as a liveable urban environment trying to achieve the valued and appreciated qualities of pre-industrial urban form again (Ellin 1996: 11). Urban development in the suburbia remains however dominated by an automobile-friendly mode of planning resulting in massive urban sprawl in the US and a growing extent of functionally interlinked urban regions in Europe. Ellin (1996: 223) therefore concludes: "While contemporary urban design largely breaks form the modern project in theory, its implementation is nonetheless embedded in it." Many scholars try to overcome this contradiction in planning and design theory. At this point, Schönwandt (2008) identifies the second breakline and proposes fundamentals for a third generation of planning theory. He is not alone in his search for a new 'theoretical orientation' for planners. Innes (2014) for example considers "the dividing discourse of planning theory […] counterproductive".

Because post-modern planning failed to develop an underlying general theory, the recognition and acceptance of planning as an independent discipline remained in question. Planning degrees could neither claim technical nor scientific expertise. Instead, most curricula combined some core techniques of related disciplines with a normative debate about planning policy. A report of the American Planning Association (APA) from 2007 shows that independent planning degree led to a significant loss of speciality knowledge in many relevant fields (Hoch 2012: 130). An average APA graduate only obtains 50% of the knowledge about subfields such as infrastructure, labour force development and urban design compared to other peers with a more specialised education. After initial growth, the number of programmes stabilised with 9 degrees in 1999 (Frank and Kurth 2010: 27). Even in Dortmund, the current academic debate between leading figures of the architectural and the planning

department demonstrate the on-going dispute about the role and principles of planning (q.v. Höing et al. 2014; Altrock et al. 2014).

Besides the engineer- and the independent planner, a third model of planning education originated from social sciences such as geography, politics, or law (Frank et al. 2014: 84). Many geography programmes offer specialisations in the field of public policy, land division and urban planning. Similarly to the engineer-planner, the social science-planner can be regarded as an expert in its field, especially public law and administration. In Germany, this mode of planning education dates back the Prussian public service. Thus, its is primarily present in Northern Germany.

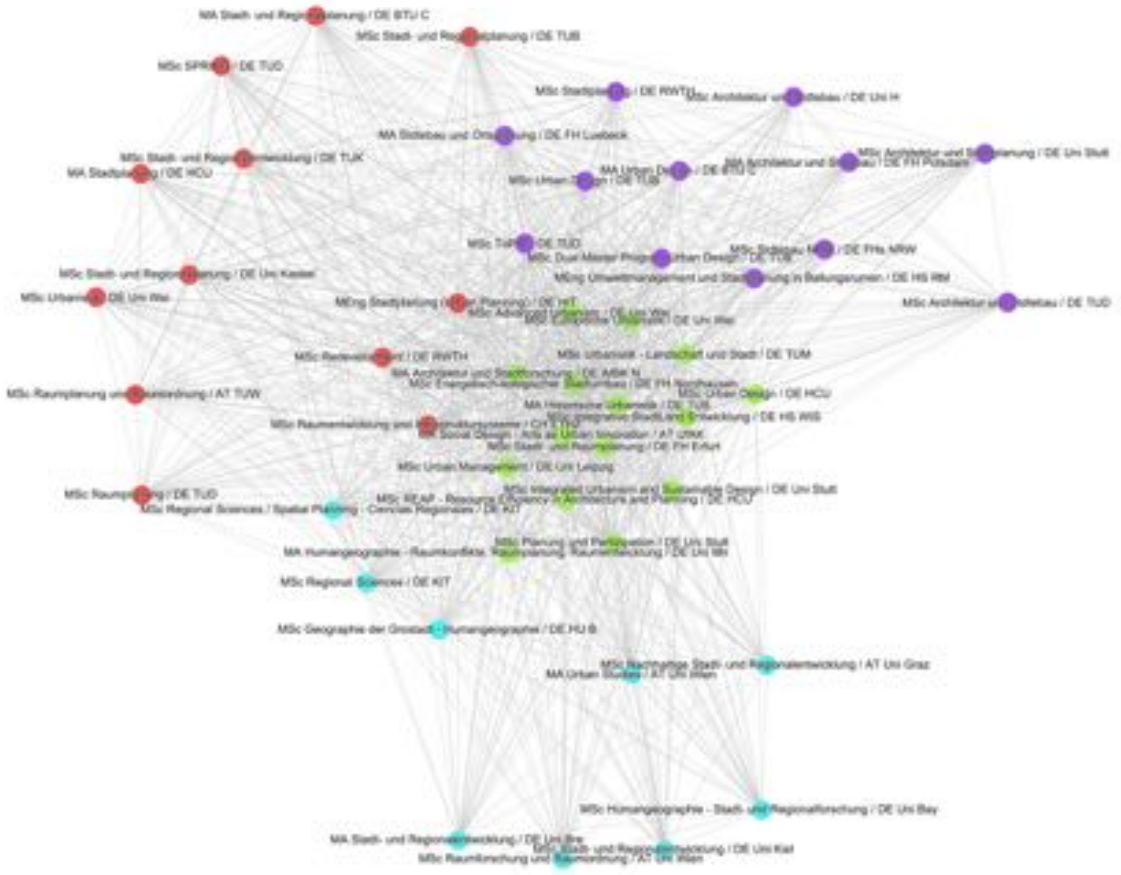

Figure 2. Network Diagram – Postgraduate Degrees in Planning – Proximity Represents Common Fields of Study Admission Requirements. Author's Graphic

Figure 2 shows the continuing presence of all three educational ideologies in the German-speaking countries. The network graphic bases upon the field of study admission requirements for postgraduate planning degrees. Our study includes all programmes explicitly addressing urban issues within their name. We collected data from study regulations from late 2014 to early 2015. Each node represents a study programme and the edges the number of common fields of study, which enable admission. The closer two programmes are, the more fields of study are shared as admission requirement. The results show that only a quarter of all graduates, which become potentially prepared for jobs in urban planning and design, come from universities with independent planning degrees. These are represented in red at the upper left corner. Independent planning degrees usually require an undergraduate degree in planning. As a result, they share less fields of study for admission with other degrees and are situated at the edge of the graphic. "Aside from the independent planning degree

programs, a plethora of new non-consecutive master's programs were also established" (Frank and Kurth 2010: 30). Degrees based in architecture and engineering are represented in purple and degrees in social sciences in light blue. Programmes, which are represented in green, allow access from a variety of undergraduate fields and can be considered as interdisciplinary in this respect.

In summary, planning is a diversified field of professionals with varying educational backgrounds. Planning roots back to engineering and social sciences and hadn't established itself as an independent discipline before the 1970s. Recently, many new planning degrees have emerged as part of a renaissance of engineering- and social-science-driven degrees as well as programmes, which are situated in between the boundaries of disciplinary fields. Today, we find a pick-and-choose mentality of content among educators. Instead of having standardised curricula, students obtain a variety of different competencies. Degree A may differ dramatically from degree B. One community of scholars may regard knowledge about urban form and composition as crucial (Höing et al. 2014), others promote focussing on the process of planning itself (Altrock et al. 2014). A recent empirical study by Christensen (2015) demonstrates also these different priorities within the group of planners. She finds out that practitioners regard „both process and outcome essential for planning" (Christensen 2015). Howe (1980) conducted a study about the perceived role of planners. 50% of American planners perceived their role as either technical or political. The other half does however classify themselves as 'hybrid' planners. The network of planning degrees shows a similar picture. The following two sections try to explain this present diversification.

*1.2 Shift of Power*

In recent years, planning has experienced a significant shift of power from public control towards private interest. Our planning system dates back to the beginning of the industrial society. Early planning theory - as outlines before - concentrated on mitigating negative effects of private industrial activities for living conditions. „Chaos has [had] entered the city" (CIAM 1933). Planners existed to bring order. This idea is strongly embedded in our statutory planning system based upon the separation of land-uses. Albrecht (Albrechts 2004: 754) argues, that these "established forms of planning [...] manage to ensure that undesirable developments do not occur, but [...] they are not able to ensure that desirable developments actually take place where and when they are needed".

„In the new knowledge economy, cities have found a new significance as nodes for innovation and communication" (Madanipour 2006: 180). Cities concentrate power, knowledge, communication and status (Danielzyk 2008: 36). „A sophisticated [private] market is interested in better-quality products [cities]. […] On the one hand, the process of economic liberalization has taken away much of the state's ability to shape localities directly, as production of space is essentially within the remit of the private sector. Hence, the private sector at the local and the regional level has found a more significant role in the governance of urban regions" (Madanipour 2006: 180). Today, public planning control has neither the financial power to shape our cities future nor the right instruments to steer private investments in their favour. Thus, planning shifted from a state-driven activity against private interest toward a competition for private investments. Madanipour (Madanipour 2006) sees this shift reflected in „the rising significance of urban design" as a private-sector planning approach. Especially in the UK, urban design has risen from a niche into the centre of the urban debate. Indeed, major structural changes in employment reflect the importance of private companies for our profession. Today, less than half of all planning graduates work in public administration (Böckenbrink, Greiwe and Weller 2013: 37). Independent planning education, which has always focussed on public planning control, becomes hereby less attractive for recruitment. These degrees usually equip graduates with state- or chamber-controlled diplomas. „The degree […] can be interpreted as one form of licensing" (Klein 2011: 256) to enter public service. The diploma ensures that the planning graduates handle statutory

planning instruments within the institutional and legal framework of our state. While the professional bodies still maintain their control over accessing formal planning service, an increasing number of jobs and planning degrees do not require or provide formal qualification. Innovative planning concepts are not the result of ‚cloning' of standardised planner.

Instead, „all employees must add value to the financial bottom line" (Brown, Hesketh and Williams 2002: 14). That requires leading and preparing students earlier and better towards top-level research and highly specialised practice. Universities implemented this target in form of a diversification of degrees on the postgraduate level. In the planning community, it has led to a renaissance of the engineer- and the social-science-planner. Engineering and social science departments have gained the opportunity to offer a wider range of specialisations at the postgraduate level. A single institute is able to conduct a small master's degree to make a mark academically (Kunzmann 2008: 17). The diversification of planning education is therefore closely linked to our societal desire for knowledge. "We wish for an authorisation of political [planning] decisions based on scientific evidence" (Lieven and Maasen 2007). Nevertheless, we "dismiss any type of technocratic governance" (Lieven and Maasen 2007). Planning history has demonstrated that cities are complex, hardly comprehensible systems. So, "we abandon the [modernist] idea that scientific truth about the future exists" (Alaily-Mattar and Thierstein 2014).

*1.3 Complexity of Planning*

Rittel & Webber (1973) argue that planning problems are fundamentally different from problems in science and engineering. Engineers are confronted with 'tame' problems, which can be solved rationally by finding the optimal solution. Planners are however confronted with 'wicked' problems. "In a pluralistic society there is nothing like the undisputable public good; there is no objective definition of equity; policies that respond to social problems cannot be meaningfully correct or false […]. Even worse, there are no 'solutions' in the sense of definitive and objective answers" (Rittel and Webber 1973: 155). 'Wicked' problems demand thinking differently about planning. Every planning problem is a unique 'one-shot operation'. There is no testing ground for social experiments. That means that the process of approaching a problem and resolving it has to be concurrent. Planning and designing to accommodate urban challenges is an iterative process with no 'stopping rule'. As we resolve one problem, we discover or even produce other problems. What we also produce at the same time, is a better situated understanding of a single planning problem. Thus, knowledge about 'wicked problems' is "localised, embedded and invested in practice" (Weber and Khademian 2008).

Knowledge can therefore not claim to be universally valid. Validity can only be constructed in a specific spatial and temporal context. We call these constructs of knowledge. Constructs of knowledge consist of the concept, idea or technique itself and of an observed impact. When looking at one construct a time, each of them is valid in itself. When comparing multiple constructs, they might actually contradict themselves. Especially the flow of planning knowledge across borders to developing countries such as China and its application in situ demonstrate that concepts and ideas cannot simply "be extracted from its context of invention, uprooted and 'planted' somewhere else" (Healey 2012: 190). For example, after Frank Gehry finished his work on the Guggenheim museum in Bilbao, planners observed a general economic and urban improvement of the area (Plaza, Tironi and Haarich 2009). The idea of the so-called Bilbao effect has travelled all around the world. Many cities hired star-architects to create their own 'Guggenheim'. However, the economic impact failed to appear (Scherer, Strauf and Bieger 2002; Jasmand and Maennig 2008). As said before, while one concept has a certain impact in one context, it might have a contrary impact in another (Girgert 2011). Nevertheless, these constructs exist and form the base of knowledge for planning academia and practice. This base of knowledge constructs is socially connected. People create knowledge, they share

knowledge, they adopt knowledge and they transform knowledge. Processing knowledge is the interplay of tacit and explicit knowledge (Nonaka, Toyama and Konno 2000: 12; Bentlage, Lüthi and Thierstein 2013: 48). Physical or ideological proximity are required for either sharing tacit experiences or combining codified constructs of knowledge. These process are responsible for the flow of ideas across borders. The constant creation and adaptation of constructs makes knowledge a dynamic network. Knowledge appears, it disappears and it transforms as part of resolving 'wicked' problems. The concept itself might take shape of something universal, its impact is however defined by the contingent of its context.

In summary, we have shown that planning education diversifies due to structural changes in employment as well as the nature of knowledge in planning. We argued that formal qualification can no longer guide educators in design planning degree programmes. In order to evaluate planning education, we will propose a system model looking at academia and practice.

## 2. Competencies revisited

*2.1 Systemic View*

In order to give structure to the diversified field of planning studies, we propose a systemic view (cf. figure 3) on the purpose and impact of planning education. The system model bases upon a linear input-activity-output-outcome-impact-schematic and two feedback loops. The underlying assumption is that educators intend to improve planning practice by ‚improved' education. Hereby, schools struggle with the discrepancy between established planning practice and state-of-the-art planning research. They have to balance between keeping students employable today and developing innovators for tomorrow. Time- and complexity-constraints furthermore hinder fulfilling both objectives, as programmes need to be feasible to study.

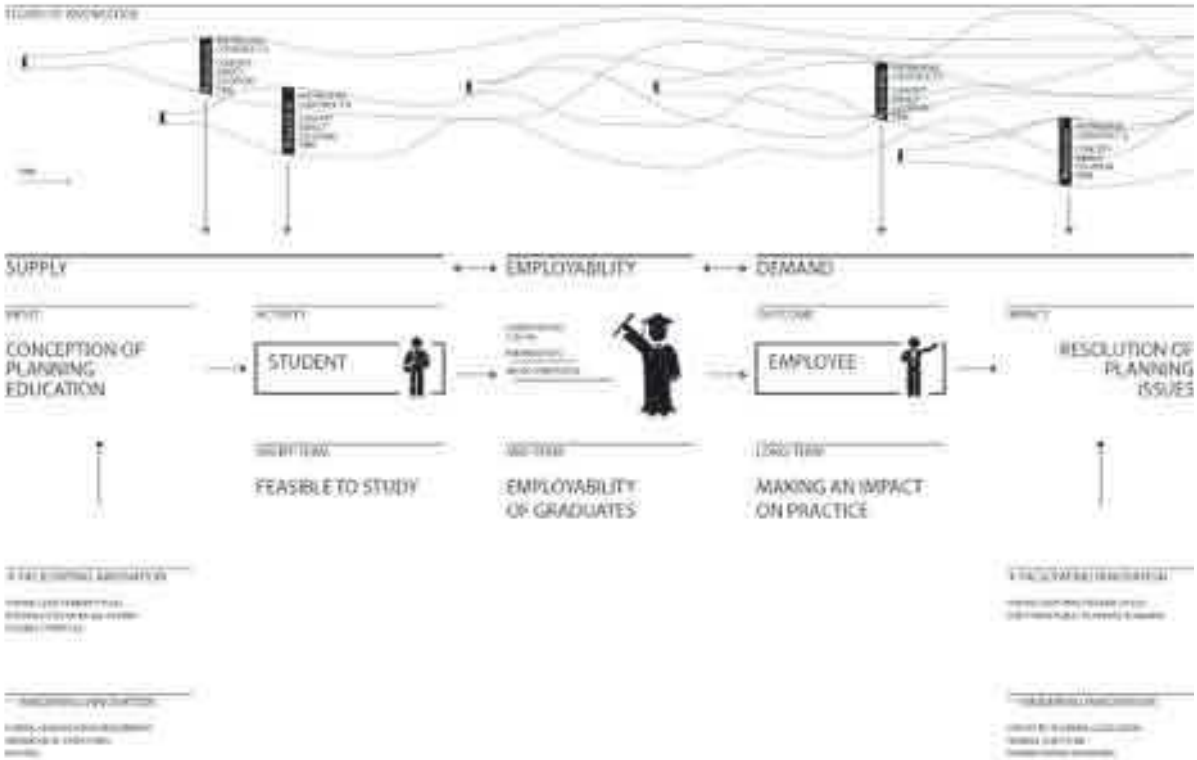


Figure 3: Systemic View on Planning Education. Author's Graphic

The left side of the model comprises academia, while the right side represents practice. The major tie between both parts is the central impact axis starting with designing and offering a planning curriculum (input), then putting graduates on the job market (output) and finally changing planning practice (impact). You might also look at this model in form of an supply and demand diagram, in which schools supply employers with graduates and vice versa. Employability measures hereby define the quality and value of graduates.

The first feedback loop is closely linked to the concept of employability, which we will elaborate on in section 2.2. We assume that programmes, whose graduate do not meet the job market's demand, have to change. Employers with unfulfilled demands will reorientate themselves and look for graduates from other fields - currently seen as part of the diversification of degrees. The second feedback loop is much more indirect. Because the underlying assumption of our model is the intention to change practice, education needs to be redesigned as soon as the intended impact on planning practice is achieved. This feedback loop relates to relevant issues in planning and the knowledge about them. As argued in section 1.3, constructs of knowledge gain and loose in importance over time. For example, the separation of land-uses has been a key strategy of modernist city planning for decades, which then got replaced by concepts of mixed use.

Both feedback loops have in common that they don't take effect immediately. Especially, the second feedback mechanism features a significant time lag. From the conception of a curriculum until graduation the first two to four years pass. Additionally, we need to add years until the graduate is in a position to actively change standard procedures and established concept. In a traditional work environment, we estimate that educators cannot expect an impact earlier than fifteen to twenty years after designing the course. Hierarchical structures in public administration slow down the way up the job ladder. The impact of education takes significantly longer than the rapid urbanisation process, today (cf. figure 4, Alaily-Mattar, Thierstein and Förster 2012). However, the shift of power and associated structural changes in employment have „given the educated classes greater economic freedom. This has enabled young knowledge workers to short-circuit organisational hierarchies to arrive in senior managerial positions often in their thirties" (Brown, Hesketh and Williams 2002: 5).

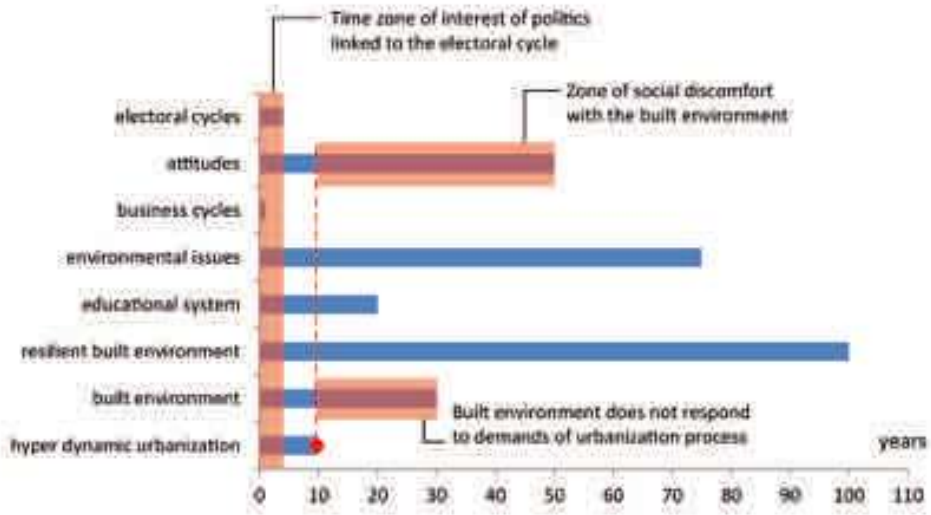


Figure 4. Time Lag of Various Systems. Source: Alaily-Mattar, Thierstein and Förster 2012

*2.2 Competencies as Measures of Employability*

„Employability is […] seen to reflect the shift away from the bureaucratic career structures" (Brown, Hesketh and Williams 2002: 4). Human resource departments examine „the personality package that candidates present to employers for evidence of competencies" (Brown, Hesketh and Williams 2002: 28) Personal attributes replace job-specific requirements. Applicants must present themselves as competent (absolute employability) and more competent than others (relative employability). Brown et al (2002: 9) call this the ‚duality of employability'.

The concept of employability bases upon personal attributes. These attributes are often described as competencies. Despite its common use, there is no clear-cut definition. The term's interpretation reaches from „the ability to handle a situation" (Keen 1992, 112, in: Stoof et al. 2002: 347) to „cluster of related knowledge, skills and attitudes" (Parry 1996, 50, in: Stoof et al. 2002: 347). Thus, the paper draws upon a constructivist framework for „understanding and using the concept of competence" (Stoof et al. 2002: 345). The idea behind this framework is, that the term competency is used differently depending on purpose and context. The term's definition is valid as long it is „adequate for the situation in which it is being used" (Stoof et al. 2002: 351). Therefore, the following definition is based upon Bloom's (Bloom et al. 1956) ‚taxonomy of educational objectives', policies developed by the European Higher Education Area (EHEA) and standards established by national practice. The definition will describe the internal dimensions of competency and the difference to other related terms.

Competence-based learning and assessment became policy in the EU as part of the Bologna process (Ministry of Science 2005: 63). The Bologna process is Europe's joint effort in implementing a single educational market based upon international transparency, recognition and mobility (Ministry of Science 2005: 57). Therefore, EU member states have agreed on common descriptors of learning outcomes. The ‚Dublin-Descriptors' use the word competence „in its broadest sense" (Flood Strom et al. 2004) leaving again room for interpretation and different national implementations.

Most countries however base their usage of the term upon Bloom's revised taxonomy (Anderson et al. 2001) differentiating between factual and conceptual knowledge (often referred to as knowledge or savior), procedural knowledge (often referred to as skill or savior-faire) and metacognitive knowledge (often referred to as attitude or savior-être) (Bulgarelli, Lettmayr and Menéndez-Valdés 2009: 37). The first dimension consists of knowledge about terminology, classifications and generalisations, principles, theories, models and structures (Anderson et al. 2001: 46). Procedural knowledge includes subject-specific skills, techniques and methods as well as „criteria for determining when to use appropriate procedures" (Anderson et al. 2001: 46) and metacognitive knowledge describes rather abstract concepts such as „awareness, self-awareness, self-reflection, and self-regulation" (Anderson et al. 2001: 55). Students can acquire different levels competence by ‚remembering', ‚understanding', ‚applying', ‚analyzing', ‚evaluating' or ‚creating' knowledge. Anderson (2001: 67) calls these the cognitive process dimension of competency. In summary, a competency consists of a construct of knowledge and the level of proficiency.

In practice, assessment and learning outcome descriptions always follow the same structure. The following examples are taken from module description of urbanism programmes in Germany. **Bold** phrases describe the construct of knowledge and <u>underlined</u> phrases the level of proficiency.

„After successful completion of the course the students […]
<u>know [better: recognizing]</u> different **dimensions of inspecting the city**: Forms of perceiving and appropriating the city (sensually, abstractly, structurally), morphology of the city,

are able to develop **a criteria check list for the city analysis** in view of the „city as a complex formation", the city as action field" and the „city inside one's head", methodological discussion,
know how to analyse the selected **forms of the city** according to plan material characterised by the relation of city and house, city and space, city and city (urbanity), city and infrastructure,
know how to analyse **the reality of the selected city area** by means of images, behaviour description, script, movie etc.,
are able to work with theoretical urban reflections: basics of analysing **statements on the city** (texts, conversations, interviews etc.), perceive and critically assess the content,
are able to **characterize** different **forms of the city** […],
are able to transfer **attitudes on the city to other contexts**" (Module descriptions appendant to: BTU FPSO Urban Design 2013).

„Examination consists of a 2-hour written exam as part of which the students have to demonstrate that they remember and understand **theories, mechanisms and impacts of the economic development of space and property** and that they are able to transfer **these** to a given problem. By transferring the theories the students show their ability to understand **popular forms of visualization and description of economic drivers of spatial change** in a specific case and to evaluate resulting **challenges for the urban development**" (Module descriptions appendant to: TUM FPSO Urbanistik 2015).

Both examples demonstrate that the level of specificity of each competence can differ. Some competencies apply to managerial, scientific or design work in general, some are specific to a profession or a professional sub-domain and others are only relevant to specific tasks. Best practice guidelines recommend, „learning outcome statements should be neither to broad nor too narrow" (TUM 2014: 7). Hence, most descriptions refer to the over-arching course content without specifying individual terminology, concepts and techniques, which can be learned in the course.

*2.3 Competencies as Guidelines for Course Content Selection*

The concepts of employability and competency are closely linked to a systemic view, which incorporates the employment sector as component of the educational system (Tchibozo 2010). Therefore, competence-based learning shifted the focus from learning content to learning outcomes (Bulgarelli, Lettmayr and Menéndez-Valdés 2009). This shift has been repeatedly critisised. Detractors of the competency term argue, „curriculum theory lost its primary goal - [to define] what is taught and learned in school" (Young 2013: 105). Willbergh (2015: 339) argues, that it is a normative question of selection, to which the concept of competence has added no value. Contrary to this opinion, we argue that focussing on learning outcomes as part of a systemic perspective enables curriculum design to select content based on employment needs and challenges in practice rather than normative concepts. The term competency stands at the interface between education and employment. Both sides of this system - the hiring human resource departments and the educating schools and universities - adopted the concept of competencies in order to bridge the gap between academia and practice. In summary, competence-based education does not neglect knowledge; it selects knowledge based on challenges in practice.

Although new career pathways have made the impact of education on the job market more immediate, the significant time lag still questions the relevance of taught knowledge constructs in the future. Detractors of the competency term again argue, „the problem of competency is that it assumes that what we judge to be criteria for success today will be stable and valid in the future" (Willbergh 2015: 338). Therefore, judgement on „competences requires the perspective of time" (Westera 2001: 83). Our system model reflects this perspective by conceptualising planning knowledge and issues as flows (cf. section 1.3). We argued that knowledge in planning can only be valid if deconstructed in its

unique context. The aforementioned time lack could therefore make acquired knowledge obsolete. However, we also argued that knowledge in planning is socially connected. Emerging new ideas base upon earlier and related concepts. Successful plans are often modifications of older planning proposals. Competent use of knowledge requires not only remembering, understanding and applying knowledge but also analysing, evaluating and creating knowledge. The employment market reflects this idea as part of the emerging knowledge economy, which is about the „exploitation of new knowledge in order to create more new knowledge" (Cooke 2002: 4-5). Although the relevance of certain constructs of knowledge may decrease, its importance as a basis for innovation and advancement is invaluable. Hereby, a competence-based selection process of learning content differentiates itself largely from one based on knowledge only. Knowledge remains one of the key input factors within the innovation process in spatial development (Bentlage 2014: 25), but the cognitive use adds an additional dimension overcoming the validity problems of knowledge in the future.

In organisational research, there is a general consensus that new knowledge is created by the combination of old knowledge (Schumpeter 1934; Nonaka, Toyama and Konno 2000; Wenger 2000). Our proposed conceptional system of education is therefore a learning system of innovation. The model consists of two cycles of innovation: a lead-thinker- and a lead-practitioner-cycle. The separation of innovation into two cycles takes into account, that while the underlying idea of our educational model is bringing innovation from academia into practice, our graduates innovate new planning concepts and ideas in practice as well. Von Hippel's lead-user approach strongly reflects this idea in management theory (Churchill, von Hippel and Sonnack 2009). The concept of competency picks up this idea in form that graduates obtain the ability to transform knowledge according to new challenges. A competence-based educational approach is hereby preparing graduates for innovation.

Consequently, educators have to select knowledge based on its potential for creating new knowledge in the future. This so-called ‚powerful' knowledge in planning consist of those constructs, whose intended impact is achieved in more places over a longer a period of time. In other words, powerful constructs are conceptual and procedural knowledge, which is successfully employed by planners in the past, today and most likely in the future. Young (2013: 107) argues that such knowledge is highly‚specialised' disciplinary knowledge. The underlying assumption is that „there is ‚better' knowledge, more reliable knowledge, knowledge nearer to truth about the world we live in and to what it is to be human" (Young 2013: 107). It is basically knowledge, which is based on stronger evidence and obtained a higher degree of consensus. You can usually find this kind of knowledge within the boundaries of academic communities, because members share "communal resources - [such as] language, routines, sensibilities, artefacts, tools, stories, styles, etc" (Wenger 2000: 229). Academics create evidence „on methodological grounds" (Faludi and Waterhout 2006: 9), e.g. by conducting systematic studies. Scientific standards such as accountability, falsifiability, or testability lend knowledge evidence (Davoudi 2006: 17). In other words, knowledge seems to be evident as long as the scholar's reasoning is reproducible and convincing, e.g. by empirical work. Hence, an important part of the education of planners is imparting specialised disciplinary knowledge for the „development of the evidence base" (UK Planning Policy Statement 12, in: Davoudi 2006: 17).

Planning practice is however „heavily influenced by events of the day" (Faludi and Waterhout 2006: 11). Situations are always unique with challenges occurring in different configurations. Planning requires improvising and innovating to a great extent. Hereby, planners can fall back on disciplinary knowledge, but they cannot resolve urban issues before combining different knowledge from multiple fields. The communities of practice literature calls this boundary work (Carlile 2002: 445). "At the boundaries, competence and experience tends to diverge: a boundary interaction is usually an experience of being exposed to a foreign competence. Such reconfiguration of the relation between

competence and experience are an important aspect of learning" (Wenger 2000: 233). Figure 2 showed three of those distinct disciplinary fields. The permeability for students switching between these fields is highly limited. Postgraduate independent planning degrees require undergraduate planning degrees. Postgraduate engineer-planner degrees demand a background in engineering. The continuing existence of all these fields demonstrate however the relevance for planning tasks. Hence, planners have to obtain the competency combining different disciplinary knowledge in order to resolve planning challenges.

## 3. Conclusions

In the beginning of this paper, we have outlined major challenges for planning education. We demanded structure for the diversifying urban discourse. Therefore, we presented a system model that describes the impact and purpose of planning education. The systemic view led us to conclude that we have to conceptualise planning as a boundary discipline - requiring disciplinary knowledge as well as the combination of knowledge across disciplinary boundaries. In contrast to other scholars, we do not propose a new general theory of planning (cf. Schönwandt 2008; Innes and Booher 2014). For us, planning is not a unitary discipline with a consistent set of concepts and procedures. Planning is rather the application of - often conflicting - scientific theories and ideas in order to resolve physical and social challenges in our cities. We reject the normative character of planning policy and embrace that the field of planning is complex. This complexity requires the joint effort of multiple disciplines and their different perspectives. No idea is superior over others. Knowledge derived from social sciences is equally important than knowledge from engineering. "In order to provide a sustainable response to […] challenges within society and urban space […] an approach involving all space-related disciplines is necessary" (Wolfrum and Schöbel-Rutschmann 2011). We therefore strongly agree with Howe (1980), when she argues that "the [planner's] choice of role should not be thought of as a choice between two conflicting ideologies of planning. Rather there are several dimensions of role which can be used separately or in combination".

„The emergence of transdiciplinarity […] signalled the need for new syntheses at a time of growing fragmentation of knowledge and cultures" (Thompson Klein 2014: 68). We call this boundary approach ‚urbanism' in order to differentiate it from planning. Independent planning degrees - with their expertise for public administration procedures (Hoch 2012: 130) - are only one community of practice within a transdisciplinary field of communities such as architects, landscapers, designer, engineers, geographers, sociologists and economists. The term urban-ism consists of two parts. The suffix ‚-ism' form abstract nouns of action, process or study (Oxford University 2015). The first part of the word hereby signifies the object of action - in our case described as ‚urban'. ‚Urbanism' therefore comprises all fields of action and study of cities such as urban planning, urban design, urban geography and so forth. Haas & Olsson (2014) recently asserted the term's emergence as part of the transdisciplinary debate about urban planning and design.

As a result, we question the central role of consecutive chamber-controlled bachelor-master-education in the field of planning. Today, professional bodies such as the German ‚Architektenkammer' or the British RTPI demand a minimum of four year consecutive ‚planning education' in order to work in the field of urban planning (Kunzmann 2008: 17). This hinders transdisciplinary work in practice, because companies and public planning departments are required to mainly hire graduates, who have acquired formal qualifications. As shown before, the development of livable cities does however require much wider knowledge, which students cannot obtain in established planning degrees. Hence, we propose educating ‚urbanists' at the postgraduate level. Here, education can base upon disciplinary fundaments. The goal of postgraduate education is then to further develop powerful key competencies

for the combination of disciplinary knowledge. This requires developing specific transdisciplinary didactics. We believe that this will be the major challenge for schools in the future.

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# EDUCATION FOR SUSTAINABLE SPATIAL DEVELOPMENT: SOME REFLECTIONS ON TEACHING STUDENTS OF PLANNING AND RELATED PROFESSIONS

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TRACK 03: Responsibilities in Planning Education and Practice

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## Abstract

*In 1992 national governments committed themselves to pursue sustainable development at the Rio Earth Summit. Urban areas play a critical role in this commitment as: they are where the majority of the world's population is located and are growing rapidly; they have large and increasing ecological footprints; and, they host the infrastructure and industries that generate the lion's share of greenhouse gas emissions, pollution and waste. Urban and environmental planners can play a vital role in improving the sustainability of these areas, but how can they be best be prepared to face such a challenge? This paper examines how strategic changes can integrate the values of sustainability into built environment programs at universities. A specific case study is used based on a first year course in sustainability that the author convenes for a large and diverse group of undergraduate students. It is argued that in their future professional life, planning graduates have the potential to be agents of change by transforming the urban form as well as how the state interacts with the private sector and the community. This analysis is undertaken using the theoretical framework of ecological modernisation that underpins the idea of sustainability, offers a strategic pathway to transform public-private-community interactions, and approaches sustainability as a design challenge. The somewhat ambitious goal is to synthesise the empirical evidence, the practical experience, and theoretical framework into a coherent whole.*

## 1. Introduction

For more than two decades sustainability has been one of the stated goals of governments, businesses and community organisations around the world. Achieving sustainability, however, has proved elusive because the changes required cut across all areas of human endeavour (Howes 2005). Since most of the world's population, production and consumption is now located in urban areas, the role of planners is crucial. How then can universities best prepare planning students for the challenges they face with regards to sustainability? This paper addresses this question in a series of logical steps. The next two sections offer a brief history of sustainability and discuss the role allotted to planners and education. After that, an outline of the rise of planning education at Griffith University is given. This leads to a discussion of a series of courses that were designed to give planning students an understanding of sustainability. A case study of a new first year course on sustainability is then developed, which includes some of the practical lessons learnt with regards to what works and what doesn't. The paper finishes by taking a step back and using the lens of ecological modernisation to understand the transformations required in pursuing sustainability, the role of planners, and the elements that need to be included in their training. The underlying argument is that sustainability should be presented as a design challenge and taught by way of interdisciplinary problem analysis and problem solving exercises.

## 2. A Brief History of Sustainability

The rise of sustainability to international prominence can be seen as a process of institutional learning by governments around the world. By the end of the 1960s a rapidly expanding range of new social

movements was forcing environmental and social issues onto the political agenda (Howes, 2005). This led to new initiatives that expanded the policy focus from traditional areas such as security, economic management and welfare (Dryzek et al., 2003). During the 1970s the idea that economic, social and environmental issues were linked began to emerge. This process started with United Nations (UN) *International Development Strategy* in 1970 which linked economic development to a healthy environment. In 1972 concerns about the impacts of industrial development on the environment were the main focus of discussions at the UN Stockholm Conference on the Human Environment and this led to the subsequent creation of UN Environment Programme (UNEP).

A pivotal moment came in 1980 with the release of *The World Conservation Strategy* by UNEP, the International Union for the Conservation of Nature (IUCN) and the World Wildlife Fund (WWF). This introduced the concept of 'sustainable development' as a proposal to utilise ecosystem goods and services for the production of social and economic benefits over the long term (Howes 2005). The concept was elaborated by the World Commission on Environment and Development (WCED) in its final report, *Our Common Future* (WCED 1987) which offered what has become the most commonly used definition: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987, chapter 2, paragraph 1). The report included a chapter on the challenges facing the built environment (WCED 1987, chapter 9) which forecast the shift in the majority of the world's populations to urban areas. It also outlined some of the key sustainability challenges, particularly for cities in developing countries. Other sections of the report stated that there was a strategic role for education and institutional change in striving for sustainable development (WCED 1987, chapter 2, paragraph 16).

The idea was followed by the UN Conference on Environment and Development (UNCED), otherwise known as the Rio Earth Summit, in 1992 that produced a strategy for reforms across all sectors of society called *Agenda 21* (UNCED 1992). A commitment that appropriate education and professional training should be a priority appeared multiple times throughout the document (UNCED 1992). A whole chapter was dedicated to developing sustainable human settlements with urban planning mentioned as playing a key role (UNCED 1992, chapter 7, paragraph 7.19). National initiatives were developed to supplement these international commitments, including: Australia's *National Strategy for Ecologically Sustainable Development* (1992); the *President's Council on Sustainable Development* (1993-1999) in the USA; and, *Sustainable Development: the UK Strategy* (1994) (Howes 2005). The Australian strategy, for example, had a chapter dedicated to urban planning as well as a chapter on education and professional training (Ecologically Sustainable Development Steering Committee 1992, chapters 6 and 26 respectively).

By the mid-1990s there were international agreements and national policies committing governments to pursue sustainable development. These included recognition of the need to transform urban areas in which planners would play a key role as agents of change. Further, education and training were seen as a key supporting mechanism that would enable professionals such as planners to fulfil this transformative role.

## 3. Education, Planning and Sustainability

It is important to note from the start that education relating to the environment and planning goes back many generations before the rise of sustainability as an idea. One of the pioneers of environmental and planning education was Patrick Geddes in late-Victorian Britain which preceded the growth of 'nature studies' in the early part of the twentieth century (Palmer 1998). The term 'environmental education' was introduced with the formation of the International Union for the Conservation of Nature and Natural Resources (IUCN) in the late-1940s and promoted at the UNESCO (1968) Biosphere Conference in Paris. There has, however, been some convergence between the two streams of

environmental education and sustainability over the last few decades. The 1972 Stockholm conference mention previously, for example, generated a principle that stated:

> "Education in environmental matters, for the younger generation as well as adults, giving due consideration to the underprivileged, is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in protecting and improving the environment in its full human dimension ..." (UN 1972, Principle 19).

UNEP, another product of the Stockholm conference, co-founded the International Environmental Education Programme (IEEP) and its 1977 conference in Tbilisi set out the principles of environmental education that remain current to this day:

- Life-long learning;
- An interdisciplinary curriculum;
- The interconnectedness of society and the environment;
- The multi-dimensional nature of environmental issues (including the social, political, economic and technological aspects);
- Energy and material resource limits;
- Global and future dimensions;
- Critical thinking and problem solving; and,
- Values and ethics (Palmer 1998).

These Tbilisi principles were picked up in *Agenda 21* (UNCED 1992, chapter 36, paragraph 36.1).

The UN declared that 2005-14 would be the 'Decade of Education for Sustainable Development'. This entailed the acknowledgement of the need to promote values in the training of professionals that would help to transform society (Howlett, Ferreira and Blomfield 2016 forthcoming). There was a subsequent shift in emphasis from environmental education to education for sustainability amongst universities that had been developing such programs (Wilensky 2007). With the rise of climate change as one of the major threats to sustainability, there was a further shift in emphasis. The Australian Research Institute in Education for Sustainability (ARIES), for example, published a report in 2007 entitled *Shifting Towards Sustainability: Education for Climate Change Adaptation in the Built Environment Sector*. Disciplines such as planning, architecture and engineering were a particular focus of this report as their graduates can play a key role in climate change mitigation and adaptation. This was supported by professional organisations such as the Planning Institute of Australia (Lyth, Nichols and Tilbury 2007).

It should be noted, however, that there are ongoing debates about the role of planners in society and what should be included in their education. On the first point, one view is that the role of the planner is difficult to define (Wildavsky 1973) while another suggests that planning is akin to geography (Huxley 1999). This uncertainty spills over into debates about what and how planners should be educated. What should be the role of practice and practitioners? (Bolan 1980; Schön 1982; Rosier 2001; Watson 2002). What is the relationship of practice to theory? (Sandercock 1999; Sorensen and Auster 1999a; 1999b; Myers & Banerjee 2005). What should be included in the core of a planning curriculum? (Sandercock 1997; Huxley 1999). In Australia these debates are taking place in an academic environment of increased competition for scarce public resources, a shift to vocational training, and a growing tension between the demands of research and teaching (Davis 2006; Markwell 2007). Resolving such debates is beyond the scope of this paper, but they provide some context for the case study that follows.

By the start of the twenty first century education for sustainability was being actively promoted as part of the curriculum for planning students, amongst others, in Australia. The values and principles of sustainability were at the heart of these proposals in line with commitments within *Agenda21* and the *National Strategy for Ecologically Sustainable Development.* Such ideas have been injected into a somewhat turbulent academic environment where there remains considerable debate about the role of planning in society and the broader design of curricula.

## 4. Planning at Griffith University

The Griffith School of Environment is the latest incarnation of one of the four founding schools of Griffith University. The university began teaching in 1975 to meet the demands of the rapidly growing population and economy of South East Queensland. The programs at Griffith were deliberately designed to differentiate themselves from more traditional universities by being interdisciplinary and problem-focussed (Quirk 1996). The Australian School of Environmental Studies, as it was originally known, took this principle to its core by employing a wide range of both natural scientists (ecologists, chemists, geologists and mathematicians) and social scientists (economists, political scientists, geographers, sociologists and anthropologists). It was the first school of its type in Australia and remains the largest School of Environment in the country to this day (Metcalf 2000). A school of planning was created in 1993 that was then merged into a new enlarged school of environment in 2007. A new architecture program added in 2009.

Today the Griffith School of Environment has over 75 academic staff divided amongst six discipline groups: planning; architecture; marine science; society and environment; ecology and biodiversity; and, soil and water science. There are several research centres associated with the school, including: the Urban Research Program; the Environmental Futures Centre; the Griffith Centre for Coastal Management; the Centre for Environment and Population Health; and the Australian Rivers Institute. Most of the planning academics conduct their research within the Urban Research Program which also includes staff from disciplines such as architecture, political science, economics and law. The author has worked at the school since 2000 and was a founding member of the Urban Research Program in 2004. He is also the Head of the Society and Environment Discipline which is the team of social scientists and public health academics within the school.

In terms of teaching, the Griffith School of Environment offers undergraduate, Masters and PhD degrees in urban and environmental planning, as well as architecture, environmental science and environmental management. Since the start of 2014 almost all the degrees offered by the school require students to take an interdisciplinary first year course that was designed and taught by the author of this paper entitled *1043SCG Introduction to Environmental Sustainability.* This is the focus of the case study that follows and for convenience will be referred to as simply the ‘sustainability course’ from here onwards.

## 5. Background to the Case Study: Forerunner Courses

The current sustainability course has a long pedigree. Since its inception, the school of environment has worked through a series of different interdisciplinary first year courses that integrate the natural and social sciences. Three that were taught by the author have had a strong influence on the development of the current course: *1181ENV Sustainable Development*; *1301ENV The Global Environment*; and, *1161ENV Environmental Economics and Policy*.

The first course, *1181ENV Sustainable Development,* was created by the author in 2007 on the Nathan campus as a core for the environmental science and management students as well as an elective for the planning students. The original version of the course took a sector-based approach to sustainability. In the first few weeks the extent of interconnected environmental, social and economic problems was

outlined. This was followed by an exploration of the idea of sustainable development as a solution and a set of principles were defined. The remaining two thirds of the course then methodically worked through how these principles could be applied to understanding and addressing issues relating to cities, housing, transport, energy, healthcare and manufacturing. The course was developed further after being taken over by colleagues in 2009 to take a constructivist approach that promoted more critical thinking and reflection (Howlett, Ferreira & Blomfield 2016 forthcoming).

The second course, *1301ENV The Global Environment,* had been running on the Gold Coast for more than a decade when the author took it over in 2009. The enrolments grew to 360 with planning, architecture and environmental science the main cohorts. It took an issue-based approach, looking at land degradation, climate change, the loss of biodiversity, pollution, hazardous waste, and water issues. The approach was based on Earth Systems science and used the drivers-pressures-state-impact-response (DPSIR) analytical framework. This framework is used for State of the Environment reporting by the United Nations, the European Union and the US EPA, as well as both federal and state environment departments in Australia. Although it was interdisciplinary, the natural sciences played a strong role in understanding the issues.

The third course, *1161ENV Environmental Economics and Policy*, was jointly developed in 2009 by the author at the Gold Coast and his colleague, Dr Peter Daniels, at Nathan. Enrolments on the Gold Coast (where the author was teaching) consisted of 80-90 students, predominantly from planning. It took a discipline-based approach that was mainly social science but started with a review of key sustainability issues. It also touched on the DPSIR framework in conjunction with key economic and policy tools. Market theory was introduced, then environmental and social problems, such as pollution and climate change, were analysed as evidence of market failures. Economic tools such as contingent valuation and cost benefit analyses were then brought to bear on the issues discussed. This was backed up with a policy analysis of responses such as environmental regulations, taxes, tradable permits and international treaties. The course also considered sustainability as a new goal for macro-economic policy.

In 2014 all three of these courses were replaced by *1043SCG Introduction to Environmental Sustainability* that sought to learn from the experience of these forerunner courses, utilise the best elements of each and integrate them into a functioning whole (Howlett, Ferreira & Blomfield 2016 forthcoming). The development process took 18 months and was funded by a Griffith Learning and Teaching Grant (led by a colleague, Dr Henry Skates, from architecture). The relevant educational literature was consulted to provide a sound basis for the course design that was grounded on best practice. International resources were used in compiling the course content. A wide range of consultations took place, with experts from all discipline areas of the school represented. External expertise was also brought in, including the university's sustainability officer, the Griffith Institute for Higher Education, an information and communication technology expert, and two educational designers. The new sustainability course was launched in Semester 1 of 2014 (that ran February to June).

## 6. Case Study: The Sustainability Course

The first version of this new course had a modular structure. Module 1 (weeks 1-3) covered the state of the environment, introduced the idea of sustainability, then outlined its key principles. The underlying emphasis of the course was on a values-based approach to sustainability with the commitment to sustainable development at the 1992 Rio Earth Summit viewed as a change in values. Some time was spent explaining the connection between ethics and values using a matrix that ranged from anthropocentric to eco-centric on one axis and deontological to consequentialist on the other. Students were asked to locate themselves on this matrix in order to encourage reflective learning.

Module 2 (weeks 4-6) then used the DPSIR framework to explore environmental issues related to the lithosphere, the hydrosphere, the atmosphere and the biosphere. The approach in this module was largely that of environmental science. In module 3 (weeks 7-9), the focus was on the economy and natural resource management with specific topics covering market theory, market failure and ecological economics. The final module (weeks 10-12) focussed on society and the environment with topics covering culture, indigenous people, settlements and governance. Some conclusions were drawn in week 13 to bring these four modules together. The associated workshops were split between developing basic study skills and reviewing some of the topics covered in the lectures.

The course was completed by 526 students drawn from a broad range disciplines, but the largest cohorts were from planning, architecture, environmental management, science and engineering. There were also students from other groups within the university (including health, business, arts, education and law) who took the course as an elective. All students were surveyed at the end of semester (with a 39% response rate) to evaluate the quality of the course and teaching. This feedback was used to revise the course content and delivery for 2015. In terms of feedback, the students were very happy with the quality of teaching and the overall satisfaction rating placed the convenor in the top quartile compared to other large first year courses at Griffith. The overall evaluation of the course, however, was mixed. While the students were generally satisfied, the rating on the engagement in learning was close to the average when compared to similar first year courses. The student comments suggested that this was because the course appeared to be too general, they could not relate much of what was covered directly to their chosen profession, they wanted more of a focus on finding solutions to issues, and the workshops needed to have a stronger link to the lectures. The discipline-based modular approach also appeared to be a problem with such a broad range of different cohorts. Students majoring in the environmental and natural science disciplines, for example, enjoyed module 2 but did not engage as well with the economic and social elements of modules 3 and 4. The opposite appeared to be true for the planning and architecture students.

A detailed content analysis of the survey results was undertaken to identify points for improvement. The convenor then went back to the education for sustainability literature to find suitable innovations. A revised course structure was created and put through an internal peer review process with some of the best performing teachers in the school. The resulting new course structure was implemented in semester 1 (February-June), 2015. This new structure was much more integrated and focussed on fewer topics in more detail. The overall approach shifted to treating sustainability as a design challenge (something that had more resonance with the planning, architecture, engineering and science students) rather than a change in values. The principles of sustainability were still taught, but were used in an applied fashion to explain how they can guide the analysis and solution of problems on a week-by-week basis. The underlying idea was to focus on a key problem in the odd weeks, then work through sustainable solutions in the even weeks. A critical thinking component was added with students exposed to different environmental discourses that challenged mainstream views. Each of the environmental science, economics, policy and cultural studies elements were integrated into every lecture to provide a truly interdisciplinary approach to both problem analysis and problem solving. The resulting structure is in table 1 below.

The relevance of the course to each student's chosen profession was tackled in five ways. First, the lectures of week 1 finished with an explicit discussion of how each of the 11 most common professions being pursued by the students could contribute to addressing the state of the environment and striving for sustainability (these professions were: scientists, planners, architects, engineers, health professionals, business managers, policymakers, lawyers, educators, journalists and social scientists). Second, every lecture included elements that were directly connected to these professions either in analysing or solving a specific problem. This was followed up with 'hands-on' workshops that

included specific problem solving exercises related to the issues for that part of the course. Third, the students were asked to look up their chosen profession on the *Australian and New Zealand Standard Classification of Occupations* (ABS 2015), identify their key tasks, and design a professional e-portfolio targeting potential employers. Fourth, students were given a written assignment to work on over nine weeks that asked them to outline a role for their chosen profession in addressing climate change and how this would fit in with the broader pursuit of sustainability. Finally, specific case studies were used that involved a range of their professions along with some examples of what Griffith graduates were doing.

Table 1. Current Sustainability Course Structure

| Week | Lecture Topics | Workshop & Assessment |
|---|---|---|
| **1** | **State of the Planet** | |
| **2** | **Environmental Sustainability**<br>*5 Principles*<br>*Critical thinking: Earth systems & DPSIR* | Calculating your ecological footprint |
| **3** | **Resource Depletion** | Resource supply & demand |
| **4** | **Sustainable Materials**<br>*Principle 1: Intergenerational equity*<br>*Critical thinking: Biomimicry* | Preparing an e-portfolio for your profession |
| **5** | **Climate Change** | On-line study skills tutorial |
| **6** | **Sustainable Energy**<br>*Principle 2: Intra-generational equity*<br>*Critical thinking: Environmental justice* | Climate change & your profession |
| **7** | **Biodiversity Loss** | Mid-semester test |
| **8** | **Sustainable Food**<br>*Principle 3: Precautionary principle*<br>*Critical thinking: Green-collar jobs* | Valuing ecosystem goods & services |
| **9** | **Pollution** | Written assignment review & submission |
| **10** | **Sustainable Goods & Services**<br>*Principle 4: Polluter pays*<br>*Critical thinking: Ecological modernisation* | The benefits & costs of cleaner production |
| **11** | **Waste** | Urban metabolism & environmental impact assessment |
| **12** | **Sustainable Settlements**<br>*Principle 5: Triple bottom line*<br>*Critical thinking: Urban metabolism* | Waste reduction & sustainable living |
| **13** | **Conclusions** | |
| **15** | | End of semester exam |

At the time of writing this paper 11 out of the 13 weeks of classes had been completed. While the comprehensive end of semester student evaluation surveys had not yet been undertaken, a qualitative in-class survey had been collected in week 6. The feedback from this survey was very positive, more so than the equivalent one conducted in 2014. This, together with the verbal feedback being given by students to the teaching team, suggests that the new course design has addressed the weaknesses that arose in the original 2014 version. Overall, looking at sustainability as a design challenge, taking an

interdisciplinary approach to problem analysis and problem solving, and more explicitly relating the topics to the students' chosen professions, are changes that appear to have been well received.

## 7. The Bigger Picture: Ecological Modernisation

Treating sustainability as a design challenge is the underlying philosophy of the ecological modernisation which provides the theoretical framework that underpins the idea of sustainability (Howes et al 2010; Howes 2005; Howes 2000). It also offers a strategy for transformation that requires better urban design and therefore, by default, planners and related professionals who are taught by universities are seen as agents for change. This gives universities and academics an important role in training these professionals (Howes 2003). Creating interdisciplinary courses in sustainability such as the one discussed in the previous section is therefore an important element in fulfilling this role.

Ecological modernisation argues that although the institutions of modernity (i.e. democracy, the state, the market, and industry) have allowed and sometimes even encouraged unsustainable practices, they can be redeemed through a process of transformative change (Christoff, 1996; Mol & Spaargaren, 2000; Dryzek, 2005; Howes, 2005; Howes et al 2010). The goal is to decouple economic growth from environmental damage by the application of new eco-efficient technology and the redesign of institutions (Berger, 2001; Janicke & Jacob 2004; Dryzek, 2005; Howes, 2005; Huber 2008; Janicke 2008). This school of thought had its origins in Europe during the early 1980s, and two of its most prominent founders were Martin Janicke and Joseph Huber, although the pedigree of many of its component ideas can be traced back as far as the 1960s (Huber 2000 & 2008; Janicke & Jacob 2004; Janicke, 2008). Ecological modernisation ranges from the weak techno-corporatist approach that focusses solely on engineering solutions, to the strong reflexive approach that include the redesign of institutions (Christoff 1996). The state is cast in the role of a facilitator of change, with interventions designed to promote economic prosperity, social wellbeing and ecological sustainability (Howes 2005; Howes et al 2010). This provides an opportunity for planners to facilitate the redesign of the urban environment and act as the agents of change.

There are five key core themes of transformation in the strong version of ecological modernisation:

1. The redesign of technology to make it more eco-efficient and cleaner (i.e. less material and energy intensive, as well as less polluting);
2. The redesign of economic imperatives to provide incentives for change (e.g. pollution charges and taxes, with subsidies and tax breaks for sustainable businesses);
3. Political and institutional redesign (i.e. a shift towards a more consensus-based form of governance that encourages partnerships between the state, business and the community);
4. The redesign of the role of social movements to give them more influence in decision making (e.g. engagement with the environmental justice movement); and,
5. A redesign of public discourse, with greater recognition of social justice and sustainability in decision making (e.g. focussing on green collar jobs as a way to achieve the 'win-win' scenarios) (Howes et al 2010).

Planners can engage with each of these transformative themes (Dedekorkut-Howes et al 2010). They can design urban spaces and infrastructure to take advantage of eco-efficient technology. They can develop planning regimes that reward sustainable developments. They can participate in the establishment of more effective community and business partnerships to rethink new developments or revitalise older suburbs. They can establish more effective community engagement and consultation processes for planning decision making. Finally, they can disseminate information and engage in public forums to promote a more sustainable worldview. Training the students of planning to recognise these opportunities and their role as agents of change is therefore an important responsibility for universities and academics. The sustainability course discussed previously has been designed to make a significant contribution to meeting this responsibility.

## 8. Conclusions

While there is an international consensus that the pursuit of sustainability is a good idea, developing a strategy that can catalyse the necessary transformations across all sectors of society has proved difficult. Clearly planners have an important role to play in making urban areas more sustainable, but how to prepare them? Planning education and training has been developing for generations, and at institutions like Griffith University it has merged with education for sustainability within a broader school of environment. By design, trial and error a series of forerunner courses have led to the development of a new first year foundation course in sustainability that is taken by students of planning, as well as many other disciplines across the university. Finding ways to engage such a large and heterogeneous set of students has proved a testing. The current version of the course has adopted a number of strategies, such as treating sustainability as a design challenge that engages students in interdisciplinary problem analysis and problem solving. This approach is consistent with the theoretical framework of ecological modernisation and the idea of sustainability that it underpins. Such a strategy not only guides the education and training of planners, it also gives them a broader sense of purpose in assisting the pursuit of sustainability.

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# HANDBOOKS IN PLANNING: FIVE THESES FOR TEACHING ACROSS NATIONAL BORDERS

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*Handbooks are assigned the task of presenting knowledge in a systematic manner for practical learning purposes. This is less immediate for spatial planning, a complex (and sometimes confusing) field of knowledge, also because of the different legal frameworks and cultural traditions in which it is practiced. Handbooks in planning are indeed used to refer the teaching to a specific national context, but this may lead to confusing the technical nature of planning with its institutional codification. The handbook recently published by the present authors in Italy builds on the assumption that planning education requires, first and foremost, that students understand its value as specific technical knowledge. From this assumption follows the distinction between 'spatial governance' and 'spatial planning', adopted in the handbook. The proposed contribution summarises the educational choices behind the handbook in five theses, which are discussed as a basis for teaching planning in an international perspective: 1) urban planning is a field of knowledge, teaching its technical aspects means teaching spatial planning; 2) to teach spatial planning we must explain why it is instrumental for the purposes of spatial governance; 3) the technique of spatial planning originated from recognisable matrices, the teaching of which lays the foundations for all subsequent learning; 4) also for teaching purposes, the technique of spatial planning can be traced back to zoning; 5) spatial governance is not a form of technical knowledge, but a political practice that may be taught insofar as it is necessary for understanding the effects of spatial planning.*

## 1. Introduction

"Spatial governance and spatial planning" is the title, translated in English, of the handbook published in Italy by the authors of this paper (Gaeta, Janin Rivolin & Mazza, 2013). Right down to the choice of title, the handbook was drawn up on the basis of three convictions: i) that teaching spatial planning is about passing on and contributing to the construction of specific technical knowledge, even more so if this is done using a handbook; ii) that for teaching to be effective, the technical nature of this knowledge must be pointed out; iii) that the institutional frameworks of professional practices do not provide a basis for technical knowledge, although they are useful for critically understanding its potential, limitations and moral implications.

With regard to these considerations, handbooks generally have different approaches:

a) the subject is usually approached in reference to a specific 'national' context (e.g. Gabellini, 2001; Cullingworth & Nadin, 2002; Cullingworth & Caves, 2009);
b) also for this reason, the nature of technical knowledge depends, explicitly or implicitly, on its institutional codification in that given context and, if the context is not given (e.g. Selicato & Rotondo, 2010; Weber & Crane, 2012), the nature of technical knowledge also remains vague;
c) the knowledge transferred – which comes from a field of knowledge including everything from administrative and procedural skills to urban design, from urban studies to public management – can rarely be described as 'technical' and at any rate is almost never 'specific'.

The above assumptions led to this new handbook being drawn up in four parts, which help to show – using concrete cases, detailed information, examples and exercises – issues that must be taken into

consideration for learning to take place without making exclusive reference to the Italian context, extending the scope to the ancient and contemporary experiences most suited to helping us understand the technical nature of our knowledge. The first part of the handbook shows how the main effect of spatial governance is that it reshapes the citizenship of those who live in the area subject to planning; the second part traces the historical matrices of spatial planning that have contributed to shaping contemporary technical knowledge; the third part sets out the main themes and methods of spatial planning that emerged over the course of the twentieth century right up to the present day; and the fourth and final part is dedicated to the institutional and procedural forms through which spatial governance, making use of spatial planning, currently operates.
This paper gives the reasons, in five theses, for the educational choices behind the handbook and concludes with a few considerations as to the relationship between teaching and civic progress.

## 2. Urban planning is a field of knowledge, teaching its technical aspects means teaching spatial planning

The political and technical practices used to order space play an essential role in all societies. No matter how many things may change in society in the future, it is certain that the ordering of space will always be necessary. Spatial planning meets this social need, although during certain periods it may not seem up to the task, and may seem like an uncertain and ineffective solution. This must be taken into account before any teaching can take place in our field, to stress the importance to students of the subject they're broaching, independently of the historical circumstances and the national and/or socio-spatial context of reference.
In this respect, it is helpful to avoid falling back on the Italian term *urbanistica* ('urban planning', see: CEC, 1997), which is still very much used in professional and academic jargon. This term – like *urbanisme* in France or *town and country planning* in the United Kingdom – is commonly used in Italy, because it was adopted by the national technical culture developed at the beginning of the twentieth century by the first disciplinary institutes (universities, journals, conferences etc.). The problem is that, due to the wide variety of subjects that have involved the ordering of space in the last century, these national denominations of the same technical practice have ended up covering a vast field of knowledge and disciplines with no real clarity as to where to draw the line; they describe bodies of knowledge that do not fit into a single framework due to the many objectives pursued and the differing jargons used. No teaching programme, even one extended over a long period of time, could satisfactorily cover the multiple subjects encompassed, for instance, by the field of 'urban planning'. Even if it were possible, such a teaching programme would end up evading or confusing, with an overly vast set of questions, the specificity of the technical knowledge that planners apply or should apply, that is to say spatial planning.
For these reasons, we decided it would be preferable, in drawing up the handbook, to use two interrelated terms that help to convey, more effectively than others, the political and technical functions of the ordering of space: spatial governance and spatial planning. By spatial governance, the handbook means the political decision-making processes through which choices about the ordering of space, i.e. defining and controlling the uses of the land, are made. By spatial planning, the handbook means the main technique that is available to and supports spatial governance. This terminological pair introduces order into the multifaceted field of 'urban planning' (or whatever term is traditionally adopted in distinct national contexts) and allows us to distinguish between techniques that actually do order space and the political processes that decide this order. Furthermore, the pairing of terms is a tool that can be applied to any socio-administrative and cultural context. That said, it must be stressed that the use of the term 'governance' should not conceal in any way the fact that only the 'government' has the ultimate power to dictate how land is to be used (i.e. to assign rights of transformation).

Whilst the traditional terminology takes both political decision-making processes and analytical and planning techniques into account, distinguishing between spatial governance and spatial planning allows us to separate two practices that have different characteristics and present different didactic issues, making them an effective combination for teaching. Given that spatial planning is a form of technical knowledge taught for practical purposes, this handbook describes it by tracing its theoretical and practical origins back to ancient times and above all through the last one hundred and fifty years of European and North-American history. This gives us the profile of a form of technical knowledge with deep and far-reaching roots, the main use of which is to assign and control the use of land, clearly demonstrating how this ultimately translates into social control and the re-establishment of the material conditions of citizenship in the area subject to planning.

## 3. To teach spatial planning we must explain why it is instrumental for the purposes of spatial governance

To pass on any technical knowledge, its technical nature must be defined and justified. In other words, a convincing answer must be given to the question 'what human practices gave rise to the need for such skills and why? Without this – as we will see – it is (more) difficult to teach how specific technical knowledge can or must be used and, above all, with what aims and responsibilities. In contemporary handbooks on spatial planning the question is usually avoided. The implicit answer these give thus tends to place the origin of technical knowledge in the institutionalisation of professional practices in the modern age, "as a technique used by the public authorities" (Marescotti, 2008, p. 1) to pursue aims "which are set out in legislation or in some documents of legal or accepted standard" (Cullingworth & Nadin, 2002, p. 2), ending up inverting the causal relationship between practical reason and institutional codification. In cases where efforts are made to define the technique outside a specific institutional context, the following ideological statement holds true: if spatial planning can be freely defined as "a process of formulating goals and agreeing the manner in which these are to be met" (Cullingworth & Caves, 2009, p. 6) or "an institutionalized social technology for systematizing knowledge pertinent for a particular kind of collective action and for marshalling the power required for its implementation" (Weber & Crane, 2012, p. 8), then it is also legitimate to deny its technical nature, teaching students that "the urban project – faced with an ever-changing local context – moves forward by trial and error, and (…) is not easily confined to a deductive logic established by a general plan" (Selicato & Rotondo, 2010, p. 2).

In actual fact, the need for spatial planning came about well before its institutional codification in the modern age, and referring back to the first experiences of it is essential to be able to correctly illustrate its technical nature. Plans have existed ever since human societies, in learning to permanently settle in a place, have needed to organise and control space, enclosing the area under their sovereignty and distinguishing, first and foremost, between space for public use and space for private use. Leaving the confirmations provided by archaeological finds dating back to the end of the Stone Age to one side, the first literary account to confirm the existence of spatial planning is notably given in Aristotle's *Politics,* in which the figure of Hippodamus of Miletus associates the application of the orthogonal grid with political constitution (Mazza, 2009). This association is made based on the political effects of the technical act of dividing land; in other words, on the "rights" this technique assigns or revokes.

In this respect, substituting *urbanistica* (urban planning) with *governo del territorio* (spatial governance) in the Italian Constitution under the 2001 reform has the undeniable, although probably accidental, merit of distinguishing political and executive responsibilities from the technical contribution that supports them, in the well-structured process that today regulates – 2,500 years on from the Hippodamean grid – the assignment of rights to the use and transformation of land by the State. Defining 'spatial governance' as the decision-making process by which political power assigns rights to the use and transformation of land, whatever the institutional context – ancient or

contemporary, of one State or another – in which this process is organised, is therefore necessary for defining 'spatial planning' as the technical tool for doing so.

## 4. The technique of spatial planning originated from recognisable matrices, the teaching of which lays the foundations for all subsequent learning

Any disciplinary knowledge, if it is to be consolidated, must establish an intellectual and professional genealogy. This is a task generally taken care of by the history behind the discipline in question, which is usually outlined in the introductory chapter of a handbook (e.g. Benevolo 2009; Cullingworth & Nadin 2002). By "inventing a tradition", in the words of Hobsbawm (1983), our handbook links the construction of technical knowledge with the aims pursued by spatial governance in the modern age, whilst also acknowledging its autonomy. Spatial governance changed between the nineteenth and twentieth centuries in response to the spatial effects of the industrial revolution, which made it necessary for the modern State to organise urban development with institutional ways of regulating land. Contemporary spatial planning culture took shape, in this context, through the application of models for ordering space established over time, i.e. by updating the original focal point of technical knowledge.

Recognising the matrices of spatial planning and understanding its aims is essential for learning technical knowledge. The matrices identified in the handbook correspond to the technical knowledge developed by three figures who pre-empted, in different ways, the characteristics and flair of the contemporary planner: Catalonian-born Ildefonso Cerdá, Scotsman Patrick Geddes and Englishman Ebenezer Howard. These men were highly committed in their day and determined to take action; they pursued interests and occupied positions in multiple fields of social practices. This did not stop them from contributing a specific set of theories, models and rules to our understanding of spatial planning that is still largely used to this day, albeit not always consciously.

Cerdá was the only one of the three who was educated in a technical school and integrated into a professional body, but took on administrative and political roles at different stages of his life. The focal point of his technical teachings, obviously more wide-ranging, was the design of the orthogonal road grid applied to the expansion of Barcelona, a design which he made into the cornerstone of a "general theory of urbanisation" (Cerdá, 1867). Placing the design of the grid and rules for building city blocks at the centre of his theory allowed Cerdá to provide technical solutions to the hygiene, economic and transport problems of urbanisation. Nonetheless, Cerdá's use of the design and rules, integral components of the plan, highlights his awareness about the effects of these on material rights of citizenship. Drawing on the rich repertoire of orthogonal urban roads (Malverti & Pinon, 1997), Cerdá associates them with an ideal of liberal and progressive governance, in which the very form of the city limits the accumulation of positional revenue and favours all forms of communication between citizens.

Geddes was a heterodox biologist, an advocate of the Spencerian concept of evolution who did not hesitate to make himself a social operator and then a planner without ever giving up on his intention to found a new science. His contribution to the technique of spatial planning was not the "survey, analysis, plan" formula that he himself, moreover, did not put into practice, but the way in which he demonstrated, using the examples of Scotland, India, Cyprus and Palestine, the close relationship between every process of spatial planning and the history and geography of a place. Geddes' technique was adaptive, sensitive to the unique characteristics of every urban culture, and focused on reinstating the harmonious development of nature and culture that was jeopardised by the industrial age. For him, the plan was above all part of a process of renewal of space and society simultaneously or, more precisely, of the evolutionary relationship between a community and its surrounding environment. In spatial planning, Geddes sought a way out of the dissipative development model that had prevailed up until then.

Howard was a self-taught man who moved from one profession to another, from one side of the Atlantic to the other. He was able to tap into the most varied of intellectual stimuli and bring them together in an ambitious programme for social reform. His contribution to the technique of spatial planning lies in the way he functionally deconstructed the industrial city, putting it back together according to a cooperative, balanced and hierarchical system for the use of land and mobility extended over the entire area. Using diagrams of the garden city, Howard maintained that the unbridled use of urban land was a source of conflict that disrupted peace in society. By establishing spatial planning as a tool for civil society (Hall & Ward, 1999), he contributed in a decisive way to its success in the twentieth century in the context of the welfare state.
In a nutshell, the technical knowledge of spatial planning was born from a combination of matrices that can be defined as regulatory, procedural and systematic respectively (Figure 1). Although they don't necessarily combine to form a consistent and exhaustive whole, these three matrices give students the essentials on which to build further learning.

Figure 1. Cerdá, Geddes, Howard: three matrices of spatial planning (sources: Aa.Vv., 1991; Ferraro, 1998; Hardy, 1991).

## 5. Also for teaching purposes, the technique of spatial planning can be traced back to zoning

Benveniste (1976) teaches us that the Italian word for rule, *regola*, comes from the Indo-European root reg- (the same as *rex*), which means to draw in a straight line, establish a right, in clear reference to the division of land. This founding etymology, so important to civil society, is useful for understanding that the rules for spatial planning can be seen above all in the boundaries it produces, and its technique can be seen in zoning. Whilst still in its infancy, the planning culture confused zoning with functional and social segregation, ignoring or forgetting that above its possible uses and effects, the division of land was the focal point of the technique. This handbook puts the student in a position to understand that the specific skill of spatial planning starts with and depends on the tracing out of boundaries.
Highlighting this paves the way for two considerable pedagogical opportunities. First of all, it shows that every technique that falls under spatial planning (e.g. sizing the extent of development, establishing and circulating standards, transferring volumetric rights, checking population density) is a specialisation in the technique of tracing out boundaries, combined with specific ways of regulating the use of land within the perimeters established by the plan, whether these already exist or are being created. The terms 'area', 'parcel', 'sector', commonly used in technical documents, all refer to the definition of boundaries without which indices and parameters would have no set meaning or be legally binding. Secondly, it helps us to understand that any technique that cannot be attributed to the tracing out of boundaries does not belong to the specific knowledge of spatial planning. This

distinction on its own is not enough to build systematic and communicable knowledge, nor does it mean that spatial planning should ignore the contribution of social and environmental sciences. The distinction is, nonetheless, useful for establishing the technical specificity of spatial planning, also preventing the student from mistaking it for a purely analytical skill. Obviously students should not be misled into a 'corporative' thinking (which is a risk that should be borne in mind), but to convey the real social utility of spatial planning it is important to allow students to recognise who we are, the technical culture we come from, and the knowledge we have.
Zoning, which is understood as a way of regulating the use of land through the tracing out of boundaries, is the most solid point of departure for the technical training of planners, regardless of the country and culture they come from. There's no one zoning model, this is actually a flexible technique that can be adapted to wide array of aims and situations. Indeed, it is applied in all cities, in the most varied political regimes, economic systems, climates and cultures, not without the support of the most radical liberals who, where in power, could not do without it. An ancient technique that is still used to this day, zoning bears the traces of the indissoluble relationship between land and citizenship. It is necessary, however, to learn to distinguish between the emancipatory use of boundaries, as authentic tools of citizenship, and their use for segregatory and discriminatory purposes (Jacobs, 1961; Somma, 1991; Chiodelli, 2012). In this sense, the moral implications of zoning are a lot more important than the aesthetic implications, and must be heeded in training students, because the autonomy of technical knowledge does not mean that it is without responsibility.

## 6. Spatial governance is not a form of technical knowledge, but a political practice that may be taught insofar as it is necessary for understanding the effects of spatial planning

In the first two theses we distinguished between the technical contribution to the control of space and the decision-making and executive responsibilities of political power. The two subsequent theses summarised the substance of the technical knowledge of spatial planning which, in theory, could be passed on even without referring to the nature of spatial governance in various institutional contexts. It is true, on the other hand, that the varied and significant issues and problems spatial governance finds itself up against – looking at just the last century this includes urban containment, the recovery of historical centres, the organisation of mobility, the protection of the environment and the landscape, reinforcing social cohesion and guiding local development, etc. – throw up just as many questions on method for technical knowledge, so much so that it is recommended that planning techniques be taught alongside decision-making processes and the ways in which the stakeholders involved participate in these.
Unlike that which is usually confirmed or implied by contemporary handbooks, however, it is important to emphasise that the national and regional characteristics of systems of spatial governance (more commonly labelled as the 'spatial planning systems'), the institutional forms and procedural tools through which this is developed in practice, the different types of plan for different administrative areas and the policies addressed do *not* constitute the technical knowledge of spatial planning. If this were the case, the need for contextualisation would risk obscuring the distinction between technical and political responsibilities. Rather, contextualisation is necessary to show that the aims and political effects pursued through planning are never 'absolute', but always linked to the characteristics and objectives of the system of spatial governance within which technical knowledge is applied.
Spatial governance is not a form of technical knowledge, but a political practice involving different types of knowledge, which more specifically takes procedural knowledge and the analysis of decision-making processes as its main points of reference. In practice, spatial governance consists in defining planning problems and deciding how to resolve them. An effective way of 'teaching' spatial governance to students is through case studies, insofar as these make it possible to describe and analyse decision-making processes. The handbook goes down this path, using concrete examples to

show the stakeholders involved in the processes, their actions and roles, their powers, and their links with active forces and interests involved in decisions of spatial governance in a given area. The case studies can be turned into 'games' in which the students take on the roles of the various stakeholders and try to find shared solutions other than those to have actually come out of the decision-making process. Among various other stakeholders, planners participate in the decision-making processes of spatial governance, as persons with a form of technical knowledge that sets them apart from the other participants. This knowledge must remain central to teaching, even though it is to be found in the context of the political processes in which it is used or represented.
We should add, to avoid any doubt, that it is useful to keep the distinction alive between technical and political responsibilities – more than to play down or downsize the responsibility of technical knowledge in influencing processes of spatial governance – to clarify that this responsibility does not end with the drawing up of plans, but extends to the contribution of technical knowledge, consciously or unconsciously, to the social construction of a system of spatial governance. Defining the technical nature of spatial planning also contributes, in this respect, to training professionals to be aware that systems of spatial governance are not formal, inanimate structures through (or against) which to unleash their individual creativity to improve the physical environment and human and social wellbeing (Healey & Hillier, 2008). Understanding that the control of space for the purposes of political, social and economic control does not follow, but pre-exists the formation of spatial governance systems, and is the founding purpose of these, is in other words essential for building technical knowledge that is conscious of its role in the progressive design of citizenship.

## 7. Conclusions

These last considerations allow us to conclude with a brief reflection on the specific institutional and political value of teaching in our field of knowledge. Indeed, the disappointment of political decision-makers and public opinion over the weak or contradictory response of spatial planning is well known.
The economic and social crisis of recent years, in particular, has led to public opinion becoming strongly detached from the idea of collective action and responsibility and from the idea of pursuing aims of public interest, which lie at the heart of the notion of spatial governance. The fiscal crisis and the further weakening of public power took away a clear and important part of the authority of spatial governance, which was not just to "do business" with urban transformations. So far, attempts to simplify spatial governance to make it more effective and transparent have often failed because public and private professional corporations take advantage of complicated and not particularly specialised procedures that increase the discretion of decision-makers but confuse responsibilities and facilitate collusion.
It is our conviction that, even without getting to the point of confusing roles and responsibilities, the difficulties referred to above are also the long-standing outcome of an uncertain method of teaching technical knowledge that lacks much-needed stability. Indeed, since spatial planning contributes to the progressive design of citizenship, it is not hard to believe that citizens who are confused or distrustful of planning are, in the long run, also the result of our specialists being trained in a way that is not targeted or selective enough. In conclusion, in the words of Beauregard (2005: 206), "a bridge exists from the technical knowledge that planners embrace to the institutional change that seems necessary for planning to be effective", and its foundations lie in university lecture halls.

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# ADOPT A NEIGHBOURHOOD: WHEN PLANNERS MEET SCHOOLCHILDREN

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**Abstract**
*Throughout this paper we will present a project that revolves around the idea of the neighbourhood as an 'identity container' and aims at bridging the gap between traditional planning programmes and the new challenges linked both to the crisis of public spaces and to participatory planning.*
*During the last two years, our University has been working in cooperation with the Municipality of Palermo and many primary and secondary schools of the city on a project called 'La scuola adotta il quartiere' ('Schools Adopt Neighbourhoods'). Within the project, planning students from the University guided the schoolchildren (8- to 13-years old) to the discovery of their neighbourhood and its community. Planners also had a key role in helping their younger 'colleagues' in the proposal and development of collectively discussed renewal policies: for instance, some of them proposed an urban renewal intervention in the well-known and deprived ZEN neighbourhood, and this proposal was later approved by the Municipality.*
*This process caused a mutual beneficial effect: on the one hand, schoolchildren became more conscious of the idea and nature of their neighbourhood and of the notion of ethical participation. On the other hand, planning students began to concretely explore the social role they are called to play in our contemporary society, and the ethical dilemmas that every participatory project involves.*

## 1. Introduction

This paper revolves around the idea that active and ethical participation must include not only the adult part of the population, but also younger people. The paper stems from an action research held in Palermo during the last two years (2013-2015), and draws upon previous experiences that we have already documented (Picone and Schilleci, 2012 and 2013).
Being the result of the cooperative work of a geographer (Marco Picone), a planner (Filippo Schilleci) and a landscape scholar (Francesca Lotta), this article mostly deals with interdisciplinary topics. Particularly, we will build the foundations of our reasoning on three key aspects: the notion of neighbourhood (arguably the *ideology* of neighbourhood: Lefebvre, 1967; see also de Certeau, Giard and Mayol, 1994; Galster, 2001; Borlini and Memo, 2008; Moulaert *et alii*, 2010; Picone, 2010; Picone and Schilleci, 2012), the generic practice of participatory processes and their ethical implications (Sanyal, 2002; Watson, 2003; Lo Piccolo, 2008 and 2009; Campbell, 2012; Picone and Lo Piccolo, 2014), and finally the inclusion of schoolchildren and young people in participatory planning processes, along with its peculiar ethical consequences (Checkoway, 1998; Driskell, 2002; Dennis, 2006; Gulson and Symes, 2007; Sclavi and Giornelli, 2014).
We will then mainly focus on the third point, and describe in full details the two-years experience we held in Palermo. Within the project to be discussed, planning students have played an essential role, and this has compelled us to speculate on the repercussions of this involvement for our academic programmes. We will also relate the practical, political and ethical issues that arose from this experience, as this will allow us to debate the future guidelines of this project within a larger conceptual framework, based on the notion of ethical participation.

Throughout this paper, we will suggest a few answers to the questions we have incurred, which are briefly summarised hereinafter.

1) How do we need to theoretically redefine the role of neighbourhoods, considering the geographic specificities of neighbourhoods between different cultural areas? In other words, do Italian neighbourhoods (*quartieri*) work exactly like their Anglo-American (or French, or German, etc.) equivalents, or are there any peculiar differences that we must account for?
2) What sort of participation can enhance the active role of citizens in the peculiar Southern-Italian context, which shows a strong (if not complete) lack of collaborative approaches from local institutions? Is there a way to overcome the contradictory (or weak) requests by either institutions or disadvantaged groups, in order to design a shared and community-based redevelopment programme? How do we strengthen the precarious notion of public spaces, when these are almost entirely replaced with private areas, often controlled and managed by wealthy entrepreneurs?
3) Which ethical issues arise from the participatory practices we are employing, particularly if we want to include young people in those practices? Do we have to use particular techniques of inclusion, or just set easy goals, so that the youth can effortlessly grasp the main points of action? What is the role of planning scholars and, most notably, planning students in these processes? Should we—as professional educators—adapt our traditional teaching curricula to train students to work with under age youth? And do ethical issues arise from this decision? Moreover, is there any peculiar kind of planning tasks that students should be trained to deal with, or are planning students able to cope with all the steps included in managing these participatory processes?

## 2. Research Background

One of the authors of this paper, coming from a social sciences background, has spent some years (2003-2005) as a junior high school teacher before starting his work as a researcher. Drawing from this doubly privileged point of view (both schoolteacher and academic researcher), he was able to design a scientific research starting from the field notes and participant observations that he collected during those years. Most of the notes revolved around the condition of schoolchildren in deprived Palermo slums, and later led to the publishing of some articles on the infamous ZEN neighbourhood (Picone, 2011).

During the spring of 2005, a group of young Dutch planning students from the University of Utrecht came to visit Palermo. They asked us (the authors of this paper) to be guided in a visit to the most important places of the city, and we proposed them to visit the ZEN neighbourhood along with some 12-years old schoolchildren (Alaimo and Picone, 2009). The goal of this visit was not just to show a socially deprived slum within the city, but most notably to help the Dutch understand *how* that particular slum was lived, represented and performatively enacted by the local youth. This experience inspired a great deal of ideas on the role of young schoolchildren, if one wants to truly understand how some troublesome social realities work.

An additional experience that is worth mentioning as part of our research background is more directly tied to academic teaching. We have been teaching Planning and Urban Geography to young planners at the University of Palermo for more than ten years now. As part of our teaching, we have always led young planners in several inspections that called for both traditional planning analyses and social observation (Picone and Schilleci, 2013). As the years passed, we realised what an important role schoolchildren played in these analyses and observations: not only did they account as essential city-users and social actors for the future of the city, but they were among the most interesting cases when it came to studying the perception of a neighbourhood. In other words, data collected from schoolchildren were proving to be more and more significant.

One last element that we feel like discussing here is our research work on the notion of neighbourhood in Palermo. The Municipality has recently (1997) put the 25 existing urban neighbourhoods together into 8 larger land units, called *circoscrizioni*. Therefore, the city of Palermo is now divided into 8 administrative sub-regions, none of which has any peculiar element, be it social, historical or geographical, that can help its residents acknowledge or recognise it. Most citizens do not even know which *circoscrizione* they live in. We have claimed (Picone and Schilleci, 2012) that this approach is a failure in urban policies, as it completely denies or ignores the role of neighbourhoods in shaping urban identities. Thus, this lack of relationship between the citizens and the administration got us persuaded that schoolchildren and the youth in general are to be included in participatory practices, as we believe that childhood and adolescence are most suited for stimulating a political awareness of what it means to be part of a community, and therefore to be part of a neighbourhood.

## 3. Relevance and Objectives

Our research exploits the educational role of the university in our city: we consider education not simply as the transmission of technical knowledge to our students; instead, we are training planners and geographers as 'cultural mediators' whose task is—amongst others—to build bridges that can connect the different social actors and mediate negotiations in conflicting situations (Forester, 2008). It is not only a matter of understanding the different points of view of social actors, but also an ability to employ active listening (according to Sclavi, 2007, based on the work by Bateson, 2000), conflict resolution (Deutsch, Coleman and Marcus, 2006), and many other qualitative techniques (DeLyser *et alii*, 2010).

Therefore, our duty as professional educators is not only to deliver scientific ideas to our students, but also to train them as mediators. This means that the university leaves its ivory tower to 'meddle' in everyday conflicts. If we want to reach out to the world out there, there is no better way than to take an active role in the educational processes that include not only university students, but also the urban population as a whole.

So far, we can actually state that there seems to be a shift in the general attitude towards our project and ideas: whereas, at first, we experienced mistrust and scepticism—most schoolteachers, for instance, considered us according to the cliché of the academic researcher, the expert technician uninterested in delving into everyday problems—, the last two years have brought a significant change in the way the municipality and the schools perceived our role as academicians. In a sense, these projects help the university in accomplishing its third sector mission and, meanwhile, help schoolteachers and other social actors in understanding a core idea of urban studies, i.e. what it means to design a city in a participatory way.

The reason why we are inciting the university as an institution to this practical approach is that we are experiencing a profound need to reconsider the role of planners in our city and, more generally, in Italy. Apparently, all planners in Italy talk about participation, social inclusion and reducing the disparities between the rich and the poor. However, politicians generally misinterpret or blatantly distort these guidelines, by repeating the same *totem words* (like participation, inclusion, etc.) even in non-participatory and non-inclusive practices. Meanwhile, the integration of the young planning graduates in the labour market is becoming more and more complicated: «with the crisis of funding for planners in public government, the diffusion of planning consultants has drawn the attention of many architects and engineers, who are backed up by stronger and more powerful professional associations. This has caused many problems for young planners trying to find their way into public administration» (Lo Piccolo, Picone and Schilleci, 2015, p.53).

Since the condition of young planners is so frail in Italy today, reinforcing their position as mediators between the administration and the youth could somehow enhance their chances to be acknowledged as experts in a field of knowledge that neither engineers nor architects can adequately master.

There is one additional consequence to our research. Not only can young planners benefit from working with the youth, but the whole city could get some benefits as well. As we stated earlier, the population of Palermo seems to ignore the administrative boundaries and sub-regions disposed by the Municipality. By working on the connections between neighbourhood and identity, we are supporting bottom-up participation and social inclusion in planning processes, as we have discussed elsewhere (Picone and Lo Piccolo, 2014).

## 4. Conceptual Framework

In order to structure our research, we have drawn upon three concepts that we will present here: neighbourhood, participation, and including young people in participatory processes.

### *4.1. Neighbourhood*

It would take more time than we can use here to discuss all the scholarly positions on the notion of neighbourhood (Picone and Schilleci, 2012). For instance, Galster (2001, p.2111) has observed that «urban social scientists have treated "neighbourhood" in much the same way as courts of law have treated pornography: as a term that is hard to define precisely, but everyone knows it when they see it». In our research, the neighbourhood becomes an ideology[1] (Lefebvre, 1967) that is actually able to "save the city" (Moulaert *et alii*, 2010).

Now, one could say, why stressing the role of neighbourhoods, in an era that disregards spatial proximity in favour of virtual relationships (Borlini and Memo, 2008)? In other words, why should we still consider the neighbourhood as a significant scale of analysis and action, if we can easily keep in touch with our friends and family even if they live a thousand miles away from us? What is the point of putting neighbourhoods back to the centre of our discourse? The answer lies at the core of contemporary social and political life. We shall try to explain this concept by showing the link between neighbourhoods and urban governance in the words of some very influential scholars.

A few years ago, Patrick Le Galès (1998, p.79) described urban governance as the ability to integrate and shape local interests, organizations, social groups, and also as the ability to represent them outside the city, to develop more or less unified strategies of relationships with the market, the state, other cities and the other levels of government. In 2003 he claimed that governance is "the art of governing", and pointed out that Medieval European cities are one of the fundamental elements of modern European societies. They act as the melting pot of the social, political and economic organization of European Nation-States. European cities become the "incomplete societies" where new, multi-scale governance modes are structured.

We acknowledge that urban governance is particularly affected by the economic crisis, the neoliberal trends and the cosmopolitanization of our world (Beck, 2006; Harvey, 2009). Traditional urban governance is experiencing deep changes, with the private sector getting more and more predominant when compared to the public sector in crisis (Peck, Theodore and Brenner, 2012). This compels us to find new levels of interaction between the public sector and private social actors, especially if we consider the latter as more than the sum of wealthy entrepreneurs and politically engaged businesspersons. Here comes the neighbourhood: in our opinion, Michel de Certeau's idea of neighbourhood as the middle ground between the private sphere (the house) and the public one (the

[1] «Nous commençons par rappeler qu'il y a une *idéologie* du quartier, en déclin, mais qui n'a pas perdu son audience et son influence. […] le quartier n'est pas un détail accidentel, un aspect secondaire et contingent de la réalité urbaine, mais son essence» (Lefebvre, 1967, p.9). Lefebvre then actually debates the ideology of neighbourhood and proposes his own ideas on the topic, but we want to point out the importance of neighbourhoods in social sciences, as the author would acknowledge them as key elements for the comprehension of the city, just in the time when he was writing some of his masterpieces (like *Le droit à la ville*, 1968).

city) can prove particularly useful: «The neighborhood is, almost by definition, a mastery of the social environment because, for the dweller, it is a known area of social space in which, to a greater or lesser degree, he or she knows himself or herself to be recognized. The neighborhood can thus be grasped as this area of public space in general (anonymous, for everyone) in which little by little a *private*, *particularized space* insinuates itself as a result of the practical, everyday use of this space. The fact that dwellers have their homes here, the reciprocal habituation resulting from being neighbors, the processes of recognition—of identification—that are created thanks to proximity, to concrete coexistence in the same urban territory: all these "practical" elements offer themselves for use as vast fields of exploration with a view to understanding a little better the great unknown that is everyday life. […] As a result of its everyday use, the neighborhood can be considered as the progressive privatization of public space. It is a practical device whose function is to ensure a continuity between what is the most intimate (the private space of one's lodging) and what is the most unknown (the totality of the city or even, by extension, the rest of the world). […] The neighborhood is the middle term in an existential dialectic (on a personal level) and a social one (on the level of a group of users), between inside and outside» (de Certeau, Giard and Mayol, 1998, pp.9-11). Considering the neighbourhood a "middle term" between the public sphere (*the city* or even *the world*) and the private sphere (*home*) offers an insight on why neighbourhoods are still very important for the unfolding of the everyday life. They become even more important within the contemporary economic crisis, which impairs the role of public spaces.

Neighbourhoods, thus, play a key role in European cities, although there is a distinction to be made. In the Anglo-American context, a neighbourhood is not just a spatial entity: it is also a social network of people connected by common values, ways of life and geographic imaginaries. The Italian equivalent of neighbourhood (*quartiere*) seems pretty much focused on spatial categories. It could probably be translated with the word *district*, therefore losing most of its social connotations. Similar observations could be repeated for other countries, like Switzerland (Giordano, 2015). This means that the social role of neighbourhoods in Italy is something that must be rediscovered and enhanced by stimulating citizens to a greater awareness of the connections between neighbourhoods-as-spatial-entities and social communities. Neighbourhoods must be considered as 'identity containers' that set up the social bases of community life (Picone and Schilleci, 2012 and 2013), a notion that is quite common in the Anglo-American world.

### *4.2. Participation*

Discussing participation and the ethical issues that it provokes would probably require an entire paper or two. Henri Lefebvre (1968) was arguably the most influent scholar in introducing the notion of social inclusion. We have used Jürgen Habermas's (1981; 1989) theories of consensus and communicative rationality as a warning to the risks that participation incurs, and Patsy Healey's (2009) *caveat* on participatory democracy. In discussing the ethical implications of participation (Campbell, 2012) we have also tried to assess the notions of ethical compromise (Sanyal, 2002) and conflicting rationalities (Watson, 2003).

One of the foundations of our discourse is that participation is a set of qualitative techniques of action-research (deLyser *et alii*, 2010), with its own rules that must be followed, and yet, at the same time, adapted to the contexts in which we practice it. We have experienced participatory techniques within the last ten years in Palermo (Lo Piccolo, 2008 and 2009; Bonafede and Lo Piccolo, 2010; Picone and Lo Piccolo, 2014), although the Southern Italian condition is quite peculiar: «the context we are referring to differs for two main aspects: 1. The weakness of local institutions; 2. The consequential de-legitimization of the public administration (politicians and professionals) by hook (corruption) or by crook (violence/intimidation), which guarantees a general condition of inertia, inaction, inefficiency and mistrust» (Picone and Lo Piccolo, 2014, p.67). This does not imply that one cannot use participation in Palermo or in other unprivileged areas, but particular caution must be exercised to

avoid the trap of the municipal administration using participation in a poor, sometimes even unfair or utterly rhetorical way.[2]
Amongst the various participatory techniques that can be used today, we have chosen to investigate and employ Lawrence Susskind's consensus building (2014a) and 'serious games' (2014b) approaches, as they seem to work very well with the young age category of the people we have involved in our research.

### *4.3. Including the Youth*

In 1998, Barry Checkoway looked at the connections between the topics we have so far discussed, and distinguished five types of participation that involved young people and neighbourhoods: «"youth action" and "citizen action" in which people take initiative and organize themselves for social change; "youth development" which promotes the positive development of young people rather than only overcoming their deficits; "neighborhood development" through which people implement programs of their own at the neighborhood level; and "neighborhood-based youth initiatives" which emphasize youth participation and neighborhood development in the same single program» (Checkoway, 1998, p.788). Several years later, however, he emphasised the lack of any agreement on the basic idea of what youth participation is, or should be (Checkoway, 2011). There has actually been some debate on the role of young people in participation, both in general terms (Ward, 1979; Driskell, 2002; Gulson and Symes, 2007) and in very peculiar approaches, like the use of qualitative GIS (Dennis, 2006). However, there is a need for further speculation on this topic, especially if one considers how young people often have a very low interest towards the public sphere.
Regarding this particular topic, we believe that Italy has displayed a decent degree of attention towards the inclusion of young people in participatory processes. Most important in this direction was the work of Francesco Tonucci, whose book *La città dei bambini* (2005) marked a significant step in this field of research; in particular, Palermo has hosted several experiences in working with schoolchildren to include them in urban participatory processes (Pinzello and Quartarone, 2005). More recently, some influential social scientists have discussed how to apply qualitative techniques of participation to schoolchildren (Sclavi and Giornelli, 2014).[3]
Including young people in participation means facing several ethical issues. Despite the general agreement that participation is essential and valuable in contemporary societies, practicing participation with young people requires an additional amount of caution, as it is extremely easy to manipulate the young for unfair reasons. Supporting or opposing the realisation of a public park or a shopping mall, for instance, is not something that should be easily done without any political awareness of the pros and cons, as well as of the consequences it can have. Persuading schoolchildren of the goodness of a shopping mall could be a piece of cake, but it might foster the profits of wealthy entrepreneurs over the general advantage of the community as a whole. These ethical issues definitely deserve additional analysis, although some steps in describing the relationships between planning and ethics (Watson, 2003; Campbell, 2012) or geography and ethics (Valentine, Butler and Skelton, 2001; Valentine, 2005) have actually been taken. Virginia Morrow, who has recently related an experience she conducted in a town in South-Eastern England, aimed at grasping the perception of 12- to 15-years old school students about their neighbourhoods, points out the ethical issues she has faced: obtaining consent from young people, reporting back to the research participants, confidentiality and privacy, pseudonyms, and drawing out policy implications from the study (Morrow, 2008, p.53). Morrow's

[2] See for instance the Electronic Town Meeting experience in Palermo: the administration wanted to provide the city with a way to empower deprived social groups, but ended up (ab)using the tool in order to build consensus over its own pre-existing goals (Picone and Lo Piccolo, 2014, p.66).
[3] We would like to acknowledge Marianella Sclavi's role in diffusing the Anglo-Saxon tradition of participation tools in Italy. Her books (see Sclavi, 2007 for the English translation of one of her most well-known writings) have deeply influenced the scholarly approach to participation, active listening, planning for real, etc.

concerns are of utter importance, but there might be many more addenda, particularly regarding the possible misuse of the collected data for unforeseen or inappropriate political means.
Additionally, we want to stress that our action-research was based on *young planners* dealing with *younger schoolchildren*. We have coordinated the whole project, but it was our planning students who were actually getting in touch and working with their younger counterparts. This raises questions about the suitability of traditional academic planning education for working with schoolchildren. Most planning curricula in Italy fail to provide the students with competences for dealing with young children and involving them in participatory practices: social sciences in planning curricula still have to be strengthened, in place of the abundance of technical courses (both from architecture and engineering; see Lo Piccolo, Picone and Schilleci, 2015). In order to get our planning students ready for dealing with schoolchildren, we have shaped our courses so that they provide the tools and methodologies needed in such cases, including a particular attention to qualitative techniques of analysis. However, there are still issues that cannot be ignored: how to build positive interactions between young planners and children, the role of planners with regards to schoolteachers, the risk of dictating choices that are considered inherently better or more suited to solve urban issues, etc. Considering that our research is not over yet, we can only produce some initial insight on these topics; however, we are fully aware that more work has to be done on this subject.

## 5. Methodology

In designing the methodology of our research, we aimed at mixed-methods approaches that recognised «geography's new turn to synthesis and holism. […] The interdisciplinary nature of geography […] can foster a methodological hybridity in the mixing of qualitative and quantitative methods and methodologies» (Sui and DeLyser, 2012, pp.112-115). The scientific reasons for this choice are drawn from the contemporary debate on mixing qualitative and quantitative techniques of analysis (Crang, 2002; DeLyser *et alii*, 2010; Sui and DeLyser, 2012; DeLyser and Sui, 2012 and 2014; Alaimo and Picone, 2015). Particularly, from the various qualitative techniques of analysis we have picked qualitative interviews (McDowell, 2010), mental maps (Lynch, 1960; Gould and White, 2002; Coverley, 2006), *shadowing* and participant observation (Czarniawska, 2007; Sclavi, 2007; Alaimo and Picone, 2015), rhythmanalysis (DeLyser and Sui, 2012), planning for real (Gibson, 1991; Sclavi, 2002), and qualitative GIS (Picone and Lo Piccolo, 2014). We have mixed them with several more traditional quantitative analyses, both demographic and technical. Most of the techniques we have used were already presented in Picone and Schilleci, 2012. Before starting our action research with schoolchildren, we have trained our planning students in the use of these techniques through specific courses (including Social Geography and Planning Workshops).

## 6. Findings

In 2012, following the publishing of a book on the neighbourhoods of Palermo (Picone and Schilleci, 2012), our University signed a Memorandum of Understanding with the Municipality. This was aimed at studying the existing administrative partition of the city and proposing a new partition that would be more connected to community ties, to the sense of belonging to a place, and to the geographical and historical traditions of our city. However, the feedback from the Municipality has proved quite ambiguous. After an initial appreciation, in the last few months the administration turned to other partnerships and deprioritized our agenda. We have already remarked how the reason for that lies probably in the instrumental, rhetoric use of participation from the administration (Picone and Lo Piccolo, 2014).
In the meantime, we have started working with the Department of Education (*Area della Scuola*) of our Municipality, which deals with public schools. We have started cooperating on a project called "*La scuola adotta il quartiere*" ("Schools Adopt Neighbourhoods"). The project stems from a

previous[4] experience called "*La scuola adotta un monumento*" ("Schools Adopt Monuments"), which picks up abandoned, closed or otherwise unvisited pieces of the artistic heritage of Palermo and revitalises them for one week per year, with young schoolchildren guiding the visitors (parents, families, friends, tourists, etc.) to the discovery of those monuments.

It might seem that our project works exactly like the previous one, only that instead of a single monument the school would adopt an entire neighbourhood. However, something sets the neighbourhoods project apart, and it is the role of planning students. By signing an agreement with the Department of Education and with several primary and secondary schools of the city, we have arranged an internship programme for our students. After attending courses dealing with the techniques that best work with schoolchildren,[5] they would spend some months in the schools working side by side with schoolteachers on the notion of neighbourhood, on its boundaries and relationships with the other parts of the city, on their strengths and weaknesses, and so on. They would start their internship by asking schoolchildren the simplest, yet most complicated question: what is a neighbourhood? On that base, they would build the foundations of a research aimed at raising awareness of the social, urban and administrative implications of neighbourhoods in our city. Planning students have employed all the qualitative and quantitative techniques of analysis we have discussed earlier, by asking the schoolchildren to draw pictures and maps of their neighbourhoods, by taking them for walks in their neighbourhoods, and—towards the end of the internship—by asking them to design some changes that were suitable to improve life quality in the neighbourhood. Some renewal proposals were actually presented to the Municipality as the result of the cooperation between the University, the schools and the Municipality itself; one of these proposals (calling for a local renewal intervention in the ZEN neighbourhood) has been approved and funded by the Municipality (Brinch and Montalbano, 2015),[6] while others are still in the evaluation process.

The main outputs of the whole project were some weekends during which the young schoolchildren led all visitors in a guided walk through their neighbourhood. We had 26 guided tours in 26 different neighbourhoods over two years. For each of these tours, particular attention was paid in pointing out that the schoolchildren were not supposed to deliver history lectures or show any degree of academic knowledge; rather, they were simply called to show the visitors the neighbourhood according to their own perception. This caused lots of surprises when those visitors who were accustomed to only look for pieces of art were actually taken to secondary alleys where, for instance, an improvised soccer field had become a meeting point for the young—a proof of the need and desire for more playgrounds and public spaces. During the weekends, the schoolchildren would hand out some guidebooks they had written during the previous months, along with the planning students from the University. All of these guidebooks contain the shared definition of neighbourhood that the children have agreed upon, the emblem (a sort of stylised logo) of the neighbourhood (a result of a democratic vote to choose the best among the many emblems drawn by each and every schoolchild), a geo-referenced map of the guided tour, and a glimpse at the renewal projects proposed by the children for their neighbourhood. A few examples of these guides are shown in Figures 1-4.

[4] The project *La scuola adotta un monumento* started in 1992 in Naples, and was later brought to Palermo in 1995 by the *Fondazione Napoli Novantanove* (see http://en.lascuolaadottaunmonumento.it/, accessed May 16, 2015).

[5] During our first year (2013-2014), a grand total of ten schools were involved in the project (six were primary schools, with 8- to 10-years old students, while four were secondary schools, with 11- to 13-years old students). In the second year (2014-2015), we included thirteen schools (seven primary, six secondary). All these schools are inside the administrative boundaries of Palermo, quite evenly covering all the different city parts.

[6] As a consequence of the project, our students have produced almost a dozen degree theses on neighbourhoods and schools.

Figures 1-4. Pages from Neighbourhood Guidebooks (Cruillas, ZEN, Pagliarelli, Borgo Vecchio).

During the second year of the project, the presidents and councillors of the *circoscrizioni* were involved in the event. They first went to visit the schoolchildren to explain the role of the *circoscrizioni* within the city, and thus confirmed that almost no student (or teacher, for that matter) had a clear idea of what the *circoscrizioni* were. Then, they took part to the guided tours arranged by the schools, and played an active role in discussing and revitalising the notion of neighbourhood.

Even in this very brief summary of the project, it seems clear that planning students arguably played the crucial role of mediators between the administration (Municipality, *circoscrizioni*), social groups (schoolteachers and children) and the academic world. This was exactly one of the main goals of the project: to help planning students recognise their role as mediators, and to make them aware of the social function of planning today, but also of the ethical dilemmas that stem from participatory processes. For instance, many planning students had to face the aftermath of their internships, with schoolchildren still trying to keep in touch with them and inciting them to provide feedbacks on the renewal interventions they had designed together (precisely the "reporting back" issue addressed by Morrow, 2008). The renewal proposal for the ZEN neighbourhood, for instance, is the result of the schoolchildren's pressure on our planning students: in a sense, the children were afraid of being let down and abandoned after their inclusion in designing a better neighbourhood.

As a whole, we might state that this project had two major positive effects. First, it made young people more aware of what a neighbourhood is: not just as a place you live in, but also a community you live with. In a sense, it means working on the notion of ethical participation, with all the *caveats* we have discussed before. Second, it prepared planning students to the challenges of working with (and for) a community, with all the inner conflicts that may arise, and to explore their role as not just "urban technicians", but as active members of the community.

Naturally, there have been issues and situations that need additional thoughts and efforts. To name a few: the ambiguous role of politicians, the inability to fulfil these kinds of projects for a long time without proper funding from the administration (so far we received no funding of sort), the need to revise planning curricula within our universities to suit these projects, and many more. Still, we believe that the pros outweigh the cons.

## 7. Conclusions

In order to draw a few conclusions, we want to get back to the questions we have posed in our introduction, and provide a few answers to them. These are not state-of-the-art, of course, since the project is not over yet and we plan to collect additional elements of reflections in the future. Yet, some considerations follow:

1) Considering that Italian neighbourhoods are not mostly perceived as community-based places but as administrative districts, our project tries to build on the notion of neighbourhoods as "identity containers", places that host a sense of belonging. It is not a matter of mimicking the Anglo-American idea of neighbourhood, for it has its own peculiarities and issues; rather, it is a way to get back to the roots of what neighbourhoods are: places of proximity that bridge the private sphere (the individual) to the public one (the community), as de Certeau suggests.
2) The Southern-Italian situation is not easily solved with a magical formula. Criminal organizations, weak or corrupt administrations and an embedded distrust in everything that is public still exact a very heavy toll. However, the lack of state-centred funding (that have diffused political nepotism and corruption to unimagined levels) is also producing the paradoxical effect of stimulating bottom-up responses to the crisis. Many third sector associations are supporting participatory processes that enhance life quality in the cities. In this paradoxical context, the universities—and urban studies in particular—are called to play a major role in creating new forms of active citizenship and participation. This may also empower disadvantaged groups over wealthy elites, and revamp the notion of public spaces.

3) In order to face the ethical issues tied to participation with the youth, our educational system should strengthen the study of qualitative methodologies in planning. The contents of our researches, as good as they may be, are not enough if a strong methodological background does not support them. This is especially true when one works with young people and their naïveté. First, we—as urban scholars or planning students—must understand what participation implies, what it means to give feedbacks even when our research is done, how to politically support our claims and proposals. It is planning education's duty to teach our students the "how to" of participation, even more so when young people are included in participatory processes. This concretely means revising our planning curricula, maybe at the expense of some technical details that are best left to engineers, so that future planners are better prepared for the challenges posed by contemporary cities.

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# EFFICIENCY OF USING URBAN SIMULATION IN TEACHING URBAN PLANNING

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## 1 Introduction

The city as an object of urban planning is a very complex and multi-component socio-spatial system. Taking into account full spectrum of elements composing an urban system implies such level of complexity and detailing which will never be achieved in practice. As a result, designers and urban planners are often forced to work with a simplified model of the city. All kinds of tools based on GIS and mathematical methods are gaining increasing popularity among foreign researchers in the field of urban planning. For example, a professor at University College London (University College London) M Bhatti in his book «Cities and Complexity» describes the various simulations based on such instruments as cellular automata and agent-based modeling, which provide the process of decision making in an interactive mode, i.e., observing an instant reaction of the virtual community on one or another project (Devisch, 2008).
However, that it seems to be an incredibly complex and "scientific" approach to planning in academic and professional environment, it is successfully used in entertaining industry for twenty-five years. SimCity (SimCity) - a computer game released in 1989 and marked the beginning of the genre of urban simulation. In SimCity player usually has no particular purpose, achievement of which the game ends. The player controls the city, serving as mayor. In players hands such tools as the construction of roads and communications, construction of the main public buildings (administration, schools, hospitals, etc.), as well as zoning tool. Zoning of the city - in the game is available three types of zones: residential, industrial and commercial - allows "mayor" to manage the development and construction of the city. Latest released version of the game based on the revolutionary mechanism simulation Glassbox, greatly enhanced the realism of virtual cities and the processes occurring in them. Since first version of the SimCity was released until now it is one of the most popular computer games and probably the SimCity introduced to the world of urban development more people than any textbook (Starr). But does it have an educational potential?

## 2 Training with urban simulation SimCity.

SimCity Developers originally considered the game as an opportunity to show how to "build" the perfect city, and betrayed the importance of its educational potential. Until now, the company producing the game consider educational institutions as one of the key audiences (Lobo, 2004). No other game has been used so widely in schools to familiarize themselves with the various elements of local government and raise awareness of the factors determining the decision of municipal authorities (we are talking about American schools). So not surprisingly appearance of free educational versions of the game, as well as various materials for teachers to use games in the classroom.
According to D. Lobo SimCity also contributes to the emergence of interest in geographic information systems among pupils and students. If you work with real GIS software packages, in the first place, it is often beyond the financial capacity of schools and universities, and secondly, is too laborious and time consuming, while using SimCity is available, and the ability to "play for educational purposes" was adopted with enthusiasm. At the end of this stage of examination it becomes clear that it's still a game designed primarily to entertainment purposes. Whatever it seems realistic, SimCity can not become a tool to solve real problems of the urban planner. To do this is much better suited specialized GIS packages such as ArcGIS.

The idea of using SimCity in university courses related to urban planning, can not be called a new (Adams, Haber, Minneri and Searle, Nilsson and Jacobson). Practical exercises using SimCity are often aimed at developing in younger students an understanding of how different systems interact with the city, including the economic, social and transport services, engineering, and others. Such understanding is necessary not only for the planning of the development of modern cities, but also for a more critical approach to evaluating the planning decisions taken in the past (Minneri and Searle).
In their article, Nilsson and Jacobson (.Nilsson, Jacobson, 2011, p. 36), make a review and pick out three main goals, which can be achieved using urban simulation in the educational process:
1. to develop in students a holistic understanding of methods of various city components interaction;
2. to develop skills in strategic planning and to ensure that students are aware that their decisions can have both immediate and long-term effects; 3. to develop in students more flexible, adaptive, critical thinking, decision-making required.
Study of P. Adams, associate professor and director of the Urban Studies, University of Texas, also has arguments in favor of using SimCity in the learning process. Adams setting was to conduct several experiments in the game. Results of the study was assessed by students essays and interviews. The course was voted the favorite project among the 48% of students, well ahead of the next eight projects.
It should be noted that in the literature frequently encountered arguments against the use of computer games, and in particular the urban simulation SimCity, in training. Some authors draw attention to the problems that arise when using SimCity in the educational process. For example, Lobo (Lobo, 2004) argues that, because "the city is not a toy", students get the wrong impression when using the games.

## 3 Experience of urban simulation programs PNRPU.

The article describes the results of the introduction of practical work using computer simulation in two training courses, which are taught at the Faculty of Civil Engineering PNRPU:
1. Planning and construction of settlements - the fourth year of specialty Discipline "Urban Construction and Management."
2. The theory of the spatial organization of the cities "TPOG" - the discipline of the first semester of the first year Master "Design of the urban environment."

### 3.1 SimCity in the course "Planning and construction of settlements".

For the course "Planning and construction of residential areas" was included practical training with urban environment simulator sim city. This program has allowed students to apply knowledge from the lectures on the example of the construction and development of various cities. Each student was offered his own version of the direction of development of the city, such as the city - business center, an industrial city, a cultural center, a city with a developed system of public transport, family city - with developed social infrastructure and leisure, etc. During realization of the task the students faced with the problems of a growing city, providing citizens infrastructure (such as housing, schools, shops, workplaces, public transport), environmental improvements, upgrading of dilapidated housing, construction of new roads. In addition to these problems, development of the city is influenced by the financial burden. During the game, student, on behalf of the mayor of the city, we have to decide what is best for the citizens in the moment, where to direct cash flow as adjusted taxes to give loans. To track how connected all the processes of urban life, and realize that if today to invest in the construction of the mall, tomorrow may not be enough for the construction of roads, ie forcing students to plan the city's budget and think through the stages of development.
Since the simulator allows us to develop the city to infinity, in the framework of the educational process has been put in the game for a period of 1 week, 1-2 hours a day. In reporting session it was necessary to state: the population, the problems encountered during the construction of city revenues

and expenditures on infrastructure elements, the state treasury, the satisfaction of residents, some important projects are constructed and whether the purpose of the job is reached.

According to the observations of students we can say that the use of the program is useful, because you can feel as a city manager and head of various departments into one.

In my opinion, the students begin to think that the city is a single organism, and all the services it should be organized and work harmoniously in solutions supporting each other, then the development of the city will be balanced. Individual work allows everyone to learn the program, reporting on the occupation at the report shows the independence of the work, whether the person is guided in the program, whether it uses the terms. Making work in a presentation allows you to organize the results to assess the progress of their work, learn summarize the final moments. A report of the group to stimulate the development of the city as well as possible in order to adequately represent "his" city. Just in the course of the assignment is a dialogue within the group to solve the problems of the city, but there is no uniformity of decisions, because the goals are different. I believe that the use of simulation of the urban environment will enable students to face the challenges of urban life, which do not even think to trace the interaction of processes, the knowledge gained to work on the model.

### 3.2 SimCity in the course "Theory of the spatial organization of the city»: Urban Utopias TESTED and Evaluation of historical models of planning the ideal city.

Discipline "TPOG" is read in the first semester of Master's "Design of the urban environment", and aims to familiarize the Master with the conceptual framework of urban planning theory and practice. Since all the students coming from the magistracy, have different basic education from the Faculty of Geography and state and municipal government to architecture, this course aims to "align" their understanding of the fundamental laws of spatial development and planning, environmental functions of building, structure and evolution cities. Handout built chronologically from antiquity to postmodernism. Practical work is to construct a city in SimCity according to one of the six historical planning model of the ideal city:

• Garden City Howard;
• Radiant City by Le Corbusier;
• Broadacre Frank Lloyd Wright;
• Linear City Arturo Soria-e-Mata;
• The industrial city of Tony Garnier;
• Sotsgorod N. Milutin.

On the job will have one month, during which students independently (outside of class) build their chosen version of the utopian city in the simulator. Results of practical work were presented in two forms:

1. A written report (1000-1500 words), including:
• a brief description of the main features of the selected urban development model;
• description of the city, built in SimCity for selected model;
• conclusions on the feasibility and effectiveness of the selected urban development model based on observation and experience "construction" of the city in SimCity;
• assessing the suitability of SimCity for the "implementation" of the authors of original ideas of urban development models (which is easy to implement, and what game limits);
• bibliography.
2. The presentation, including:
• diagrams and drawings of the model chosen, a brief description;
• screenshots from the game, showing the layout of the city and the aligned illustrating the findings of the report (figure 1-3).

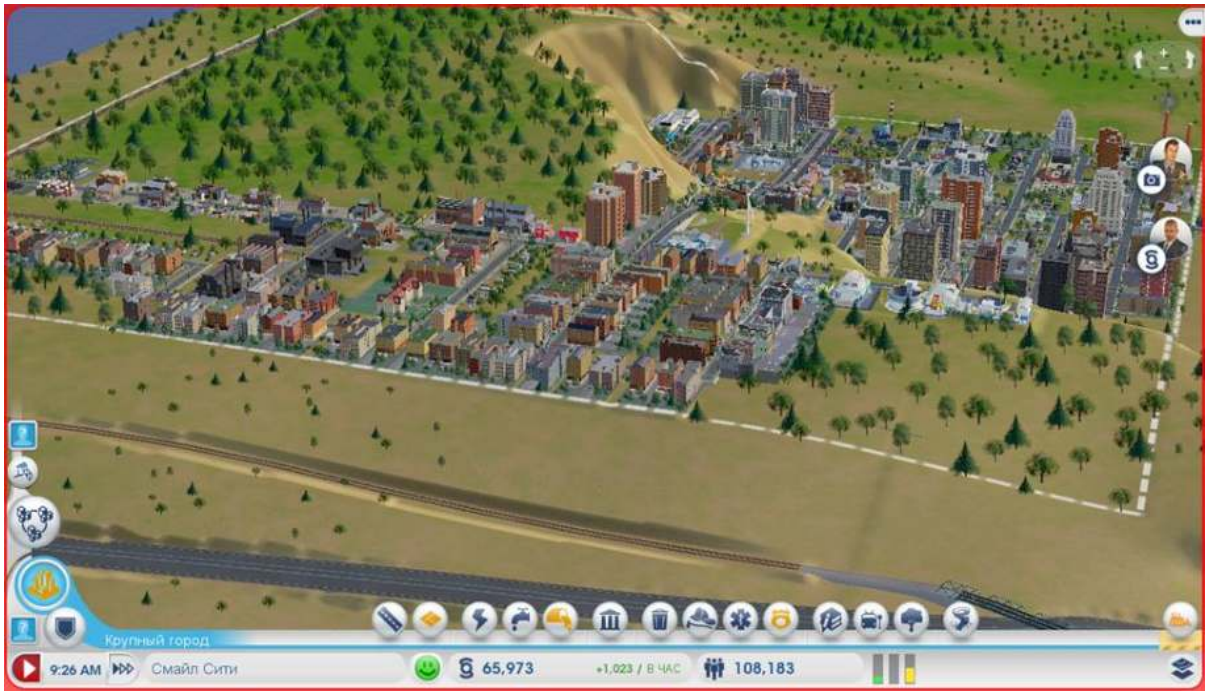


Figure 1. A city with a developed system of public transport

Figure 2. City budget

Figure 3. Population map

From the perspective of a deeper study of six urban development utopias project was an unqualified success. According to the task the students had to describe the basic ideas of the author of the selected planning model. Understanding that "the construction of" utopian city in the simulator requires a thorough comprehension of the original ideas of the author of the planning model led to more thorough approach to the analysis of these ideas, rather than with other forms of self-control work, for example in the preparation of the oral report.

## 4 Conclusions

Effectiveness of urban simulation in the educational process can be noted as follows:
1. Students gain new insights and skills in urban planning.
2. Students systematize the knowledge acquired in the lecture course, and past experience.
3. Students show skills of teamwork and mutual support.
4. Students with high interest are studies in the form of a game.

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# Title: **Multi-identity planning process in a studio course; How to combine different ideologies/identities in integrative coherent planning?**

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Abstract

The planning process as is developed in a planning studio is a demonstration of a micro-cosmos of diver's concepts dealing with ideologies and identities seeking for acknowledgment and spatial recognition. In a modern world of multi and dynamic identities aspire of self-recognition of regions, towns and communities, a place-base identity becomes a core aspect, where dynamic identities and ideologies are something that we need to take into planning consideration. The planning process needs to give present solutions to places situated in a dynamic process of change. Where their place-base identity and self- recognition are changing, and the future of identity/identities is steel unclear.

These are the questions we asked in a metropolitan planning studio that give our students a chance to translate and transform their conceptual ideas to spatial policy plans. One of the aspects that considerably stick-out is the complex thinking of iterative top-down Bottom-up approaches. This approach can create a multi-dimension and coherent planning alternatives (where most of the alternatives combination are possible), and spatial solutions may arise from communities along their changing processes.

In this paper we present two alternatives spatial plan development in a studio course based on planning proses that embrace this line of thinking. The first alternative is based on an ARCView GIS model builder that assist in creating spatial locations in a region were each town and village can define their own spatial future and still be a part of a collective ideology. The second alternative simulates spatial locations for a mixture of future identities based on present identities and the different route each identity may take during its growth process and possibilities of identity that changes in time. The results of these two research planning processes were non-conventional, highly dynamic, aspire with complex plans, aside of highly applicability and flexibility addressing wide range of ideologies and identities.

## Introduction

This article discusses the outcome of a regional planning studio that deals mainly with the development of a long term comprehensive of a regional plan (50 years forward), and offers a multi-identity planning process developed by several student teams and allows reference for different and diverse communities and identities. This process displays product that combines conceptual pluralism and regional perspective of a bottom up planning approach based upon the integration of spatial information technology and multi-parametric analysis of regional planning.

In this course the students are dealing with a comprehensive planning which addresses complex and integrated questions of development, conservation, spatial justice, economy, transport, employment, demographics, and more. This is an intensive course that requires a high investment both on methodology and technic in a limited period of time. The course is built upon five phases: phase 1 reviews the current situation, Phase 2, individual planning concept development based on their ideological perceptions. Phase 3, students' team work for a comprehensive regional program development, Phase 4, students' team work for developing the spatial plan, and Phase 5, evaluation of the diverse spatial plans using by using analytical and political tools.

The studio methodology allows students to address different aspects of comprehensive spatial planning as part of their training as planners and as part of the formulation of a "professional voice" and planner identity. The students are required to develop a working model which answers their "professional voice" along with reference to the characteristics and constraints of reality. The planning work of is done in a given area, and each student's team provides an alternative. In the last part of the course, all the alternatives are being evaluated by the students and the pros and cons of each alternative and discussed.

A number of student teams have dealt with the planning dilemma that relates to the inflexibility of the planning process of representing multi-identities or societies/communities, and the difficulty of addressing differences between groups, types of identities or communities. Criticism in planning intensified as far as the real world has become more pluralistic, diverse and multi-cultural.

The question to address is - is it possible to combine differences between communities and types of identities that characterize the complexity and the pluralistic world where we live today in a coherent planning process which places the principle of multi-culturalism as a working model premise?

### 1.1 Multicultural premise in planning

In a global and dynamic world, one of the known trends is the growth of multicultural society. This trend is a challenge for planning. In the past, planning succeeded by characterizing uniform local cultural characteristics of a region, or characterize nationality with a common direction, alignment and commitment of a common vision. Today such definitions are much less common and much less agreed in a multicultural society, which is composed from a mosaic of communities.

Each community has its unique identity and unique needs for fulfilling its vision and goals. Communities need space and amenities for fulfilling shared values, but even communities with similar goals and vision will require different needs due to spatial differences and difference in local authority policy (Walters & Brown, 2004). The processes of creating a multicultural society are increasing, and the spatial outcomes are segregation, on the one hand, and integration on the other hand (Burayidi, 2000). However, both need a planning process which will identify its uniqueness in the first place, and addresses this uniqueness in a comprehensive plan (Hague, & Jenkins, 2005; Devine-Wright, 2009).

This Spatial diversity corresponds with the theories of multiculturalism (Goldberg, 1994; Sandercock & Lysiottis 1998), individualism (Healey, 1997; Bellah, et al., 2007), pluralism (Davidoff, 1965; Hayden, 1994), & cosmopolitan (Binnie, et al., 2006; Bloomfield & Bianchini, 2003). These theories point to the advantage of variety. However, in contrast to these theories that modern societies aim to adopt, we identify a lack of planning tools addressing multiculturalism, pluralism and individualism at the regional level.

Few cities, especially world cities, have succeeded in providing multiculturalism and hyper-diverse life for their population. Most regions and cities prefer to differentiate themselves from other regions and adapt homogeneous identity.

Therefore, planning is obligated to mitigate the negative elements and develop positive aspects of diversity. The negative aspects refer to aspects of segregation and closings, and positive aspects refer to the opening of possibilities, variety, choice, and the possibility of self-determination and self-expression. Under this approach, the goal of the studio planning process is to provide the optimal combination of diversity, on the one hand, and not to impose pluralism on the other hand.

### 1.2. Multicultural planning model in planning studio

Diversity and variety are addressed in planning by refining the diversity of land use. There is an increasing of urban usages in all planning fields: green areas of different types, residential textures, density levels and urban fabric types, variety of public service and mixed uses. This

increases the variety of types of usages as an outcome of the need to address more complex existence and a need for unique policy in a growing number of land parcels.

Currently there is a shift in the way urban planning process is developed around the world. This change occurs due to several transformation and changes: for example, technology change, such as implementing the GIS platform in planning (Talen, 2000). Development of new methods for planning as the Form-Based Code (FBC) that comes as an alternative to conventional zoning planning. At its base is the idea of a neighborhood or city as a whole, rather than its division by specific land uses (Parolek, et. al., 2008,). The Buffalo Green Code developed for using a new approach to guiding development. This new approach is called "Place-Base Planning", a way to shape the city by concentrating on the look and potential of places, their form and their character, instead of focusing only on conventional categories of land use. Using this code will map the entire city by type of place. This will be followed by a comprehensive zoning ordinance that will create a new set of rules to encourage development that fits with the desired character of the place (http://www.buffalogreencode.com/what-is-place-based-planning/)

As can be seen the studio projects reacts to these changes in the planning field, especially in a studio program. For example, the change in planning terminology developed as an outcome of a top-down planning thinking. The diversity in urban usages increases the variety of zoning types that serves as an answer to a complex wide variety of laws and building regulations. The planning process tries to cope with the wide variety of laws and regulation by developing innovative and creative terminology for those land use types. This zoning terminology is inherently general and relates to a wide variety of regions and plans. This terminology is not built to address place based planning. Zoning terminology in most planning processes is not an outcome of a bottom-up process but rather a given as a fact. Zoning terminology assumes that its richness of land uses can cope with the variety and complexity of the reality, and if not, the plan will reduce the variety to the existing terminology.

A bottom-up - place based planning process that addresses the existing and future variety in a specific area requires a different model of zoning; a model which will be flexible enough to develop appropriate spatial policy for different communities and different ideologies. But despite the high level of flexibility, the model should be generic based on space-based analysis. These specifications require a new planning model.

Classic Planning model is built as a double funnel or a sand clock. First, the information and knowledge are collected about the region. This Knowledge is being abstracted and simplified for representation of the urban systems. This knowledge is further being abstracted into planning principles, alternatives and finally a chosen alternative. The chosen alternative undergoes a process of expansion, deepening and developing of policy measures and spatial details which mature the process to a complete comprehensive plan (Altshuler, 1966; Hax, & Majluf, 1996; Chadwick, 2013).

To produce bottom-up planning that address's variety of identities and different ideologies, the "narrow waist" of the planning process should be expanded. Instead of single chosen

alternative, multiple alternatives should be reflected throughout the planning process taking place side by side from initial stages of data collection towards development of a comprehensive plan.

Different alternatives fits different ideologies and identities, provides a plan for the exact identity it serves. All plans have their own internal logic but at the same time an overall view that incorporates and integrates a comprehensive plan at a spatial level and a conceptual level.

This place based planning process creates a mosaic of programs at different levels, so every level will provide harmonious plan. The outcome plans will expose all communities and local identities, and in addition create links between communities and regions, between neighbors and similar neighbors at the same time.

Different levels of the region plan will address: a). the relationship between nearby places that share community life, and b). ideological or conceptual system between distant places. The last is similar to the concept of an ecological corridor that connects regions and creates ecosystem. This principle will be used to connect places of common ground ideology in the formation of an ideo-system which might be a knowledge base of similar conceptions.

This planning approach is based upon the use of GIS spatial information technology as an integral part of the planning process. This technology enables the development of multiple local plans of different characteristics and policy, in one region, and creates mutual connections between them. Spatial information systems are able to contain hundreds of attributes of information for all spatial objects and examine spatial adjustments between objects depending on spatial and functional relationship. A resembles approach can be seen at the “Bottom-Up GIS (BUGIS)” model developed by Talen, (2000), were understanding of residents perceptions and preferences of local issues is based on a GIS planning analysis of spatial complexity, spatial context, interactivity and interconnection.

This place based planning process fits ideology to an identity with an appropriate set of policies of its own and for neighboring communities. The methodology is based upon the development of an identity matrix and a generator/influences matrix, which defies the development characteristics for different ideology and identity as well as the mutual influences between different identities and between identities and their surroundings. The methodology may be expressed as a rigid and not flexible enough, however, the actual the reference to a wide variety of different parameters allows extensive and complex variation of the land uses, a view to the feature that encourage the plan flexibility.

Parallel to the development of the influence matrix generator, an extensive set of typical identities is being formed, as part of the planning process. This planning model concept allows representation of each identity's needs in the matrix. The set of identities represents the diversity of population in the region and also addresses future variations. Future variation of identities is being set according to current trends of global societies.

Major trends that have been introduced to the influence matrix generator represents a strengthening of self-definition based on nationality, religion, language, gender, education, economic capital, sexual orientation, marital status, and geographic identity. These processes increase the range of properties needs of society. It can be argued that the system is too rigid and categorically defines characteristics for existing and future identities; however, the opposite is true. The development of various land-use policies for an extensive set of typical identities increases the diversity across the region. This is a bottom-up planning which relates to the characteristics of the public in a complex and profound way. Furthermore, this type of planning creates a wide variety of residential, employment, education, amenities and leisure spaces and places. This variety fits the needs of the place, and also enables wide choices for future communities.

Bottom-up planning has an added benefit at the regional level. The classification and characterization of identities allow identifying opportunities and conflicts, communities' synergistic elements and possible collaborations. Identify opportunities, conflicts, synergies and potential collaborations during the planning process allows conflicts mitigation and region management in a way that encourage cooperation by development. These elements play a significant role in regional planning process that allows and supports a variety, and copes with regional challenges of economies of scale, efficient transportation, employment mix, variety of services and optimal spatial management.

The next chapter will demonstrate this place based planning methodology by demonstrating two examples of the studio course student's plans. The plans were conducted in different years and in different regions of Israel and illustrate each in its own way, the principles presented above.

## 2. Description of the planning process

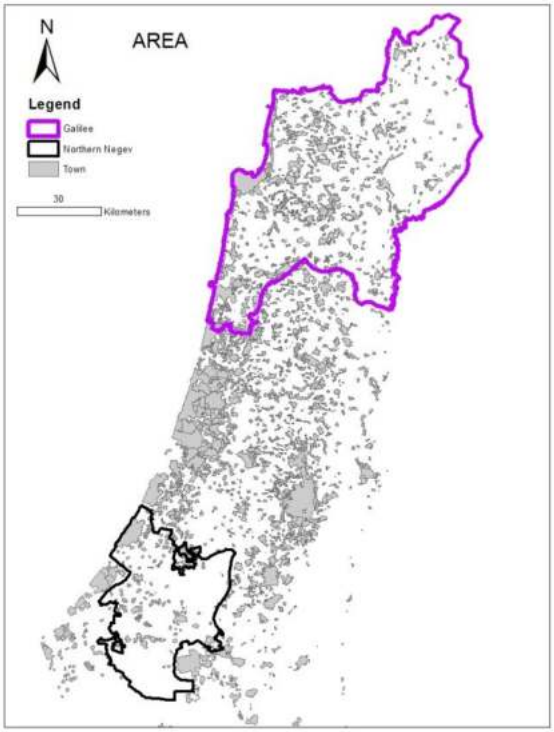
### 2.1. Two planning areas

The presented alternative plans are located in heterogeneous area, at the outskirts of metropolitan core areas, one at the north of Israel, the Galilee area, and the second at the southern area of Israel, called the Northern Negev region (see Figure 1). The Galilee area is characterized as a rural region having small Jewish and Arab towns, with traditional employment system of agriculture and traditional industry and rural villages. The Northern Negev region is characterized as an intermediate region between main three Metropolitan areas of Jerusalem, Tel Aviv and Beer-sheba, characterized by small and medium cities, traditional employment and life-style, diverse communities of Jews, Arabs and ultra-religious Jews.

Motivation for both planning process comes from a critical approach to the existing statutory planning that chose to ignore the variety of population and residence types in the alternative areas. The existing statutory plan defines most of the areas as rural, and ignores the complexity and uniqueness nature of both regions. The spatial policy suffered from a lack of reference of the

distinctive features that creates identity and internal unity. Towns and villages in these regions were scattered and separated with an absent of unique identity.

Figure1: areal map of the two alternative plans. המפה עוד תשתנה




## 2.2. Definition of existing and future identities in both regions

The first stage in the planning process includes definition of different identities and distinction between the identities in the region. In both alternatives current planning needs of various communities were examined and defined, however, in different routes.

The Galilee alternative plan provides a unique planning statement and individual treatment for each settlement in the space and the multi-dimensional connection between them. The idea was to create alternatives for people searching for a different lifestyle, and to provide a generic solution for the types of settlements that people are looking for. The models provide solutions for the differences that were identified, between the 'needs' and the 'wants' of people in search of alternatives to the conventional urban lifestyle. With that, the main emphasis was on developing models that offers the conditions that required for specific lifestyles which will provide maximum flexibility to the residents in accordance to their wants and needs. The idea was to categorize the existing settlements according to the model that was environmentally- and space-wise as the most appropriate.

Different community types were defined by their different characteristics of: population size, self-sufficiency ability, self-organization level, mix of employment types and typical local economy. The result was based on four different types of towns:

1) Ecological - According to research, ecological towns are viable only with small populations (up to 1000 residents). The distances to the city can be long because most of the residents work within the settlement. Also ,being located close to environmentally sensitive areas is based on the idea that these settlements have minimal environmental impact, and tourism makes up a significant part of their income.

2) Cooperative - distances from the city can be long because the towns can provide work ,food (from agriculture) and services.

3) Coexistence -the same as house in the countryside- Requires a community apparatus that is more complex and requires for employment in the settlement.

4) Country side - House in the countryside - The town can be larger, closer to the city and to employment centers

Each combination displayed different level of performance in each characteristic as can be seen in figure 2a.

The Negev alternative plan the students identified six different generic personal Identities in the region having different needs and characteristics. Identity characteristics were defined as parameters in multi-parametric matrix, for example: Jubel (identity) - a student and a farmer son, deliberating between staying and living in the farm or leaving the farm; Phatma- a yang Bedouin women; J'aklin- a single mother living in a small traditional town; Oleg- immigrant from former SSSR, work as an engineer; Raz- gay person how tries finding suitable community for his modern family; Sara-Rivka- ultra-orthodox women, a mother of five who works as a programmer. Each of these generic identities provided with possible future development of these identities as can be seen in figure 2b. Each of the ideologies and identities also have spatial characteristics such as transportation accessibility, access to employment; and social characteristics such as nationality, religion, gender, language, identity, education, marital status, economic capital and more.

This identity analysis has characterized the variety of present communities and their future development needs. The place-based planning process tries to cope with a range of future possibilities such as: strengthening existing traditional elements, or providing a mix of traditional and modern life, or drastic change and abandonment of social tradition and adoption of some of existing trends in Israeli society and a global perspectives.

The analysis refers to current trends in Israeli society and global trends which will be intensified in the future such as women's employment, the growth of a new family types, the blurring of gender, individualism, liberalism and education.

Each of the identities/idiologies has undergone a similar expansion process that tried to outline the future possibilities. Obviously this process cannot predict all directions of personal development, but the excruciating in this kind of thinking creates a vast mosaic of various mixtures which may characterize the majority of the population.

The next step of the planning process, includes characterization of the towns and villages which will provide the needs of the different communities such as: town size and type, occupations structure, social structure, regional identity and relationship to the natural environment are providing the basic elements of the identity matrix generator.

Figure 2: Ideologies in the Galilee and identities possible future development in the Northern Negev area

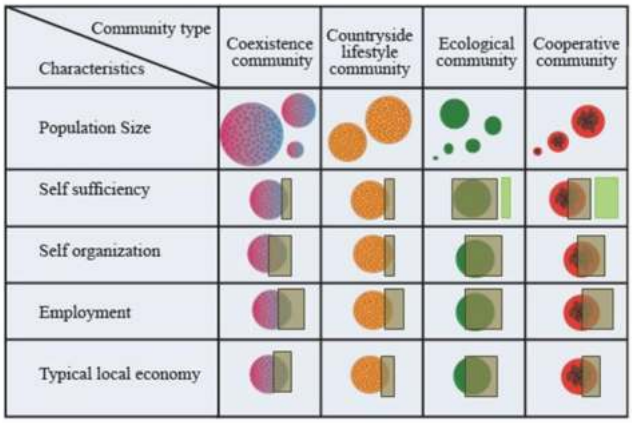



Figure 2a displays the categories of cities and towns the Galilee.

Figure 2b displays 6 main identities in the north Negev area and the possible future development these identities into 36 sub-identities

## 2.3. Development of identity matrix generator

The second stage of the methodology is based upon a generator of ideologies, and their characteristics of transportation accessibility, access to employment; and social characteristics such as nationality, religion, gender, language, identity, education, marital status, economic capital are translating to define the spatial environment for each community and type of: housing, employment, social relationship and spatial relationships between the different ideologies. These matrices are known as the '*identity matrix generator*'. The matrix contains ideology's types, which were identified in the first stage and future ideologies which were developed based on social trends. The Galilee alternative have developed the generator according to geographical characteristics, (see figure 3); and the northern Negev alternative have developed the generator according to social indicators (see figure 4).

To address the characteristics of each existing and future identity, towns and villages that may provide an opportune environment for communities and different ideologies were identified. This matching process was accompanied by a development of policy measures for required adjustments, which included an establishment of specialized employment centers, establishment of educational institutions; Entertainment directed toward the needs of types and communities. Policy measures also include an establishment of new settlements designated if required.

The implementation of this methodology for large area includes hundreds of different kinds of settlements has allowed specific reference to versatile ideologies, and different communities received an individual and specific planning (see Figure 5). Spatial distribution of towns and villages allowed a versatile identities mix for different communities and complex spatial pattern and differentiated spatial policy for different types of ideologies.

Figure 3: identity matrix generator for the Galilee Alternative

| distance from protected areas | Distance from employment centers | Distance from the city | Population size | |
|---|---|---|---|---|
| X | - | 5 km < | 1000 > | Cooperative |
| 3 km > | - | 5 km < | 400 > | Ecology |
| - | 5 km > | 5 km > | 2000 > | House in the countryside |
| - | 7 km > | 5 km > | 500-200 | Coexistence |

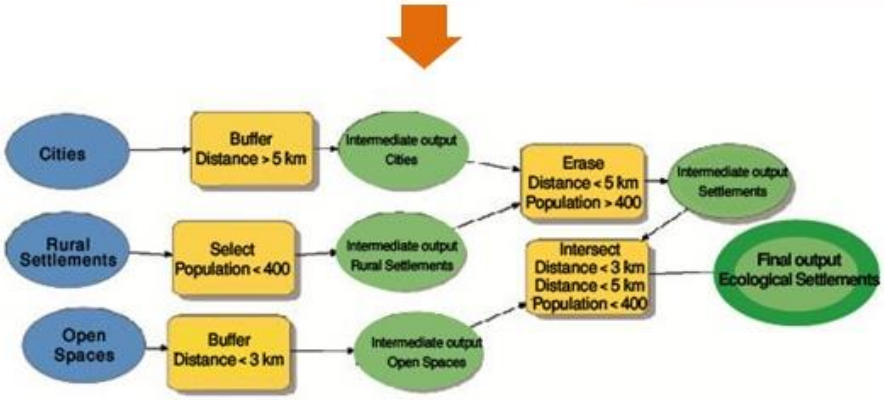
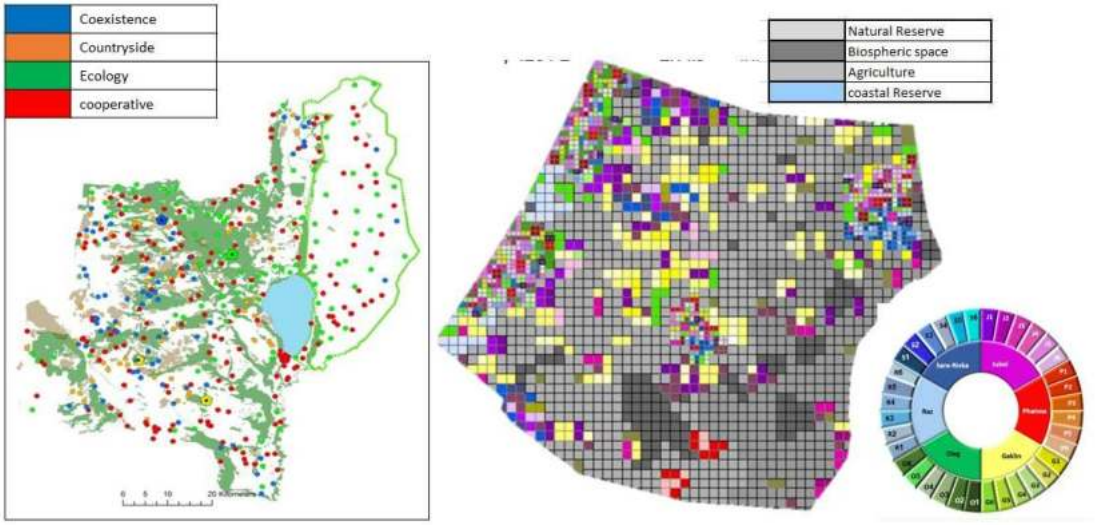


Figure 4: identity matrix generator in the Northern Negev Alternative

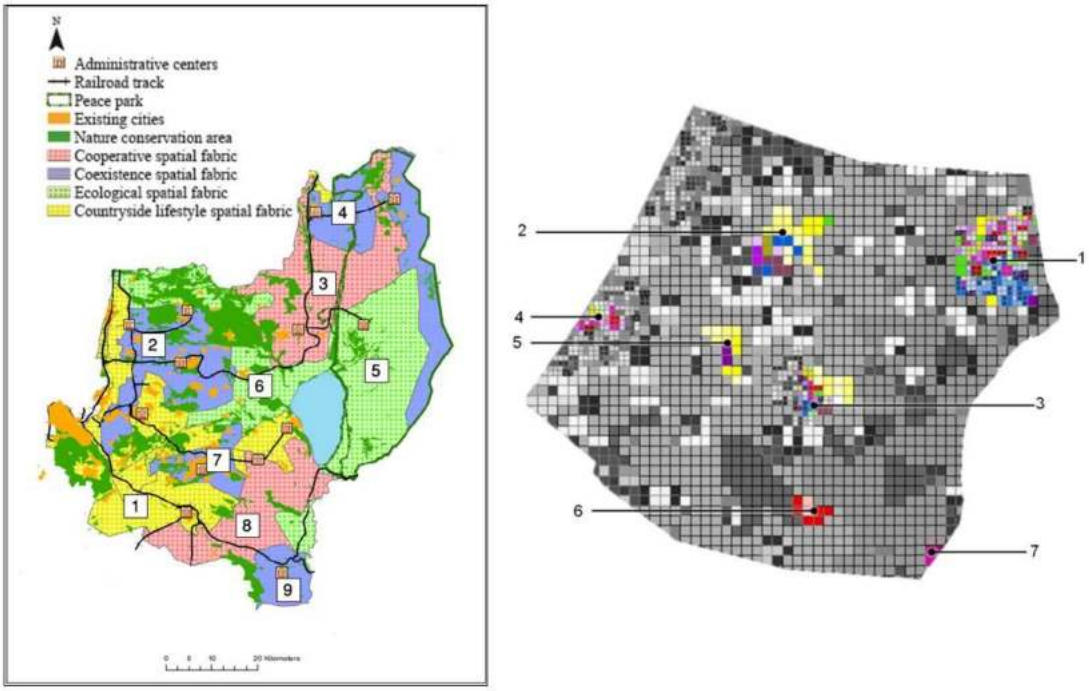
| Identity | Approximate Town Size | Community Type | Residential Type | Profession | Environment |
|---|---|---|---|---|---|
| G1 | medium | traditional | small app | services | suburb |
| G2 | very large | close | small app | industry | suburb |
| G3 | large | open | medium app | academy | city |
| G4 | medium | medium | house | tourism | town |
| G5 | small | traditional | medium app | free profession | village |
| G6 | very large | individual | medium app | free profession | metro |
| P1 | small | close | medium app | free profession | village |
| P2 | small | traditional | house | agriculture | farm |
| P3 | large | open | large app | academy | city |
| P4 | large or very large | multi | medium app | tourism | city |
| P5 | very large | open | medium app | hitec | metro |
| P6 | very large | individual | small app | cleantec | city |
| S1 | very large | close | large app | hitec | city |
| S2 | metro | individual | small app | services | metro |
| S3 | very large | open | medium app | free profession | city |
| S4 | large | multi | medium app | academy | town |
| S5 | very large | traditional | large app | industry | city |
| S6 | large | individual | small app | academy | town |
| J1 | very small | individual | house | tourism | village |
| J2 | very small | open | farm | agriculture | village |
| J3 | large | close | small app | hitec | city |
| J4 | medium | multi | medium app | academy | town |
| J5 | medium | individual | cottege | free profession | town |
| J6 | very small or very large | multi | medium app | services | suburb |
| R1 | small | individual | cottege | agriculture | farm |
| R2 | very large | multi | medium app | free profession | city |
| R3 | very large | open | large app | services | metro |
| R4 | small | open | cottege | tourism | village |
| R5 | very small | close | cottege | free profession | village |
| R6 | large | individual | medium app | academy | town |
| O1 | very large | individual | large app | hitec | city |
| O2 | metro | multi | small app | academy | metro |
| O3 | very large | open | large app | services | city |
| O4 | very small | individual | cottege | free profession | village |
| O5 | very large | traditional | small app | industry | city |
| O6 | metro | close | medium app | cleantec | metro |

Figure 5: spatial patterns of ideologies in the Galilee and the Northeren Negev alternatives




This pattern has supported a complex sub-regional division which provided opportunities for regional collaboration and cooperation, conflict recession, identifying opportunities and synergies between localities and communities. The product of this analysis allowed examining the spatial role of different communities in future situation (see Figure 6).

Figure 6: subdivision of spatial fabrics in the Galilee and opportunities and conflicts in the Negev



The Galilee alternative is addressing the northern part of Israel and defines the core areas which will assist in connecting towns and villages of similar characteristics and empower them in elements of economics of scale, transportation efficiency, employment mix, and more:

1. Core area for community towns in Carmiel
2. four 4. Core areas of mixed community towns in Maalot Tarshiha, Massada and Bet Shean
3. 7. and 8. are Core areas for agriculture based villages in Kryat Shmona, Shfaram and Kafar Kama
   5. and 6. are Core areas for ecological villages in Kazrin and Tiberious

The Negev Alternative is addressing the southern part of Israel and is pointing out opportunities and conflicts in that area

1. Religious – Secular conflict in the town of Bet Shemes
2. Social decline in an too homogeneous town of Kiryat Malahi
3. Social opportunity in a heterogeneous town near agricultural landscape of Kiryat Gat
4. Opportunity for heterogeneous town on a sea-shore in Ashkelon
5. Social conflict between old conceptions and new ones in the village of Nehora.
6. Opportunity for spatial interaction in new Bedouin village
7. Opportunity of ecological communities

This section indicates the possibility of exposing insights of the analysis related to the performance characteristics of the area, such as: problems, conflicts and synergies.

## 2. Discussion and conclusion

Both plans relate to the tension between planning at the individual level (community, ideology) integrated into a comprehensive planning. Both alternative plans indicate that vital and extensive information, that relates to ideologies and regional way of life, may be lost in a classic comprehensive planning approach, information that deals with the needs and desires of the individual.

Both alternative plans began by assuming that this information needs to be at the core of the planning process, and future approach to planning decision making and planning models should keep this information throughout the planning process up to the formulation of the plan (Ho, & Dey, 2010).

In both alternative plans, planning policy relates differently to various ideologies, and regional policies that point out on the different characteristics of the land uses in every location in the region taking into account the characteristics of existing and future types of ideologies in the

region. The plans tells personal stories about various ideologies found in the region, trying to deal with the different paths each identity will take in the future, by drawing alternative paths of diverse personal development of various identities according to global and local trends.

Future relationship between identities and between communities in the region is defined by the influence matrix generator. This generator defines the relationship between characteristics and the different ideologies and different types of towns/villages in the regions. This generator is a Geo-Social matrix that addresses the spatial needs of various ideologies such as: settlement size, proximity to employment, proximity to services, closeness to nature and more.

This planning methodology enables multi-resolution observation of the process. The methodology allows zoom in over different types of communities, and examining the conditions for their flourish, identify conflicts, regional opportunities and ways to resolve/Mitigate between communities in controversy. The methodology allows zoom out on overall connections and relations between communities, and address mutual influences. This multi-resolution observation provides multi-level solutions of spatial conflicts and identify spatial opportunities.

Such detailed approach to the characters of each identity can operate and manage due to use of Geographic Information Systems and the ability to manage and control hundreds, thousands or even more features in an attribute table. Attribute table allows a multi-parametric approach for all different identities with no need to reduce parameters. In the case presented here different identities were characterized by 17 different characteristics concerning in a variety of spaces: personal, cultural, social and spatial. This data have not been analyzed in a processed that lowered the number of variables, such as Cluster Analysis or Factor Analysis, on the contrary, processing the data increased the variance, and the analysis enhances and enriches the data.

Analysis of the spatial distribution of identities has identified spatial conflicts and opportunities, addressing and presenting a complete picture of the region and the policies derived for different identities. This multi-parametric analysis produced two very different alternative plans in their spatial structure however, similar in the way they address different identities.

Both alternative plans represent a vast variety of towns and village types, having complex spatial pattern which supports a variety of ideologies. Mapping the spatial distribution of different types of towns and village allows planners to connect and link communities of similar characteristics or complement characteristics.

This identification allows creating a regional planning dimension of connectors, bridges and links based on relationships, opportunities, conflicts and complementarity of diverse issues, that allows tailoring specific planning solutions as appropriate.

This regional dimension is based on the complex layout of towns and villages, and deals with questions of economies of scale and efficiency on the one hand and spatial diversity benefits management, conflict management, spatial opportunities arising from the diversity and complementarity of community needs of different housing types on the other.

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# Community-based planning in a dynamic landscape development; a teaching experiment

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## Abstract:

*In a four-week studio, second-year bachelor students get acquainted with an approach for an operational plan in a Problem Based Learning Environment. In the course set-up each student represents a stakeholder. Based on input, ideas and vision from stakeholders students try to create a development plan and process, after a landscape analysis and supported by a societal cost-benefit analysis. The students act and think as a (front stage) stakeholder but in the meanwhile doing (backstage) research and analyses, discussing and reporting from an academic point of view. This year, the Brainport Park Cooperative (BPC) in Eindhoven is central. The challenge in this year's studio is to mimic a community-based planning approach, central in the BPC approach. A core objective of the BPC is to offer space for development to all entrepreneurs, citizens or whoever wants to start and continue this to be beneficial for the community and for the landscape. The landscape is the theatre to host and induce developments. The community of citizens, entrepreneurs, visitors, NGO's, etc. are the actors. The (local) government should only restrict themselves to facilitate the necessary legal aspects. Because of the available four weeks it will be a pressure cooker situation; the students are either a representative of stakeholders, or one of the (key-)players in the area, with their own ideas and approaches. Are they capable while being a (relative) outsider of the area to be part of that community? Will they have impact on the area development? Is there a community-based planning framework to be applied related to a dynamic landscape development?*

**Keywords**: Community-based Planning, Dynamic Landscape Development, Student Participation, Transdisciplinarity

## 1. Introduction

In the curriculum of the Spatial Planning Specialisation at Wageningen University different courses are linked with external, non-academic questions. These approaches are often described as a Problem Based learning Environment (see e.g. Carsjens et al., 2013; van der Knaap, 2014) or as a Regional Learning Environment (Oonk and Gulikers, 2014). The course Studio Operational Planning is a course, halfway in the second year of the bachelor program. The studio covers a four-week full time educational period in which students should get acquainted to design a landscape development plan to become effective in a short-term period.

During the last five years a commissioner from outside the university was involved in the course. He or she presented a current societal issue as an assignment for the students and they (or their representatives) have interactions during the course with the students. Within the set-up of the Studio, each student represents an interest of a specific stakeholder. Based on their input, ideas and (interpreted) vision the students try to create a landscape development plan and a process plan based on a shared group vision, as well as a landscape and network analysis, together with a societal cost-benefit analysis. The students try to act front stage and backstage (Boyd et al., 2015); they have to act and think as a stakeholder (front stage) but in the meanwhile doing research and analyses, discussing, reflecting and reporting from an academic point of view (backstage).

We started this year to work with the Brainport Park Cooperative (BPC). This cooperative was introduced by the Education Project Services of Wageningen University, a service organisation

that mediates for external questions into the academic educational program. Projects via Education Projects Services can present a new perspective upon the issue at hand and provide interesting recommendations for the students as well as the involved stakeholders. We wanted the challenge of this year's studio to be to think about and stimulate a Community-based planning approach. This approach is at the heart of the BPC, it is the way the BPC is organized and functions. Given the only four educational weeks it have to be a kind of pressure cooker situation, maybe with the students being a representative of a stakeholder, or as one of the (key) players in the area, having their own ideas and approaches. Are they capable while being a (relative) outsider of the area to be part of that community? Will they have impact on the development in the area?

Community-based planning is extensively described in literature, for instance by Lane and McDonald (2005), Ansell and Gash (2008), Emerson et al. (2012), Opdam (2013) and Koontz and Newig (2014). Most of these articles describe a more theoretical approach and a governmental driven or at least initiated or induced process. The participation of the (local) community is only part of a more governmental approach. In the Brainport Park case the government is actually one of many participants, or even will not be part of the process at all, only for formalising legal aspects. One of the objectives of the BPC is to offer space for development to all entrepreneurs, citizens or whoever wants to start and continue this to be beneficial for the community and for the landscape. The landscape forms the scenery to host and induce developments. The community of citizens, entrepreneurs, visitors, NGO's, etc. are the actors to create the theatre. The (local) government should only restrict themselves to facilitate the necessary legal aspects.

In my contribution for the conference I want to share my findings around the link between Community-based planning, as a democratic approach towards landscape development, combined with time-limited educational activities, based on the developments in Brainport Park as an inspiring, actual case. The challenges, faults and limitations will be brought forward and discussed. How democratic can the process be? The BPC case is intended to be an educational environment for several years, so we also have the opportunity to build up a more solid research case around Community-based planning. We have to identify which elements can or might be important to be monitored. Suggestions are more than welcome. Other questions remain, such as: Can a second-year bachelor student already perform on that level in a landscape-community theatre, being inspired by his/her own ideas or as representative of certain stakeholders either front- or backstage? Is there a Community-based planning framework that can be applied related to the dynamics and democratic development of landscapes? Or is this impossible?

## 2. Background

There are several theoretical aspects to be considered in this process. First of all the aspect of Community-based planning (CBP) will be highlighted to some extent. There is an extensive amount of literature about CBP, but not so many linked to landscape developments, and especially with an ecological point of view (Opdam 2013). The Brainport Park Cooperative wants to specifically integrate ecological and economic developments in sustainable landscape developments. The paper by Liu and Opdam (2014) puts explicitly ecological landscape development central in a Community-based planning approach and is used therefor as a starting point in the first section. Next, social learning is often mentioned as an important element in a CBP process. To elaborate on this aspect, an overview paper by Reed et al (2010) will be followed. Another aspect linked to CBP is the ongoing debate about transdisciplinary research as a science-society interface to support knowledge development. This will be discussed in the third section and is largely based on a special issue about this topic in the journal Futures (Lawrence, 2015). A fourth aspect is the educational point of view connected to these three aspects, how to mingle this in an educational (academic) setting. This will be touched upon in the fourth section of this chapter.

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## 2.1 Community-based planning

The spatial planning process in the Netherlands (and also in other Western European countries) is gradually shifting from a top-down led structure to a governance model; from the national government as leading party towards local governments as initiator and facilitator (see among many others, van der Valk 2002; Roodbol-Mekkes et al 2012; Alpkokin 2012; Gerrits et al 2012; de Roo et al 2012; Olesen 2013; Opdam 2013). More and more other groups and stakeholders are included in this planning process, from being one of the partners to even become the major initiator. Community-based planning (CBP) is a next step in this process of further disentangling governmental control on landscape developments. According to Liu and Opdam (2014), community-based planning "*refers to a flexible, collaborative and adaptive planning system that intends to reshape the landscape according to the wishes of stakeholders for higher quality of life and long-term sustainability. It aims to achieve environmental sustainability while meeting social needs and societal values through landscape change*." They continue by stating that the conventional, linear planning approach should change into a more cyclic planning process, to stress "*a reflective and dynamic problem-solving process, in which re-evaluation of predefined goals according to the methodological feedback and monitoring results is applied.*" To obtain a smooth process it is essential to well coordinate the divers (collaborative) action steps in order to result in a long-term sustainable landscape change. They suggest in this sequence four main activities: objective setting, design, implementation, and evaluation. In each of these activities an environment for mutual learning and discussion is required. Also trust and respect for the decisions taken and the values of others is an essential element to create a more solid collaboration process and to share responsibilities.

Based on the commitment by stakeholders a very divers scope of interests and motives can be encountered, leading to diverging value perceptions and conflicting interpretations of the goal of the planning process. This requires that stakeholders are informed about the different (starting) values of the partners in the process and how these might change during the process. And this information also strengthens the process itself and can be supportive to resolve different conflicts that might arise. Now every involved stakeholder has to be clear about their own value perception, find common values and collaborate in order to reach the earlier defined goal(s). When the understanding of each other is growing the planning process evolves and this should also be beneficiary for the landscape development. These aspects can be identified as important aspects within a social learning process. In the next section this social learning process is elaborated more.

## 2.2 Social Learning

According to Reed et al (2010) there are many confusion interpretations about social learning. Sometimes only creating an environment in which people can learn from each other during a participation process is already typified as social learning. But only bringing people with different background together to participate at a specific topic is not enough. To indentify a process as social learning, there should at least be interaction from different backgrounds, with different values, perspectives, knowledge and experience, in which everybody is stimulated to be reflexive about their role, implicit suppositions and attitude. This should lead to new (social) outcomes, like improved trust, better adaptation behaviour and attitude, a stronger awareness of social relationships, etc. One has to be aware of the difference between individual and social learning. Each individual has the ability to learn also a result of social interaction with others or in a specific facilitated process like a workshop or a conference. But this does not mean that a social learning process is taken place. Reed et al (2010) argue that to be considered social learning, a process must: " *(1) demonstrate that a change in understanding has taken place in the individuals involved; This may be at a surface level, e.g., via recall of new information, or deeper levels, e.g., demonstrated by change in attitudes, world views or epistemological*

*beliefs; (2) demonstrate that this change goes beyond the individual and becomes situated within wider social units or communities of practice through social interactions between actors within social networks; and (3) occur through social interactions and processes between actors within a social network either through direct interaction, e.g., conversation, or through other media, e.g., mass media".*

A community-based planning process will contain these three characteristics as described by Reed et al, but are not necessarily a prerequisite for a good planning process. It seems however inevitable that during or after a such a CBP there will be new insights in how other partners in the process will be involved and participate (condition one), and also will result in changes in the environment, both the landscape and the social environment (second condition). The third circumstance (linked to interaction and communication) is however not so obvious in a CBP, but is necessary in order to bring the process a step further. A reflexive attitude (see eg. Howe and Langdon, 2002; Beunen et al, 2013; Van Assche et al, 2014; Lawrence, 2015 and related articles in that special issue of Futures) by each of the persons involved seems an essential requirement to support a good CBP process.

Next to the social aspects in CBP, also the knowledge component and its related exchange is important. There is in one way or the other always knowledge involved during the planning process. Who is providing for this required knowledge to feed the process? Is it coming exclusively from science and academic literature, or only from (local) stakeholders, including governmental agencies, or will it be a mix? Oonk and Gulikers (2014) reflect upon the current planning profession in which planners have to collaborate with multiple stakeholders from very diverse disciplinary background and with divers interests. They state that the planners have to " cross boundaries" as "*efforts by individuals or groups at boundaries to establish or restore continuity in action or interaction across practices"* (Oonk and Gulikers, 2014, p2). In this planning process it is impossible that one person is an expert in all disciplines and has enough knowledge for it. This person is in need of a collaboration with others to create new knowledge, that goes across boundaries, explicitly addressing the differences between the disciplines. A transdisciplinary research approach seems to offer an appropriate setting for this knowledge provision and exchange. This will be explained in more detail in the next section.

## 2.3 Transdisciplinary research

This section is mainly based on a special issue about transdisciplinary research in the journal Futures (Lawrence (ed.), 2015), which was published at the beginning of 2015. Lawrence (2015) in his introduction states that the integration of different types of knowledge and know-how is a core ingredient of transdisciplinary research. Klay et al (2015) recognize that people trained in different disciplines need to develop a common language based on a shared concern for sustainable development. They elaborate on the growing issue about the required knowledge transfer between science and society, in order to move forward in society as well as in science. It requires insights in and for (new) methods and processes that can be relevant for knowledge. This knowledge production has a role in several phases related to a planning process, such as the framing of the problem, the required analysis, and during the implementation and monitoring of interventions. At each phase there should be a cooperation between academics and non-academic participants, be it either professionals, institutions, politics, governments or civilians. This should also reveal hidden agendas of all the stakeholders involved, especially related to their power positions (Zscheischler and Rogga, 2015). Real transdisciplinary research and related projects are still rarely applied, especially with a focus to role of non-scientific partners. Therefor they question the underlying assumption about the added value of transdisciplinary research. There is also the possible lack of support by institutions and politics for the results of these processes (Lawrence, 2015). This could of course be well related to their power positions. Besides these critical notions, Lawrence (2015) also points to the ongoing debate about the meanings and uses of terminology, be it either multi-, pluri-, inter- or trans-disciplinary research. Zscheischler and Rogga (2015) come up with a European description of transdisciplinarity in which all involved persons (academic and non-academic) go beyond disciplinary boundaries by using a shared conceptual framework,

to address common problems. It has to be noted that all the papers in that special issue of Futures are having an academic as leading author (Lawrence 2015), although transdisciplinarity is about academic and non-academic working and learning together. This phenomenon can partly be explained by the academic writing tradition and its related pressure to publish.

## 2.4 Educational aspects

The articles in the special issue of Futures (2015) around transdisciplinarity are most of them concerned with (sustainable oriented) research and projects. There are two papers that deal with the educational aspects around transdisciplinarity, the paper by Boyd et al (2015) about performance aspects and the paper by Balsiger (2015) about costs involved and setting up a new framework in order to determine different types in transdisciplinarity. These two papers especially offer new insights to integrate transdisciplinarity into education. In the paper by Boyd et al (2015) the performance-as-metaphor, as described by Goffman, is used in a class room setting to elucidate transdisciplinarity in an environment not familiar with the approach. The theatre equivalent is applied to imagine different situations. The authors distinguish three elements that provide a starting point: (1) roles and interaction between the cast and the crew (2) the role of the audience and (3) the stage, including what happens front stage and backstage, and its settings. Involved stakeholders can play their role front stage, how they would react in certain specific phases like problem framing and analyses, based on a script they themselves have developed beforehand. Then backstage they can reflect on their role and of others and create on that result evaluations and formulate new intentions for a next performance. Especially in a teaching environment the front stage and backstage approach seems useful to reflect on in a group discussion and an individual reflection paper (Boyd et al, 2015).

Balsiger (2015) notices in his contribution that teaching transdisciplinarity is a costly task, which is overlooked very quickly. One of the forgotten aspects is the extra activities needed extra to the normal academic interactions, which are above the interdisciplinary actions required. First of all you need to cross boundaries within the academic disciplines, but also set up communications and events outside the academic world. This requires extra expertise about theoretical aspects, methodological and practical factors, in a team-like setting to educate the students and improve the relations with and knowledge by the other partners involved, which could cover a wide range of interests. Already at the start much time is needed to start up and maintain relations, to convince and involve different stakeholders to participate in a research environment, in which they have to be available at all possible moments during the educational period, which often covers a condensed period of time. Next to the content related part of a transdisciplinary activity, the management of the logistics and coordination also demand special skills, to indicate possible constraints and alternative ways of dealing with specific situations. To meet all these prospects and limitations Balsiger proposes a framework to support transdisciplinarity, using elements like integration, evolving methodologies and collaboration. He suggests four varieties to facilitate the choice of teaching options and to influence management. These varieties depend on the level of integration (shallow or more deeper) combined with two options for collaboration (narrow or more broader). He distinguishes soft transdisciplinarity (narrow collaboration with shallow integration), inclusive transdisciplinarity (applying a broader collaboration with a shallow integration), reflexive transdisciplinarity (having a deeper integration but a narrow collaboration) and the hard transdisciplinarity (a deeper integration and a broader collaboration). Balsiger illustrates one of these varieties with a classroom simulation exercise. He stipulates that simulations cannot replace the real activities taking place in concrete settings with real stakeholders facing complex problems. But it will give the students at least a view on different mechanisms that could be relevant in a transdisciplinary setting.

## 3. Case Study area and project in an academic teaching environment

The Brainport Park Cooperative (BPC) started in July 2014 by several entrepreneurs and stakeholders in the Eindhoven Northwest region. The area is around 2000 ha in size, embedded in the surrounding with the city of Eindhoven, the second national airport of the Netherlands and 'het Groene Woud', an area with a mixture for agriculture, recreation and nature elements between 3 larger cities in the South of the Netherlands (see fig 1). Central inspirations and notions within the cooperative are: co-creation/togetherness, honesty/transparency and a colourful approach. These motivations are mixed with four added value principles as returns of investments: inspirational, ecological, society driven and financial. The ecological aspects should be the main driver, economic considerations must not steer developments. The interaction between the involved stakeholders and the landscape should grow organic. The first goals were defined at the start by the local government. The BPC has to take care of building two (slow lane) bridges, one crossing a railroad track and the other crossing the highway A2, both should have great iconic values for the area. But the BPC wants more. They want to start and guide integral developments around a high tech campus/business area, support (new) agricultural use, create and maintain large and small ecological connections, manage roadside verges and support recreational objects. All these activities should take into account the different dynamics in time and place in the landscape scenery. Furthermore, these kind of developments should only be community driven and iterative/cyclic, not a top-down governmental driven activity. In the landscape theatre with some long-lasting elements (like roads, housing blocks, waterways, ecological structure elements), new short-residing elements should appear, thus creating a dynamic landscape based on a democratic input by many different actors and players in the theatre.

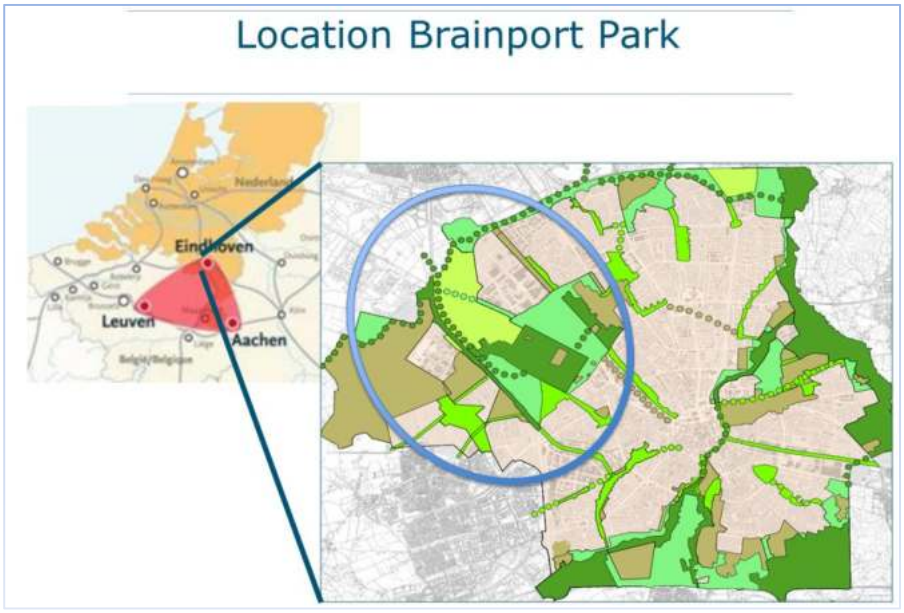


*Figure 1: overview of case study area (within the circle)*

In the course guide of the Studio Operational Planning (Van der Knaap, 2015) the following profile of the course is presented: "*the Studio is an in-depth planning course, focusing at integration of knowledge and skills presented in previous bachelor courses to support operational planning problems at a local to regional scale level. The course familiarizes the students with:*

- *gathering information on different scales and with different accuracy in limited time, to support qualitative and quantitative analyses of land use and landscape, including biophysical and environmental aspects as well as socio-economic aspects;*

- *developing ideas for further development in a region;*
- *executing a SWOT analysis to find out strong and weak points in the present situation and opportunities and threats for the future;*
- *making an integral plan for a specific region;*
- *making a detailed plan, including social costs benefit analysis, qualitative evaluations, financial arrangements, implementation process and participation options for that region."*

The course will engage the students with aspects of an operational planning process on a local scale. Within this process the students get the challenge to create a vision and its related plan for the case area, based on (interpreted) stakeholder ideas. The course is built around several planning elements, like spatial analysis, actor analysis, SWOT-analysis, development planning, detailed operational planning, sustainable planning and the natural step method. Together, these elements provide the students with a robust toolkit of methods and techniques to engage with several steps within a (participative) planning process. The students will have to integrate the methods and techniques that they learn during the course in several products and reports. Each theme that is discussed during the course will be integrated in at least one of the steps that will make up a final planning design and process description. Using group work integrated plans should be developed and underpinned with process and added value suggestions.

This year's assignment was to propose creative (impulse) ideas for the landscape theatre of Brainport Park, given the initial tasks for the BPC. Scenery and management to create connections (either physical or mental) between the park area, entrepreneurs, and (local) people (including visitors). These ideas should fit in a regional development and should be aligned with business model suggestions, like funding, money spent, income earned, merits. To deal with this assignment the students started with an area analysis, together with an actor and policy analysis and a visit to the park area. They also had a creative session in which they tried to come up with as many (extreme) creative ideas for the area as could be thought of. This was followed by a selection out of the these ideas and get them more focussed. Using a spatial-oriented SWOT analysis the students individually tried to locate the most optimal environment for their ideas, in which the current tasks of the BPC had to be included. The next step was to make an integrated plan, followed by a more detailed plan, for their ideas within the group of four students. The final part consisted of a social cost-benefit analysis (SCBA) of their integrated detail plans. This SCBA should incorporate next to a quantitative part also a qualitative analysis about the qualities for the landscape, environment and society. It should also consist of a suggestion of how to realise the plans, with financially as well as planning process suggestions. In this part the Community-based Planning theories could be well applied. The students ended the course with a reflection paper in which they had to describe the four weeks of education and how well they could perform with the presented structure and the given assignment. Most of the students were able to describe their, sometimes strong, learning curves and the omissions related to a Community-based Planning process. For the students it was the first time they had to deal with a practical oriented situation in which spatial impact and processes were central.

It has to be said that this year's course was not embedded in the theoretical background as describe in chapter two. In the theory chapter I wanted to describe some notions I had in mind when the Studio started, but without any direct translation from theory to a methodological and practical script. I wanted to keep a fresh mind as to how students might act in this new situation, without too many constraints, and perform in the theatre of education with what they had learned in previous courses.

## 4. Discussion and conclusions

In the introduction several question were put forward. In the previous chapters the theoretical and the educational aspects were highlighted a bit ending with the final remark in the previous chapter that theory about Community-based Planning (CBP) and Transdisciplinarity (TD) was not directly trans-

lated to a ready-made methodology framework for the students. The older framework still served as a kind of relict from the older (top-down) approach of the planning process. The Studio of this year was a learning curve for both the students as for the teachers involved. We wanted to see what could be useful and what should be altered given the CBP and TD impact. Especially if we want to use this case area of BPC for a longer period as an educational environment. We also wanted to focus on which elements might or can be important to supervise and monitor in this CBP-TD process. Based on the given theory in chapter two about social learning and transdisciplinarity in the class room, and the presented questions in chapter one, I would like to mention a few focus points, divided over two blocks. One about educational aspects and one more in general about the CPB-TD process, but with education in mind. Planning and design education need to bring forward a new generation of reflexive professionals, that is not only able to make plans and organise planning processes following the top-down planning approach , but they must also be able to objectify spatial planning practices and their own roles and responsibilities within these practices. Reflection can fuel and deepen debates about trends, deadlocks, drives and innovation.

The first point is related to the curriculum in which the bachelor students had to take this class and is related to the question if a second-year bachelor student can already perform on the required level in a landscape theatre. Students were very enthusiastic about working with a real life case situation and about converting part of their earlier gained knowledge into a solution that might be implemented or at least accepted by the practitioners. However, it showed during the course that the students, being in their second year, were not yet fully capable to deal with the kind of issues around CBP and a realistic exchange of knowledge with stakeholders. They miss a sound reflexive attitude to perform fully at the front stage and backstage level, as described by Boyd et al (2015). On the other hand they learn a lot from working in this kind of CBP-environment, even in the more distant way as is was presented during this year's course. In the next course there should be more and stronger attention to a direct interaction between stakeholders and students. The students missed more discussion with the stakeholders. That will also increase the exchange of knowledge much more. One of the critical points that the students brought forward, was that there was too little (and too late) interaction with the stakeholders. An option that has been discussed after the Studio by the students as well as the commissioner was to stay in the area for at least a few days and not for only one excursion day. This suggestion will unfortunately collide with the university program committee who only offers a one-day excursion for this course, which is in line with the remark by Balsiger (2015) about supposed expenses for a longer stay in the area in relation to management ideas on transdisciplinarity.

A second point that can be mentioned is the performance front stage and backstage, related to their knowledge and exchange of knowledge with stakeholders. By better explaining and experimenting within a short exercise with these two stages at the start of the course they would probably better perform on both stages. Then the students know how to write a script for their performance at the front stage. The students were able, in the end, to act backstage, but there is room for improvement and more profundity in their reflexive attitude. During the course the students were having difficulties dealing with all the different and new concepts. They also missed some content related knowledge about physical and social phenomena, which is offered later in the curriculum. A new set-up of the curriculum next academic year will probably overcome this lack of knowledge. The Studio is then scheduled at the end of the second year program.

A third point concerns the knowledge of the area and related possible interactions with stakeholders by students. To better act as a participant in the area, or as a representative of a stakeholder, it is important to know the area and the people how are active. It takes time to build up that knowledge and gain the required trust, in order to feel connected to the area and its people, mentally and physically, especially in a CBP-TD process. Four weeks is by no means enough; the students have scarcely time to reflect upon their impressions and the involved stakeholders are limited in their available time; over a longer period it will be easier for both groups. It will at least take more than two months, to be

better embedded in the area, the people and their hassles. During the evaluation session with the commissioner it was suggested to place the Brainport Park area more central in other courses as well, so the students can build up their area knowledge and stakeholders can get more acquainted with the students. This will definitely upgrade the students acquaintance, but it should be mentioned that students are also keen on very different sites to be central in a course. A differentiation in case study area over courses is also related to the place in the curriculum and the described learning outcomes. Other areas offer other and different items to focus on.

The more general related focus points are concerned with how democratic the BPC process can be. And is it possible to have a community-based planning framework that can be applied or linked to the dynamics and democratic development of and in landscapes? Or is it merely utopian and governmental thinking to have such a framework? There is still a stage manager (or name this position producer or facilitator) required to connect, support and inspire the many different actors and to introduce and facilitate new players and new dynamic developments (see also Axelsson et al, 2013). But (s)he can only act on the basis of community acceptance, being a member of the community, not through dictatorship or being an outsider. All actors involved exchange insights and experiences, learn with and from each other and create new types of knowledge. So when students are part of the actor group they must also be aware of their position and act accordingly. The learning curve for students might well be steep for them with only a few weeks, but for the permanent crew the activities of students should also have an added value.

In a paper by Axelsson et al (2013) suggestions are made for a set-up for a multi-level social learning framework that contains promising elements. They included policy development about sustainable landscapes and rural developments, learning about the related indicators and norms. They have based their set-up on 18 (forest-oriented) initiatives, mainly located in Sweden. A main difficulty was to secure systematic social learning and explicate it at different levels. They distinguish three levels, the local level where projects develop solutions to different issues. The second level consists of learning from these local projects. The third level is made up of general learning, based on experiences from multiple development initiatives and places, in which tacit knowledge is generalised and made (more) explicit. This kind of knowledge (new and its use) will be created when project results are assessed, in order to understand what did work and what did not, which issues were or are still important, where it could have gone wrong. The authors state that this learning process will benefit from transdisciplinarity, including the collaborative process and comparing results to theories and experiences in other places. They also put forward that there should be enough difference in the stakeholder group from sectors, levels, interests, background and learning experiences. All people should be open minded and willing to participate and represent relevant stakeholders. There should be applied a variety of methods, like reflections, discussions, self-evaluations, external assessment of the project and the local initiatives. One should keep in mind that when abstracting the learning process the contact with reality and local stakeholders should be kept. Also the persons included in the process should not be the 'usual suspects' that are at all these kind of meetings or the 'main/current' representatives. Also building trust is an important element to enhance collaboration (see also de Vries, 2014), while not overlooking the limited equity among the different actors and policies. The authors propose that the first step should be to focus on solving small and easy problems before tackling the larger ones. Maybe comparable projects from elsewhere can be an example.

Another suggestion is brought forward by Ayre and Nettle (2015) for a catchment area in Australia. They focussed on the dynamic process of how to combine and effectively manage diverse disciplinary perspectives and other knowledge(s) in a social learning process for practice and policy change. They come up with five different phases. The first one is to establish the imperative for integration. If there is not enough basis then don't start. The second phase consists of coordinating the different involved disciplinary and other knowledge commitments. The next step is to consolidate arrangements for integration. Take care that everybody agrees on norms and steps to make. The fourth

phase is to prioritise the outputs from the integration process. And then as fifth step start representing the outputs. These phases should be planned in a strategy, but there should also be room for emergent inputs as a result of iterative steps.

There is a great deal of overlap and communality between the different studies. It also shows that these kind of integration and transdisciplinary projects are complex, require good guidance and facilitation, and could be very well time consuming. The question remains how to integrate these sensibly in an educational environment with limited time. This adds an extra element in an already very complex process that is not easy to tackle. We will continue to explore this track of educational transdisciplinarity and social learning in the very near future.

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# MARINE LITTER – OUTREACHING THE YOUNGSTERS

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Abstract:
*Planning has mainly focus on land, however new challenges arise from environmental planning in the sea. MARLISCO - Marine Litter in Europe's Seas: Social Awareness and Co-responsibility aims to raise public awareness, facilitate dialogue and promote co-responsibility among the different actors towards a joint vision for sustainable management of marine litter in European seas. By developing innovative mechanisms and tools, it targets to effectively engage, inform and empower society, reaching the widest possible audience.*
*Within this project a Video Contest was launched to encourage and provide the opportunity for youngsters to get in touch with the issue of marine litter and share their visions with a broader public. Youngsters were invited to develop and produce a short video expressing their views about marine litter, becoming agents of societal change. This challenge was taken by schools, as a curricular or parallel activity, approached from several or multiple disciplines. It has promoted critical thinking and active citizenship regarding a complex problem that affects everyone and is of the responsibility of all.*
*In this communication we present and explore the methodology and results of the video contest in Portugal within the several European countries, exploring the lessons learned.*
Keywords: Marine Litter, Education, Outreaching, Co-responsibility, Youngsters

## Introduction

MARLISCO - Marine Litter in Europe's Seas: Social Awareness and Co-responsibility aims to raise public awareness, facilitate dialogue and promote co-responsibility among the different actors towards a joint vision for sustainable management of marine litter in European seas. By developing innovative mechanisms and tools, it targets to effectively engage, inform and empower society, reaching the widest possible audience. Within the several activities of the project a Video Contest was launched to promote the opportunity for youngsters to get in touch with the issue of marine litter, share their visions with a broader public and reach wider audiences. Youngsters, in articulation with their teachers, were invited to develop and produce a short video expressing their views about marine litter, and submitting it to a national contest. This challenge was taken by schools, as a curricular or parallel activity, often involving a diversity of disciplines. The video development has promoted critical thinking and active citizenship of a larger educational community regarding a complex problem that affects everyone and is of the responsibility of all.

## Conceptual Framework

This paper deals with the video context of the MARLISCO project, an issue that develops within the context of science communication. Science communication has shifted methodologically and conceptually. The traditional one way communication has given place to “dialogic and discursive fora

that aim to empower people regarding the issues which might affect them and their communities" (Pidgeon et al., 2014).

From the literature in science communication and from working in the ground, it is clear that publics are capable of debating complex issues of environmental science, technology and policy given the right tools and the opportunity to do so (Renn et al., 1995 as in Pidgeon et al., 2014; Dietz, 2008 as in Pidgeon et al., 2014, Vasconcelos et al, 2013a, Vasconcelos et al, 2013b, Vasconcelos et al, 2012).

This new current is more adequate to the complexity of these contexts with (1) numerous interconnected elements combining technical, behaviour and institutional elements, (2) mixed a diversity of multiple geographical and temporal scales and (3) integrate national level science policy problems difficult to model " (Pidgeon et al., 2014). Due to this, policy issues are often called wicked (Tumpeny et al, 2009 as in Pidgeon et al., 2014; Rittel and Webber,1973) or postnormal (Rosa, 1998 as in Pidgeon et al., 2014) in the literature.

To overcome this, it is crucial to adequate the processes to promote change of the perspective of the society at large, and conquer participation in issues concerning the environment, in this case marine litter, a collective problem to what all of us contribute. As so, the direct mobilization, involvement and engagement can contribute to develop a continuous process focused in enhancing human knowledge, contributing for the generation of new adopted values, and to the creation of innovative tools targeting to the success of a project aiming the changing of attitudes and behaviour.

This is part of the component of environmental education (EE) of the project. EE is an ongoing process of training and education through which individuals and communities become aware of the environment in which they live, and acquire knowledge, skills, experiences, values and determination that makes them capable of acting individually or collectively in the search for solutions to environmental problems present and future (UNESCO, 1987).

It is essential to go through an educational process with the specific aim of "know how to do, know how to be, and know how to act, reflecting on knowing how to be, both at local level and in social terms" (Alves, 2001). This calls for experiential learning since it considers the individual learning process (Breunic, 2009) a process of learning through experience or better "learning through reflection on doing" (Felicia, 2011). This type of learning is different from the didactic one, where the learner plays a passive role (Felicia, 2011), because the idea is more to implement active learning, such as action learning, adventure learning, free choice learning, cooperative learning, and service learning (Itin, 1999).

Experiential learning is concerned with more concrete issues related to the learner and the learning context, a rather ancient concept that comes from Aristotles as written in Nichomachean Ethics "for the things we have to learn before we can do them, we learn by doing them". This idea lived up again in the beginning of the 1970s, with David A. Kolb development of the modern theory of experiential learning, drawing heavily on the work of John Dewey, Kurt Lewin, and Jean Piaget (Dixon, 1997). This was reinforced by Freire´s educational theory, defending that education should raise the awareness of the students so that they become subjects, rather than objects, of the world making them to think democratically and to continually question and make meaning out of everything they learn. In fact, Freire states that "...our relationship with the learners demands that we respect them and demands equally that we be aware of the concrete conditions of their world, the conditions that shape them. To try to know the reality that our students live is a task that the educational practice imposes on us (Freire, 1998).

Departing from the concept that knowledge is socially constructed (Freire, 1998, Berger et al., 1967) Freire states:"... knowing is a social process, whose individual dimension, however, cannot be forgotten or even devalued. The process of knowing, which involves the whole conscious self, feelings, emotions, memory, affects, an epistemologically curious mind, focused on the object, and equally involves other thinking subjects, that is, others also capable of knowing and curious. This simply means that the relationship called "thinking" is not enclosed in a relationship "thinking subject - knowable object" because it extends to other thinking subjects. (Freire, 1998). In this line he discusses practical and theoretical knowledge, calling the attention to the fact that believes are shaped into knowledge by discussion and critical reflection.

The idea of the video contest of the MARLISCO project is anchored in this conceptual framework. It is expected that by doing the teams increase their ocean literacy, reflect critically on the marine litter problem and come up with joint proposals enriching the responsive capacity of society. Targeting this young group has the advantage to create a dynamics that will transform society since the learners of today are the decision-makers of tomorrow.

The lack in the school program of issues related to the understanding of the way the environment and biodiversity functions contributes to the students' fractional and incomplete vision of nature. This understanding is essential to educate responsible and active citizens of tomorrow promoting future sustainability policies. Therefore the above approach to EE emerges as a possible response to this gap in the learning process. Being a type of education that aims to a more comprehensive learning, it should lead citizens to live in harmony with the environment, by understanding the dynamic relationship that exists between natural ecosystems and social systems, in order to lead to a sustainable management of natural resources, ensuring the welfare of future generations (Evangelista, 1992). For this, educational practice must therefore develop and enhance the capacity for action (Uzzel *et al.*, 1998). The school should, in this context, be seen as an active agent for the creation of change, rather than a passive transmitter of information.

The MARLISCO project aimed to sensitize all citizens of all ages, particularly the younger ones, to sustainable behaviours in relation to the sea, generating a multiplier effect to make them active agents to provoke change in their communities and extended family. Students addressed local and very specific issues, but of utmost importance on the world stage. This helped them to develop critical thinking and co-responsibility for the problems of local and wide scope.

## MARLISCO Project - Social Awareness and Co-responsibility

MARLISCO (*Mar*ine *Li*tter in European *S*eas: *S*ocial Awareness*S* and *CO*-Responsibility – is an European project funded by the European Commission in the context of the Seventh Framework Program for I & D. MARLISCO is a plan of action for mutual learning and mobilization that aims to raise society awareness to the issues and possible solutions of the marine litter. While involving universities, governmental agencies, environmental NGOs and industries the MARLISCO Portuguese team launched the project and worked on it for three years. The Portuguese team included a set of experts from the New University of Lisbon, and worked closely with a wide range of diversified professionals and experts from other entities.

Overall the MARLISCO project involved a partnership of fifteen countries (see figure 1) and twenty institutions namely: from the industry sector (plastic production, conversion and recycling), research (universities and research centres) and civil society (environmental NGOs).

Figure 1 – MARLISCO –countries involved

Marine litter has been identified as an emerging threat to the environment, human health and safety, as well as livelihoods. Originated from various land and sea based sources, it is a challenging and complex problem. Figuring out specific responsibilities is hard since these are unclear, and even the costs and consequences are unequally shared. It is clearly a problem without a unique solution that can be the same for all. It requires an integrated approach of articulated efforts. It is a global problem without boarders requiring solutions to involve partnerships of different sectors of society.

The litter ending up in the sea is a result of activities and attitudes of all of us, either directly or indirectly. Contrary to what is the general perception, according to the United Nations about 80% of marine litter is generated in land and only 20% result from sea activities. Its exponential growth results from prevailing production and consumption patterns and from human attitudes and behaviour in dealing with waste. MALISCO project has emerged aiming to deal with this issue.
Within the terrestrial sources we can list the general negligent abandonment of garbage (close or far away from the coast), the inappropriate disposal of objects at home (e.g., swabs push down the toilet), absence or overcharge of sewage treatment stations, failure in the management of collection, treatment and elimination of litter and products resulting from industrial activities. The garbage wherever it is left finds its way to the sea, through the rivers, sewage, by the wind, drained by the rain or by the tides. Extreme events such as the hurricanes and/or *tsunamis*, are also responsible to drain substantial amounts of garbage to the ocean. Marine sources include commercial fishing, leisure activities, shipping, military or of research navy, offshore oil or natural gas platforms and aquaculture.

MARLISCO overall goal is to raise public awareness, facilitate dialogue and promote co-responsibility among the different actors towards a joint vision for the sustainable management of marine litter across all European seas.

The main objectives of the MARLISCO project are (1) to increase the awareness of the consequences of societal behaviour in relation to waste production and management on marine socio-ecological systems, (2) to promote co-responsibility among the different actors, (3) to define a more sustainable collective vision, and (4) to facilitate grounds for concerted actions through the successful implementation of the Mobilisation and Mutual Learning Action Plan (MMLAP).

The main focus is to provide and evaluate mechanisms to enable society to perceive the impact of litter on the marine environment, to identify the land-based activities that are involved and collectively arrive at solutions to reduce that impact – in particular solutions that can be implemented locally but have a regional effect.

**Specific objectives**

1. To provide a review of current understanding of the sources, type, distribution and fate of marine litter in Europe's Sea. This will provide an evidence base to support appropriate actions and to provide a baseline against which change can be measured.
2. To provide an evaluation of key stakeholder perceptions of marine litter, assess current practices and potential solutions, and measure the effectiveness of the Action Plan at changing attitudes and perceptions.
3. To develop a web based portal to promote the Action Plan, provide a source of information on marine litter, stimulate discussion and disseminate the results of the Co-ordination Action.
4. To provide a platform for structured dialogue among the key stakeholders from industry, end users, science and society, in 12 European countries. This will help to identify and resolve barriers that currently retard the adoption of good practice.
5. To develop a video contest in schools in 14 countries around the European Seas in which children will be encouraged to develop short videos about the issue, embodying a multi-disciplinary process of getting in touch with the problem and addressing potential solutions as they see them.
6. To identify good practice and facilitate its adoption via a range of disseminating materials aimed at specific sectors and present them to evaluation during the stakeholder fora.
7. To increase awareness and empower general public and children through a series of national educational activities and innovative communication tools, while facilitating the integration of their views in the platforms of dialogue.

Source: http://www.marlisco.eu

MARLISCO has been developed by a consortium of 20 organizations from 15 European coastal countries (Italy, Holland, United Kingdom, France, Slovenia, Ireland, Romania, Germany, Cyprus, Bulgarian, Spain, Portugal, Turkey, Denmark and Greece). It encompasses the four European Regional Seas: North-East Atlantic, Baltic, Mediterranean and Black Sea.

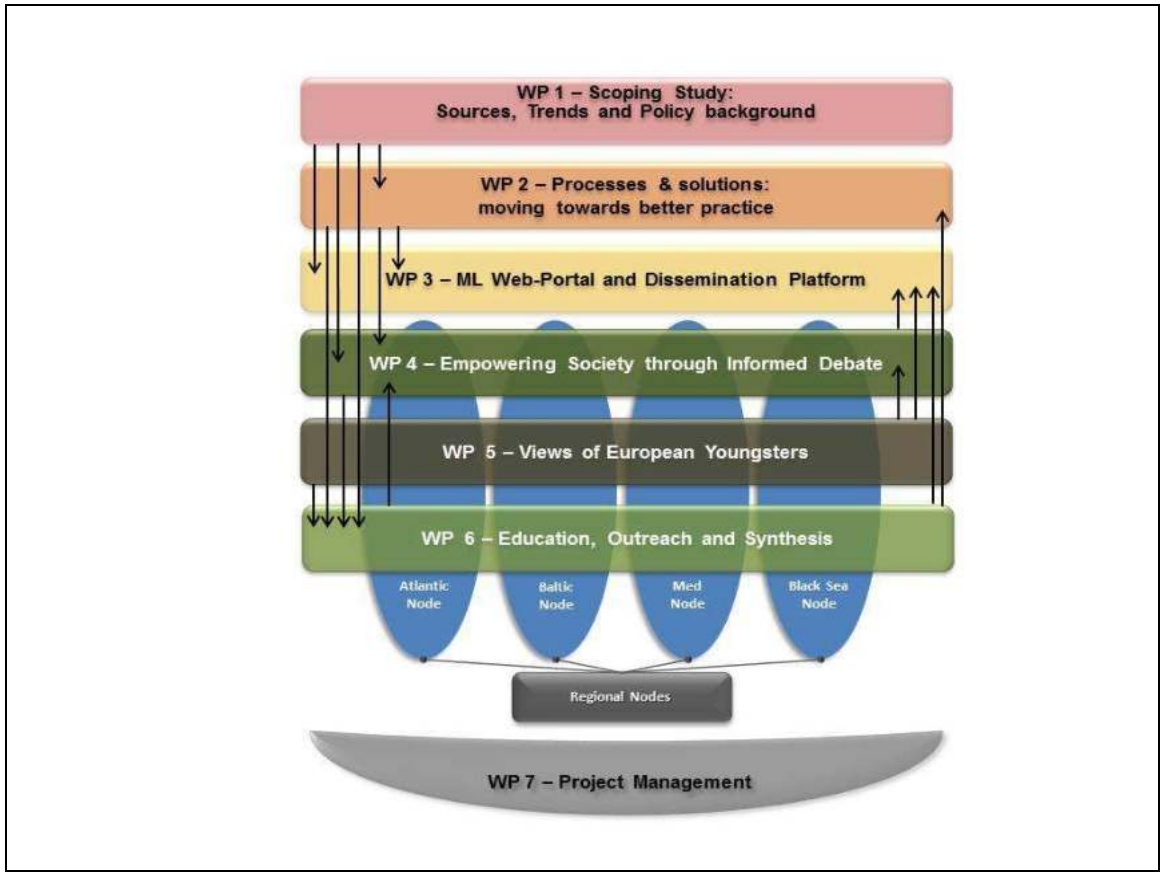


Figure 2 – MARLISCO Work Packages structure

MARLISCO is organized in 7 work packages (figure 2).

- **WP1** – Scoping study: sources, trends and policy background
- **WP2** – Processes & solutions: moving towards better practice (Best-practices collection and stakeholder survey)
- **WP3** – Marine litter web-portal and dissemination platform
- **WP4** – Empowering society through informed debate (National fora)
- **WP5** – Views of European youngsters (European video contest)
- **WP6** – Education, outreach and synthesis (several customized activities to raise social awareness about marine litter including MARLISCO exhibition)

The central idea of departure of MARLISCO project has been to develop innovative mechanisms and tools to effectively engage, inform and empower society, reaching the widest possible audience. MARLISCO activities include:

- A scoping study of the sources and trends regarding marine litter in each Regional Sea.
- A collection of best practices from all partner countries.
- A survey on the prevailing perceptions and attitudes of different stakeholders regarding marine litter.
- National debates in 12 partner countries.
- Diversified, tailor-made national activities including exhibitions, workshops, festivals, clean ups, etc.

- A European video contest for youngsters to collect their visions on the issue of marine litter and empower them as agents of change in society.

In Portugal the MARLISCO social awareness activities already involved more than 9000 persons. In this paper we focus in this last activity - the video contest – that, in Portugal generated 92 videos, engaging and mobilizing more than 600 students and teachers.

This has followed up the launching of the MARLISCO´s European Video Contest as stated in the MARLISCO site: "In 2013, the European Project MARLISCO challenged European youngsters to tell us what they think about the problem of marine litter in a short video" (http://www.marlisco.eu). For the overall project this resulted in 379 videos submitted involving 2 123 youngsters, from 118 schools. The best videos were selected by a national jury in each of the 14 participating European countries.

**The Portuguese Video Contest – youngster "hands-on" activity**

Supported by the project central idea - to develop innovative mechanisms and tools to effectively engage, inform and empower society, reaching the widest possible audience – the MARLISCO project launched an Europe-wide national-level video contest for schools for youngsters ( in Portugal 12 to 18 years old students were involved). Students were challenged to produce a 2 minutes video to manifest their ideas and propose solutions to the marine litter problem. It was expected that becoming aware of the problem could shift their own behavior. This was supposed to be done in teams of at least two students with one teacher/educator. Each student – teacher/educator team could submit as many videos as they wanted. The team had total freedom to decide the topic and context for the video as far as they addressed the following issues: 1) Why is the marine litter a problem? 2) Where does the marine litter come from? 3) What can be done to reduce the marine litter? 4) What have we done in our school or community about this problem? 5) Innovative ideas/solutions to solve the marine litter problem.

In sum, videos were expected to highlight several issues namely, the impacts of marine litter, consumer good practices to reduce marine litter, reporting an initiative developed in the school or in their community to better manage or reduce waste or the preparation of an artistic/creative work (for instances using material collected in a beach clean-up). The key was to pass a clear message on marine litter to a broader public. The videos selected in each country could be broadcasted in the national television (perhaps together with another video from another country), supported by a national celebrity to leverage dissemination and to reinforce the importance of the message.
Videos are encouraged to be shown in other public events, within the project or not. A final award for the team winners of each country was to travel to participate in the European Sea Celebration Day in Bremen-Germany. A final video compilation of all the video winners Europe-wide was prepared – "Voices of Young Europeans about Marine Litter" and broadcasted during this celebration in May 2014.

The evaluation criteria of the videos submitted were: adequacy of the topic, quality of the research shown, relevance and potential impact of the message, quality of the production, and creativity and originality of the video. In Portugal, teams were encouraged to find a catchy title and the videos were evaluated by a jury of four elements - the national coordinator of the project, the European coordinator of the Video Contest, a movie expert, a godfather of the video contest – taking into account the voting in the YouTube. The team had a substantial debate if this last component of evaluation was fair since it can be easily manipulated by asking friends to vote. However, one of the key objectives of the MARLISCO project was to widened up the diffusion of this issue, therefore recurring to the internet voting had a good potential to contribute to this.

The public voting had as basis the number of "Likes" in the MARLISCO YouTube and Facebook pages (the number of views did not count). The public voting period to decide the winner (finalists) was open to the public during 10 days (3 to 13 of March). The voting of the special categories ended one day before the launching of the best videos voting and it lasted approximately 2 weeks. The number of "likes" on Facebook and YouTube attained a total of 14292 (which count as points do decide de winner), though it had a total of 7195 views on YouTube and 61280 views on Facebook during the period of voting. The most popular video achieved a total of 2283 likes.

In Portugal to achieve a wide engagement and mobilization the Portuguese MARLISCO team did a wide diffusion through the website and the Facebook contacting more than 1 400 organizations directly. This effort paid back since thirty four (34) schools got involved and developed videos. Thirty one (31) submitted their videos. The 3 missing informed that either the videos developed did not have enough quality or that they did not had enough time to finish them. This was a loss of 11 videos not delivered, the process of producing the video was performed and was positive by involving teachers and students got involved in the theme during sometime around a concrete project.

Ninety two (92) videos were submitted for evaluation (figure 3). Some schools had more than one teacher involved and at least forty one (41) teachers got mobilized. A total of 458 students (2 teams/videos were composed by 50 elements each, the other teams varied between 2 and 10 elements, usually not more than 5 members because MARLISCO team announced that only could take 5 students to Bremen).

Figure 3 – Essays for MARLISCO Video development

MARLISCO Portugal offered a set of support services, but the most relevant was a Workshop in partnership with the Faculty of Beaux Arts of Lisbon University to technically support students and teachers teams. This workshop was organized in two sessions (November 4 and December 9, 2013). It registered 72 attendances (17 teachers and 55 students from 11 schools) (figure 4).

Figure 4 – MARLISCO Project workshop of technical support

The project team also provided financial support. Sixteen (16) schools requested financial support representing a total of 41 videos/teams supported. Some schools did not claim funding and the majority of schools did not use all the money. The financial resources were used to organize the award ceremony.

National Juries were set-up in the countries involved to select the best national video and winners. Wider public engaged fostering the dissemination of the videos, constitute an intermediary step in the video selection process to capture public support and preference, with a sub-set of the national videos going on "public voting" on Youtube. The exposing and sharing of these videos in social networks, such as Facebook, allowed for a wide outreach. Some of the videos have reached 1.000 "views" within the first week.

Due to the great amount of videos (92), a pre-selection was a must. Four members of the team viewed all the videos and fill in a table with a "yes, no and maybe" option to decide if the video should proceed to the next phase. The four evaluations were assembled: excluded the videos that had "no" from the four members, and included all the videos that had four "yes". The videos classified with "maybe" or the ones that were not consensual were discussed in a meeting to decide jointly. From the 92 videos 30 were delivered to the national jury (15 for each cohort). The second phase consisted in integrating the voting of the jury and the public (this one accounting for 20%) to get the final result. Only the TOP 10 (selected by the jury for each cohort) were submitted to public voting.

From these 20 top videos, not taking into account the age range, the most voted video by the public won the People's choice award. Moreover, as there were some good videos that were excluded in an earlier phase the team project decided to attribute some special prizes. These prizes (Informative, Animation, Character and Creative) were attributed by public votes.

Besides the initial sponsors for the Portuguese National Awards - Oceanarium of Lisbon, "Pavilhão do Conhecimento" (Pavilion of Knowledge) and "Kit do Mar" (Ocean Kit) - the MARLISCO Portuguese team decided to contact several companies that offer adventure activities (outdoor/sport/nature). These contacts were only developed after knowing the finalists, in order to request local companies from the same city of the finalist team. The result was very positive and all the companies contacted accepted, in a total of 11 companies that represented a total of 12 team prizes.

**Youngsters Portuguese Video Team Recognition**

The National award ceremony in Portugal - an event organized specifically to announce and deliver the prizes to the finalists' teams – was held on the 22th March in Lisbon Oceanarium. A total of 117 participated, being 70 members of the video contest teams (students and teachers), 20 guests (jury members, sponsors and high entities representatives) and 27 winning students and teacher of an additional contest that the Portuguese project team organized (MARLISCO Anthem Contest).
All the 15 prizes teams except for one participated in the ceremony. The missing team lives in Madeira Island and did not get financial support to pay for the travel expenses. However, we had one student from the Island of Madeira and two students and one teacher from São Jorge Island (Azores) that got some local support.

Figure 5 – Video Winer and the team Winer and MARLISCO Portuguese coordinator

The whole day ceremony event was filmed and also live streamed in the web, so that all schools, families of the students, and other people interested, could watch the ceremony. (https://www.youtube.com/watch?v=Vxp4EtT-5mA). All people present at the ceremony had free entrance in Lisbon Oceanarium exhibition and also in the MARLISCO exhibition of the Oceanarium at the time.

All awarded teams were called to the stage to receive their prizes, after showing the video and revealed the classification (figure 5). Besides the prizes offered by sponsors, MARLISCO Portugal also offered a simple kit to all students and teachers (MARLISCO bag, t-shirt, cap, certificate, bracelet, pin, small porcelain trophy (designed by an artist for this occasion). All teams also received a trophy to the school that was especially designed by an artist, inspired by the MARLISCO video logo.

The 2-days European Ceremony for the young representatives of the national winning teams took place on the 18th and 19th May 2014 within the 7th European Maritime Days Ceremony (EMDC). The delegations of youngsters were accompanied by the teachers that supervised their involvement in the contest and by a staff from the MARLISCO national partner. During the plenary session off the EMDC, MARLISCO was presented by the conference moderator and the Teaser of the MARLISCO Video Contest. Winners were publicly recognized, to an audience of 900 participants. One representative from each of the 14 national winning teams was called on stage to be greeted and receive from European Commissioner for Maritime Affairs and Fisheries - Maria Damanaki (2010-2014) an official recognition for their efforts. In total 86 youngsters, from 13 countries, with ages between 9 and 19 years old, took part in an attractive and interactive programme and had the opportunity to meet each other and share their experiences in an intercultural context.

**Reaching Collective Learnings**

The Portuguese achievements on the video contest were rather successful. Results show this. In fact, the number of youngsters engaged and videos produced was particularly high in Portugal. Of a total of 379 videos submitted by the 14 countries involved in the video contest (Greece did not have the video contest) Portugal contributed with 92 (24%). And out of the 2 123 students involved, 570 (27%) were Portuguese (Figure 6).

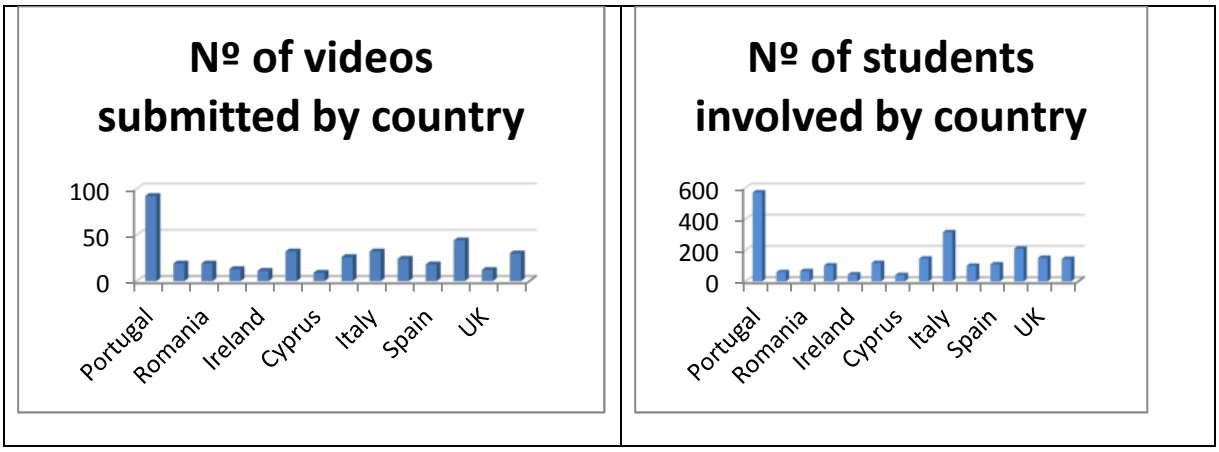


Figure 6 – MARLISCO Project – numbers of videos/students by country

The ones involved – students and teachers – worked towards a cause, researched on the issue, discussed and communicated. While doing this they improve their ocean literacy and developed critical thinking. More important than any of these numbers is the snowball effect, that has just started and that hopefully will give continuity and reinforce the movement towards overcoming the marine litter problem.

**Reflecting on Lessons for the Future**

The experience of the Portuguese team in creating emancipatory education, coming from previous projects, is well reflected in the results attained. MARLISCO project has constituted an opportunity to this team to further develop ways for wide mobilization and engagement of multi-generational groups (e.g., students and teachers). Nowadays the general concern of communicating science has been in the agendas but that requires tools to its implementation, this might be a way.

Involving, mobilizing and engaging a group in "hands on" projects of their own creates dynamic synergies that hopefully positively influences societal transformation by reshaping individual attitudes and behaviours, defend a cause, or contribute to improve collective learnings. Doing this may be the key to improving social attitudes and provide a way to mitigate or solve problems that look to us today as unsolvable. Substitution of generations will be the better judgement of the results of these efforts in shaping more responsible citizens.

Capacitating our complex and uncertain society to the challenges it has to face, turning the citizen into a changing agent should be a priority in any political agenda. Empowered, active and responsible citizens can be the key to transform society in a better place to live.

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# TRACK 04

# Participation and New Governance: Ethics, Responsibilities and Commitments

## Track description

Co-chairs: **Louis Albrechts**, **Doris Gstach**

The academic ambition behind the concept of governance in spatial planning matters aimed at developing more inclusive and democratic urban and regional processes. For some it raises questions of the various actors' responsibilities. How can especially civic actors not only be empowered but made accountable? To which extent is a shared/participatory governance legitimated to compensate for the statutory rights and legal responsibilities of governments concerning the enforced decisions? Problematically, mainly in formalized processes a wide range of these relationships are being compressed into a one-size-fits-all concept of 'citizens' participation', which doesn't seem to provide the equal and reciprocal relationship between the state and citizens so much aimed for. Moreover, in daily practice emerging informal institutions and opaque networks in territorial governance seem to pose a challenge to democracy and to the democratic representation, accountability and transparency of decision-making processes. In addition the privatization of public services and public spaces fuel the danger that issues are replaced from an arena of public debate and decision-making into closed networks of elite representatives and technical experts who take upon themselves the right to resolve the issues at hand between each-other. So questions have to be asked about the legitimacy/democratic character of these processes. A crucial element in this respect is the way in which people are excluded or included in planning processes and the way the relationship between people – technologies of government – are organized.

# 'Capital' cities: marketisation, governance and the demise of planning

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**Keywords**: financial crisis, urban policy, spatial planning, governance.

**Abstract:** This paper examines the question of governance as a product of contemporary capital accumulation. Rather than focusing on formal arguments around governance (efficiency, civil society, democracy), a more radical approach is adopted in terms of governance as a strategy and means for opening up new areas and means for the circulation of private capital. In this sense all cities are 'capital' cities: cities of hegemonic capitalism. Theoretical analysis is developed at three levels: the macro-level involving the economic landscape following the 2008 financial crisis and the move towards greater central government intervention in regional and local affairs; the meso-level concerning political resistance and the legitimacy crisis; and the micro level concerning local reform and the debilitation of local government and planning. These issues are illustrated from experience in the Birmingham/West Midlands region in the UK. The impacts of the Scottish independence referendum and the re-emergence of English regionalism and the UK government's response to them are examined. It is shown how the restructuring of the regional and local planning system, formally aimed at greater local autonomy and community participation, is producing new fields of conflict and a weakening of public powers and democratic institutions, including planning as guarantor of the public interest. Governance, it is argued, is failing to provide the sense of cohesion and collective well-being for which it is designed. Against this, planning, both theory and practice, requires a new sense of political direction and social responsibility.

## 1. Introduction

One of the outstanding effects of neoliberalism has been the heightened profile of cities in global economic development. The dismantlement of international trade barriers and the conformation of new economic blocks and regulatory institutions gave the impression of a waning of the nation state, thrusting cities into to limelight as leading spatial players in the new global economic landscape. Cities, or city-regions, were held to be the new locus of economic power and control centres of globalised economic networks (Sassen, 2001, 2005; Taylor, 2005), and cities continue to occupy a central position in urban planning theory and practice, seen as the key actor in the restructuring of economies and the future competitiveness of nations.

Notwithstanding a reconsideration of the continuing importance of the nation-state in recent theorising of this geographical re-scaling process (Brenner, 2004; 2009), it was the global financial crisis of 2008 which demonstrated, in practice, the structural role of the nation-state. The financial crisis and its aftermath – the deepest economic recession since the Great Depression of the 1930's – have been the major issue in economic and social policy across Europe and North America. Rescuing the banking system involved a huge fiscal cost with dramatic consequences for cities, with highly differentiated effects across continents, between countries and within urban areas.

Whilst the effects on cities have been extensively documented, the implications for planning itself have been less thoroughly explored. A new round of austerity politics orchestrated by national governments gave a new shape to urban economic development policy, as well as accentuating spatial inequalities and provoking new forms of social protest (Harvey, 2012). A temporarily crippled banking sector and collapsed property markets sent crisis waves through the three-decade orthodoxy of property-led development and city entrepreneurialism. National governments turned to major infrastructure developments as a means to re-establish growth, and both economic and social policy became increasingly under the direction of central governments.

This paper explores the consequences of this process for urban governance and planning practices. Focusing on the UK experience, we highlight three aspects: greater direct intervention of national government in regional/urban affairs seen as of strategic to economic recovery, the reconfiguration of the institutional spaces of local government and community participation, and the consequent legitimacy crisis as expressed through social unrest and rebellion in the regions. The cumulative effect of these phenomena presents, we suggest, a major dilemma for planning, which has become so closely intertwined with business interests and property markets that has become unable to argue convincingly the public interest and exercise its legitimating function.

The paper first outlines the nature of the financial crisis, its geographical dimension and its implications for spatial governance. It then examines how these complex and uneven processes are unfolding in the Birmingham/West Midlands area of the UK, where regional planning structures have been dismantled in the context of severe austerity politics and, notwithstanding claims of 'localism', central government continues to dictate city and regional governance and resource allocation. This is followed by an examination of the rebellion in the regions, as exemplified and inspired by the Scottish independence movement. The final section reflects on the consequent demise of planning, locked into capitalist interests, devoid of any proper corpus of ideas, and unable to present an alternative, socially progressive outline of the future. The paper ends with a plea for planning to rediscover its radical roots and lead in addressing the decisive question of socio-spatial equality and sustainability.

## 2. The political economy of the financial crisis and urban planning

It is not our intention to detail the causes of the financial crisis, of which there are many excellent accounts concerning predatory lending practices, global financial instruments and the speculative culture of the finance industry. We focus instead on its geographical dimension and implications for state intervention at the local level. Indeed as Aalbers (2009) observes, the crisis was a particularly geographical phenomenon, whereby local/national housing finance markets acquired global significance through securitization, thereby implicating countries and regions not directly involved in the origins of the crisis in subprime lending in the USA. A decade of NICE growth ("non-inflationary consistent expansion") suddenly turned nasty (see Kitson et al., 2011, p.289). Economic growth turned out to have been based on unsustainable rates of consumer spending fuelled by a deregulated and speculative financial system, and the bubble burst through the housing and property markets.

The immediate response to the crisis was a huge state effort to rescue the banks. One or two went bust (Lehman being the most notable) but most were bailed out at a huge cost ($1.5 trillion according the IMF, cited in Kitson et al., 2011), which threw national economies into turmoil. National governments became embroiled in unprecedented levels of borrowing, public sector debt soared, and what to do about it became the defining question in the following years.

The immediate impact of the crisis hit cities severely, though unevenly, and with differential social and spatial consequences. In the USA, foreclosures were concentrated in certain cities and neighbourhoods, with particularly adverse repercussions for low-income and minority communities (Aalbers, 2009; MacLeavy, 2011), whilst in much of Europe the rate of foreclosures was lower but young and low-income families suddenly encountered even greater obstacles to entering the housing market as credit facilities dried up. The 'credit crunch' halted major building projects across Europe and parts of the Middle East, in Spain the bursting of the real estate bubble left a million new homes empty with no chance of buyers, and many investors, both large and small, personal and institutional, found their assets devalued or worthless.

It was not long, however, before governments and multilateral organisations were declaring the end of the crisis, arguing by the end of 2009 that the worst was over and that things were getting back to normal. This might have been true in the USA where (low) growth was restored fairly quickly, but in Europe things were different. Countries such as Greece, Spain, Ireland and Portugal, were forced to seek help from the European Union to meet debt obligations, and sustained negative growth or multiple-dip recessions haunted the continent. The European economy as a whole remains severely troubled. The effect on world trade led to falling growth rates in China, fears for growth in the emerging countries and a reserved outlook for the global economy as a whole.

From an urban perspective, a major consequence was that the hitherto cosy relationship between cities and private capital was severely shaken (Harding et al., 2010; Kirkpatrick and Smith, 2011). The model of property-led development, city entrepreneurialism, urban regimes, public-private partnerships, and so on, temporarily ground to a halt and will undoubtedly face reshaping in the future. This in turn poses some interesting questions concerning governance.

The notion of governance as a more horizontal, flexible, efficient and inclusive way of dealing with complex change had become established as the new orthodoxy of urban policy, through which the private sector acquired enormous influence and a high profile in urban development. Under the legitimating guise of governance there unfolded a vast array of privatisations, deregulations, restrictions on public investment and areas and forms of intervention. The fiscal pressures arising from the financial crisis, constructed and devolved to local state authorities, has resulted in 'fiscal bullying' and extremes of privatization, monetization and outsourcing in the US, Maywood, CA and Sandy Springs, GA being prime examples (Peck, 2012). In the UK, local authorities such as the London Borough of Brent and Suffolk County Council have proposed reducing the local state apparatus to the bare threads of a procurement procedure, involving the total commissioning of public services (including planning) from the private sector. However if the 'democratic deficit' of governance had already provoked concern amongst some academics, the radical proposal of total privatisation has also met with considerable opposition from citizens, and no such scheme has been implemented to date.

Governance also has a strong scalar dimension. Although much attention has been paid to the institutional arrangements concerning different actors in the development process, globalisation established the multi-scalar nature of those actors and the complex intersections of local, national and supranational interests and influences over policy decision-making and project implementation. But as Wissen and Brand (2011: 3) observe:

> The problem, however, is that mainstream political science tends to conceptualize the new spatio-institutional configurations in a rather static way. The contested process through which they are produced is often excluded from analysis. The same applies to their specific social content determined by the social relations of forces which are inscribed in the arenas of global and multilevel governance and which account for the strategic and structural

> selectivities of the latter. In short, the aforementioned political science approaches are more concerned with the *interaction* of pre-given spatial levels and less with their *production*.

These authors point out the much more process-oriented understanding of the spatial dimension of state transformation developed through the scale debate originating in radical geography, as well the renewed importance of the territorial dimension under conditions of financial and environmental crises. The work of Bob Jessop and Neil Brenner was especially influential in developing state theory under conditions of neoliberal globalisation. Governance practices could then be seen as emerging from the multi-layered intersections articulating local-global networks of economic and political power, as cities and city-regions emerged as key players in the global economy.

However the financial crisis has spurned a resurge of interest in city governance. As Keil (2010) observes, the state 'roared back' in response to the financial crisis. National governments were responsible for bailing out the banks and coping with the fall-out that followed. Dealing with the huge levels of public borrowing led to widespread spending cuts which directly affected public sector employment (shrinkage, wage cuts and reduction of pension entitlements) and focused on social policy (welfare provision and social services and programmes) as prime targets of the new round of austerity politics. The financial system and its bonus culture remained largely untouched, along with tax benefits for the wealthy and large corporations. Public indignation over the injustice of it all led to the Occupy movement, the 'indignados' in Spain, and widespread protest in Greece and Portugal.

Austerity again became the keyword in fiscal policy. Austerity itself is nothing new, having been a recurrent feature in times of economic crisis (Levitas, 2012) and an inherent feature of the different phases of neoliberalism characterised by a permanent state of fiscal restraint and market oriented selectivity (Peck, 2012). Peck argues that the current crisis has produced a more revanchist state and systemic austerity, leading to a 'cumulative incapacitation' of the state. This political agenda was eagerly implemented in the US and UK, and imposed by multilateral finance institutions on countries more reluctant to follow the orthodoxy of austerity. More recent calls by the IMF to relax austerity programmes have fallen on deaf ears in the aforementioned countries. As Krugman (cited in Peck, 2012) asserts: "The austerity drive isn't really about debt and deficits ... at all; it's about using deficit panic as an excuse to dismantle social programmes." Similarly, Chang (The Guardian, 2013) argues that in the UK "... the coalition government isn't as stupid or stubborn as it appears. It is sticking to its plan A because spending cuts are not about deficits but about rolling back the welfare state. So no amount of evidence is going to change its position on cuts".

We argue in this paper that it is also about reshaping spatial planning to facilitate, compensate for and legitimise state retrenchment. It is worth recalling Harvey's (2005) reading of neoliberalism as accumulation by dispossession, a class project involving a sustained attack on the working class and increasingly the middle class, growing social inequality and the concentration of wealth and power. Each crisis sharpens the neoliberal resolve. Austerity measures are rolled out with a (class) vengeance, against economic logic and policy alternatives, and used as a motive to reduce the living standards and life expectations of the poor, and further concentrate wealth in the hands of a privileged capitalist aristocracy.

The unfolding of neoliberalism is frequently improvised, experimental and contradictory. This is equally true in the case of local spatial planning, where formal planning structures and procedures have long been held to be an unnecessary restriction on development. In times of crisis, city planning may be called upon to deregulate and re-regulate simultaneously and intensively, paving the way for renewed circuits of capital accumulation through urban development whilst attempting to reconstruct convenient forms of social stability through notions of place and community. The following sections examine these processes as central

government tightens its grip on local government as an instrument for the administration of national economic austerity.

## 3. Governance and planning practices in the West Midlands, UK

Like most of Europe, the banking system in the UK was heavily implicated in the 2008 financial crisis. The major banks were obliged to recapitalise, merge or were effectively nationalised, a rescue operation that cost the government an estimated £120 billion. As credit facilities and confidence dried up, there was in a sharp fall in economic output, rises in unemployment and the sedimentation of the legacy of huge public borrowing would dominate economic policy.

The financial crisis – who was to blame and what to do about it - was at the centre of the May 2010 election. The Conservative party formed a Coalition Government with the minority Liberal Democrats on a platform of ruthless austerity. Reducing public debt was the ostensible and obsessive economic goal. There were some tax increases (VAT to 20%, additional capital gains tax and a 50% rate for high earners) and a public sector salary freeze subsequently capped at 1%. However, the overwhelming strategy involved drastic cuts to public spending. Social programmes provided by local authorities, and local authority spending in general, itself heavily dependent on central government, were prime targets. In the first round of spending cuts, whilst the average central government department saw its funding cut by 11.2% between 2011 and 2015, spending on local government was slashed by 26.8% (Joseph Rowntree Foundation, 2012).

In Birmingham, the UK's biggest local authority at the centre of the West Midlands region, this means job losses (another 2,100 forecast for 2013 and up to 7,000 by 2017) and the reduction of services to the core. According to a city report "The extent of the future financial challenge facing Birmingham will change the landscape of local government not only in Birmingham but nationally – we will have to decommission a number of services" (Birmingham City Council, 2012). A survey of 81 local authorities carried out in March 2013 found that planning services in most areas were in line for large cuts, especially in big cities such Manchester (54%), Portsmouth (49%) and Liverpool (35%) (The Guardian, 2013a). Sir Richard Rogers was prompted to warn that this would undermine the government's localism policy (designed to devolve planning decision-making to community groups) and leave the development industry to control the agenda (The Guardian, 2013b).

The financial crisis was exploited by the Conservative-led Coalition government to substantially dismantle the strategic planning system. Regional Spatial Strategies (RSS) had been introduced by the previous Labour government in the 1990s to govern and indeed form part of the statutory development plans for individual local authorities. RSS were developed by Regional Assemblies (of local authorities) and addressed in a holistic way, with short, medium and long term horizons, matters including housing provision, employment growth, the future of towns and cities, and inter- and intra- regional transportation, with an explicit agenda for social, economic and environmental change. Alongside RSS, a Regional Economic Strategy (RES) was developed by Advantage West Midlands, one of the Regional Development Agencies established and funded to act as the delivery arm of central government in UK regions. Together they provided a clear and consistent framework and priorities for investment which addressed need as well as opportunity, delivered by public institutions in an evidence-based, open and transparent way. The locally set explicit agenda for urban renaissance was radical, realistic and realising positive results (West Midlands Regional Authority, 2010).

These strategic planning structures and processes were immediately abolished by the Coalition Government in 2010, a move echoing the abolition of the Greater London Council

and Metropolitan County Councils by the Thatcher government in 1986. While still in opposition, the Conservative Party policy paper "Open Source Planning" determined to "... abolish the entire bureaucratic and undemocratic tier of regional planning..." (Conservative Party, 2010: p.2). Upon taking office, funding for these regional institutions was immediately cut off, Regional Development Agencies were closed down and the statutory basis for the abolition of RSS was included in the Localism Bill which became law at the end of 2011. However the Localism Act also included a 'Duty to Cooperate' designed to ensure that all bodies involved in planning work together on issues of more than local significance. It was a last minute and reluctant recognition of the need for some kind of supra-local strategic planning, certainly sitting uneasily against the views of the Conservative Secretary of State who had said that "…the whole concept of regional economies is a non-starter and (regions are) arbitrary dividing lines across the country for bureaucratic convenience" (Pickles, 2010).

The Duty to Cooperate remains at best an unproven mechanism as yet unable to coordinate effectively policy issues such as planning for climate change, housing and transport (Planning Officers Society, 2012: Royal Town Planning Institute, 2015). In the meantime, local areas are left to the vagueries of the market as effective control of development is prejudiced by a 'no plan' context wherein major decisions often fall at appeal to the central government's Planning Inspectorate.

The Localism Act also transferred judgement on infrastructure planning to the Secretary of State, supported by a Major Infrastructure Unit located within the Planning Inspectorate. This represents a radical scalar differentiation and the disconnection of infrastructure and regular planning (Layard, 2012). The lie that is the rhetoric of localism was finally revealed by the Growth and Infrastructure Act of April 2013 which inter alia transferred to central government (the Planning Inspectorate) decision-making on large-scale commercial and business development.

At the sub-national level, central government strategy was to replace coordinated regional policy and management with private sector led Local Enterprise Partnerships (LEPs) charged with articulating and delivering local aspirations for economic growth. These one-dimensional, business-led bodies, formed by geographical groupings based on local authority administrative boundaries but with no direct public accountability, have over time been given real power and influence over policy and resource allocation. In another echo of the 1980s, Enterprise Zones (EZs) with a relaxed planning regime were also created. These measures have resulted in tensions with local authorities, heightened by competitive bidding for limited government funds, and provide little prospect for balanced or effective treatment of regional imbalances.

In the case of the West Midlands, the boundaries of the LEPs reflect not economic geographies but political marriages of convenience at the time of their creation. The continuing Balkanisation of local governance in the West Midlands and the eschewing by LEPs of cross-boundary spatial issues, indeed of spatial planning of any form, has led to an increasingly incoherent and inefficient approach to the region's challenges and opportunities. This issue is well exemplified by the lack of strategic planning around the proposed high speed rail link between London and Birmingham known as HS2. The proposal has seen a sustained effort towards exploiting the economic opportunities presented by the development of new internationally-connected stations, but little coordinated planning regarding local connectivity to the stations or the regeneration needs of the wider urban area.

The fact that the West Midlands conurbation is split between two LEPs in no way helps. Indeed the "divide and rule" strategy of central government is demonstrated by the influence & control it exercised over the agendas of individual LEP Growth Strategies (which set out priorities for local investment) and its requirement that they be submitted to and approved by

the Coalition Government to form the basis of negotiation of "City Deals" on local responsibilities and funding.

In this speculative, competitive, divisive and privatised winner-takes-all context, the losers will continue to suffer from a competitive disadvantage now institutionalised by local governance reforms and financing.

## 4. Unrest in the regions

Tensions arising from intensified central government intervention and the concentration of public and private investment and wealth in London and the south-east, produced unrest in the UK regions. The Conservative-led coalition government paid little attention, confident in its close relationship with the London-based finance and media industries, and its stranglehold over local government through tight fiscal controls. Austerity politics, it seemed, could be implemented with a minimum of local government opposition and maximum of regional inequalities. The facade of participatory governance provided by the Localism Act could legitimate the socio-spatial chasms opening up across the under-developing cities and regions.

There was, however, some expression of concern from the largely neoliberalised planning establishment. The Royal Town Planning Institute's (2012) 'Map for England' initiative produced information on the differential spatial impacts of public policy, while a Town and Country Planning Association report demonstrated that England is "[…] one of the most polarised of the developed nations [... ] There has been no sustained attempt in the last thirty years to fundamentally rebalance the economic geography of the UK" (Town and Country Planning Association, 2013). The pro-business organisation Centre for Cities' (2014) report showed that for every twelve jobs created between 2004 and 2013 in cities in the South of England, just one was created throughout cities in the rest of UK. Commenting on the report, David Sparks, Chair of the Local Government Association commented: "We can't ignore the evidence that some of our great cities are being held back by being denied the sort of autonomy enjoyed by equivalent European cities" (The Planner, 2015: p.6). His comments reflect the position of the English Core Cities Group, established in 1995 by eight major English city authorities (Glasgow in Scotland and Cardiff in Wales were admitted in 2014). These city councils are also members of the pan-European Eurocities network, a group co-founded by Birmingham City Council.

Calls of this type for more regional autonomy fell on deaf political ears until the referendum on Scottish independence. As the 18 September 2014 date loomed, a surprised political establishment became alarmed at the strength of popular support for independence. Scotland had been particularly badly affected by 35 years of neoliberalism (demonstrators in Glasgow danced on the streets at the news of Margaret Thatcher's death), and disenchantment with Westminster was running strong. At the last minute the three major political parties joined forces to counter the independence vote and the referendum was defeated, partly on the basis of promises of the devolution of substantial new powers and fiscal resources.

The Conservative-led coalition government had already been awakened by poor performance in the 2014 European Parliament and local elections, especially in less prosperous areas, and was under pressure from MPs for England to address issues of accountability and control. Following the Scottish referendum both main political parties offered promises of more investment and powers to England's outlying cities, and the Coalition government's offer of 'Devo Max' to Scotland was followed by 'Devo Manc', an agreed package of powers and resources devolved to Greater Manchester (Birmingham's competitor for the title of England's Second City and immediate neighbour to the Chancellor's constituency) unveiled in November 2014 and promoted as a model for how other City Deals might be shaped. However, the promise of a new 'Northern Powerhouse' must be seen against the effects of

macroeconomic policy which according to Liverpool's mayor Joe Anderson has seen cities "absolutely battered by the government's austerity measures and cuts" (The Guardian, 2014).

These devolutionary packages within England have many strings attached, most noticeably the requirement of elected mayors (as 'executive officers') and continuing Whitehall (central government) influence and control of local agendas. A good example of this is the Northern Transport Strategy (Department for Transport, 2015), prepared independently from local spatial planning processes (Planning Resource, 2015). Other City Deals currently being negotiated are similarly being centrally determined. The Edinburgh region of Scotland, for example, has put together a package for investment in transport, housing, economic regeneration, energy and digital connectivity which according to the Leader of Edinburgh Council Andrew Burns will build on their strengths and tackle "persistent pockets of inequality" that "threaten to hold the region back", but which has to be agreed by the UK and Scottish governments (The Planner, 2015, p.7); and in Cardiff the local Business Council will be subject to review (by central government) to ensure that it is "fit for purpose", with the Leader of the local council Phil Bale saying that the city has to take part in the deal or "risk being left behind" (The Planner, 2015). In the West Midlands, exploration of governance options for the conurbation continues but in a fraught climate created not only by rivalry between competing LEPs but also by a central government review of Birmingham City Council (Kerslake, 2014).

There was, however, a significant difference between the specialist, business-oriented regional initiatives and the Scottish independence movement. Whilst the first argues for more autonomy to pursue the international neoliberal urban agenda, the latter is, to a large extent, a popular political reaction against it. The resentment against the both Conservative and Labour neoliberal governments was far from quashed after the 2014 referendum , and in the May 2015 General Election, an overwhelming 56 of the 59 Scottish parliamentary seats were won by the Scottish Nationalist Party, whose campaign was based on anti-austerity politics and social policy reform.

As the new Conservative government sets out on another and more severe round of welfare cuts, with Scotland immune to a degree, the future of the English regions will hinge around the equation of central government, market-led capital investment and increasing urban poverty and inequality, with the bogus participatory mechanisms of New Localism entrusted with the task of providing legitimacy to the whole process. Where planning stands and what stance it adopts is far from clear.

## 5. Conclusions

It is clear from both theoretical and practical viewpoints that, in the UK, the 2008 financial crisis brought with it not only enormous economic upheaval ('creative destruction' from within the finance sector) but also political opportunities for neoliberalised governance. Ironically, the deregulated excesses of speculative international finance capital resulted in even greater political influence of capitalist interests in national economic and social policy. The effects over cities and regions have been considerable and threaten to shape territorial politics in the immediate future, as separatist/regional movements combine with fracturing political parties and landscapes.

Spatial governance, we argue, needs to be understood in this macro-political context. Governance is not simply a matter of administrative procedures re-enacting the immediate, superficial concerns of 'stake-holders', but the re-engineering of the mechanics of power and capitalist interests as they operate at spatial different scales. Governance is a neoliberal ideological form whose function is to legitimise the uneven distribution and social effects of contemporary capitalism: 'good governance' is what is good for capitalism, its mantra.

For many years now planning in the UK has shared this mantra, articulating its spatial dimension and property market interests to, it must be recognised, some positive effect, at least before the financial crisis. Since then, the sharp edge of capitalism in crisis has thrown the professional tenability of 'good planning governance' into disarray. In practical terms, the combination of centralised government intervention with weakened local regulatory powers has accentuated the vulnerability of local government, increasingly dependent on or hostage to both central government and private capital. When the specifically planning considerations outlined in this paper are put into the context of austerity politics and all its social injustices, then city authorities are facing a veritable legitimacy crisis.

In our view, the notion of 'fuzzy boundaries' tends to obscure the political nature of current governance practices, and facilitate a neutral position from within planning. Just as in the Scotland case it was politics that challenged the neoliberal austerity orthodoxy, the planning profession needs to rediscover its progressive reformist and radical roots, and address issues of equity and ethics in professional practice at all spatial scales (TCPA, 2015). In particular, the reintroduction of critical theory into planning schools curricula will be essential for addressing present problems and future challenges.

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# PUBLIC CONCERNS ON SHANGHAI URBAN GOVERNANCE AFFAIRS: AN ANALYSIS BASED ON GOVERNMENT MICROBLOG DATA

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Keywords: Urban Governance Affairs, Public Concerns, Shanghai

*This paper builds a database of urban governance affairs through making textual analysis of all microblogs published in June and December 2014 by Shanghai Municipal Government official microblog account "Shanghai City". The public concern on urban governance affairs is reflected by netizens' attitude to Shanghai City's updates, and measured by the volume forwards. By this means the public concerns on urban affairs are known, which provides important decision-making basis for better listening to public's will and responding to their needs when the government allocates resources and sets priorities. The result shows that: (1) in content, the public concerns are mainly focus on leisure activities and traffic condition, then daily life information. Governance and policy matters are rarely concerned; (2) in attributes, people are highly concerned about the forthcoming events, rumor refuting and life services, but pay little attention to policy news except for housing, entrance test, holiday and car license auction related policies; (3) in specific affairs of most concern are entrance exams, leisure activities, health and hygiene, weather variations, city images, films and TV programs, food, traffic, car license auction, sports and holiday etc.*

## 1. Research background and purpose

### *1.1 Research background*

Chinese cities are experiencing two significant transformations: (1) the stage of urban development. China has entirely stepped into the middle-late period of urbanization. In this context, new demand emerges--from pursuing economic growth to emphasizing the quality of economic development, which is entirely distinct from what was before the 50% node. (2) the composition of citizens. The old generation fades while the next generation rises. The post-40s and post-50s retire from the stage of social management. The post-60s and post-70s become the social dominants. The post-80 and post-90s turn into the leading component of social forces and carries the city's future. The growing-up environment and living conditions of the new generation are completely different from the old. They have unique concerns and needs on urban affairs. Their mainstream demand varies from the pursuit of material possessions to the high quality of life. With the two changes interweaving, a structural change is taking place profoundly in the public mainstream demand for urban governance and services.

These two changes occur in a new context--widespread use of Internet and rapid rise of new media. New media perceived public demand for the government. By effective use of the new channel, the government can be more keenly listen to the latest pulse of the community and the people's will.

The existing researches do not give sufficient considerings about the desires of the new generation citizens (post-80s and post-90s), and lack quantitate analysis (e.g. by microblog data method). The previous works on new media and microblog are mostly focused on the aspects of online public opinion, social interaction, public participation, information dissemination, network marketing, social governance, etc. They see microblog as a channel of public participation in politics, but not regard it as a "mirror" to show urban governance affairs.

Shanghai is one of many Chinese cities experiencing two major changes in the new context. Its economic development leadership decides it walks in the front row of nation-wide in these changes. Research of Shanghai is representative and has a great meaningful reference for Chinese urban researches.

*1.2 Research questions*

This research aims to capture the online hot issues of the public concern which reveal the "mainstream opinion" about the urban governance affairs, and provides important decision-making basis for better listening to public's will and responding to their needs when the government allocates administrative resources.

The research objectives can be summarized into 3 specific questions:
(1) What contents of affairs are most concerned about?
(2) What types of affairs are most concerned about?
(3) What characteristics do the most concerned issues have?

Furthermore, what public needs and expectations on urban government's management and services do the three questions reveal?

**2. Research design and data**

*2.1 Research design*

This paper's objectives are achieved through the studies of the governmental microblogging content and public responses to them. We make textual analysis of the "Shanghai City" microblogging messages to obtain prototype data on urban governance affairs. "Shanghai City" is the official microblog account of Shanghai Municipal Government. Its microblogs cover all aspects of urban life, and can be used to represent a variety of citizen-related affairs. Launched on China's popular Twitter-like service platform Weibo.com in November 2011, "Shanghai City" has been in operation more than three years, published more than 20,000 tweets, and accumulated more than 500 million followers. Its influence has consistently ranked within the top five governmental microblogs of China. The characters of publicity, officiality, maturity, universality and quantity of "Shanghai City" make the reliability and validity of research data is guaranteed.

This paper uses the forwarding amount of microblog to measure people's concern on urban governance affairs. The logic is that: if a microblog is forwarded, the forwarder is concerned about the content of this microblog; once a microblog is forwarded, the larger the forwarding amount is, the more public concerns the forwarded microblog has.

*2.1 Data*

We take the year 2014 as our study year, and choose microblogs published in June and December (to cover the first and the second half of the year) as research samples. The total number of valid microblogs is 1394. The forwarding amount is 180,373, where maximum forwarding amount of a single microblog is 4901 and minimum is 6. Each microblog is forwarded 129.4 times on average. The research data distribution is shown in Figure 1.

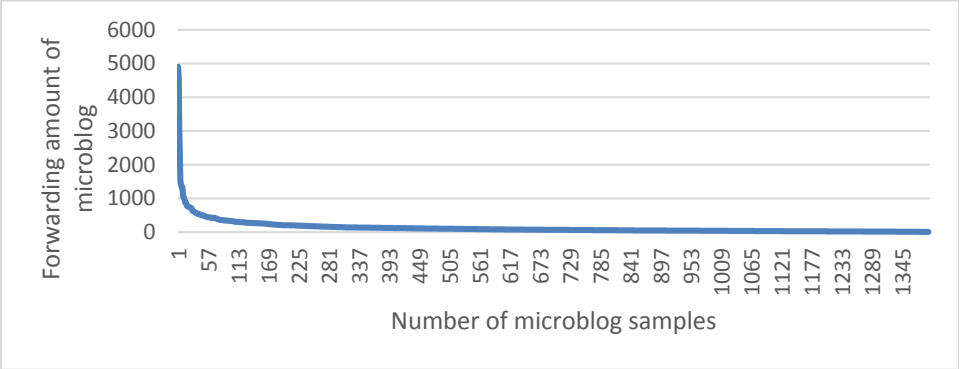


Figure 1. Data distribution of the microblog forwarding amount

## 3. The characteristics of affair content

### *3.1 The category of urban governance affairs according to content*

Depending on the content, urban governance affairs of the study are divided into 7 categories and 32 subcategories. The average concerning amount of each subcategory is shown in Figure 2. For the 7 categories, leisure activities and transportation are the most concerned affairs, then daily life information. Governance policy, weather and other affairs draw less attention. For the 32 subcategories, entrance exams, carnival, city image, housing policy, car license auction as well as health and hygiene are highly focused issues by people. In details, the microblog with the title "News: Essay theme of 2014 Shanghai college entrance published!" has been re-tweeted 4901 times and becomes the most concerned microblog among the entrance exam related affairs; the microblog "Oriental Pearl New Year's Eve countdown: 20 tickets waiting for you" has been forwarded 2474 times and ranked top in the carnival related affairs; the microblog "Photo: Shanghai Center stunning lighting" gets the most re-tweets of 3073 in all city image related affairs; the microblog "News: 2015 holiday arrangements announced" is the biggest concern in holiday related affairs with the forward amount of 1332.

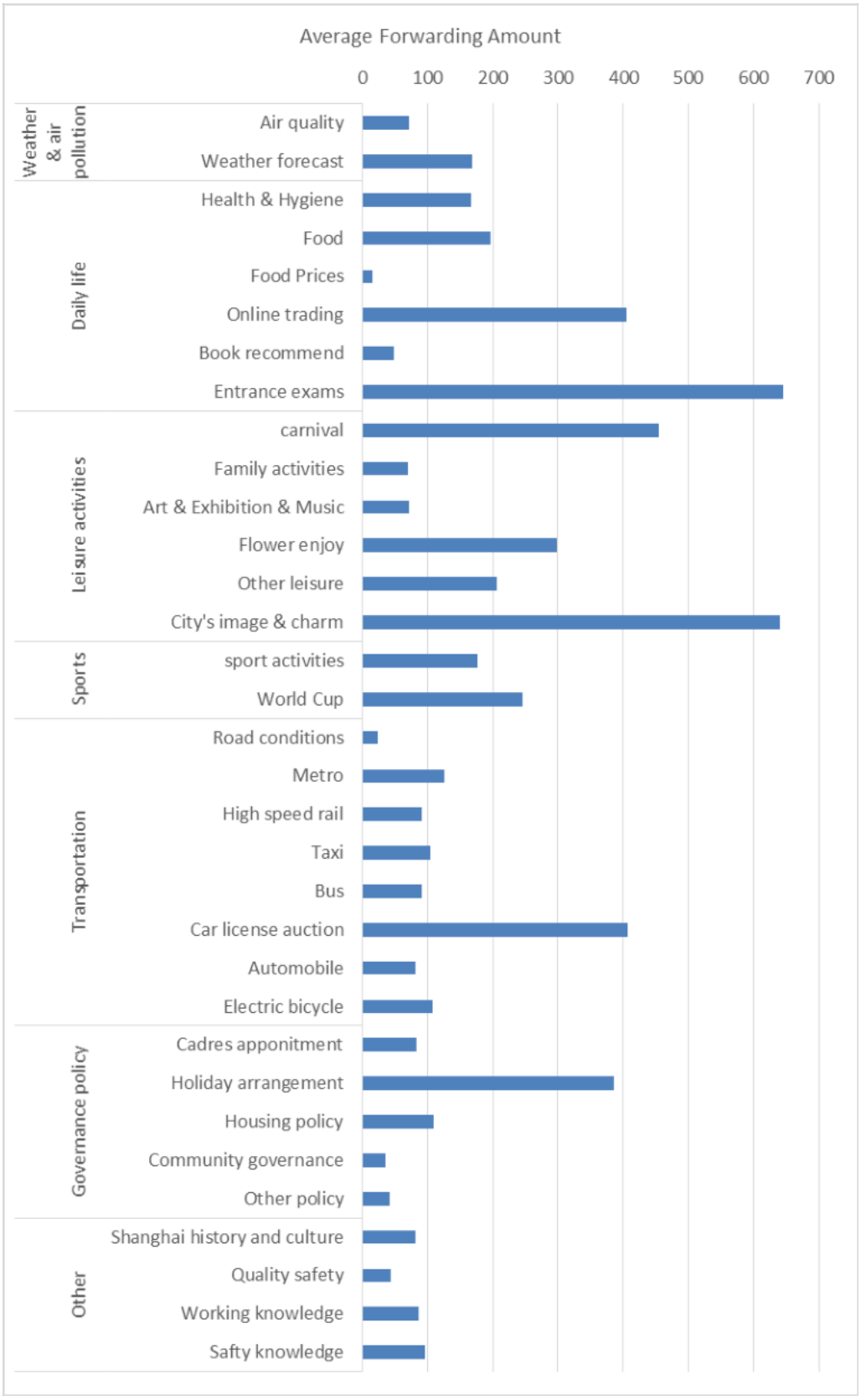


Figure 2. Categories and average forwarding amount of urban governance affairs

*3.2 Some interesting phenomena*

In the case of weather forecasting and variation, people's main concern is the sharp weather changes, especially the dramatically cooling or rain. If there appears "zero ", " minus ", " snow " , "Storm "

and other similar words in weather forecast related microblog , people forward them several times higher than usual . For instance, the average forwarding amount of weather forecast microblog is 135 , but the one with the title " Storm hits Shanghai from tonight! It is expected to continue until the day after tomorrow morning" is forwarded 761 times.

In the case of air quality, public concern is generally lower with the average forwarding amount of 72. But that does not mean people are not concerned about air quality, because when the air quality deteriorates (e.g. PM2.5 reaches high level), the public will pay much attention. For instance, the microblog entitled "This morning severe pollution: the highest temperature is 13 degrees, New Year's Day fell to freezing point" get 208 re-tweets. Showing awareness on air quality indicates that Shanghai people tend to purse more refined life quality.

For food and book, there are totally 61 book related microblogs (1 post per day) and 166 food related microblogs in sample. Their average forwarding amounts are 49 and 166, and their maximum forwarding amounts are 260 and 569 respectively. That is to say, food receives more attention than book. This result shows that in Shanghai "eat goods" outnumbers "reading people". The public usually are more concerned about where to eat good food rather than what good books come out.

For leisure and flower, Shanghai people have a unique interest in flower. For example, the microblog titled as "This weekend Guyi Park lotus exhibition: 60 tickets waiting for you!" gets 1070 forwarding amount, ranking 11th in the highest forwarding microblogs. This reflects that enjoying flowers is one of the important interests for Shanghai people's leisure activities.

**4. The characteristics of affair attribute**

According to information attribute, urban governance affairs in this study can be divided into six categories, in descending order of the degree of public concern is events information, rumor refuting, life services, news and report, culture and history, policy issuance (see Figure 3).

Rumor refuting affairs are highly concerned, indicating a strong public desire for accuracy of information. It also reflects a side of the information problems of the transforming Chinese cities. In the past, the degree of information openness was relatively low. But in the present, rumors spread quickly and easily on the Internet. People have a great need for disclosed and reliable information. For example, the microblog entitled "Rumor: 'Shanghai will cancel the property-purchasing limitations', Shanghai housing restriction policy has not changed" quickly gets 330 times re-tweets. It not only reflects that housing has become a matter of general concern of the public, but also mirrors that the public are less informed of the policy of the city government. In addition to the establishment of the government's future rapid rumor dispel mechanism, more effort must also be made to increase transparency in policy making and radically reduce the spread of rumors.

Governance and policy affairs are rarely concerned, indicating that people are not enthusiastic about the city governance. This may be involved in the possibility and convenience of the participation. When the public feel less likely to participate, they would have thought that the it is little to do with them and so choose to "ignore" them. For example, the microblog entitled "2015 My words to Shanghai" gets 1342 re-tweets. It said, "as long as the desire is send to 'Shanghai City', the selected aspirations will appear on the big screen of Lujiazui Citigroup Tower in the evening of December 31th". In sharp contrast, another microblog entitled "2010--2014 annual selection of model workers in Shanghai start! Raise your hand to participate!" receives only 8 forwards. The gap between the two is that the public think they may be involved in the former but they cannot be rated as model workers in Shanghai.

Despite the governmental issuance information is generally not as hot as others, the entrance examination, holiday arrangement, housing policy and car license auction etc. affairs which people think are directly related to their vital interests are closely watched by the public. For example, the microblog entitled "2014 Shanghai college entrance examination scores a two announced!" is

forwarded 1516 times; the microblog labeled “URGENT: 2015 holiday schedule announced!" wins 1332 re-tweets; another microblog headlined "Car plate new regulations released: driver's license must be submitted next month!" is forwarded 847 times.

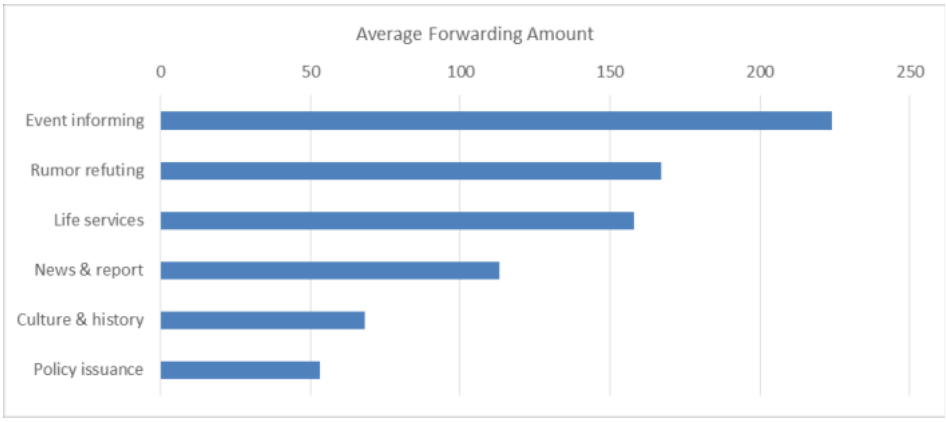


Figure 3. Public concern on urban governance affairs by different attributes

## 5. Analysis of the concerned affairs with high frequency

This research regards the microblog forwarded more than 500 times as the high-frequency microblog. There are 45 such kind microblogs in our statistic, accounting for 3.23% of the total. Their forwarding amounts are 46749, coming to about one-fourth of the sum number. By the data, entrance exam affair appears most in the high-frequency microblogs, along with leisure activities, health and hygiene, weather variation, food, films and TV programs (see Figure 4). Moreover, entrance exam affair also has the largest forwarding amount, followed by leisure activities, health and hygiene, weather variation and city’s image (see Figure 5).

According to the above analysis, the high-frequency affairs in the government official microblog reflect several things: (1) affairs related to children’s education and future destiny (entrance exam in this study) are dominantly the most concerned things of citizens; (2) leisure activities, health and hygiene, and weather variation affairs are stably and everlastingly watched; (3) City image affairs have big forwarding amount but emerge less in the high-frequency microblogs, suggesting that this topic is strongly cared by the public and the government should give more effort on enlightening the city’s image and charm; (4) traffic condition and car license auction affairs attract great attention, meaning that Shanghai’s transportation is not satisfactory; (5) the active performance of online trading affairs remarks that Internet has becoming a major channel of public buying and spending.

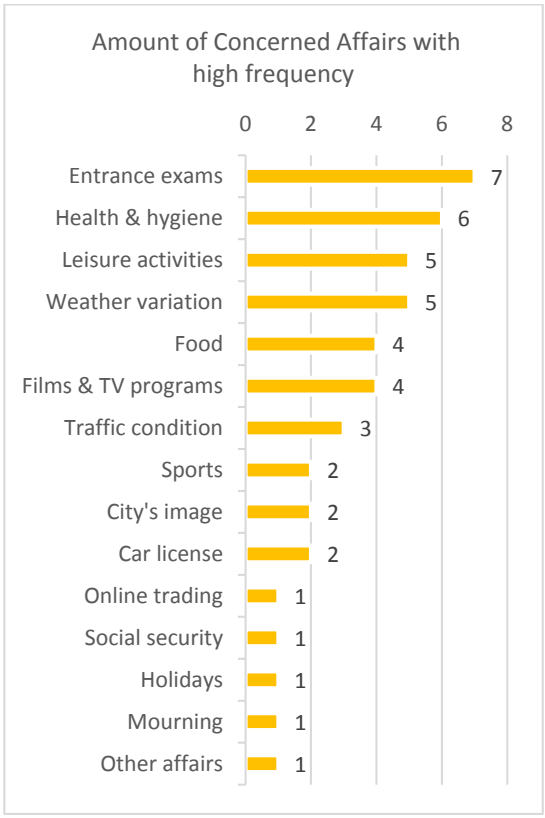


Figure 4 Amount of Each Concerned Affairs with high frequency (Unit: piece)

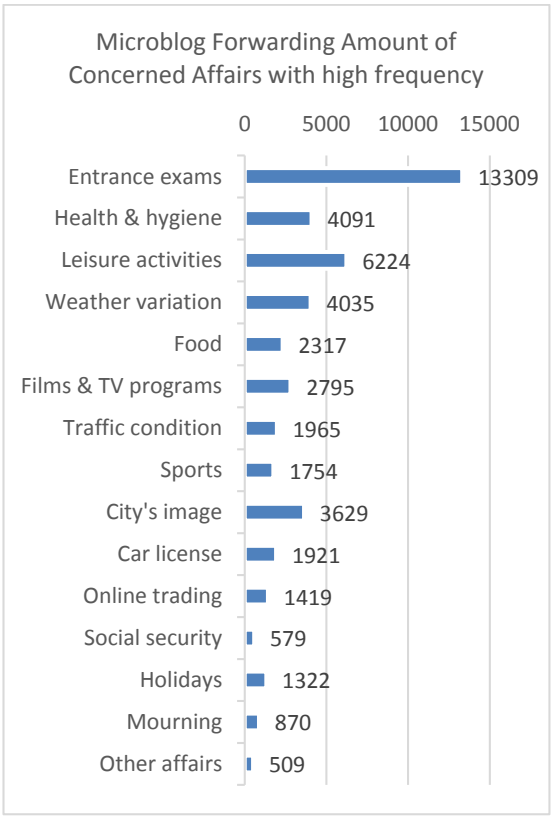


Figure 5. Forwarding Amount of Each Concerned Affairs with high frequency (Unit: time)

## 6. Conclusion and deficiency

This paper reveals three characteristics of public concerns on urban governance:

(1) In content, the public concerns are mainly focus on leisure activities and traffic condition, then daily life information. Governance policies, weather and air quality are rarely concerned;

(2) In attributes, people are highly concerned about the forthcoming events, rumor refuting and life services, but pay little attention to policy news except for housing, entrance test, holiday and car license auction related policies;

(3) In specific affairs, people show most concerns on entrance exams, leisure activities, health and hygiene, weather variations, city images, films and TV programs, food, traffic, car license auction, sports and holiday etc.

These characteristics indicate that Shanghai government should place more administrative resources in the following fields to meet the needs of the public: increasing the number of high schools and universities as well as enhancing the quality of higher education, providing enough leisure spaces and recreation facilities, shaping the city's image and charm, improving the traffic condition, optimizing the online trading environment, and making better services of food, sports, weather, etc. related affairs.

Taking into account the age structure traits of Internet users, data in this paper mainly reflects young people's concerns and demands. To fully grasp the needs of every age group, other approaches (e.g. telephone interview, questionnaire survey, etc.) should be taken to make supplementary and comprehensive analysis.

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# THE CONFLICTS AND DILEMMAS PRESENT IN THE FAVELAS OF RIO DE JANEIRO, BRAZIL: NEW RESPONSIBILITIES AND NEW FORMS OF PARTICIPATION.

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Keywords (maximum 3): favelas, urban violence, citizenship

## Abstract

*The Government of the State of Rio de Janeiro is putting forward a new ambitious program of pacification and slum upgrading in some favelas in the city of Rio since 2008 – the Pacification Police Units (UPP). It aims to recover the territories once controlled by drug dealers, establishing a program of peace building and institutional reconstruction together with the construction of basic infrastructure and public services. In the favelas with the UPP program, one can observe new urban dynamics, such as new services and commercial ventures, upgrading of homes, expansion of informal real estate, new touristic, leisure and sport activities, which generate new jobs, income and new perspectives for dwellers. On one hand, these new socioeconomic dynamics strongly restructure and redesign the favelas; on the other, the absence of a planning body that coordinates the several ongoing projects, together with the precarious infrastructure and the ominous presence of the police force, diminish the potential gains. The UPP generates new responsibilities and new expectations towards public safety and quality of life in a population now with more income and consumer power, demanding a more effective public response and new forms of participation. As long as these demands are not fulfilled, new conflicts and new forms of resistance appeared in these communities. The objective of this paper is to analyze the progresses and setbacks of the UPP program, focusing on the rising conflicts and dilemmas, taking as case studies two communities in Rio de Janeiro: the Complexo do Alemão and the Pavão-Pavãozinho-Cantagalo.*

## 1. Introduction

The Government of the State of Rio de Janeiro is putting forward a new ambitious program of pacification and slum upgrading in some favelas in the city of Rio since 2008 – the Pacification Police Units (UPP). It aims to recover the territories once controlled by drug dealers, establishing a program of peace building and institutional reconstruction together with the construction of basic infrastructure and public services. In the favelas with the UPP program, one can observe new urban dynamics, such as new services and commercial ventures, upgrading of homes, expansion of informal real estate, new touristic, leisure and sport activities, which generate new jobs, income and new perspectives for dwellers. On one hand, these new socioeconomic dynamics strongly restructure and redesign the favelas; on the other, the absence of a planning body that coordinates the several ongoing projects, together with the precarious infrastructure and the ominous presence of the police force, diminish the potential gains. The UPP generates new responsibilities and new expectations towards public safety and quality of life in a population now with more income and consumer power, demanding a more effective public response and new forms of participation. As long as these demands are not fulfilled, new conflicts and new forms of resistance appeared in these communities. The objective of this paper is to analyze the progresses and setbacks of the UPP program, focusing on the rising conflicts and dilemmas, taking as case studies two communities in Rio de Janeiro: the Complexo do Alemão and the Pavão-Pavãozinho-Cantagalo.

## 2. Conceptual framework

My analysis is based on the theoretical propositions of five authors: Anthony Giddens' notion of reflexive modernity and Ulrich Beck's notion of risk society; Henri Lefebvre´s concept of urban praxis and of the ideology of urbanism, as well as his scales of socio-spatial reality; Michel Foucault´s discussion of order as an expression of power and his notion of power network; and Paulo Freire's pedagogical proposition towards the liberation of the oppressed. In this particular paper, I will also refer to Bruno Latour's concept of actor-network-theory in order to understand new social relations being formed in favelas.

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The research focuses on 4 case studies which encompasses 4 favelas in Rio de Janeiro:

- Comunidade Santa Marta; South Zone of Rio de Janeiro, District of Botafogo; Middle-Class District;
- Morro da Providência; Downtown Rio;
- Morro Pavão-Pavãozinho; South Zone of Rio, Upper-Middle Class District;
- Complexo do Alemão; Northern Zone of Rio de Janeiro, close to the International airport.

## 3. The Context of Urban Violence in Rio de Janeiro

Urban violence has doubled in the last 20 years in the whole world, according to UN-Habitat data, and it is expected that in the next 5 years half of the world's urban population will be a victim of some sort of crime. The increasing crime rates are a problem for cities in the Southern or in the Northern hemisphere. In the latter, petty crimes increased between 3% and 5% annually from 1970 and 1990 in the cities with a population with more than a 100.000 inhabitants. In Latin American and in Brazil, urban violence is growing not only in informal areas, but also in several formal districts of cities. In Brazil the mortality rate linked to urban violence continues to grow, increasing from 59 deaths in 100.000 inhabitants in 1980 to 75,2 in 2002 reaching 90 deaths in 100.000 inhabitants in 2003.

The city of Rio de Janeiro used to be one of the most violent cities in Brazil, in which the rates of mortality from external causes (traffic accidents and violence) rose from 59 deaths per 100,000 inhabitants in 1980 to 75.2 deaths in 2002 and 90 deaths in 2003, affecting mostly the male population between 15 and 19 years and the population in low-income squatter settlements. With implementation of the pacification program, homicides rates from violence have substantially decreased to 10 deaths per 100.000 inhabitants in 2013.

The city presents an interesting case of the dialectical relationship between urban violence, social exclusion and spatial segregation. Urban violence contributes to new forms of segregation and increases the vulnerability of socially excluded groups. Rio de Janeiro also presents an interesting aspect of proximity between low-income squatter settlements and the traditional middle class and upper class neighborhoods, which also makes urban conflicts more visible. This socio-spatial conformation, the result of a historical process of urban occupation and a peculiar geography, encouraged urban policies that are often contradictory and ambiguous.

In Brazil, favelas have become vulnerable areas because of the lack of infrastructure, its housing conditions and the absence of state institutions. In Rio, the illegal drug business found a strategic location in the favelas, with its labyrinth urban pattern and poor accessibility. The favelas are usually located in hilly areas which further contribute to difficult the police actions or raids in those areas.

Urban violence in the city of Rio de Janeiro starts to grow from the late 1980s, with the increasing concentration of income, socioeconomic inequalities and the fiscal crisis of the State. From the 1990s on, violence grew as a consequence of the entry of large drug cartels in the city. Having the slum as local marketing of illicit drugs, drug traffickers inherit a clientelistic relationship from other illegal activities that existed before in the favelas, mainly the "jogo do bicho" (animals lottery).

In 1985, there were 377 slums in Rio de Janeiro, which concentrated approximately 1,800,000 inhabitants, representing 32% of the city population. The number of slums and slum population has grown steadily over the years. In 2005 there were 750 favelas officially recognized by the city. Some slums are in contiguous clusters that form the so-called complex of slums. According to the 2000 census, the city of Rio de Janeiro had a total of 5,857,904 inhabitants, of whom, approximately one-fifth (18.65%) lived in favelas. The Instituto Pereira Passos (IPP), the planning office of the City of Rio de Janeiro, (IPP) estimates that the population living in favelas and illegal subdivisions is approximately 406,000 inhabitants. The area occupied by favelas in the city in 2004 was 41%.

In the case of Rio de Janeiro, the expression divided city (Ventura, 1994) designates the city divided between formal and informal areas. Some authors reject this term, because they believe it feeds the collective imagination of Rio de Janeiro as a violent city. This perception of the city as violent contributes to spatial fragmentation and social exclusion, and the diffuse feeling of fear and insecurity. Milk argues that "the representation of Rio as a 'divided city' strengthens symbolic connections between poverty and crime in the city' slums." The numerous episodes of violent clashes, massacres, and rebellions in the city are increasing from the 90s, and have contributed to the isolation of citizens in their condos or ghettos. It also creates a false opposition between the poor living in the hilly favelas and those living in the so-called asphalt communities (morro vs. asfalto), between slum dwellers and middle class, between gangsters and the police, which contributes to the symbolic level for the urban chaos. Thus a vicious circle is created, where the media and the private security industry benefit from this state of fear among citizens, which further contribute to the perpetuation violence, shifting the focus from the real problem, i.e., the poverty and social exclusion.

This representation of fear and insecurity contributes to intolerance and individualism, undermining the foundations of urbanity. The cariocai spirit has always been guided by solidarity, warmth and joy. In the collective imagination Rio de Janeiro is a city with a democratic spirit and integrator of different races and social classes in their urban space. Places, such as the beach and cultural and sports activities such as samba and football, are places that congregates different groups. In the street corners, one can see different segments gathering for a beer in the popular bars. Thus, the sense of insecurity and fear contributes to increase the social and physical boundaries between rich and poor and between the formal and informal areas. It also contributes to the reduction of the civil rights of favelas inhabitants, since in these areas dominated by drug trafficking, citizenship and public safety are incompatible from a conservative viewpoint. The crackdowns against drug trafficking are almost always surrounded by arrests and indiscriminate killings, where police clashes with armed drug gangs. In this scenario the residents of these areas are those who suffers the most. These police raids are being conducted systematically since the early 90s. Instead of producing the decrease in crime rates, it has had the opposite effect and contributed to its increase. It also contributed to the emergence and strengthening of private security apparatuses in illegal slum areas, the militia, who in the name of protecting the residents, has taken control of basic services such as bottled gas distribution and transportation (usually vans and motorcycles) and also access to illegal cable television, therefore creating another parallel power. These militias are formed by retired police officers and express the fine line between legal and illegal power.

The phenomenon of police violence is not new in the city of Rio de Janeiro. Holloway shows how the police was created to serve the elite and aristocratic classes, and not the common citizen, since

the nineteenth century. The author argues that civil society has always supported the brutal actions of police repression (Holloway, 1993). Police violence and its repressive methods, rather than contributing to reduce urban violence, has triggered processes of resistance and social exclusion.

## 4. The program of pacification police units in the city of Rio de Janeiro (UPP)

The city of Rio de Janeiro is hosting two mega events: part of the Soccer World Cup, which already occurred in 2014, and the Olympic games of 2016. Because of the magnitude of these events, the State Government or Rio de Janeiro with the support of the City Government, are putting forward new public safety programs in the favelas. Drug dealers, mostly in the form of cartels, dominated the majority of these squatter settlements.

Until 2008 the majority of urban projects for favelas focused only on the improvement of public spaces, with little concern for the problem of public safety. In 2008, the Department of Public Security of the government of the State of Rio de Janeiro launched a new program called Pacification Police Units (UPP) aiming at dismantling the drug gangs that controlled the territory of almost all the slums in the city of Rio de Janeiro. This program aims to inaugurate a total of 40 UPPs in favelas of Rio and encompasses up to April 2014, 37 favelas. The first UPP was established in the Favela Dona Marta in November 2008. According to the official description of the program, the UPP "intends to establish a new model of public security and policing which aims at promoting closer relationship between the population and the police, as well as strengthening social programs. Another goal was to recover territories controlled by drug dealers and to promote social inclusion of the poor inhabitants of these areas."ii

The UPP program takes its concept from the international peace building programs implemented in countries where there is an institutional and political crisis, usually after civil war. There is a difference between peace enforcement and peace building. The first is based in the imposition of peace through military occupation. The second one is based on the reconstruction of state apparatus and social rebuilding of democracy. Brazil has a solid experience on peace building since it has been a key actor in UN actions in Haiti.

The UPP program intends to generate peace in these highly vulnerable areas. The first phase of the program is the occupation of the favela (after a military action of invading these communities, arresting the drug dealers, or in most cases, expelling them) with the establishment of a physical unit of the police in a strategic place where it can oversees streets and movement of come and go. The second phase is to gradually bring social services and public institutions into the favela. In this phase there is the creation of the social UPP (UPP Social) -- the counterpart of the municipal government.

The UPP tries to reinforce public safety through a 24-hr control of the favela space. The police personnel designated to serve in the UPP receive a special training, which includes courses on social skills and on how to establish a positive attitude.

Since the UPP program is very recent the first studies about its degree of success are starting to appear. The majority of analysis deals with the UPP Dona Marta because it is the oldest. Before the UPP, an important favela upgrading program was already been implemented, with a very important equipment being created: the inclined tramway, a sort of elevator that transport people and goods from the lower to the upper part, or vice-versa. More than half of the dwellers of Comunidade Dona Marta are in favor of the UPP. They resent the ominous police presence, which although better trained, still intimidates the dwellers.

## 5. New internal dynamics in the favelas

So far, 38 favelas or “complexos” (adjoining favelas forms a complexo) received the UPP program. The results are diverse. In some favelas, mainly at those located in the Southern zone of the city

(inhabited by the wealthiest classes), the UPP program is succeeding in bringing violent conflicts to a minimum level. Comunidade Dona Marta, Complexo Pavão-Pavaozinho-Cantagalo (PPC), Chapéu Mangueira, among others, showed a decrease in the crime rate in general, particularly in the homicide rates. In others, such as Complexo do Alemão, Complexo da Maré e Rocinha still suffers from violence and armed confrontation between the police and drug gangs, which usually affects civil population.

### a. Complexo do Alemão

The area that encompasses the set of adjoining favelas, known as Complexo do Alemão is considered a neighborhood by the city, for statistical purposes. It is located in the Planning Area 3, in the Northern zone of the city, which is traditionally a working-class area. It has an official population of 69.143 inhabitants and has 4 UPP's: Nova Brasília, Fazendinha, Alemão and Adeus/Baiana. An important structure of transportation based on cable cars was put in place in 2011.

This transportation structure had a profound impact on the landscape of the favela, when seen from a distance, from people who transit in car in the main expressways of the city. But, more important, has also a very important impact on dweller's daily life, since it goes over the rooftops of the houses. The cable cars together with the 4 UPPs have prompted a cycle of tourist influx to the favela, attracted by the curiosity to visit an informal settlement, but also to enjoy the wonderful views of the city one has from its several observation points. As a consequence, a new internal urban social and economic dynamic is installed in the favela. Just as an example, the Complexo do Alemão and its cable car is the second touristic attraction in the city right now (the first is the Sugar Loaf hill), receiving 8.400 visitors per day in the high season. 12.000 people access it in one day, 70% being visitors. The cable car is free for favela dwellers; but it only costs R$ 5.00 to outsiders, while the Sugar Loaf costs R$ 62.00. As a result of the increase in safety and in the numbers of visitors, a series of new restaurants, bars and hostels are being opened. Commerce has also benefitted from this dynamic. Another important aspect is that the value of real-estate (mostly informal housing or buildings) is increasing with concerns over a gentrification process.

NGO's and "coletivos" (informal association of artistic and cultural groups) are increasing, as well as many cultural groups and associations.

### b. Pavão-Pavãozinho-Cantagalo

The area, known as Comunidade Pavão-Pavãozinho-Cantagalo, is located in the Southern zone of the city, in a traditional area inhabited by the middle- and upper-middle classes, in Planning Area 2, close to the touristic areas of Copacabana and Ipanema. It has an official population of 10.338 inhabitants, and has 1 UPP. The connection between the neighborhood of Ipanema and the upper part of the favela is made through a public elevator opened in 2010. Like Complexo do Alemão, one can observe new internal dynamics as a result of the pacification and the improvement in accessibility. The public elevator represents a direct connection from the General Osório station of the subway (in Ipanema) to the top of the hill. The views of the beaches of southern Atlantic coast of Rio are also splendid, and its location next to Ipanema and Copacabana has attracted many visitors. Dwellers have seized the opportunity, and opened new commercial and service ventures, such as, bars, restaurants, hostels, B&B in the favela. PPC shows an impressive number of NGOs, "coletivos" and cultural groups, that have many programs and actions in the community.

## 6. Associations and new forms of participation

One can see that many types of associations, formal and informal, public, non-governmental and private, are appearing in these communities. These groups stimulate new forms of participation and new forms of representation of favelas problems and demands. One can also observe that the use of digital media and its apps, such as Facebook, whatsapp, google, is increasing, as well as the use of

crowdsourcing, crowd mapping, and so forth. These represents new forms of assembly as well as new forms of communication. Pamphlets and printed ads and posters refers to new forms of manifestation or resistance, and also to humorous criticism of the new structures and projects going on in these communities. If these will represent a real voice or a real participation in the public arena and in the city is something to be observed and analysed.

## 7. Conclusions

The UPP program has brought some benefits to favelas, as well as pitfalls. Among the main benefits, one can see that favelas are more safe and secure, and that homicides rates have a decreased and that the State has regained territorial control of favelas; at the same time, local economy have been stimulated, as well as entrepreneurship with new commercial and service activities appearing, which, in turn, stimulated local tourism.

Despite the positive aspects, one can verify that there is no empowerment of local communities, no citizenship awareness program. Most policies are top-down, reflecting a State assistance approach. Moreover, UPP maintains a 24-hr surveillance and control of the territory, and shows an ostensive presence of armed police.

One can also observe that new forms of association are appearing in those communities, and with the easy access to digital media, have prompted new forms of assembly and manifestations. Whether these will be favourable to a more inclusive environment and to a more democratic participation is something to be verified.

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[i] Carioca is how inhabitants from Rio de Janeiro are called.
[ii] http://www.upprj.com/index.php/o_que_e_upp

# NEW SCENARIOS FOR LARGE-SCALE TERRITORIAL GOVERNANCE IN ITALY

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## Abstract

The last twenty years have seen a general erosion of trust in the efficiency of local-scale planning and its continued use alongside new planning tools to coordinate large-scale policies. The solutions developed in the Provincial Territorial Coordination Plans (Italian: Piani Territoriali di Coordinamento Provinciale, PTCP) have seemed able to control the main criticism, which is linked to various aspects, including: land consumption and the compromise of natural resources; the drastic worsening of the energy balance and the changing landscape; infrastructure network congestion; and the aggravation of hydrogeological risks.

The increasing economic crisis and the need to cut governmental costs have accelerated the process that led to Law 56 in 2014 (regulations regarding metropolitan cities on the union and fusion of municipalities). This law redefined the roles and function of the Province, and the importance of the PTCP will therefore possibly be degraded in the future. Cutting back the political heft of the Province has sparked a reflection on how to redesign the map of territorial planning without triggering traumatic solutions to maintain continuity. The strategic plan of the Province of Teramo represents one of the first experiences in this direction in Italy. This tool aims to define a new model of territorial governance that is capable of ensuring a substantial equilibrium between responsibility and self-determination of the subjects most directly involved in territorial transformation.

Keywords: multi-level governance, large-scale planning, strategic planning.

## 1. Introduction

Since the end of the 1990s, Europe has been home to a generalized restructuring of multi-level governance which has occurred neither by making governance more effective and more capable of responding to the needs of citizens nor, especially, by rationalizing and reducing public costs in an era of general economic recession.

This action has often assumed the form of a consolidation or a reduction in the weight of local governments in favour of the national government (Baccetti, 2011). It is a form of recentralization dictated by the regions that is more economic and financial than administrative and functional. Above all, it reduces the number of variously denominated local intermediate governments that act as mediators between the cities and the regions (Bertrana and Heinelt, 2011).

In most European countries, the reform of intermediate local governments has often been implemented within a greater overall reorganization of the relationships between the centre and periphery in a marked redistribution of powers among the different levels of territorial government. This reform movement was sparked by decision-making processes that kept the central focus on, for example, a search for the best size of territorial government (region, province, or municipality), governmental problems in metropolitan areas, or the need to achieve greater efficiency in administrative activities and the rationalization of policies and services.

The political debate has not overlooked the contribution from numerous research centres, which have compared the policies implemented in different European countries in order to identify possible points of agreement. Among these studies, we point out those regarding the functions attributed to the large scale (Hooghe and Marks, 2001). Also of interest is research on the level of fiscal and

political/administrative autonomy that intermediate entities have when interacting with the central government (Bertrana and Heinelt, 2011).

The combination of these studies has shown that, in relation to the organizational characteristics assumed by the central administration, intermediate entities tend to take on different profiles:
- characterized by 'self-government', in virtue of greater federalization in the distribution of powers, as occurs in France, Italy, and Spain;
- inspired by a 'multi-purpose administration' in service of higher levels of government, according to a model seen in Poland and Belgium;
- oriented towards a greater influence of actions, as in Germany, where the *Landkreise* (though with a wide variety of cases) carry out coordination, supervision, and even financial tasks compared to the cities, but which are in turn subject to supervision by the central government.

In all the cases examined, the reform of local intermediate government has occurred within a general reorganization of the balance of power between the centre and periphery. In Italy, in contrast, reorganization of the Province is 'going it alone'. For incidental political reasons (a wave of 'antipolitics' and growing public opposition to political costs, etc.), a very sudden reorganization of only the intermediate government has taken place that overturns its historical identity, introducing a new second-level elective mechanism and reigniting the ever-present doubt if in Italy there is effectively a place for large-scale planning (Talia, 2013).

## 2. Conceptual Framework. Reorganizing the Intermediate Entities in Italy

In recent years, numerous legislative attempts have been made to reorganize intermediate entities in Italy. As a first step, the proposal for constitutional reform (Laws no. 4439 and 4506 in 2011) has revolved around a push for 'regionalization' in which the Regions were given the responsibility of revising the provincial precincts. The possible establishment of new provinces was conditioned on exceeding a minimum size threshold and on the absence in the regional territory of a metropolitan city. In both proposals, the legislation reiterated the basic functions of organizing and planning vast areas of the province and the role of coordination and collaboration among the municipalities in managing network services.

In 2012, the Monti government's Legislative Decree no. 95 (the so-called 'spending review') reopened the discussion. In lieu of the suppression and unification of the provinces set out in the original text of the law, the subsequent Decree no. 188 set out a general reorganization through an announcement that had previously been shared with the local communities and the redefinition of their functions. In addition, the suppression of provincial additions along with the unification of the existing provinces was confirmed. However, the end of the Monti government and the suspension of parliamentary activities in light of the political elections in February 2013 made it impossible to enact Decree no. 188, which was subsequently declared unconstitutional.

Finally, the third phase was the presentation of a bill called the 'Delrio Reform' (after the minister for regional affairs who signed the initiative), which, after a parliamentary procedure of some months, was converted into law (Law no. 56/2014). In the text, the transformation of the Provinces into second-degree organs was confirmed, its functions were cut back, and above all, the role of large-scale entities was recognized to serve the municipalities. This reignited the reform initiative to reinforce the community barycentre within local autonomies, with the result of 'municipalization', though within a framework of strong connection with the regions.

In fact, this reform aims to reduce the powers and functions of the Provinces, cancelling the elective councils and instituting ten metropolitan cities: Turin, Milan, Venice, Genoa, Bologna, Florence, Bari, Rome, Naples, and Reggio Calabria. It proposes an autonomous model based on two territorial levels directly represented by the respective communities and therefore elective in the first degree: the Regions and the Cities. While for the metropolitan cities the institutional aims and responsibilities are defined in detail (for example, the adoption and annual updating of the strategic plan for the metropolitan territory,

general territorial planning, structuring of coordinated management systems for public services), the potential role of the large-scale entities for the portion of territory that does not fall under 'metropolitan city' is rather unexplored.

And yet in Italy as in Europe, the so-called intermediate regions[1] provide an important contribution to the economic growth of the country, accounting for at least 50% in Italy. In this situation, forms of governance are often developed that guarantee greater efficiency in terms of economic development, natural resource management, provision of public services, and access to public funds. And it is in these areas—not metropolitan areas—that the logic of development linked to the 'places' should be encouraged (Barca, 2009), thus closing the gap between the reform of autonomy, administrative federalism, and development policies. The model of institutional reorganization moving forward in Italy should immediately see and understand the potential precisely of the intermediate, non-metropolitan regions in a perspective of improving and shortening the territorial government chain (regarding decision making, time, and relationships among subjects and among plans), in view of developing coherent innovation of territorial and city planning and design in order to redefine new policies for local development (Barbieri, 2014).

## 3. Conceptual Framework. Large-Scale Planning in Italy

This debate, already underway for some time, has become even more heated with the latest legislative provisions applicable to reconfiguring the institutional structures in Italy (L. 241/2011, D.L. 95/2012, Art. 17), and it contains interesting elements for rethinking the actions of territorial government. Starting in the 1990s with Law 142/90 and the responsibility given to provincial administrations in directing large-scale plans[2], it has been agreed that the Provincial Territorial Coordination Plan (Italian: Piani Territoriali di Coordinamento Provinciale, PTCP) should take care of reorganizing territorial complexities and therefore favour the association between physical/environmental factors of a territory, infrastructure needs, and economic pursuits. This is a task that should have necessarily gone beyond the community's understandable tendency towards parochialism or the inevitable tendency towards regional simplification. Not only due to the dictates of Law 142 was it adapted to the provincial dimension and the original role of programming entity that was entrusted to the Provinces. At the same time, this coordination action implied a hierarchical approach between the Province and the City, and the difficulties that quickly came to light in the connection and integration of actions between the overarching level of government and the municipal realities pertaining to the provincial territory are probably due to this marked asymmetry.

This was the situation for the so-called 'first-generation' provincial plans, which were rather anchored in a traditionally hierarchical vision and trickle-down effect in planning levels, even if the methodological approaches adopted were rather different from plan to plan. While some were characterized as large, more or less systematic frameworks of knowledge, others almost exclusively proposed a system of protection and limits, especially for the landscape, and others still were characterized by their prevalently strategic structure (Pomilio, 2014). These three tendencies in reality are combined differently within each plan, but the general impression is that these plans use only part of the potential inherent in the coordination role assigned by Law 142/1990. In fact, in most cases, provincial planning still seems to struggle to develop adequate methods and tools to guide transformations, manage negotiating tables, and coordinate community and sectorial planning according to an organic, shared vision.

[1] According to the definition by OSCE, intermediate regions are those in which the population living in urban centres varies from 10–50%; it also includes mid-sized cities. These regions make an important contribution to the economic growth of the country (estimated to be about 64% of the aggregate growth of the OSCE area).

[2] We recall that the concept of large-scale government is well presented in national regulation, at least starting with the urban-planning law 1150/42, which in Arts. 5 and 12 respectively defines the Provincial Territorial Coordination Plan and the inter-municipal General Regulatory Plan.

After these pioneering experiences, a second generation of large-scale plans was then developed thanks to the reform of Title V of the Constitution (constitutional law no. 3 of 18 October 2011), which assigned responsibilities at the regional level in a different way and aimed to complete the course of regulatory innovation that would create the conditions to fully enhance the potential of provincial coordination. In this new phase of applying the PTCP, the keywords became 'subsidiarity', 'governance', and 'strategic dimension'.

The balance of this second season of territorial planning is rather complex, and it should keep in mind the relevant peculiarities that characterize the different territorial and regulatory contexts. In any case, however, the most recent PTCPs seem to understand the potential of the vast area, developing the capability to align themselves with the problems expressed by the territories, such as settlement dispersion (sprawl), the discontinuity of the environmental networks and the fragility of landscape resources, and the incompleteness of the infrastructure network, implementing a growing propensity to exercise a multi-level system of plans (Talia, 2013).

All of this, however, has occurred without the appropriate limits, in that the considerable directions and directives (in addition to knowledge) that very often accompany the plans have not been supported either by adequate administrative powers or financial availability enabled by the transfer of national, regional, and municipal funds. In addition, the reduced effectiveness of these planning instruments is enhanced by the lack of representation of *weak* territories, which are also commonly 'warehouses' of great environmental and landscape heritage. The consequence is that territorial coordination plans have not always completely understood themselves to be the instrument of a possible, beneficial strategy for development and territorial cohesion, especially in intermediate regions.

Nor does this potential seem to be understood by the recent Delrio Reform. In line with redesigning the institutions and responsibilities, which in the provisions of 2011–2012 were concentrated at the provincial level, only on paper is a role of coordination of large-scale territorial planning on behalf of the province confirmed. While confirming the skills of the province and metropolitan cities in matters of territorial coordination and planning, the bill does not square with the experiences of the last twenty years. In particular, the perspective of a new model of institutional governance does not inspire an authentic impulse to renew the current planning model in terms of goals, methods, tools, and procedures to apply to territorial governance. This is not even so when overcoming the traditional municipal limits obtained thanks to the advent of the Community Union would lead to prefiguring a new way of planning the territory and the city with new plans and programs conceived and designed through co-planning process according to a trans-scalar government approach.

Decision making to promote a structural planning model on the territorial level that is strategic and does not conform to vast areas ought to have served as a not-to-be-missed opportunity, especially due to the timely concurrence of institutional reform with the reform of the National Urban-Planning Law (Lupi Bill/2014, 'Principles in matters of territorial public policies and urban transformation'), which would have substituted Law 1150/42. But it was not to be, and the Lupi Bill was inexplicably forgotten after the intense participatory phase unexpectedly concluded in September 2014.

At the moment, there is a continuing delay at the central level, which has been interrupted only by some local experiences such as those we present here. While awaiting a new model of institutional reorganization, these experiences represent an attempt to shorten the territorial government chain (regarding decision making, time, and the relationships among subjects and among plans), without the simplification automatically transforming into a power vacuum, but favouring the redefinition of local development policies. As a consequence, they would also allow for better administrative efficiency that can be translated into greater simplicity and efficiency for citizens, economic activities and services, and which is definitively capable of ensuring real competitiveness in sustainable growth processes.

## 4. Analysis and Discussion. First Experiments in a Non-Metropolitan Area

### 4.1 Characteristics of the Provincial Territory

Situated on the north-eastern edge of the Abruzzo Region (in south-central Italy), the Province of Teramo has a territory characterized in part by mountains (which extend to within the Gran Sasso-Monti della Laga National Park and include two of the most important peaks in the Apennines: the group of Gran Sasso Laga d'Italia and the Monti della Laga chain), in part by hills (where the main historical settlements are located), and in part by valleys and the coast (occupied by a continuous, dense settlement system).

A population of about 290,000 lives on a total surface area of 1,951 $km^2$, distributed in 47 municipalities. With the exclusion of Teramo (provincial capital with about 50,000 inhabitants) and a few other urban centres, the territory is characterized by the presence of a network of tiny towns: about 30 municipalities have fewer than 5000 inhabitants, of which 17 have fewer than 2000, most of which are situated in mountainous areas.

There is, therefore, a stark imbalance between the different settlements in favour of the coastal and mid-hill areas, which are more equipped with services and economies favoured by the presence of production and seaside tourism. This comes at the expense of the different small communities in the high-hill and mountain territories, which, while very rich in natural, historical, and environmental resources, suffer from progressive depopulation due to the poor local economies.

## 4.2 Draft of the Provincial Territorial Coordination Plan

The Provincial Territorial Plan (PTP), which is still in effect, represents the fruit of a political/administrative season that has now passed. In spite of its relatively recent date of approval (2001), it constitutes the success of a plan-creation process that had already begun in 1991 with the adoption of programming directives that have progressively faded in their incisiveness over the years. Not surprisingly, drafting of the 'Report on the state of activating the provisions of the PTP' made in 2008 therefore revealed the substantial incapacity of the plan to respond to criticism made by the provincial territory, which has been even further accentuated in the last decade.

In particular, the report made clear that the PTP—while correctly inspired by the principles of protecting natural, historical, and cultural resources, and rationalizing the settlement model—did not offer a vision 'of the future', that is, mobilize the main energies available. Nor did it appear able to develop that institutional collaboration (between region and province on the one hand and between the province and local entities on the other) in the absence of which territorial government was destined to lose a large part of its orientation capability.

In this perspective, the decision by the provincial administration (2011) to promote the drafting of the new PTCP aimed to take advantage of the main opportunities offered by a new generation of large-scale planning that could integrate the most traditional limiting approach with the themes of developmental sustainability and with a new planning culture. In confirming a trend that characterized the formation of most new-generation large-scale plans, the preliminary document of Teramo's PTCP subdivided the provincial territory into areas and sub-areas. The objective was two-fold. On the one hand, it wanted to highlight a closer relation between strategic directions to be pursued in the long term and territorial partitions denoted by substantial geographic homogeneity. On the other hand, it wanted to favour the consolidation of planning directives and systems of relations aimed at overcoming the traditional limitations imposed by community borders, pointing at the unitary presence of historical/urban-planning phenomena, dynamics of current development, landscape variety, and definitively, the habit of working together on behalf of public administrations that the current territorial design would seem to show, at least in the most fortunate experiences.

In this perspective, the identification of three main geographical areas certainly aims to favour a closer dialogue between the PTCP and the new Regional Landscape Plan of Abruzzo currently being drafted, but they will also be capable of supporting the official presentation of special territorial projects,

with which the technical/administrative experience acquired in recent years can be developed and investigated.

The division of the provincial territory into sub-areas is identified in the preliminary document of the PTCP using SWOT analysis (strengths, weaknesses, opportunities, threats). The analysis considers the positive and negative aspects both within and outside the territorial system and thereby manages to identify a series of actions to enhance the resources present, minimize the causes of slow development, obtain the best advantage possible from external opportunities, and finally, cancel the factors that can threaten achievement of the objectives.

In constructing a support tool to define development strategies for the provincial territory, the preliminary document sets out a strategic vision organized by each of the territorial sub-areas (identified with reference to the different systems: landscape/environmental, settlement, production and tourism, and mobility) and specified in a series of strategic guidelines. These allow tendential scenarios to be developed, which are especially useful in preventively simulating the impact of different intervention policies, and therefore in enabling public debate on the proposals of the plan.

Finally, the preliminary document identifies a repertoire of strategic projects that necessarily correlate multiple areas, and which aim to promote a course for reinforcing the role that the territory derives from its geographical location, its history, and the important environmental and landscape heritage it possesses.

## 4.2 Provincial Reform and Drafting the Regulatory Modification of the Existing PTCP and the Strategic Plan

After the decision in 2011 to begin drafting the new PTCP, and following the reform of intermediate levels of territorial government in Italy carried forward by Law no. 56/2014, the provincial administration of Teramo decided to adjust its aim. While awaiting a definitive settlement regarding the institutional and regulatory framework of reference, the Province decided to define partial acts, documents, and 'interlocutors', such as, for example, a regulatory modification to the existing PTP, which aims to ensure greater concreteness in the new design of the plan on some decisive questions, such as:

- counteracting land use;
- modifying the zoning rules for new urban settlements;
- an innovative discipline to regenerate the anthropized territory and the landscape;
- the predisposition of a strategic plan, in which this new act of territorial governance would be situated.

In the wake of a law emanating from the Abruzzo Region in the spring of 2014[3], the Province then launched the regulatory modification of the PTCP/2001 and the 'Strategic Plan for Environmental Sustainability and Land Use'. The intention was to 'play in advance' and therefore not to submit passively to the effects of the inevitable resizing of intermediate entities on super-municipal (but also local) policies in matters crucial for planning large areas. Rather, the aim was to turn such institutional reorganization into an opportunity to plan large areas, protect and enhance the landscape, contain land use, and mobilize all available energies (Sargolini and Talia, 2011) to overcome the profound economic and social stagnation.

### 4.2.1 The Regulatory Modification of the Existing PTP

Drafting the regulatory modification of the strategic plan relied on synthetically assessing the state of the provincial territory made when drafting of the preliminary document and evaluating the resources, opportunities, and critical factors that characterize the different territorial areas and sub-areas and which

[3] Regional law 24/2014 'Framework law in matters of enhancing agricultural areas and containing land use'.

have allowed a useful screening to be made in order to establish development scenarios in the strategic plan.

The questions addressed looked at containing land use and the quality of the settlement system, the opportunities offered by the territorial project, the establishment of a new discipline for environmental networks and ecological compensation, the 'rediscovery' of the primary sector, and the enhancement of the agricultural territory.

*Quality of Settlement Systems*

As for the first of these themes, the search for new city borders and counteracting sprawl refer to the loss of the city edges and its unlimited growth in an overall framework in which the explosion of urban forms makes it ever more difficult to recognize local communities.

In the area of Teramo, the theme of the border and urban edge assumes particular importance, especially due to the tendency of the coastal territory and main river valleys to present accentuated sprawl especially in the first chain of coastal hills and the intermediate hill systems, and due to the threat of urban centres of different sizes merging together, thus losing their identity and recognisability.

The reconstruction of a system of interpretive relations of design and rules for these territories also pertains to large-scale planning, where a profitable link is developed with other local urban-planning instruments. As a consequence, the regulatory modification of the PTCP lists a series of actions aimed at delimiting the settlement systems and conferring environmental and landscape quality on the existing settlements, which in the peri-urban agricultural area and the passages of discontinuity of the settled areas are proposed as obstacles to merging together the built areas and favouring the adoption of interventions to reconstruct the environment and landscape. New settlements would be authorized only if they were replaceable with interventions of functional reconversion or to make the existing fabrics denser.

*Opportunities for the Territorial Project*

A new level of aggregating local entities into complex territorial systems has been hypothesized. These may constitute a permanent 'laboratory' for the preparation of territorial projects, which, thanks to co-planning procedures to be developed within planning conferences, can act as important activating agents of new territorial quality and new proposals for improvement.

In the regulatory framework proposed, the area plan orchestrated within the planning conference is the 'tool to specify the discipline established by the PTCP, which is entrusted with coordination of the planning and programs of institutional subjects'. Through the area plan, planning large areas can rely on a strategic, flexible, and adaptable framework of reference, and long-term scenarios can be defined and projects developed to be realized in the short to medium term.

Despite being unbinding, the area plan contributes to identifying means and times to activate the strategic guidelines, with the effect of drawing attention to some primary objectives:

- land conservation and the protection of unbuilt areas and the landscape, with measures that subject new building to the recovery of decommissioned areas;
- enhancement of the agricultural territory, even with respect to a possible use of cultivation for energy production;
- the activation of policies aimed at economic improvement, with provisions in defence of sustainability and local identities, acting to check activities that consume a lot of land or have great repercussions on mobility;
- actions to contain speculative anthropic transformations, selecting those activities that are capable of ensuring the quality of settlements or reinforcing the economic structure of the area.

In subjecting the mobile border between city and country to monitoring, the new regulatory layout offers a very useful input for local administrations that intend to base their idea of the city on understanding the processes that lead to metropolitan growth. In particular, the regulatory modification indicates the most appropriate forms of institutional collaboration designed to allow effective

application of equal territorial distribution, the active protection of the environment and the landscape, and the search for a close connection between equal distribution and environmental compensation. For this, experimentation of 'green warehouses' is established, along with the formulation of a chart of the works for compensation.

*Centrality of the Open Territory*

The regulatory modification asks the municipal plans to deal with arguments that have never been dealt with before, but which contribute to a capillary improvement of the territory and the opening of new perspectives for local development. This is the case for hydraulic and seismic safety, promoting alternative energies and bioarchitecture, searching for new ways of using the territory and the landscape, integrating the tourism resources of the coast with those inland, and adopting measures to adapt to climate change (energetic efficiency of buildings, making urban lands more permeable, increasing green roofs to counteract the heat island, etc.). There is a wide range of objectives destined to create a sizeable impact as much on disciplinary innovation as on the confirmation of a new cycle of development under the banner of sustainability, with important effects in the confirmation of a new culture of governing the open territory.

Beyond dedication to reorganizing unbuilt urban areas and the relevance of buildings within the peri-urban agricultural areas and passages of discontinuity, the City, when forming and/or updating its own urban-planning tools, should produce a 'Charter for Agricultural Land Use' defining the potential, actual uses, and worth. All of this also lies within the scope of verifying how the possible removal of peri-urban agricultural terrains destined for new settlements can slow sprawl through actions to mend the urban network, facilities, green areas, and the residential and productive functions surrounding the existing centre.

Among the measures more generally aimed at the open territory, some devices dedicated to the river system echo experiences made in recent years in Europe and beyond. Such is the case of the Landscape Contracts and River Contracts. These are proposed as tools for voluntary, negotiated strategic planning. They do not bind urban-planning choices, but this does not limit their potential in becoming an opportunity for building consensus related to a strategy of territorial development implemented by more prescriptive tools.

Due to their negotiable nature, the contracts favour a change from sector policies—such as securing the territory or river requalification—to integrated policies of landscape improvement. They contribute to transforming the strategic scenarios of the PTCP into shared views to enhance the river and basin systems, agricultural landscapes, settlement systems, and the mobility and tourism networks, which, by defining local development models, can lead to 'added territorial value'.

*Enhancement of the Agricultural Territory*

With the aim of enhancing and protecting this complex reality, the regulatory modification identifies 'agricultural areas of significant economic worth as an invariant of the provincial territory', whose quality is verified with the aid of a 'Charter for Agricultural Land Use' prepared by the communities when drafting or updating their own urban-planning instruments. This step is fundamental in strategically identifying the definitive limits for building, but also to promote the adoption of measures for preventive environmental compensation according to values and parameters that the community urban-planning tool is required to fix.

These measures are also particularly important in favouring the integration of agriculture within the urban circuit, coherent with the approach called *agri-urbanism*, which is proposed to unite what was traditionally separated.

### 4.2.2 The Strategic Plan

The guiding idea that inspired the 'Provincial Strategic Plan for Environmental Sustainability and Containment of Land Use' is characterized by a significant break with the dynamics that have denoted

the phase of the most intense transformation of the Teramo area. It prefigures a new paradigm that brings up for discussion the myth of virtually unlimited quantitative growth that has been pursued up to now.

The perspective indicated does not necessarily imply the choice of a future of degrowth, but rather marks the possibility of adhering to a model of stationary development that is dynamic at the same time. According to Giorgio Ruffolo's metaphor of the open lake compared to the pond (Ruffolo, 1994), it offers the opportunity to follow a path that leads to important objectives under the profile of innovation and quality.

Such a scenario assumes a notable change with respect to the most consolidated behaviour in past years, but it can nevertheless take hold of some elements already present in the local context. For example, low demographic density leads to less settlement pressure and therefore a substantial balance between the factors that contribute to the consumption of scarce resources and the agents that contribute to their reproduction. But the notable size of the protected areas and the existence of a dense multi-centre network of small and medium cities, which have not impeded the spread of building sprawl can contribute to a valuable reference in view of policies to contain urban growth and the greater synergies between inland areas and the coastal strip.

Prefiguring a virtuous course that makes the local development model of the mountain and hill areas compatible with the integrated territorial project of the more urbanized areas, it is necessary to hypothesize a learned combination of settlement and production formulas that support the search for new values and orient a change in lifestyle, consumption, and production.

In this framework, the strategic plan proposes to creatively reinterpret the role assigned to each territorial system, ensuring that the productive fabric can rediscover new opportunities in the economic framework of local development, with applications that range from quality agriculture to cultural and natural tourism, and from handicrafts with greater added value to the advanced service sector.

With a desire to give new impulse to the potential expressed by the different territorial areas, the strategic plan therefore suggests moving in different directions, which are clearly recognizable even if they are closely related:

- acquisition of a more favourable positioning in terms of competitiveness and innovation on behalf of all the components of the Province of Teramo;
- the claim of new centrality in territorial care, to be interpreted not only as an ethical imperative to be assumed for the safety of citizens, the settlement structure, and the landscape, but as an extraordinary opportunity for a change in lifestyle and consumption;
- the promotion of initiatives appropriate for counteracting de-industrialization and defending the most qualified and innovative production;
- the launch of initiatives for territorial recapitalization that still view the city as an important engine for development.

Under the procedural profile, organization of the provincial territory into six complex territorial systems represents the best size for promoting these objectives and experimenting with processes tending towards constituting new Community Unions. Such activities should customarily be entrusted to the planning conferences, which ought to favour participation by the cities and the management bodies of the regional protected areas in the planning process. Therefore, a model plan and dialogue is activated that can more concretely be translated in the drafting of Planning Agreements or Programme Agreements to initiate works and interventions.

As for the implementation of the plan design that was delineated with this strategic plan, recourse to a series of instruments is set out that entail overcoming the narrowest administrative limits (by definition municipal) that have up to now constituted significant dead weight for the traditional plan. Beyond the Landscape and River Contracts already mentioned above, the strategic plan foresees the formation of area plans (which the PTC already considered) and especially the strategic projects, which instead are introduced for the first time by the strategic plan and the regulatory modification.

While the area plans are destined to recreate the possible conflicts deriving from the main settlement choices made by the Cities (zoning of the buildable areas, localization of the urban facilities,

development of the infrastructure network, etc.), the strategic projects instead allow greater complexity. This is demonstrated by the fact that large-scale planning is not proposed simply to correct 'errors' and the dysfunction to which the urban-planning discipline can succumb when it cannot overcome the more reductive or sectorial approach. The strategic projects that were developed for this strategic plan, in fact, are proposed to implement some medium- and long-term views with a transverse approach that should develop the capability of orienting the choices and investments of public and private subjects.

In the formulation introduced by the regulatory modification to the PTCP, six strategic projects were identified that implement the fundamental refinements of the long-term vision at the base of the strategic plan:

1. *Coastal city*, where improvement of accessibility and sustainable mobility will serve as an opportunity to modernize the infrastructure networks, requalify the landscape, and improve urban competitiveness;
2. *Production and development*, in which the specialization of economic activities can be pursued thanks to the strengthening of territorial provisions and the rationalization of the settlement choices;
3. *Ecological and landscape network*, with interventions aimed at strengthening the ecological networks, securing the territory, and realizing projects for landscape improvement and environmental compensation;
4. *Tourism*, with initiatives aimed at strengthening the sector by diversifying the accommodation offered, integrating different circuits (sea, mountain, art city), and making tourist fluxes less seasonal;
5. *A new agriculture*, with measures that associate the reinforcement of the agricultural and food system with the implementation of modern agricultural business and infrastructure development;
6. *Territorial equipment and service management*, aimed at developing the secondary transverse infrastructure network (connection between the coast and inland areas) and consolidating the structure of territorial accessibility.

## 5. Conclusions

The particular planning experience presented here and the character of eternal transition that our country and the Abruzzo Region have now been experiencing for many years could justify suspending judgement related to the possible successes of a strategic document and a regulatory modification whose efficacy ultimately depends on the survival of the Province. And yet the first tests made by the Province of Teramo upon presenting these new devices to public opinion and the principle stakeholders have demonstrated that in daily practice the territorial disciplines are still forced to rely on the autonomous urban-planning that now for some years has constituted the only and most concrete alternative to an opposition to progress (Talia, 2009).

It can be agreed that the validity of each new procedure should very probably not be measured by singling out its capability to harmonize with the golden principles of coherence and appropriateness inspired by the system of existing planning; rather it should be measured by its ability to provide quick responses, analysis tools, and decision-making assistance that can be used in that 'visible navigation' that increasingly characterizes the concrete exercise of territorial governance.

Along these lines, one cannot help but underline the fact that the basic inspiration guiding the drafting of new tools by the Province of Teramo significantly evolved amid the administrative, political/cultural, and planning context in which new proposals for territorial and socio-economic protection, requalification, and enhancement should be matured and not discounted. In contrast, this resolute change in step requires a marked debureaucratization of the routines used to implement the plan and the adoption of behaviours characterized by a preventive evaluation of the effects of each decision, and, as a consequence, also a rigorous verification of the results to be expected.

In favouring this point of view, correct management of the planning conference will be a determining factor, not only regarding the formulation of functional rules that should guarantee the balance and protection of the interests legitimately represented by these new organisms, but also regarding the assumption of a role of promotion and oversight by the Province. It is the Province under whose jurisdiction lies the care for that area of collective use and values coinciding with the super-municipal scale and which, in the opposite case, would risk not being adequately protected.

As can be seen, the slow transition towards a planning system that is more polarized on the regional and local scales assigns the Province with the responsibility of witnessing and safeguarding the relevant needs, but under weak control. To be completely fulfilled, it requires supporting institutional discussion and collaboration with collective learning and cultural growth in order to be successful in mobilizing different interests and growing sensitivities, even in the absence of authoritative or coercive mechanisms.

The course described can naturally become too long and complex for the effective leadership abilities expressed by the Province's political and technical/administrative frameworks. For this reason, it is convenient already in the initial phases to aim for other qualifying content in the Teramo initiative, as in the case, for example, of some strategic projects that seem capable of appealing to sensitivity that is already present in many local communities regarding questions about the vast area (calling to mind the coastal cities or the ecological and landscape network).

But even before initiating planning processes that are complex and connected to wide, effective sharing between the institutions operating in the provincial territory, it may be worthwhile to trust a new regulatory and operational framework that was established to ensure that the 'construction' of new large-scale governance would assist the timely application of several very innovative devices. At the same time, however, these devices need to ensure positive results already in the short to medium term.

The numerous provisions range from the introduction of new zoning rules to environmental compensation (green warehouses) and the provision of passages and elements of discontinuity in the settlement fabric. As well, particular emphasis is placed on the obligation for communities dedicated to forming a new urban-planning tool to make available a 'Charter for Agricultural Land Use' aimed at, among other aspects, establishing a careful perimeter of the existing settlements and consequently at favouring the systematic containment of land use.

In the perspective described, the changes brought to the planning system are not limited to promoting greater awareness in governance actions on behalf of the local administrations, but rather introduce some corrective actions in the new urban order that have been confirmed in the last decade even in the Teramo area, laying the basis for more ambitious public policies with which to re-establish that constant dialogue between agrarian and urban landscape that sprawl tends to cancel out.

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AESOP 2015 Definite space – fuzzy responsibility

# Public Participation in Norwegian Physical Planning – revisited

Helge Fiskaa

## Abstract

Ten years ago, I published about article Public Participation in Norwegian Physical Planning (Fiskaa, 2005), which this paper follows up. Since then changes have occurred in Norwegian planning act and practice. The new Planning and Building Act from 2009 emphasized the ambitions and requirements for public participation. At the same time, Norway has an explicit right for private developers to promote zoning plans, unlike at least the other Nordic countries that still have a public planning monopoly.

Thus, one may assume private developers in Norway to influence the content of plans decisively although the municipal council has the authority to approve them. Previous research project indicate that developers communications about plans are mostly towards the municipal planning department and other public authorities, with less regard for public participation.

This paper examines the present status of public participation in Norway, enlightened by a case study of 140 zoning plans decided upon by the city council in Trondheim in the years 2012-2014. The study shows that public participation in the meaning citizen participation beyond the act's minimum requirements is rather seldom. Moreover, when neighbours, other inhabitants and civil organizations oppose to plan proposals or forward alternative proposals, their meanings are for the most not taken into account. This fact is most obvious concerning private promoted plans, and must be a challenge for planning authorities that have the superior responsibility for open and democratic planning processes.

Key words: Planning system, public participation, private plans.

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## 1. Introduction

The article in 2005 gave three recommendations to the preparation work on the Norwegian planning and building act concerning public participation. Firstly, a planning program should be introduced for all planning matters, as even small plans may turn out to be controversial. Secondly, public participation should be organised at the very beginning of the process. Thirdly, the planning authority should be responsible for establishing the planning program and leading the planning process, which would give the planning authority an undisputable place behind the steering wheel and thus increase the chances for real public participation and plans more in accordance with public interests. An underlying question for this article is if these recommendations are taken into account or not.

In Norway, public participation is on one hand regarded as an inevitable part of the planning process and on the other hand, market forces seem to challenge participation, which gives reasons to investigate participation related to political and planning ideology. Why and how has participation in Norwegian physical planning developed over time and what are present status and challenges? Which kind of actors participate and to what degree? What are the outcomes of public participation in planning?

The request for public participation in Norwegian planning has roots in citizen's protests and actions around 1970 against the then authorised form of planning, which was, in the opinion of many, authoritarian and top-down, a "game" between planners and (some) politicians, following an instrumental rational approach (Amdam and Veggeland, 1998). The municipality had monopolistic responsibility for planning and was supposed to co-operate with public agencies, organisations etc. who had interests in the planning task. Interest for participation from other than municipal and other public bodies and those with business or owner interests was not very conspicuous, and limited to public scrutiny of plan proposals with opportunity also for citizens to put forward their remarks.

The protests, which were often in the form of demonstrations and actions, was a reaction against undesirable consequences of the policy of economic growth, industrialisation, and centralization (Furre, 1991). The criticism was concrete in the sense that it dealt with loss of jobs in rural areas (Skjeggedal, 1988), and negative environmental consequences as unfortunate effects of urban growth, such as building on agriculture land and natural areas, and urban renewal and road projects, which inhabitants meant would deteriorate old neighbourhoods, etc. The protest promoted alternative values such as sprawled settlement structure (Fiskaa, 2009), local communities, historical continuance and environmental protection. The criticism was also theoretically directed against methods in modernistic planning and the "value neutral" expert role in physical planning (Ellefsen, 1993).

Gradually planning became more locally oriented, incremental and focused on local environmental issues. From the late 1970s, the authorities accepted citizen participation as part of the planning process. Planning theories about bottom-up and garbage can planning arose (Amdam and Veggeland, 1998). From the 1980s' neo-liberal ideas' belief in market forces and the idea of new public management, have strongly influenced Norwegian politics, as in most western countries (Mydske *et.al.*, 2007) The regulative and controlling public sector came under pressure when liberalization, privatization and deregulating became major political goals (Falleth & Hansen, 2011). The fundamental purpose of public planning as such came under discussion. Today private developers provide most local plans, at least in the cities; in contrast to countries like Sweden, Denmark and Germany where public planning monopoly is still in effect. By this planning changed character with less emphasis on public long-term preparation and control, and was more incremental and project oriented. In most cases, developers have the main responsibility for plan implementation, often in the form of development agreement with the municipality, and have thus a leading role in urban development (Røsnes 2008). Thus, they may have a considerable influence on master planning as well. Planning literature described a change from public governing to

governance, which in practise exists in the form of public-private cooperation giving market actors a stronger position then traditionally (Fimreite & Medalen, 2005; Nyseth, 2008), and with little attention to citizens participation.

After this presentation of the political and historical background, the paper accounts for conception of public participation in Norwegian context. The main section of the paper presents a case study of public participation in zoning plan processes in the city of Trondheim. At the end, the paper discusses the present situation and current trends, with some reflections on future participation in planning, including a recommendation to authorities to strengthen the requirements to openness and democratic planning processes.

## 2. The conception of public participation in Norwegian planning

Three main arguments legitimate public participation in Norway: Participation will (1) enhance knowledge about the situation and give a better basis for creating favourable solutions, (2) it will give affected people opportunity to control that all factors are taken into consideration and thereby give legal security for them, and (3) participation is as a democratic right (Medalen, 1999). Implicit, participation has a purpose of advancing fairness and justice (Innes E. & Booher, 2004). Public participation is a means to fulfil the basic purpose of public planning and interventions, namely to correct the free market forces in order to provide common goods, hinder overexploitation of limited resources, control external consequences, and to contribute to fair distribution of goods (Sager 1991).

The Norwegian term *medvirke* for participation means to take part, contribute, co-operate, and indicates thus an active form of participation. Related to Sheryl Arnstein's Ladder of Citizen Participation (Arnstein, 1969), which has been adapted to Norwegian planning as shown in figure 1, participation should mean real co-operation and influence. Everyone should know they could influence the shape of their community (Bedford, Clark & Harrison, 2002). Public participation can include all parties or actors having any interest in or for the planning case, although one primarily thinks of citizens' participation.

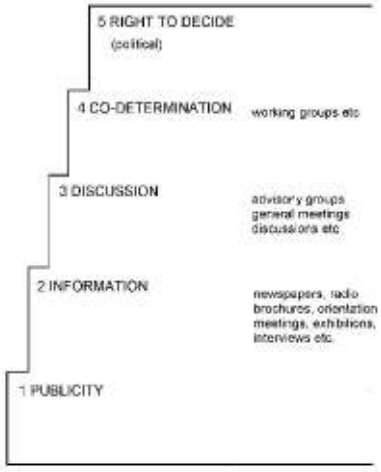


Figure 1. Different degrees of public participation range from one-way communication (1 and 2), via two-way communication (3), up to active participation and co-operation (4), and right to decide (5), which is the responsibility of political boards (Adapted from NIBR/TØI, 1980).

The parties might be directly and indirectly affected persons and organisations as owners, property developers, public agencies, neighbours, other inhabitants, interest groups etc. The purpose of participation is to obtain better plans, in that meaning that most people accept them. A well-performed participation process can contribute to moving a problem from disagreement and unknown solution in the direction of agreement on goals and solutions (Sager 1991). Brabham (2009) claims that Norwegians are more

apt to be involved in public planning due to a general expectation of transparency in government and due to Norwegians' generally high rates of activity in political parties.

### *2.1 The Act's requirements*

Most physical planning takes place in the municipalities, although the counties shall provide regional plans, which will normally not be specific on localisation and land use, and the state may prepare and approve state plans for securing national interests or projects. The municipalities shall prepare and approve a master land-use plan for the entire area, and eventually land-use plans for parts of the municipal area. There are two types of detailed plans. Area zoning plans, which are meant for defining land use in some detail, will normally cover a rather large area. The municipality is normally responsible for preparation of this plan type. Detailed zoning plans are meant for further clarification of the design within the actual area, and is normally used for concrete projects. Private bodies, developers, organisations and other authorities are entitled to put forward plan proposals, often called submitted plans.

Some allege that the prevailing Planning and Building Act's has strengthened the requirements to public participation. However, the present principal wording *"... shall facilitate public participation. ...."* seems weaker than the former act's statement *"... make an active effort .... at an early stage ...to inform the public ... "*, and *"... an opportunity to participate actively ..."*. There are concrete minimum requirements to participation for the different plan types, which the new act has just slightly changed.

According to these requirements, inhabitants and other may promote their views and arguments at two stages of the planning process: Firstly, at the commencement of a planning work, affected public bodies and other interested parties shall be notified, and the proposer shall publish a notification. The act does not describe real participation at this stage, but common practise is to invite both public agencies and citizens to questions and comments. For a zoning plan that may have substantial effects on the environment and society, a planning programme, including arrangements for public participation, shall be drawn up. The programme proposal shall be circulated for comments and presented for public scrutiny.

Secondly, the planning authority shall, if they wish to proceed the process, present the plan proposal for public scrutiny and, at the same time circulate it to central government, regional and municipal authorities and other public agencies, organisations and institutions affected, for comment. Landowners, lessees, other rights holders in the planning area and directly affected neighbours shall be informed of the planning work. This hearing gives citizens and organisations a right to forward their remarks and proposals, most often in written form, which the municipality shall consider and eventually incorporate in the plan. Some state and county agencies and neighbouring municipalities are entitled to object on plans within their sphere of responsibility. The last step is the municipal council's eventual adoption of the plan; however, an objection to the plan may cause a final decision by the ministry.

### *2.2 Actors, arenas and planning process*

Generally, one can divide actors in planning in four or five groups: planning authorities, politicians, developers, and citizens (Nordahl, 2006). In addition, other public agencies have an important role in most planning matters. Planning authorities has the assignment to produce plans and advice others promoting plans. In the present situation when other than the planning authority prepare and promote most detailed plans the public planners are most often reduced to executive officers who steer the plan through the formal political decision-making process (Falleth & Hansen, 2011).

Politicians are rarely involved in the planning process *per se*. Their task is formally most often limited to participating in the decision-making process in the actual political committees and boards. This is in

line with the logic of New Public Management with a clear division between politicians who set the wider regulatory framework and public administration staff who administers and implements planning decisions (op. cit.). Citizens may be individuals or organizations; neighbours and other persons or groups affected of or interested in the planning matter. They may represent different and conflicting interests and views. When opposing plan proposals they often meet the arguments of being selfish and not looking at common interests.

Other public agencies are for the most state agencies representing specific sector interests. Most important is the County Governor, who is the Governments representative in each county and responsible for several planning interests. The County Authority has the assignment to take care of several regional interests and coordination with regional planning. Neighbouring municipalities are entitled to participate in planning that might affect them. Public bodies have the right and duty to take part in planning when it concerns their sphere of responsibility; if they do not they may lose the right to objections. The use of objections has escalated over the years, and is under discussion because of severely delaying planning processes; a problem for Norwegian planning is lack of coordination between state sectors, which hamper and retard planning processes. Steps are going to be taken in order to diminish the problem.

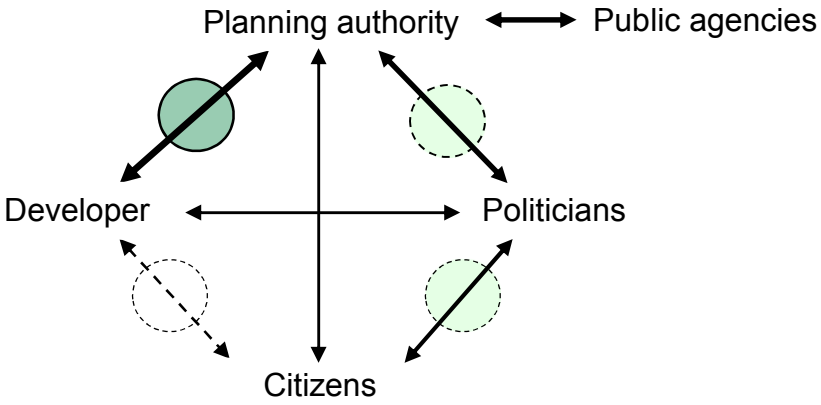


Figure 2. Actors in the planning process for a private promoted zoning plan. Full circle indicates a formal statutory meeting and dotted circle eventual meeting. The thickness of arrows indicates the strength of contacts between actors (adapted from Nordahl, 2006).

The Planning and Building Act prescribes one specific meeting between developers and the planning authority at the commencement of a planning process, often referred to as preliminary conference or advance meeting, where the planning authority gives advices for the content of a plan. The act do not prescribe any other arenas in which other actors can meet, but occasionally the developer has meetings discussing plan matters with affected sector agencies. The ministry advises to arrange information and discussion meetings, and eventually other means of more active public participation in large and complicated plan tasks. Falleth & Hansen (2011) found that participation beyond the minimum requirements are rather seldom.

### *2.3 The challenge of public private cooperation*

A question concerning coordination and collaboration is about the relationship between public bodies, private interests and people in general. The emerging of public-private cooperation implies a number of dilemmas about the purpose of planning and the public's and the inhabitants' role in community development. As a fundamental purpose of planning is about safeguarding those matters and public interests that

free market forces do not take care of, the motives are to provide for what is desirable and to hinder unfortunate side effects of individual and private actions (Vigar *et al*., 2000; Røsnes, 2005). In addition to the right for developers, which have substituted the traditional public responsibility for preparing project implementation, may threaten public interests. Crucial questions are about the transparency in the process and negotiations taking place parallel to the planning work. Parallel and closed negotiations, and may be lobbying as well, may lead to early informal decisions on plans and thus short-circuit the planning process (Garnåsjordet, 2000). Thus, negotiations upon plans and agreements for plan implementation may lead to pre-binding and exclusion of lay citizens and third parties from information and influence in an early and decisive stage of a planning process until the final hearing of the proposal (Røsnes, 2005; Falleth and Hansen, 2011). The procedure for development agreements is the same as for a zoning plan, giving opportunity to real participation at the stage of public scrutiny. It is paradoxical to give third parties the right at a late stage when the possibility to real influence is modest (Wøhni, 2007), which citizens find unsatisfactory (Schmidt et. al., 2011).

Falleth & Hansen (2011; 2014) have found that the performance of governance has given private developers a stronger position in planning and development at the sacrifice of public control and third parties influence. The planning administration and local politicians appear to value participation as an import part of the democratic decision-making process. Developers are far less likely to view public participation as an important part of the planning process. They rely to a greater degree on an economic rationale with planning seen more as a necessary administrative control before construction can get under way. Their survey reveals further that most municipalities have set up procedures for interaction with developers. The developers have mostly interaction with planning authorities in the form of closed meetings and direct contact. They have also considerable interaction with local politicians, especially direct contact. Community organizations also have more or less contact with politicians and planning authorities, for the most direct contact. Developers and local organizations have to lesser degree interaction, and then most often direct contact. Politicians mean suggestions from and contact with community actors influence the planning result to a higher degree than contact with developers, contrary to the view of planning authorities. Both local organizations and developers mean contact influence the plans to lesser degree.

## 3. The survey

This article is based on a recent study of all 140 zoning plans approved by the City Council in Trondheim in the years 2012 to 2014. They are all proposed and processed according to the prevailing Planning and Building Act of 2008. Six of the plans are area zoning plans and 134 detailed zoning plans. The size of the plans varies considerable, covering from around 700 square metres up to more than 200 hectares. Most of them concern housing or other buildings, but there are variations from roads, recreation areas, to a wind farm etc., and even a shooting range. Of the 140 plans, 84 are private plans provided by developers or landowners. Fifty-six plans are public. The town planning department was responsible for 15 of them, three of them in cooperation with private developers or Public Roads Administration. Other municipal bodies, as for example the municipal property department and the municipal administration for transport (The environmental package) are responsible for 32 plans prepared by private consultants. The Public Roads Administration was responsible for seven, and other public authorities for two plans.

### *3.1 Method*

The survey is a cross-case survey dealing with many examples and rather few questions. The method is supposed to give reliable results. However, equivalent studies in some other municipalities may have given different results. It is a document study of case documents for the plans. The main documents are easily accessible at Trondheim municipality's web page. They include the written presentation of cases and plan maps provided for political treatment during the process. The survey examines the documents

at two steps. The first step is the announcement of commencement of planning work and the following treatment of the proposal in a planning committee, in Trondheim called building committee, who decides if the plan proposal shall be presented for public scrutiny and circulated for to public agencies and organisations for comments or not. The committee may accept the proposal, reject it or make changes in it. The second step is the committee's considerations of received scrutiny comments and eventual objections. Also at this step, the committee can accept the plan, reject it or prescribe alternations. A major revision requires new presentation for public scrutiny and circulating for comments. After the committee's acceptance of the plan, the final step is the City Council's decision upon approbation of the plan. The survey do not analyse this step because a final decision will be accordant to the second step.

The written presentation to the treatment in the committee and city council gives a description of the plan proposal and the consequences of it, and a summary of meetings during the process and, comments received from public agencies, organisations and inhabitants, and the judgment of the comments. However, the presentation does for example not always account for all internal meetings concerning solutions within the planned area, or eventual informal steps. Thus, vital decisions may have been taken behind closed doors, not least in the crucial early stage of the process. Due to lack of time available, no other documents are scrutinized or involved persons interviewed.

In addition to these statutory minimum requirements for public participation, it is of interest to look for supplementary arrangements, for example information and discussion meetings, what kind of arrangements, the purpose, participants etc.

Comments may be irrelevant or not dealing with the real matter of the plan proposal, for example circumstances that the plan does not affect. There may be some misunderstandings behind a response, for example about what the plan really regulate. In several cases, especially public agencies just report that they do not have any comments to the plan.

Comments may be taken fully or partly into account, or be rejected. Comments fully taken into account may concern one or more plan elements that are all accepted as reasons for revision of the plan. If partly taken into account the comment deals with several issues, and some lead to plan modifications and others not, or the arguments are accepted to a certain degree and the plan are revised modestly. If rejected, none arguments and views are accepted. The case study follows this classification.

Respondents are grouped in three categories. One is neighbours and other individuals, groups as for example residents' associations, or companies nearby or inside the planned area, directly affected of the plan. Another group is organisations often representing, as for example environmental protection organisations, and citizens generally who are interested in the planning matter, some specific interests. The third group is public authorities, which most often represent one or more specific public interests.

Responsible for the plans are divided in two groups, public authorities and private developers and landowners. As the number of plans produced by the municipal planning department is very low, there is a risk for random results, which may be reduced within a greater group.

### *3.3 Step one –at the commencement of a planning work*

Although the act does not prescribe a process for following up the announcement of the commencement of a planning work, it seems common that public agencies react and give their comments. They may comment on elements in the plan and propose solutions, and can notice a possible objection to the plan. Many inhabitants and organisations also ask questions and put forward their views and remarks that has to be considered by the planning authority.

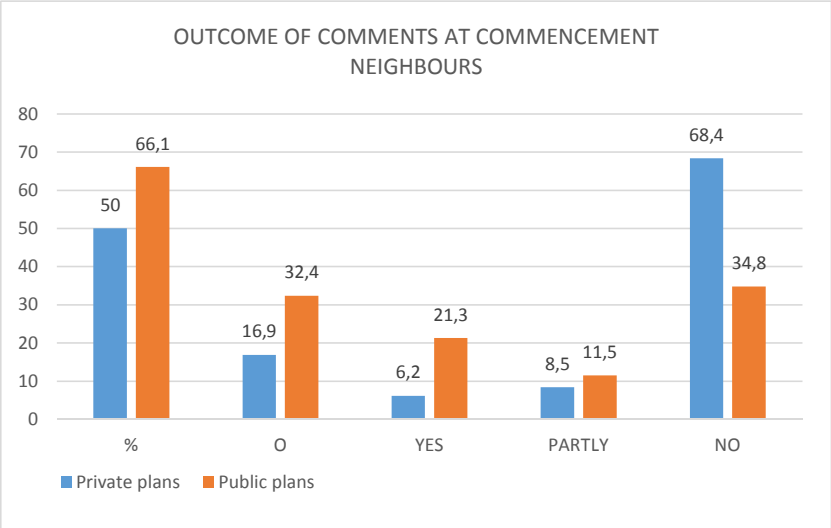


Figure 3. The outcomes of the building committee's considerations of received comments from neighbours after the commencement of the planning work.

Surprisingly many neighbours reacted to the planning work already in the first stage. As much as ¾ of publicly and half of privately promoted plans were commented upon from one or more neighbours (%). Despite limited announcement, people seem to be aware of planning initiatives. This is opposite to former findings where participants in a participation project meant that invitation to participation happened too late in the process (Schmidt et. al., 2011).

When it comes to the result of the planning committee's considerations, they found one third of the comments to public plans and sixth part to private plans not actual or relevant (0) which may indicate more trust to public agencies than to private developers. One third of the comments to public plans were taken fully (YES) or partly (PARTLY) into account and just 15 % of the comments to private plans. The higher rate of positive response to comments to public than to private plans gives the same indication. One third of comments to public plans and two third to private plans were rejected (NO). The high rate of rejections of comments, especially to private plans, indicates that private promoting plans are less sensitive to neighbours' interests and views than public agencies. It seems that major principles for the content of the plans have been determined at a very early stage of the process. In addition, one explanation may be that private plans most often deal with new dwellings in already urbanised areas, which often lead to worry among people for reduced quality of view, outdoor areas, traffic safety etc.

Other citizens and organisations, for the most organisations, commented to nearly one third of the private and more than forty percent of the public plans. Although lower figures than for neighbours, this is in fact a high share, as one would think that people outside the actual area more seldom would be concerned about the planning. The high share of not actual comments for both private and public plans, about a third, indicates also that many involve even if they are not sure that their views are relevant. On the other hand, the figures for fully and partly acceptance for comments, in all around 40 to 45 % and a little higher for public than for private plans, indicate that many promote important arguments and views.

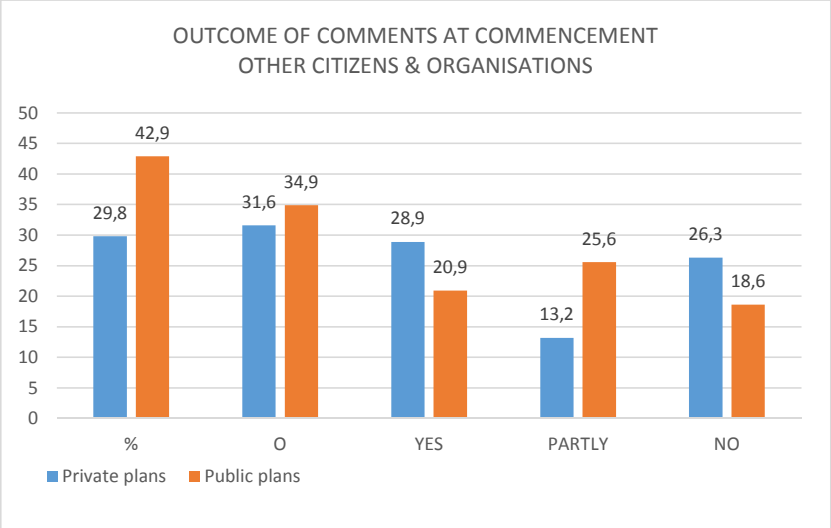


Figure 4. The outcomes of the building committee's considerations of received comments from other citizens and organisations after the commencement of the planning work.

The higher score for public plans indicates that public agencies are more open for inhabitant's meanings and proposals than private developers are. One can have the same interpretation of the higher share of rejections to private than to public plans. Although higher figures for acceptance and lower for rejection then is the case for neighbours, the figures for other inhabitants also indicate that basic principles for the plan design are fixed at the very start of the planning work.

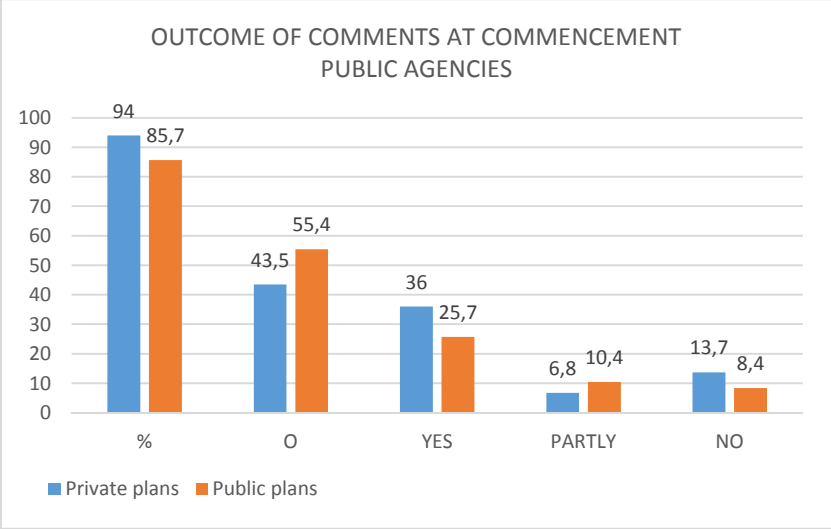


Figure 5. The outcomes of the building committee's considerations of received comments from public agencies after the commencement of the planning work.

Several public agencies, especially at municipal and regional level, have responded to the commencement of planning work, in almost all cases. The obvious reasons are that all relevant agencies receive a direct information of the commencement and public bodies are according to the act obliged to participate in the planning. The high share of irrelevant or not actual comments, most to the private plans, is due to many responding that they have no comments at this stage.

Of the relevant comments, the most are taken fully or partly into account, a third for public plans and a little more for private plans. Thereby only about one tenth of the comments are rejected. All together, the figures tell that public sector agencies have a considerable influence on the planning. This may base on strong political traditions for many public sector interests' strong power, and in addition, they often represent rather concrete and practical issues that have to be taken into account. The right for public agencies to make objection to plans may be a kind of pressure for making revisions in a plan proposal.

*3.4 Step two – at the public scrutiny*

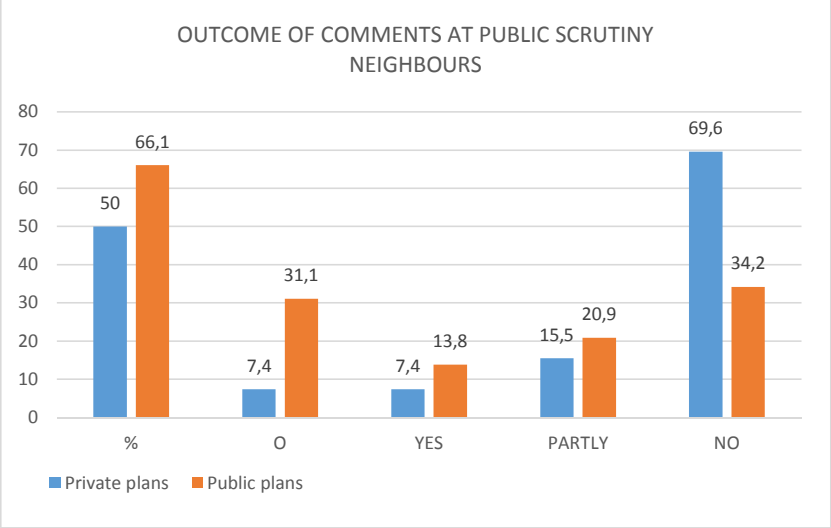


Figure 6. The outcomes of the building committee's considerations of received comments from neighbours after the public scrutiny of the planning work.

Neighbours commented to the same share of plans at the stage of public scrutiny as at commencement of the planning work, namely half of the private and two third of the public plans, but the total number of comments is noticeable lower. One should anticipate more comments and a higher rate as the act's requirement to information at this stage also include other right holders, lessees and directly affected neighbours, and they are explicit invited to react. An explanation may be that at least some remarks are taken into account and made some neighbours satisfied at the first step, though this argument seem to be inconsistent with the high share of rejected remarks at the first step. May be many simply have given up to protest. The rate of not actual or relevant comments is about the same for public, but considerable lower for private plans than at the stage of commencement. Anyhow, these comments are probably expressions for many neighbours' fear for being negative affected. One find about the same figures for fully or partly acceptance for the comments for both public and private plans as at the commencement phase. So also for the share of rejected remarks, nearly 70 % for private plans, which indicates that the solutions are to a high degree already fixed and the will to listen to neighbours is rather limited.

Other citizens and organisations have commented at the same share of private and some higher share of public plans at public scrutiny than at commencement of the planning. The difference may be accidental, although many organisations have received direct information about the scrutiny, but the high shares may indicate that many are dissatisfied with the outcome of their comments at the first stage. The share of not actual of relevant comments is about the same for public, about one third, and some lower, about a fourth, for private plans than at the commencement phase. The rather high shares may indicate a fear for being negative affected, like the neighbours.

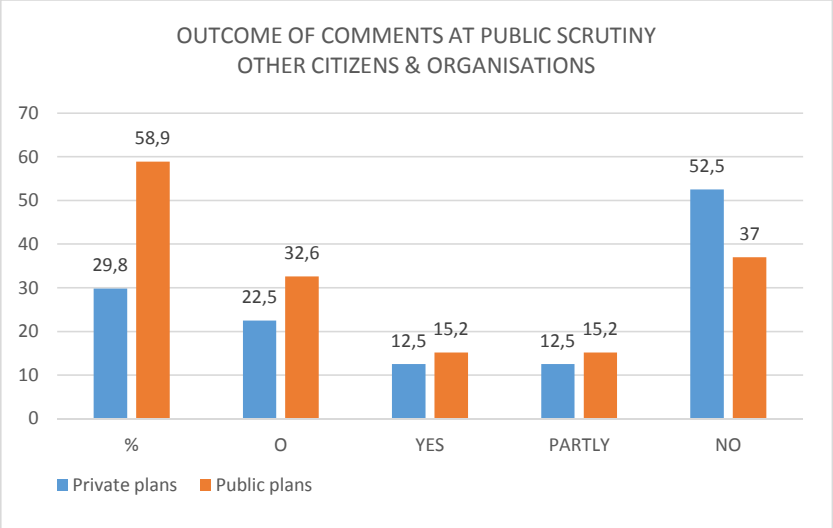


Figure 7. The outcomes of the building committee's considerations of received comments from other citizens and organisations after the public scrutiny of the planning work.

The rates of positive outcome, one forth for private and one third for public plans, is considerable lover than at commencement stage, and the percentage of rejected comments, more than a half for private and a third for public plans, are considerable higher than at the first step. These figures too, demonstrate that the main parts of the plan content are determined in forehand of the public scrutiny process. Probably only minor less problematic and alterations are implemented in the plans, either fully when a comment was about a small detail or partly if the comment was meet only to a certain degree. A major revision of the plan would cause a new procedure of circulation for comments and public scrutiny, which would delay the process.

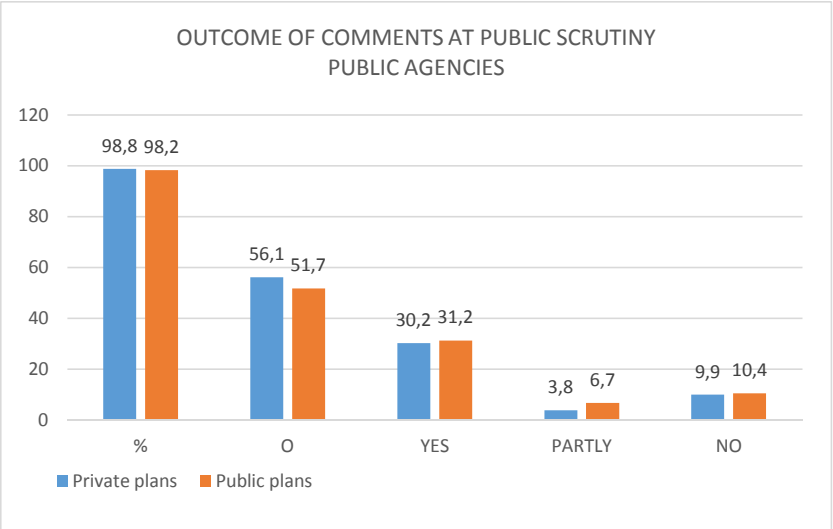


Figure 8. The outcomes of the building committee's considerations of received comments from public agencies after the public scrutiny of the planning work.

Public authorities have commented to almost all plans, and more than half of the comments are not actual or irrelevant, some more than at the commencement phase for private plans. As at the first step, many public bodies answer that they do not have any comment to the plan. About one fourth of the comments are taken fully or partly into account, a few more for public than for private plans. Just about 10 % of the comments are rejected. In addition to the political traditions of strong public sector interests, public bodies announced objection to all together 66 of the 140 plans provided the comment was not accepted. Almost all these plans were revised; one after formal mediation by the County Governor, and one was approved by the ministry. In a few cases, the revision was so wide-ranging that a repeated scrutiny was necessary.

The city council adopted all plans according to the planning committee's decision, not always unanimously. Planning tasks often lead to discussions and disagreements.

*3.5 Other arrangements for public participation*

Some other arrangements for public participation are performed, most often in forehand of or during the public scrutiny. The written presentations of the cases for political treatment give only limited and partly inaccurate information about what arrangements are performed and the outcomes. Developers have held several internal consultation meetings with various public agencies in order to clarify technical and other questions, but the accessible documents give very little information. For fairly many plans the proposer have arranged external meetings, some of them limited to information meetings which strictly speaking cannot be recognized as real participation. However, information about the plan may give people a basis for formulating comments at a later stage.

Some of the meetings were limited to specified groups of participants, for example landowners or schoolchildren, and some were open for all interested parties or for neighbours and nearby residents. In some cases, there have been arranged on-site inspection for public agencies, neighbours and others affected. Except for one example of a workshop for some public agencies and a few representatives for neighbours, no more active forms for participation than meetings have been performed. The scarcity of information about those arrangements make it impossible to give any analysis of the outcomes.

Table 1. Number of plans and the share where additional public participation arrangements were performed, grouped after plan responsibility.

| Plan responsible | Planning dep.<br>15 plans | Other municipal<br>32 plans | Other public<br>9 plans | Private<br>84 plans |
|---|---|---|---|---|
| Number of plans | 6 plans | 9 plans | 3 plans | 19 plans |
| Percentage | 40 % | 28,1 % | 33,3 % | 22,6 % |
| Percentage municipal | 31,9 % | | | |
| Percentage public | 32,1 % | | | |

As table 1 shows, public agencies are most interested in arranging at least some kind of external meetings beyond the act's minimum requirements. The municipal planning performed meetings etc. in 40 %, all municipal agencies near to 30 % and not municipal agencies one third of their planning tasks. All together public sector arranged some additional participation measures for nearly one third of their plans, compared to private developer's less than one fifth.

## 4. Some conclusion

The ten-year-old article underlined the risk for matters decided upon before announcing the start of planning, and a need for initiating public participation early in the process. The recommendations to the then ongoing work on the new planning and building act was in the first place to introduce a planning program for all planning tasks, including a program for public participation, not limited to plans that are supposed to have major impacts on the environment as even small plans may turn out to be controversial. Secondly, the participation should be organised at the very beginning, and thirdly, the planning authority should be responsible for establishing the planning program and leading the planning process, even when a private developer has taken the initiative. This would not limit the developers' right to initiate a plan, but by giving the planning authority an undisputable place behind the steering wheel and thus increases the chances for real public participation and a result more in accordance with public interests.

The legislator did not follow these advices. On the contrary, the act introduced a new rule that gives developers a legal right to apply for building approval simultaneously with the commencement of the planning work, which strengthens the planning system as project-led. It seems obviously that when performing the project design and planning, and in addition, negotiating on a development agreement simultaneously the main content and design of a plan will be fixed, mentally and economically, at an early stage, may be already at the preliminary conference between developer and the planning authority. The developer will usually make project preparations ahead of this meeting and confront it with the planning authorities' information about paramount plans and requirements, and thus seek for some kind of acceptance for the first sketches. Many politicians have a sense of obligation to advance negotiations on development agreements and preliminary conferences (Hansen and Falleth, 2011), which will influence their opinion to the plan.

The survey demonstrates clearly that private developers have strong power in the planning process. However, public agencies have a considerable influence on the content of plans; only one tenth of their comments were rejected, and internal meetings between developers and public agencies were held to clarify solutions in many cases. Public agencies have traditionally a great influence, and if necessary, they can force developers following requirements by announcing objection to the plan, which was the case for almost half of the plans.

The picture is quite different when it comes to neighbours and other citizens' influence. Although surprisingly many individuals and organisations have delivered their comments in both the initiating and the scrutiny phase, the comments are to a high degree rejected. This outcome is most obvious for private plans, and concerns most neighbours to a higher degree than other citizens and organisations. Possible conflicting interests and views among neighbours may account for some of the rejections, but the rates are still high and indicate strongly limited will among developers to adjust to third parties' opinions and interests.

Falleth and Hansen (2011) have found that the planning authority interact primarily with developers, and at a very early stage of the process, and less more with third part, which is contrary to what most planning literature ascribe. Surprisingly they also found a high frequency of interaction between politicians and the community actors, but at later stage of the process. Other surveys indicate the same (Wøhni, 2007; Schmidt *et al*., 2011). This survey cannot confirm these findings, but the high rates of rejected comments to especially private plans indicate that it is the fact. When politicians are involved at a later stage than the planning authority, it might be too late for them to prescribe major alterations in the plan.

In the present situation neighbours and citizens have to work very hard to influence planning decisions leading to fundamental revisions of the premises of the project (Innes & Booner, 2004; Schmidt *et al*., 2011). There is obvious a need for a more transparent and democratic planning that involve citizens more and give them real influence. A solution could be to restore the former public planning monopoly, for example in accordance with the Swedish system where the planning authority shall give a plan answer (planbesked) to developers if an area shall be subject to planning. The planning authority shall have the leading role in planning processes, and thereby a clear responsibility for performing citizen participation. At present, such solution is probably too radical politically in Norway. A more careful way could be to require planning program, as mentioned above, for all zoning plans, like in Finland, provided by the planning authorities. At least one could make the commencement phase clearer as a first step of participation with invitations to deliver comments in line with the principles for public scrutiny.

## 5. References


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# Beyond the usual suspects: Uncovering the network of civic and private sector actors in Munich's urban development.

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*Urban development more and more depends on the cooperation of public authorities with civic and private sector actors. Public budgets are scarce, the tasks at hand and the related investment volume are immense. Planning as tabula rasa without concerned stakeholders is a rare exception. As a consequence, politicians, users, neighbours increasingly call for serious and effective involvement and participation.*

*When setting up citizen participation processes one key question is: Who shall be addressed? To what issues and in what areas of the city? Beyond the usual suspects, we often find a fragmented landscape of various actors that – explicitly or implicitly – involve themselves in urban development. The paper presents the results of a research project investigating the fragmented landscape of actors in the city of Munich, Germany. Three research questions guide the empirical work: 1) What does the civic and private sector actors' commitment to the urban development of the city look like? 2) What shared activities and shared spatial and thematic interests potentially bind these actors? 3) What is the correlation between the civic and private sector commitment and the activities of public authorities?*

*The empirical research is based on a quantitative and qualitative content analysis of public communication. The collected data is analysed in respect to actors, spaces and issues. A quantitative network analysis reveals the linkages between the divers range of actors. The results are visualised in maps and diagrams and will be discussed in a focus-group workshop with key actors of the revealed network.*

## 1. Introduction

Urban planning is a social activity, done by people for people. In that kind of people's business a broad range of actors is to be involved and addressed: users, providers, property owners, investors, public authorities, politicians and all kind of other stakeholders in the public, civic or private sphere. From the planner's view, theses different actors can be conceived in a multi-level perspective: Planning actors encompass individual planners, teams of planners and planning organisations. In most cases different planning organisations interact and cooperate in a constellation that is embedded in an institutional context. This multi-layered 'planning world' is part of the 'life world', where the 'arena' of stakeholders, political bodies and decision-makers and the public shape the 'agenda' of planning issues, interests and topics (Förster 2014) (figure 1).

In a very basic understanding, the activity of planning can be conceived as a cycle of different process steps that involve both, the planning and the life world. The planning model of the third generation according to Schönwandt (2002) (Figure 2) incorporates a systemic perspective that purposefully avoids any idea of 'rational planning'. The limitations of perception, reasoning, communication and action are an integral part of that model. From a systemic perspective, system processes and system structures mutually influence one another. Consequently, any planning activity has an effect on the performing actors and the target groups that shall be addressed. Conversely the mind-set, interests, skills and resources, organisational structures and social networks of the actors involved shape the scope of planning actions.

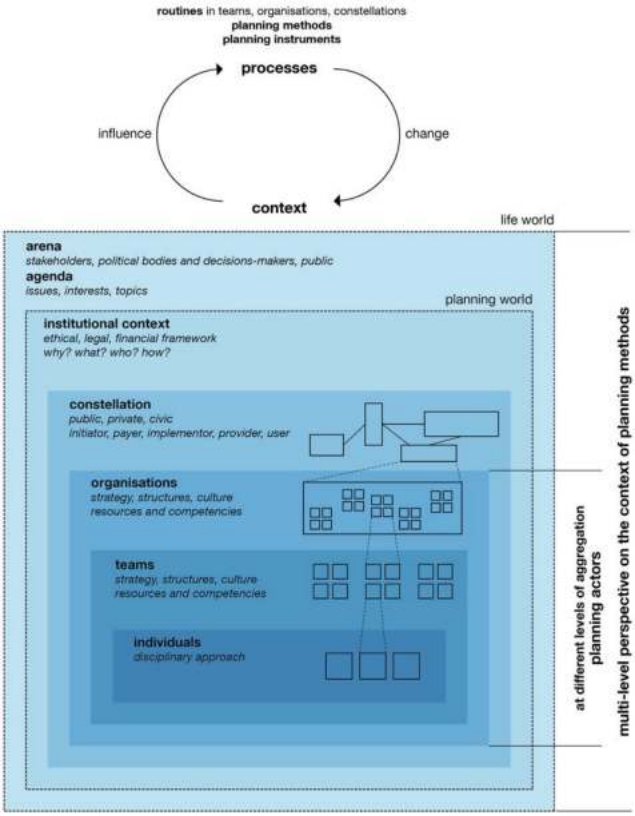


Figure 1. A multi-layer perspective on the actors involved in planning (Förster 2014).

In planning research and practice, big efforts have been undertaken to improve planning techniques and procedures. But there is only little knowledge on the perspective and motivation of the actors involved. Any planning routines, planning methods and planning instruments are only as good as capable and dedicated actors – be they planners, politicians, citizens, users, operators, investors et cetera.

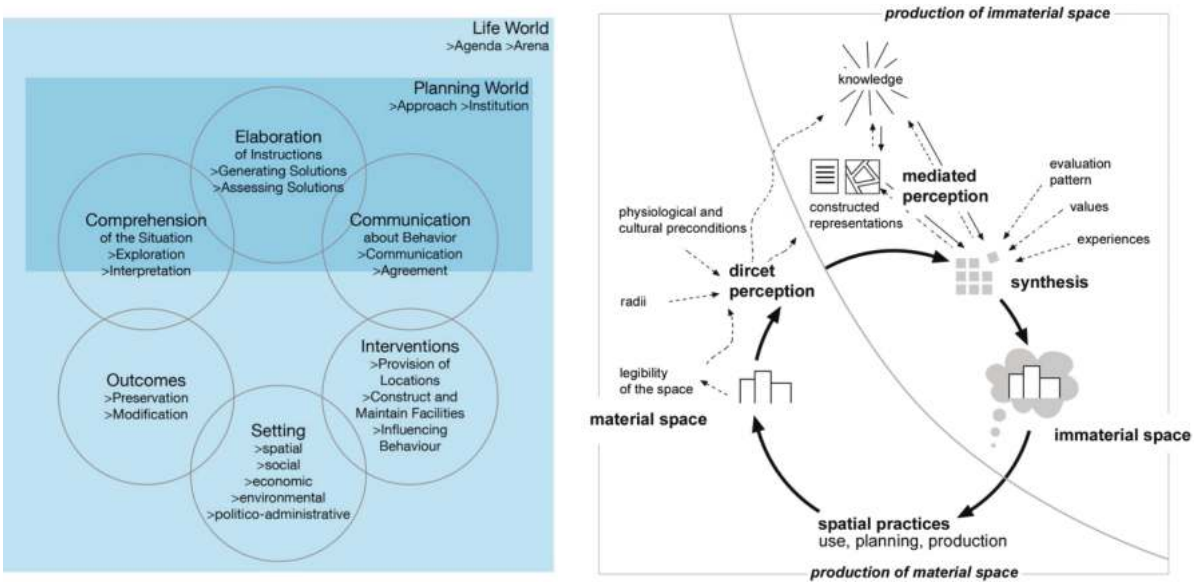


Figure 2. Planning cycle according to Schönwandt (2002) (left)
and Petrin's concept of the production of space (2008) (right).

This paper follows an actor centred research perspective. It focuses on the public commitment and involvement of civic, private and public sector actors in urban development. Specially, the paper

focuses on the public debate on the city – that has to be distinguished from actions taken in the city. From the systemic perspective, planning activities in the city and the way of talking about the city are interrelated. The 'planning cycle' can be interpreted to the circular 'production of space' according to Petrin (2008) (figure 2). The production of immaterial space by perception, mind-sets and discourse prepares the production of material space when spatial practices such as use, planning and production take place. Correspondingly, urban planning is no technical endeavour that can be conceived and implemented according to a target-means matrix but it is inseparably linked to the city and urban society as a whole – and to its public discourse. With the focus on the debate on the city the paper investigates the role – the potentials as well as limitations – of public discussion and reflection on urban development and planning.

In Germany, we see a growing awareness and demand for citizen participation in all kinds of urban and regional planning projects in recent years. Currently planning practitioners and researchers develop and evaluate new participation formats. At the same time, they have to recognize the limitations of activating new target groups to the public debate on urban development – beyond the usual suspects. In the German parliamentary democracy, citizens have only rarely the opportunity to make use of direct democracy instruments. Therefore civic, private and public organisations, associations, clubs and actions groups have an important moderating role in addressing the citizens and in shaping the public opinion.

The involvement and participation of civic and private sector actors in urban development can be understood as a resource for urban development and planning. Relevant actors come from different spheres such as environment protection, trade unions, professional organisations, trade associations, monument protection, education, youth groups et cetera. These very different organised actors show structures of interaction and cooperation that have gradually evolved over time and cannot be reproduced intentionally. These network-like structures serve as a capital for urban development. They facilitate the flow of information and provide for short links and direct communication among a broad range of stakeholders.

**The Munich Case**

'Let's talk about the city!' This appeal could be heard at least 500 times within the last three years in the city of Munich. Invitations to public events were advertised on the Internet as well as in newspapers, flyers or on the radio. The estimated number of events spread by social media or word-of-mouth is much higher. In Munich, we are seeing a lively debate on urban development for many years now. On the one hand, this debate is the result of intended citizen participation around current urban development projects and programmes – planned and implemented by public authorities or private investors. On the other hand, the debate is the expression of publicly articulated comfort as well as discomfort in a continuingly growing and changing city.

The city of Munich is known for an active involvement of citizens in urban planning. The civic association 'Münchner Diskussionsforum für Entwicklungsfragen e.V.' was founded in the 1960s in opposition to the on-going transformation of Munich to a car-friendly city. Since then, the 'Münchner Forum' supports the public debate on current issues of the development of the city. Besides, there is a broad range of other associations and groups that raise their voice to issues of city development and planning. Today, this gradually grown 'landscape of participation' in Munich is facing the challenge of a strong and lasting population and job growth with all the related issues such as transport and social infrastructure, social integration, densification of existing neighbourhoods and enhancement of green areas. When trying to tackle these challenges in the public debate, urgent issues are:

1. How to get an overview over the fragmented landscape of participation?
2. What organised actors support a long-term perspective on urban development – beyond the 'not in my backyard' attitude?
3. How to use that knowledge to build up new coalitions and alliances for change?

This paper presents the intermediate results of an exploratory study investigating the fragmented landscape of actors in the city of Munich, Germany. The paper sets the focus on the empirical work with the methodology applied and the interim findings in respect to actors, spaces and issues. The results raise questions to further research on the 'landscape of participation' in Munich, to the methodological approach and to the implications for theory. With the presentation of an exploratory study in the early phase of a research project, the paper provides a first sketch that inevitably remains incomplete in many facets of theory and methodology.

## 2. Methodology of the empirical study

The aim of the empirical study is to reveal Munich's 'landscape of participation' – that is defined as the public debate on the city including the actors involved with their structures of cooperation as well as the urban spaces, urban issues and urban projects that debate is related to. Three research questions guide the empirical work:

1. What does the civic and private sector actors' commitment to the urban development of the city look like?
2. What shared activities and shared spatial and thematic interests potentially bind these actors?
3. What is the correlation between the civic and private sector commitment and the activities of public authorities?

The empirical research is based on a quantitative and qualitative content analysis of public communication. The starting point is the identification of public events of communication such as panel discussions, workshops, excursions and exhibition events that reflect on the development of the city and region as a whole or on individual spaces, projects or issues within the city. These communicative events are collected ex post from a period of January 2012 to December 2014. In retrospect, all events were included that were detectable from an Internet search. As the personnel resources were limited, the survey was restricted to face-to-face communication and excluded all kinds of communication on the Internet and social media.

With that definition at hand, data was collected in relation to five dimensions of communicative events (figure 3). The first dimension relates to the actors such as initiators, hosts, people taking part in discussions, organisations providing the room for the activity or financing the event. Actors can be distinguished between civic, private and public – they operate as organised actors or individuals. The second dimension points to the format of the communicative event. Third, communicative activities are collected and analysed in relation to current urban development projects in the city. Fourth, the public debate has a spatial dimension when activities relate to distinct areas within the city from a very local to a district scale or beyond. The fifth dimension explores different issues of urban development that are debated on.

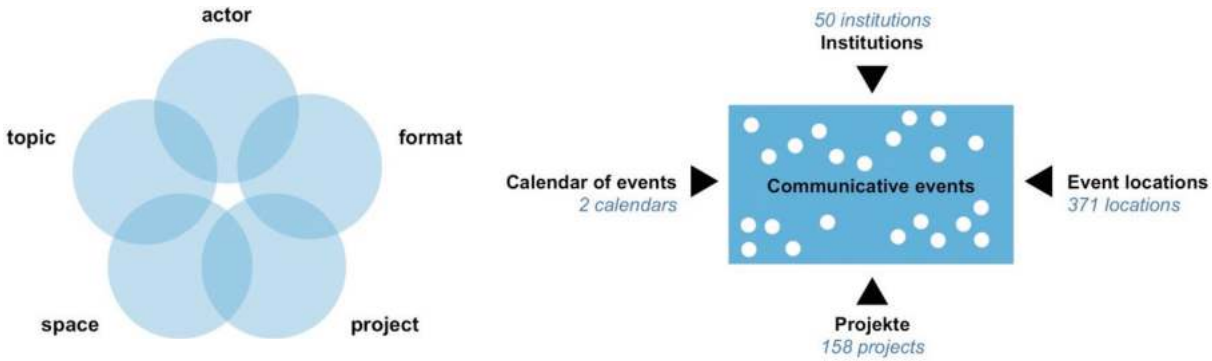


Figure 3. Five dimensions of communicative events (left)
and research strategy for the collection of data (right).

These five dimensions shape the object of investigation and the collected database of this study. The overall population of communicative activities from 2012 to 2014 is unknown. In order to consider as many activities as possible within that time span, the research strategy built upon four perspectives: The internet search started from 50 institutions already known as participants in the public debate, considered 371 event locations, looked for 158 official projects within the city and investigated into two calendars of events (figure 3).

Starting from that basic definition and the research strategy, the first part of the study is based on a quantitative analysis of the collected data. Quantitative analysis is organised in five phases:

1. Basic content analysis to decide whether an activity is taken into consideration or not
2. Profound content analysis of the selected activities and feeding into an Excel database
3. Quantitative analysis in Excel, GIS, Matlab, Gephi and visualisation of the results
4. Qualitative evaluation of the quantitative results
5. Interpretation

The second part of the study was a qualitative focus group workshop. The actors identified in the quantitative research were invited to discuss, validate and complement the intermediate results. Visualisations were a key to stimulate the joint discussion among the participants. The research team got involved in the 'landscape of participation' itself. With the preliminary results at hand, the researchers provoked a lively debate among the participants.

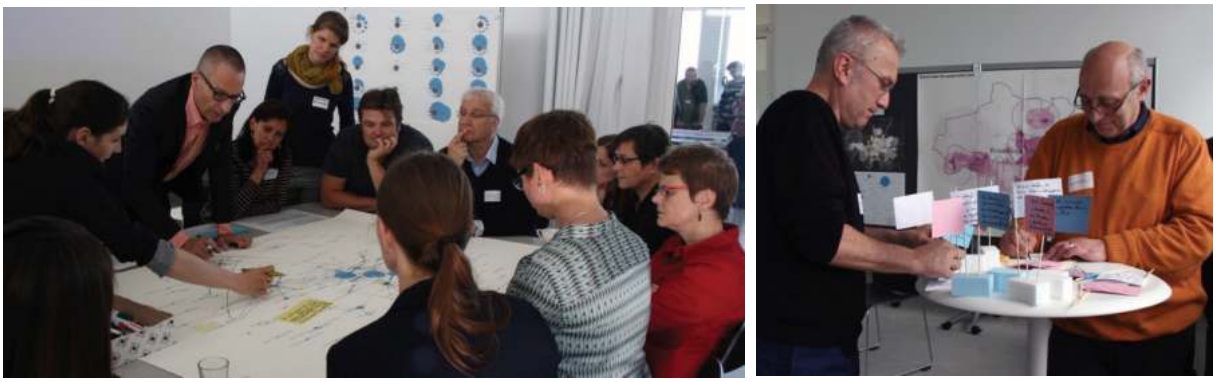

Figure 3. Impressions of the focus-group workshop.

The look back on the last three years of activities was combined with a look into the future. How can the current involvement and commitment of the various actors be used to tackle the challenges of the growing city of Munich? In the workshop research had a positive, enabling effect for the actors involved. They sharpened their awareness for new linkages, synergies and coalitions within Munich's 'landscape of participation'.

## 3. Results

The Internet search identified 510 communicative events within the last three years that were fed into the database. 209 different actors organised these activities. Another 624 actors cooperated in these events as discussion partners, moderators or experts. The formats of the public communication are dominated by public discussions with 34 per cent, followed by excursions with 20 per cent, presentations with 19 per cent and exhibitions events with 13 per cent. Workshops as the most interactive format are applied only in 5 per cent of the events. Civic actors contribute to 49 per cent of all activities, private and public actors each to 34 per cent. More than two third of the communicative activities are not directly linked to a distinct project of urban development. This is equally true for public as well as for civic and private actors. The dataset is further analysed in relation to actors, spaces and topics the public debate points at. The exploratory empirical study focuses on pattern analysis within the quantitative dataset, an approach very different to a representative survey.

### 3.1 Actors

The first focus of the quantitative analysis is related to the actors involved in the public debate. The organising actors can be ranked by their amount of activity (figure 4). This ranking shows three main actors who organized the most of the public events: the municipality of Munich ('Landeshauptstadt München') with its different departments, the adult education centre ('Münchner Volkshochschule GmbH') and the civic association 'Münchner Diskussionsforum für Entwicklungsfragen e.V.'. The remaining actors have a much lower frequency of events.

Figure 4. Ranking of the most active actors.

A quantitative network analysis was applied to the collected database in order to reveal the structures of cooperation and communication of these actors. The actors are represented as nodes. The size of the nodes indicates the number of public events in which the actors took part. In the first step of the network analysis, the joint organisation of a communicative activity is interpreted as an edge between two actors. The thicker the line, the more events were organized by two actors. The network of the 209 organising actors – the 'producers' or 'makers' of the public debate – is shown in figure 5. The second step of the network analysis also incorporates the other 624 cooperating and participating actors (figure 6). In that network, the edges represent a joint participation of two actors in a public event.

The network of the 'makers' of the public debate can be read on three levels (figure 5): On level 1 the three main actors form the central cluster and are connected to each other. Each actor also possesses its own small cluster that links to further actors. The role and position of Munich's adult education centre is the result of the annual programme of 2014/15 with the focus on urban development issues. Despite the large number of organised events, it is rather weakly cross-linked within the network. The adult education centre tends to be a cosmos of its own. Level 2 comprises actors with fewer organized events – such as 'Stiftung Federkiel' or the 'Technische Universität München' – but that still operate close to and well connected to the central cluster. Beyond that, level 3 of the network shows 'satellites' around the central area. On this level we find very small networks of actors jointly organising public events and even actors that are not linked to any other actor at all. So in that network of the 'producers' we observe a tension between the main players in the centre – the 'usual suspects' – and a broad range of further actors that are only loosely or even not connected to that centre.

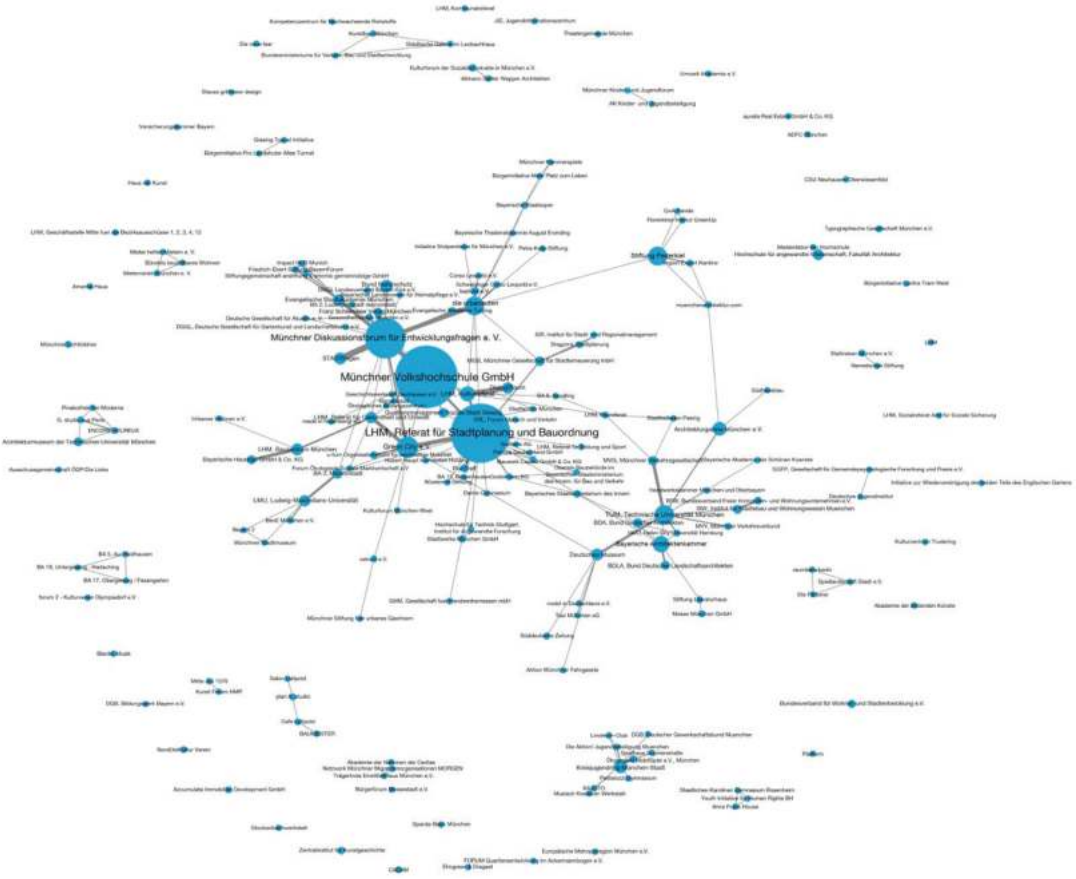


Figure 5. Network analysis of organising actors.

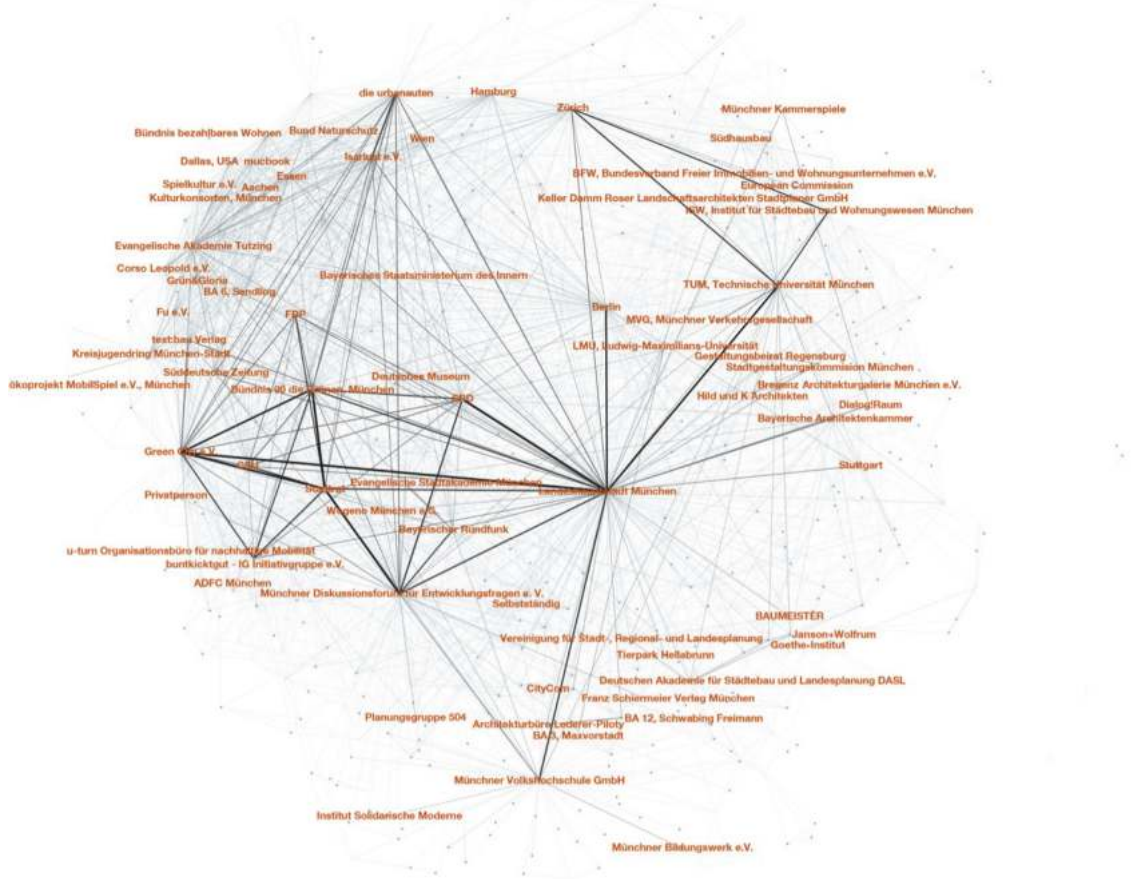


Figure 6. Network analysis of participating actors, strongest connections are highlighted.

In contrast, the network of the cooperating and participating actors shows a very dense structure (figure 6). The participants that join the debate from politics, the media and also from outside Munich connect the different clusters of the organising network. So the different 'makers' of the debate involve the same addressees, be it decision-makers, experts or disseminators. These act as 'connectors' within the 'landscape of participation' and thus have an important role for the exchange of knowledge and the negotiation of different perceptions, concerns and interests.

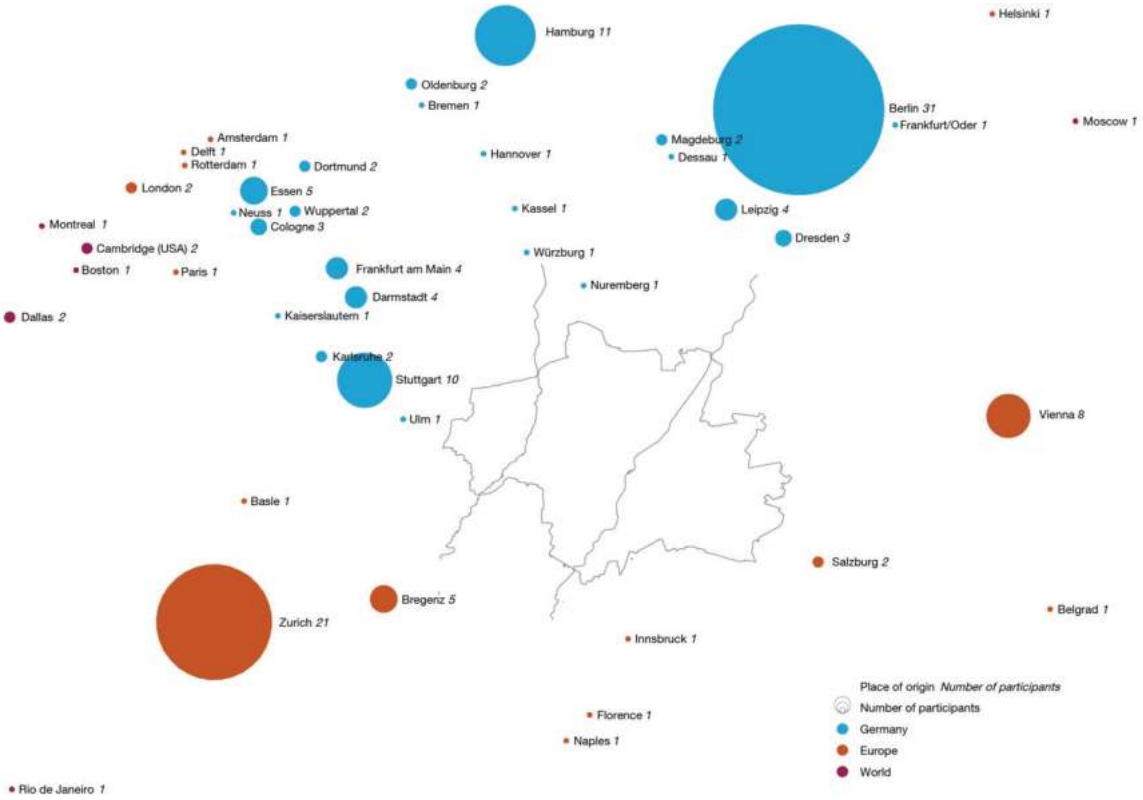


Figure 7. Actors involved in the public debate from outside Munich.

In a further step of the analysis we identified all contributors to the public debate that come from outside the City of Munich. We assume that external input is important for the quality of the dialogue and debate within a city. Otherwise, there is a risk of a 'lock-in' situation in the debate that hinders city planning from further development. The debate in Munich indeed shows a broad range of participants from other cities in Germany, Europe and even from all over the world (figure 7). The main focus of the cross-city exchange is on the city of Berlin as the capital of the Federal Republic of Germany as well as on the neighbouring cities such as Zurich, Stuttgart, Bregenz and Vienna. In the public debate on the city actors in Munich look for expertise and best practices much more frequently within the German-speaking south, southwest and southeast including Switzerland and Austria than in the north and northwest of Germany.

In the focus-group workshop the research team confronted the participants with the results of the quantitative network analysis. It became evident that in many cases the self-perception of the actors differs considerably from the outside perception of the research findings. First, this reaction can be interpreted as the surprise effect when giving a systematic overview on the so far hidden landscape of participation and cooperation. Second, the gap in perception points to limitations in the dataset and analysis. This is the case for the activities of the 25 district committees within the city of Munich. Their regular meetings that are in principle open to the public were intentionally excluded from the research. However, in the self-perception of the political actors, these meetings provide for a constant discussion of local issues on urban development. Another limitation points to the availability of data. The ex post search includes only those communication events with information still available on the

Internet. We have to assume a lot of public events to be advertised by social media or flyers only – all these kinds of events are not represented in the dataset. Third, the difference between self-perception and the revealed 'landscape of participation' might indicate deficiencies in the communication strategy of each actor. This was exactly the discussion that was provoked in the workshop. Each actor began to reflect on its own position within the network and discussed the reasons of the gap in perception.

## 3.2 Spaces

The recorded events of the public debate are further analysed with regard to their spatial dimension. What spaces of the city is the public debate related to? In the public debate on urban development awareness might not be spread equally throughout all districts of the city. There might be hot spots and white spaces of the debate. The debate might even be very general and not point to any specific areas within the city. The spatial dimension of the debate is a key in order to assess the relation between the civic and private sector commitment and the activities of public authorities. It also helps to estimate the relation between the awareness and commitment for overall, strategic issues of the future development of the city and the need for action and implementation in specific urban situations.

In order to capture the spatial dimension of the debate, each communicative event was assessed in terms of the area within the city to which it is related to. The challenge was to map spatial references that in most cases have no administrative borders. Lots of communicative activities point to rather 'emotional' or 'informal' areas of the city that can hardly be described with a fixed outline. The awareness and public debate on these areas often refer to historical identities or emotional neighbourhoods that are hardly comprehensible for an outsider.

From the assessment of the individual event we built up a GIS database that allows for a spatial analysis with regards to actors, topics, formats and projects. This database comprises 120 different spatial shapes as the areas the public debate focused on within the last three years. These shapes refer to different spatial scales within the city. Some of the communicative events point to individual buildings or restricted areas with a definite address. Others refer to whole streets, formal and informal quarters, administrative districts as well as quite fuzzy areas with vague names such as "the edge of the city" or "East of Munich".

The analysis reveals 215 of the 510 identified public events that point to the city as a whole. So there is a large debate on the city without any specific spatial reference. On the one hand, this can be interpreted as broad public interest in urban development beyond individual interests in particular areas. On the other hand, the overall debate might be too general – and maybe also too academic – and therefore miss sensitivity and awareness for distinct spatial situations within the city.

Figure 8 shows the overall spatial pattern of the public debate with reference to distinct areas within the city. The 'creative quarter' is a current urban transformation project that attracts the most public events. The relation between the city of Munich and its region or agglomeration is ranked number two. On the map we find numerous other events with reference to urban projects within the city. In total we recognize a lively debate in the districts adjacent to the inner city. In these areas we often observe spatial transformations processes caused by the constant growth of the city and the enlargement of central functions of the city center. Furthermore these areas have a high share of a long-established population that actively contributes to the public debate. In the north of the inner city we find three areas in close vicinity to one another: the art district, the creative quarter and the Olympic Park with its different facilities. Here, the map reveals potential for new spatial links and synergies in the public debate.

Another spatial focus relates to the Isar river, where a big renaturalization project has been realized within the last 10 years. In the inner city the regain of the riverside – today a car-dominated area – as public space for pedestrians and cyclists is a big issue. The growing city of Munich also shows clearly visible spatial dynamics in the outskirts. In the north, west and east big housing areas are going to be realized within the next 5 to 30 years.

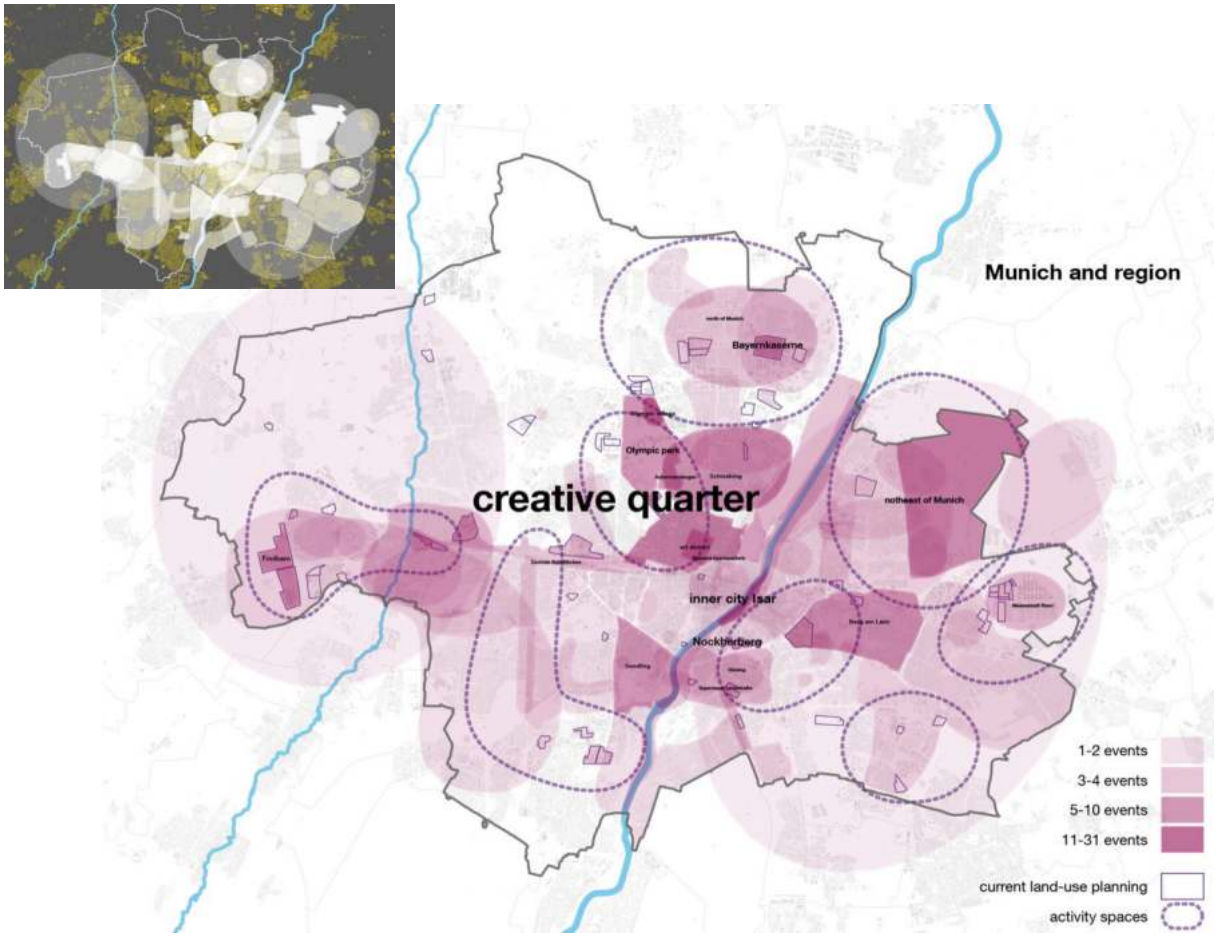


Figure 8. Spatial dimension of the discourse on the city of Munich.
Top left: Spaces that are excluded in the public debate.

The spatial analysis also reveals those areas of the city that are not talked about: the northwest, the south and southeast. These areas were the starting point for the discussion in the workshop: Why are some areas in the city not as interesting as others? Who takes care of the seemingly forgotten parts of the city? Especially in the southern part there seems to be a mismatch between the ongoing dynamics of spatial transformation and the limited awareness in the public debate. In the south, the banana shaped 'activity space' set by the urban development strategy 'Munich Perspective' (Thierstein et al. 2010) is almost empty.

The city of Munich is currently running numerous brownfield development projects of vacant barracks and industrial areas. At the same time, big urban expansion areas are on the way in the west and east. In order to breathe new life into these upcoming city quarters there is a need for constant involvement of civic, private and public actors. Instead, in these areas citizen participation is often limited to individual events. In many cases public awareness and interest get lost in the long-term transformation process. The lack of attention and care in these empty spaces raises the awareness that existing civic, private and public commitment in other areas of the city is an important resource that cannot be reproduced easily. Nevertheless, planners often feel that temporary users, action groups and local associations disturb and slow down city planning.

The participants of the workshop also discussed the relation between the residents' identification with their neighborhood and their readiness and interest to participate in the public debate. In a growing and constantly transforming city, the feeling of belonging is a valuable good – especially for those residents who arrived only recently. In return city planners have to ask themselves what spatial scales shall be addressed in the public debate on the future development of the city in order to draw attention and commitment among the intended actors.

### 3.3 Topics

The quantitative analysis thirdly relates to the topics that are raised in the public debate. Based on the information available on the Internet, the communicative events of the database are analysed in respect to the issues involved. This qualitative content analysis reveals 22 different categories. Most events refer to two or even more categories at the same time. So the different issues of urban development are discussed in close relation to one another. City planning, housing and culture are the most frequently debated topics.

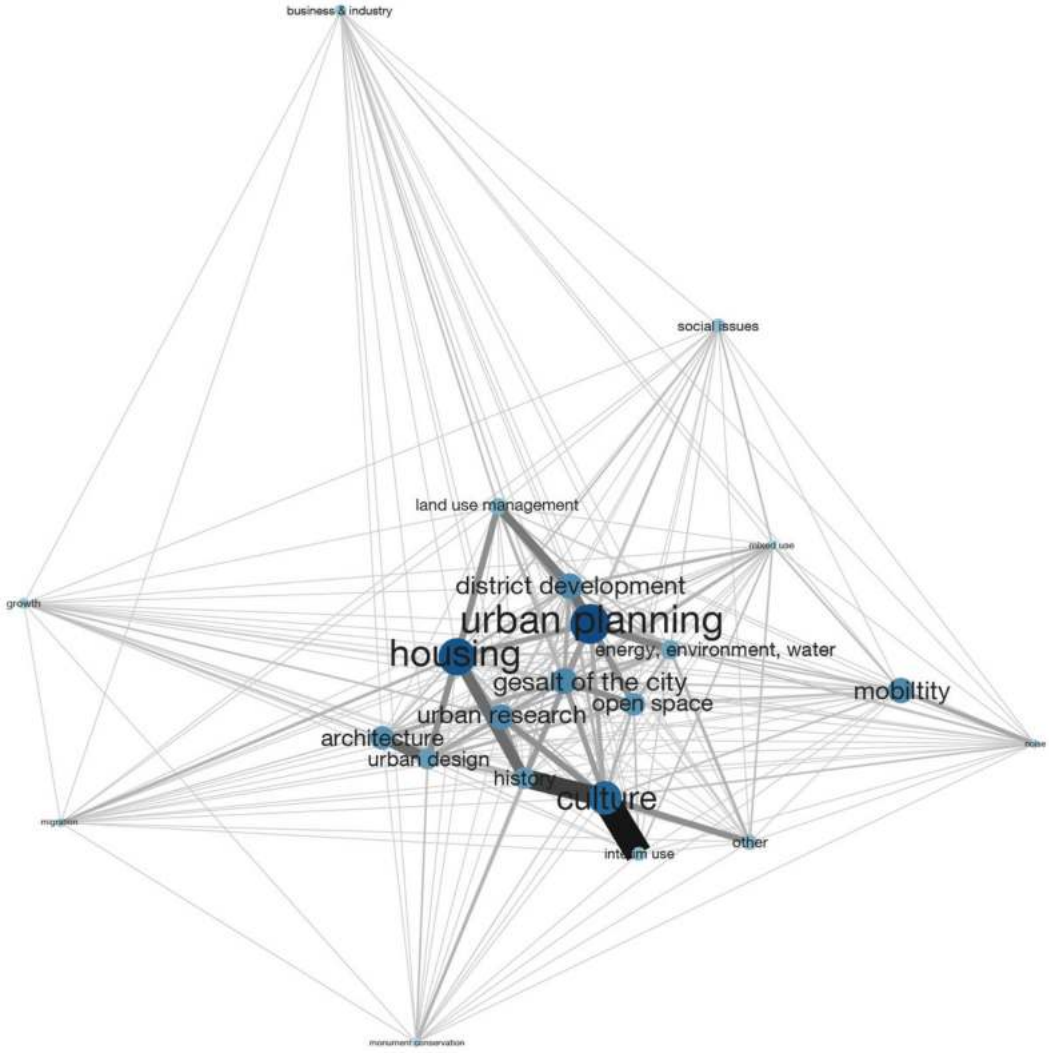


Figure 9. Network of topics talked about.

A quantitative network analysis shows the proximity and distance of the different topics in the public debate (figure 9). The size of the nodes indicates the number of communicative events that deal with a topic. The weight of the edges refers to the amount of events that combine two topics. The network reveals a core of about 12 particularly closely connects issues. The gestalt of the city is placed in the center of that core with an especially high degree of networking. Open spaces show an almost equally central position. So gestalt and open spaces are particularly intensely discussed in relation and dependency to a broad range of other important issues. In contrast functional topics such as mobility, social issues or business and industry are mostly discussed one-by-one. Here, from a thematic point of view, a less integrated perspective dominates the public debate. The rather isolated position within the thematic network is especially critical for the urgent issue of mobility. The development of the transport infrastructure in combination with the changing mobility demand is a crucial topic for the growing city-region of Munich. This issue demands for a debate that also integrates the spatial dimensions of housing and jobs at the spatial scale of the functional city-region.

According to the thematic network, the important issue of culture can be read in two ways. First, there is a strong link to history. This relates – amongst others – to the importance of Munich as a center for art and culture in the beginning of the 20th century that is still present in the self-image of the city today. On the other hand, there is a lively debate on the conditions of contemporary artists and cultural workers that desperately look for available working spaces in the city. Interim uses – so far only marginally offered within the city – are of considerable potential for the promotion of the arts and the creative economy in the Munich region. The analysis of the actors involved in each topic show that the issue of culture has the specific capacity to bind and activate a broad range of different actors beyond the 'usual suspects' (figure 10). The department of arts and culture of the city of Munich only ranks 8 in the list of the most active actors that debate on the issue of culture.

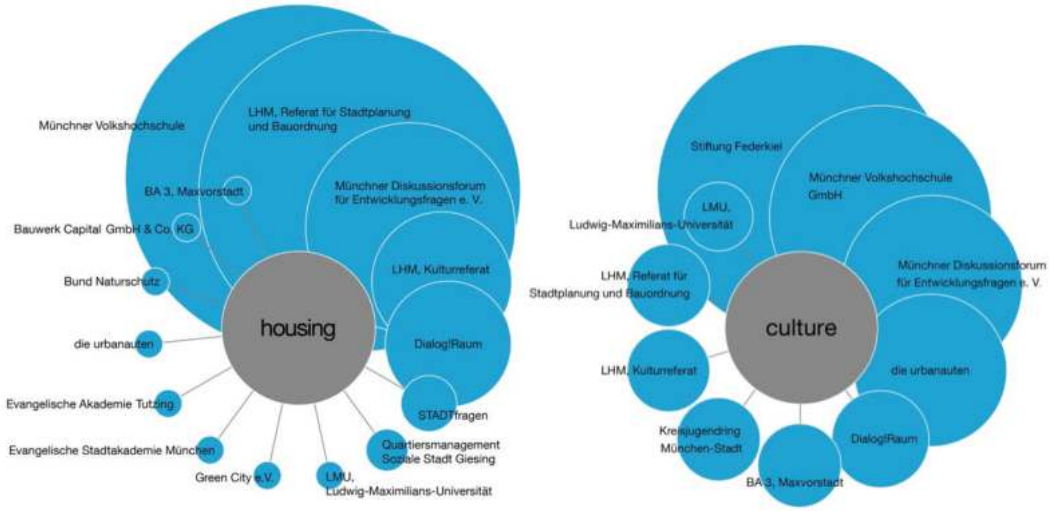


Figure 10. Actors related to topics in the public debate.

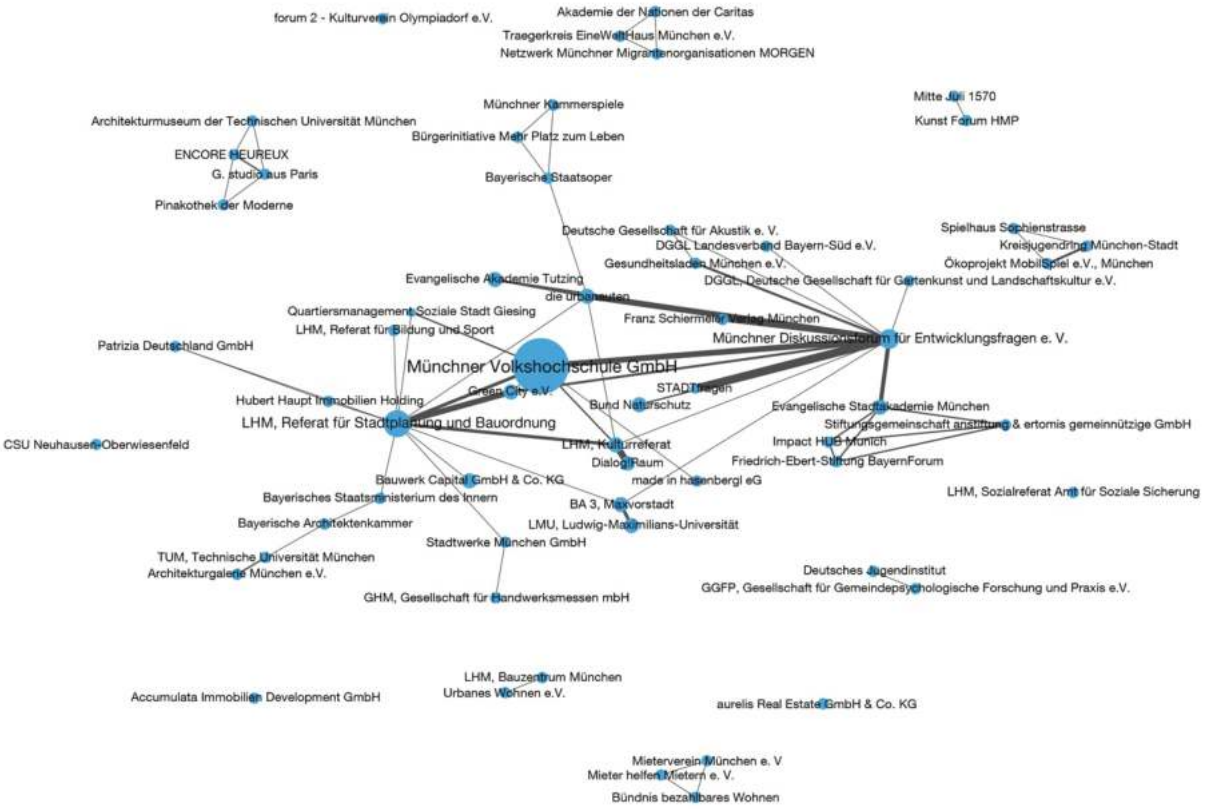


Figure 11. Network of the actors cooperating on housing issues.

The network analysis specifies the cooperation structures of the actors involved in each topic (figure 11 as an example for the housing issue). This analysis reveals very specific constellations of actors that go beyond the general perspective as presented in chapter 3.1. When looking for synergies between the different actors involved in Munich's 'landscape of participation', specific potentials can be drawn for each issue. Moreover, the thematic perspective on the cooperation of the different actors helps to identify issues of urban development that might bring in new actors and perspectives and thus new resources of civic, private and public commitment.

## 4. Conclusions

This paper proposes an actor centred research perspective on urban development and planning. It takes the public debate on the city as a starting point for the investigation of the 'landscape of participation' within a city. The involvement and participation of civic, private and public actors in urban development with their respective network-like structures are regarded as a resource for urban development and planning. From a systemic perspective there are important interdependencies between the public debate on the city and the actions and implementations taken in the city. The paper presents the methodology and intermediate results of an exploratory empirical study on the 'landscape of participation' in the city of Munich. This working paper sketches out preliminary empirical results based on a rough theoretical background. Both theory and the empirical work have to be further elaborated in future research.

**Consequences for the city of Munich**

The city of Munich shows a lively scene of actors involved in the public debate on the future of the city. Within that debate, the quantitative network analysis reveals the dominance of three main actors in the center of the network and a broad range of much smaller networks as well as individual actors in the periphery. These 'satellites' are only loosely connected or even not connected at all to the core of the network. The three main actors include the department of urban planning and building regulation of the city of Munich as well as the initiative 'Münchner Forum' and the adult education center – both receive financial support by the city of Munich. Thus all three key 'makers' of the public debate on the city are directly or indirectly influenced by public interests. The 'Münchner Forum' – founded in the 1960ies – today shows ageing members and the generation change proceeds only slowly. The adult education center of the city of Munich is the biggest of its kind in Germany and offers a highly diversified program for different target groups. Nevertheless it traditionally addresses the – mostly female – middle class over 50-years-old. So one major challenge for the 'landscape of participation' of the city of Munich is: How to expand the core of the network to new target groups? The actors on the periphery of the network already represent these more divers cooperation partners with their respective audience.

The analysis shows, that thematic actor-networks are a key in order to address new partners and audience to the 'landscape of participation'. Culture turns out to be a vehicle for the discussion on the self-image of the city – that also influences other issues of urban development. The study reveals a broad interest in an overall debate on the city beyond distinct projects of city planning. In contrast, functional perspectives such as mobility, social issues or business and industry seem to be rather isolated in the public debate with only few links to other issues. Overall, the discourse is very much dominated by the department of urban planning and building regulation whereas other departments play only a minor role. In order to develop a future perspective for the growing city of Munich, it seems to be crucial to identify new thematic approaches to the public debate – beyond city planning and urban design on the one hand and beyond pure functional approaches on the other hand.

Additionally, die spatial analysis demonstrates a need for the orientation of the public debate towards a spatial scale in between an overall perspective on the city and individual urban projects within the city. The 'activity spaces' identified in the urban development strategy 'Munich Perspective' (Thierstein et al. 2010) provide such a spatial scale that relates to people's everyday home range including living, working and leisure time.

**Conclusion of the general approach of the research**

The empirical study proves the strength of the quantitative research approach in order to give an overview over the so far hidden 'landscape of participation'. Visualisations of the quantitative dataset with diagrams, networks and maps are a key to uncover that landscape and an important starting point for a joint debate with the actors of that landscape.

The combination of three analytical foci with actors, spaces and themes turns out to be a 'magic triangle' for improving the public debate and participation in a city. Additionally it seems to be crucial to link the actor-centered research approach with a spatial perspective on urban development. In the focus-group workshop the spatial dimension of the quantitative analysis with its related visualizations opens an entirely new perspective for most participants. In future research, the spatial analysis should be elaborated further. The spatial footprint of the public debate on the city with its thematic characteristics could be analyzed in relation to social and economic patterns and their related dynamics as well as urban development projects and programs within the city.

The link of the quantitative analysis with the experience and knowledge of the actors involved in the focus-group workshop is a crucial step in the case study. The research team involves itself in the 'landscape of participation'. Research enables the actors to reflect on their position within the public debate and the related actor-network. The confrontation of the self-perception of actors with the outside perception of the research results simulates a lively debate. This methodological approach fosters learning processes among the actors of Munich's 'landscape of participation'. This kind of collective learning is an important premise to develop new synergies and alliances for the growing city and thus go beyond the 'usual suspects'.

**Limitations and need for further research**

The presented case study has an explorative character. There are important limitations of the quantitative approach: The dataset includes only those communication activities that can be detected by an ex post Internet search. All communication events within the last three years that are not documented on the web any more are missing in the analysis. Furthermore the research was restricted to face-to-face communication and deliberately excluded all communication on the Internet and in the social media – even though we know, that this kind of communication is of growing importance for the public debate on the city. The discussion in the workshop revealed that important actors within the city of Munich are systematically ignored in the analysis. These include international companies such as BMW and ADAC as the most important automobile club in Germany. These actors powerfully act behind the public stage but avoid the public 'talking about the city'.

A quantitative network analysis does not inform on power structure on principle. Nevertheless, power structures are crucial when trying to assess the relation between the debate on the city and the actions taken in the city. Beyond the relations of the organized actors, the personal networks of the key players might exert major influence on urban development in Munich. This would demand for an ego-centered network analysis.

From the empirical perspective, the Munich case study calls for further qualitative research – e.g. with interviews and another focus-group workshop – that complement the quantitative findings. Furthermore, this single case study should be embedded in a comparison with further case studies on the 'landscapes of participation' in other cities. A further elaboration of the theoretical framework is necessary in order to answer the question: How does the debate on the city actually influence urban development and planning? The relation between 'talking about the city' and 'acting in the city' has to be conceived in more detail.

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**AESOP 2015, Prague**
TRACK 04: PARTICIPATION AND NEW GOVERNANCE: ETHICS, RESPONSIBILITIES AND COMMITMENTS

# TOWARDS POST-LIBERAL FORMS OF DEMOCRATIC GOVERNANCE?

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Keywords: Governance, democratic theory, Brazil

## Abstract

*Participatory planning has become an ever more common practice in Brazil and many other Latin-American countries, at least in the case of more progressive local governments. Although significant progress has been made regarding the expansion of public participation in local policy making and planning processes, rising discontent can be observed in these countries with – especially young – people occupying streets and public squares, expressing their dissatisfaction with the shortcomings in service provision and infrastructure, as well as with increasing corruption, as recently happened in 2013/14, in the run-up to the Soccer World Cup in Brazil. In spite of an apparently consolidated democratic regime established in the country, deficits of democratic legitimacy are becoming evident in an increasing complex society demanding renewed interactive governance practices able to provide social justice and sustainable development. In this paper, we intend to analyze the potentials of post-liberal theories on democracy (Sørensen & Torfing, 2007), which share the assumption of the insufficiency of representative institutions of liberal democracy for tackling adequately with contemporary challenges, to contribute to the development of new territorial governance approaches able to develop "more inclusive and democratic urban and regional processes", referred to as a crucial governance challenge by the co-chairs of this track. Emphasis will be given to evaluate the capacity of those approaches to incorporate public interests and concerns with public goods in political decision making and planning. The Brazilian case will serve as reference to illustrate the theoretical considerations.*

## 1. Introduction

Liberal democracies have suffered important transformations and faced significant challenges in the last decades. The recent financial, economic and social crisis, environmental and humanitarian disasters as i.e. recently the "refugee crisis" in the Mediterranean, as well as the decay of the urban conditions, primarily in the developing countries, reveal a limited state capacity to deal adequately with such complex multifaceted or wicked problems, whereas growing popular protests, from the so-called Arab Spring, the Occupy Movement, the Spanish "Indignados" to the Brazilian protest from June 2013, indicate deficits of democratic legitimacy in the developed as well as the developing world. "Something is going wrong" (Judt, 2010) according to Tony Judt, for whom we live in an age of progressive insecurity, which not only affects the state's capacity to act, but calls into question social peace itself: "We have entered an age of insecurity – economic insecurity, physical insecurity, political insecurity. ….. Insecurity breeds fear. And fear – fear of change, fear of decline, fear of strangers and an unfamiliar world is - corroding the trust and interdependence on which civil societies rest" (ibid., p.23).

The loss of political legitimacy by state agencies and by liberal-representative democracy, based on an

increasing public discontent with politics and the politicians, and with the fact that a growing part of the population seeks to satisfy its necessities primordially by means of the market (Crouch, 2004, p.9), has resulted in a situation that political reforms are back on the political agenda, in Brazil and other parts of the world.

Though, in the Brazilian case we assist currently a quite blurred, confusing and increasingly explosive situation with militant right-wing groups calling for the return of the military regime, economically threatened middle classes demanding impeachment of President Rousseff and calling for strict clampdown against corruption, at the same time as politically debilitated left-wing activists protest against welfare cuts and the decay of the urban infrastructure and basic public services; and, amongst these quite different social groups manifesting their political discontent, young violence-prone black bloc protesters destroying public equipments and infrastructure and challenging and attacking the state security forces. These kinds of manifestations are symptoms of a decrease of the state's steering capacity and of a decline of democratic legitimacy of prevailing governmental practices.

Besides the recurrent concerns about the possibilities to alleviate poverty and maintain or amplify de progress made in terms of social security, which in the case of Brazil is still very fragile and precarious, and the debates around the conditions for renewed type of developmentalism, in general considered as necessary and desirable to counter the negative effects of neoliberal reforms (Bresser-Pereira, 2015), we are also confronted with a situation of increased transnationalization of economic activities, a growing relevance of supranational structures and processes for national and local politics.

In addition, we are facing diverse menaces of our ecological systems that result from our incapacity to handle politically the challenge of the dilemma of the common goods. Our unsustainable production and consumption patterns generate grave impacts in the long run and produce uncertainties and risks of disasters, being climate change only the most emblematic of theses dilemmas, but having in common that these problems escape the logic of the current political systems of decision-making and of planning practices. Many political questions seem to become politically undecidable.

In such a context of increasing "complexity, dynamics and diversity of modern societies", according to Kooiman, "new forms of diverse, dynamic and complex governance [are needed], which are to be based more on interaction, than on the 'do it alone' attitude of traditional institutions" (Kooiman, 2002, p.78). Thus, neither a return to the models of centralized planning and authoritarian state action of the past, nor a revitalization of the neoliberal policies of fiscal austerity, deregulation, minimal state, privatizations and tax reductions, seem reasonable options in view of the challenges at stake, as all of them proved inadequate to promote sustained development, to reduce the growing gap between rich and poor in society, to preserve nature, and to guarantee good quality of life for all.

Particularly, the sustainability challenge, which requires a radical change in our consumption patterns and an active citizen engagement, makes it unavoidable to rethink more deeply the state-society relations and the organization of the state itself, ascribing a more decisive role to civil society and citizens and, consequently, to the local and regional levels of power in sustainability seeking political strategies.

The institutions of liberal democracy, based on the national territoriality as basic unit of public action, appear to present difficulties in facing such kinds of complex and multifaceted challenges, calling into question not only our development model, but also liberal democracy itself and its capacities to contribute to a development model in line with the principles of sustainability. Therefore, it's about calling into question the preparedness of our current democracy to incorporate the dimension "future" in current decision-making. As Otfried Höffe (2009, p.10) puts it: "people do not only cherish hopes

[that communities assume responsibilities for the future]; but they are right, because this is exactly for what communities are responsible: to ordinate the way humans are living together, and not only in the present, but also giving shape to it related to the future"

While we observe in Brazil the strengthening of a research agenda concerned with how to reconcile state capacities with political or democratic capacities within development strategies, placing emphasis, on the one hand, on the design of institutional arrangements able to produce desired political results (Gomide & Pires (eds.), 2014; Gomide & Pires, 2014), on the other, on the analysis of diverse innovative institutional arrangements that aim at handling with the challenge of sustainability (Abers & Keck, 2006; Jacobi, 2005 e 2006; Frey, 2001), the attempts trying to better understand the interrelations between the dimensions of democracy, development and sustainability are still quite rare, at least in Brazil. And particularly, we are lacking approaches able to incorporate the fact that we face today a strong tendency towards a post-liberal condition, where "the political-democratic capacity, concentrated on the level of the nation state", which from the aftermath of the Second World War until the heights of the social-democratic era still accomplished to control the power of the business interests, as far as these have still been strongly subordinated to the authorities of the nation state, is suffering significant decline due to the transnationalization of political and economic relations (Crouch, 2004, p.17).

In this paper we are proposing to contribute to the ineluctable revisiting of the democracy concept in view of the particular challenges posed by the aspired development *with* sustainability. We are starting with Calame's consideration of a "profound analogy existing between the current governance crisis and the crisis of our models of development" (Calame, 2009, p.22). On that basis, we suggest the necessity to reassess the roles and patterns of interaction between state and civil society, which happen basically in three different ways: by means of traditional mechanisms of political intermediations as political parties, civil society organizations and voting (including plebiscites and referendums); by means of new (in fact, not anymore that new) arenas of intermediation as policy councils, public policy conferences, public budgeting, public hearings etc.; and finally, through means of governance or policy networks, interwoven by structures and practices of participatory democracy. Here our proposal is to go beyond mere representative forms of liberal democracy, reflecting the process of redemocratization and of deepening of democratic practices in Brazil in the last three decades.

Based on the debate on the insufficiency of representative institutions of liberal democracy for tackling adequately with contemporary challenges and on experiences in participatory governance in Brazil, we intend to contribute to the development of new territorial governance approaches and their potentiality to come to "more inclusive and democratic urban and regional processes", and to evaluate the capacity of those approaches to incorporate public interests and concerns with public goods in political decision making and planning processes.

## 2. Theoretical approaches on democracy

The discussion on theoretical approaches on democracy will be done in two stages. First, we start from the assumptions evidenced in the introductory part about the limits of liberal democracy. On the basis of the work of Sørensen and Torfing (2007), we present and discuss different approaches of post-liberal democracy in order to develop a theoretical perspective in line with the requirements of sustainability. In a second step, we propose a realignment of these theories in three groups of strategic arrangements – modernizing, deliberative, and finally, militant or contesting – with the intention to evaluate their appropriateness for imagining possible transformative processes in post-liberal contexts, as well as their implications for thinking sustainable ways of development.

For Sørensen and Torfing (2007, p.234), liberal theories of democracy share the idea of democracy "as a political system in which the members of a territorially defined political community – i.e. a nation state – govern themselves either through direct citizen participation or through the election of representatives". According to them, two types of theories can be distinguished in the liberal tradition of democratic thinking: *aggregative theories*, characterized by principles of equal division of power between citizens and the guarantee of individual liberties; traditional institutions of representative democracies, in that sense, ensure political equality and individual liberty. By contrast, *integrative theories* place emphasis on the common good to be achieved by a rational deliberative process, in order to overcome traditional, merely power-guided forms of political struggle. Democratic institution's purpose lies in developing "a sense of communality and obligation to act in the interest of the common good among the citizens" (ibid, p.235).

Whereas the first group of theories places emphasis on the individual acting in defense of his own particular interests, the second group stresses the importance of community and therefore the role of civil society acting on behalf of the common good. In an analogous manner, we can distinguish models of liberal and republican citizenship, as discussed by Dobson (2009): whereas the former one places emphasis on the protection of individual political rights in view of the State, considered a potential threat to individual liberty; the latter advocates the idea of an active citizen, endowed with civic virtues and with commitment to his citizens obligations and, therefore, acting in favor of the collectivity and the common good as crucial parts of republican citizenship.

Both theories of liberal democracy share the idea of clear separation between the State and society, an assumption which, yet, seems less and less appropriate or viable to be maintained in the post-liberal context. Correspondingly, the recent statement of one of the main Brazilian philosophers Renato Janine Ribeiro (2014) that "good politics in our time […] requires the separation of the public from the private", given with the very understandable worries related to the historical legacy of Brazilian patrimonialism, marked by the appropriation of public resources by private interests, might be called into question due to a growing de-facto interlacement between the state and society and between the public and the private.

This general relational complexification has provoked the emergence of new governance practices and of policy networks which represent special challenges for liberal democracies: "Governance networks represent a threat to democracy because they undermine the borderline between state and society" (Sørensen & Torfing, 2007, p.234). At the same token, environmental risks, which require both changes of our consumption patterns as well as the mobilization of society and its citizens, turn ineluctable the politicization of aspects of social life that traditionally have been ascribed to the private sphere. From an environmental point of view it's becoming decisive society's capacity to expand the concepts of the public sphere and of citizenship itself, as proposed by the conception of ecological citizenship (Dobson, 2009).

In view of these supposing threats to the notion of a liberal democracy, characterized fundamentally by the strict separation between State and society, new theories of democracy has appeared, designated by Sørensen and Torfing as post-liberal democratic theories. Those not only accept the new opacity that characterizes the relation between State and society as given and recognize the limits of the nation state as primordial or exclusive arena of democracy and the exercise of citizenship, but they also seek new constructive theoretical paths to think the possibility of new, more daring, democratic practices of participation in public policies and planning, based precisely on governance networks, pinning hope on "governance-driven democratization (Warren, 2009). "Hence, post-liberal theories of democracy search for new perceptions of democracy, and new institutions of democracy that do not take the existence of a well-defined homogenous nation-state and a sharp demarcation between state and

society as their starting point" (Sørensen & Torfing, 2007, p.236).

This means that we are in a situation where it is essential to revisit democratic theory considering the inevitability of intensified interaction between the State and society, as well as of improved institutional and procedural articulation between different scales and levels, from the global to the local. This need of increased articulation refers most notably to the intermediate scales, which generally are badly served by representative institutions. This is the case on the regional scale, between the local level of the municipality and the state level, after all in metropolitan regions where competitive relations used to hinder effective cooperation; but also between the state and the national level, where we very often lack a reasonable interstate cooperation. This has became recently very evident in Brazil where we face intense interstate and intermunicipal conflicts around the use of the scarce water resources. Yet, similar problems of lack of horizontal cooperation we find on the international level where conflicts around resources in a context of increasing scarcity tend to sharpen conflictive relations; and finally, on the global scale where the weak institutionality hinders arriving at reasonable agreements about global environmental problems.

Sørensen and Torfing (2007) distinguish the following four theoretical approaches to post-liberal democracies:

## 2.1 Competitive democracy

This theoretical approach aims at reformulating the concept of competitive democracy, based on elite domination, in accordance with Max Weber, however, having as its main representative Joseph A. Schumpeter (1950). For him democracy can be understood, basically, as a method to select political leaders and therefore as a means to regulate the struggle for political power between interest maximizing individuals: "the democratic method is the institutional order to arrive at political decision where individuals acquire decision-making power by means of competitive struggle for popular vote" (Schumpeter, 1950, p.428).

However, authors like Eva Etzioni-Halevy[1] reject the idea that it's possible to bring forward these kinds of struggles within the representative institutions of liberal democracy. She instead places emphasis on the central role exercised by sub-elites or semi-publics in order to balance the power relations between elites. Social movements and other societal agents are acting in a gray zone between the public and the private sphere, endowed with capacity to exercise social control over dominant elites between elections. Though, according to Etzioni-Halevy, citizens can overtake an active role in public policies, without becoming themselves political elites. So within the overall Schumpeterian framework of a competitive or realistic form of democracy they envisage democratic gains in the post-liberal contexts due to the emergence of counter-elites and to extent that the traditional elites loose part of their previous predominant role in the political society.

Still embedded in an overall competitive framework, Paul Hirst (2000) highlights the role of voluntary, self-regulated associations, within a radically decentralized administration, which favors a "competition between providers and consumer choice – without making service access so dependent on the ability to pay" (Hirst, 2000, p.29). In accordance to Sørensen's and Torfing's interpretation of the Hirst proposal, it's the state, who tends to define "the overall political goals and financial frames (...), while the task of the associations will be to produce public services in competition with one another" (Sørensen & Torfing, 2007, p.238). Of fundamental importance are the mediating consociational institutions engaged in promoting a process of negotiated governance aiming to

[1] Etzioni-Halevy, Eva. The Elite Connection: Problems and Potential of Western Democracy. Polity, 1993.

establish consensuses, and balancing power relations between the different hierarchical levels, without eliminating competition, contestation and coordination, considered crucial elements of the model.

However, this approach, despite taken as given a competitive institutional environment, establishes an important distance and a clear distinction, by pinning hope on the "pressure for democratization in the wider society" and a "radical administrative decentralization, removing tasks from central, local, and quango governments" (Hirst, 2000, p.29). Notwithstanding, and particularly when we take into account the traditions of oligarchical power relations in many developing countries, new questions arise in this context about the possibilities of a real democratization of such "organizational society", which under such circumstances could easily invigorate already existing elitist patterns of exercise of power.

## 2.2 Outcome democracy

The "empowered participatory governance" approach of Fung/Wright (2001; 2003)[2] is inspired by Jürgen Habermas' deliberative model of democracy, at least in the sense that institutional arrangements should favor an effective exchange of arguments, even so the authors adopt a much more pragmatic attitude, by stressing that the quality of democracy depends much more "on its ability to produce desired outcomes through various forms of coordination" (Sørensen & Torfing, 2007, p.239), more than on the democratic legitimacy of political decision makers. The three guiding lines of the proposal comprise, first, the idea that institutions should be designed with the primordial objective to solve concrete problems, in order to handle quite practical aspects in situations that affect people's normal course of life; second, that participation should be constructed from the bottom upwards, considering particularly the "stakeholders" considered relevant for decision-making, upwards to the public authorities; and third, that there should occur effective power sharing in order to guarantee mutual respect between the participants and a deliberative way of problem-solving. Habermas' influence becomes evident in the expectation that deliberation and balanced negotiation are supposed to contribute to the achievement of consensus and to avoid the eruption of conflicts. Hence, whereas Habermas' model conceives deliberative democracy as something quite demanding in terms of the necessary communicative competences from part of the involved subjects, Fung e Wright (2001, p.7) pin their hope on the "energy and influence of ordinary people, often drawn from the lowest strata of society in the solution of problems that plague them". The democratic ideal they defend is output-oriented in the sense that its fundamental *raison d'être* consists in "ensuring that all citizens benefit from the nation's wealth" (ibid., p.5).

Similarly output-oriented is the democratic theory of Iris Marion Young (2000)[3]. She relates democratic quality to the characteristics of political processes, considering them appropriate only in so far as they are qualified to produce just solutions. For her, there does not exist anything like a "common good". Hence, the only way to identify if the results of democratic processes can be considered just consists in verifying if the procedural arrangement and structure favors the possibility of fair negotiational interaction. That's why it is essential to create democratic institutions and procedures able to produce just results for those citizens affected by the decisions. In order to ensure procedural justice, conditions of equality and non-domination as well as the stimulation of continuous interaction have been guaranteed in the deliberative processes; and they have to be guided by the general principle of reasonability. However, Young does not ignore the imminent empirical risks of exclusion of voices and of lack of transparency and procedural publicity, risks that have to be explicitly opposed and minimized.

[2] Fung, A.; Wright, E. O. (eds.) (2003). Deepening Democracy: Institutional Innovations in Empowered Participatory Governance. London: Verso.
[3] Iris Marion Young. Inclusion and Democracy, New York: Oxford UP, 2000.

In another work, Young (2001) criticizes the concept of deliberative democracy as defended by Michael Walzer and Jürgen Habermas, as far as they, as she puts it, presuppose unity as a condition for deliberation, that is, as something preexistent in society (Walzer), and therefore democratic practice can be interpreted as an ongoing process to "restore an interrupted consensus" (Young, 2001, p. 374). And even in the cases of authors that conceive "the unity not as starting point, but as the aim of political dialogue (ibid.:375), Young notices unity-guided democratic discussion, and in the common appeal for seeking the "common good", which these approaches usually share, the risk to entail mechanisms of exclusion. She proposed, on the contrary, a form of communicative democracy sensitive to the huge cultural differences and social segmentations that characterize contemporary societies. Difference should not be envisaged as something to overcome, but rather as an important resource, which has to be democratically valued. For her the necessary minimal unity of a communicative democracy consists rather in three basic conditions: significant interdependency, formally equal respect, and concerted procedures" (ibid., p.376-7). "Such a theory of democracy requires a broad and plural conception of communication, which includes the expression and extension of common understandings, where they exist, and the offering and recognition of meaning that is not shared" (ibid., p.386), paving the path to the agonistic theory of democracy which will be addressed further down in this article.

## 2.3 Community democracy

The model of a community democracy maintains relations with the integrative theories of liberal democracy, in so far as it places emphasis on the collective dimension proper to communities and in detriment to individual interest. Public discourse is seen as main mechanism of integration: "In a democratic society citizens are linked together by open dialogue and public debate taking departure from a shared sense of connectedness and collective identification" (Sørensen & Torfing, 2007, p.241). Community democracy derives from the criticism of competitive or economic democracy, which "ignores the centrality of a bourgeois-humanist tradition: that any form of free (non-despotic) government demands a strong identification from part of the citizens" (Taylor, 2002, p.15); apart from necessity of "a strong sense of belonging to the political community, shared by all" (ibid., p.31).

Thus, although, in accordance to Taylor (ibid, p.21), the first democratic condition is "*unity*", he even so sustains that the state is not anymore in conditions to play this unifying role of ensuring group identification, i.e. "(the) identification that defines the group of individuals that belong to a given polis" (Sørensen & Torfing, 2007, p.241). Therefore, it's up to the modern democratic society to define its collective identity, "a difficult and never to accomplish task" (Taylor, 2002, p.33). The demands for the members of a community are consequently quite high, as the citizens have to act in different contexts and scales, from the local level of the neighborhood to the global, where he is supposed to engage in discussing and solving planetary problems. According to Michael Sandel (1996[4], apud, Sørensen & Torfing, 2007, p.242), "such a politics requires citizens who can think and act as multi-situated selves. The civic virtue of our time is the capacity to negotiate our way among the sometimes overlapping, sometimes conflicting obligations that claim us, and to live with the tensions to which multiple loyalties give rise".

Thus, the main challenge consists in the construction of democratic institutions able to promote a process of constructing collective identities and orientations in a context of growing identity fragmentation and diversification. In accordance to Sandel and March/Olsen[5], it becomes crucial the

[4] Sandel, Michael J. Democracy's Discontent. America in Search of a Public Philosophy. Cambridge: Harvard University Press, 1996.
[5] March, James G.; Olsen, Johan P. Democratic Governance, New York: Free Press, 1995.

dissemination of "reasoned debate (that) leads to the construction of shared stories of past, present and future that render meaningful collective behaviour possible" (Sørensen & Torfing, 2007, p.242). By means of such narratives democratic rules and norms are constructed, as well as "logics of appropriateness in and between political communities" (ibid.). Thus, it's up to democratic institutions to contribute to the establishment of bridges between political identities, narratives and communities, creating conditions of political and democratic citizen empowerment. The risks related to such kind of approach is related to the possible exclusion of identities and minority groups from such dialogues, that some become empowered, whereas others end up disempowered, withdrawing from the public sphere and from collective dialogue; that is, there are risks of a relapse to traditional community practices, more hierarchized, insensible or ignorant towards diversity and towards social and cultural minorities. Difference, thus, should not be envisaged as something menacing community, but rather as a "welcome addition" (Taylor, 2002, p.42), which enriches the community itself: "We are intended to understand each other, and this mutual understanding is growth and fulfillment" (ibid., p.44).

## 2.4 Agonistic democracy

Agonistic democracy turns against consensus-oriented approaches, which often ignore, from this perspective, the existence and centrality that political conflicts play in the advancement of democracy. It combines a democratic perspective of conflicts with a cultural understanding of the nature of human action. Instead of transforming enemies in comrades (consociational model), advocates of an agonistic model of democracy as Chantal Mouffe[6] and William E. Connolly[7]), defend the pursuit of institutional arrangements and political practices which provide legitimate forms of expression for such conflicts, and that allow for an emotional confrontation, open to diverse groups with different identities, ideas and interests. For Mouffe (2006, p.173), antagonism has an ineradicable character, whereas liberal democracy had neglected the decisive role of political discourse in politics. This discursive power shapes the identity of actors, their worldview and the scope of legitimate action and, thus, has to be regulated democratically. The approach likewise turns against competitive democracy insofar as it contests the idea that political agents are basically moved by rational cost-benefit calculations, and instead stresses that "politics consists of battles between competing discursive images of society, its borders, and the identity of those inhabiting it" (Sørensen & Torfing, 2007, p.244). The main task of democratic institutions therefore consists in "transforming antagonistic friend-enemy relations into agonistic relations, whereby people disagree on substantial and procedural issues but respect one another's right to voice dissimilar opinions" (ibid.).

Albeit recognizing the centrality of political conflicts, agonistic theory places emphasis in negotiation, as this compels hostile actors to communicate, and by that way, getting a more nuanced comprehension of the other, bearing therefore resemblance to Young's communicative democracy. Connolly, in a recent book, highlights "heightened patterns of sensitivity", "the creative element in social movements and democracy", associated to a "politics of democratic activism situated on several sites" (Connolly, 2013, pos. 416 e 484), as essential aspects to counter "neoliberal fantasies". Emphasis is given to the emotional confrontation of adversaries – groups with different identities, ideas and interests – what determines the possibility to reach "conflictive consensuses" (Mouffe 2007, p.69).

Notwithstanding the similarities to Young's proposal regarding the expectations related to deliberative and communicative processes, the main difference of the "agonistic perspective" consists in the expectation regarding the possibility of "a profound change of existing power relations and the

[6] Mouffe, Chantal. The Return of the Political. London – New York: Verso, 1993;
_____. The Democratic Paradox. London – New York: Verso, 2000; ver também: Mouffe (2007).
[7] Connolly, William E. The Ethos of Pluralization. Minneapolis: University of Minnesota Press

creation of a new hegemony" (ibid, p.70). In conditions of high conflict potential, the best protection against totalitarism would be the recognition of the political and contingent character of the common good. Hence, agonistic democracy advocates the repoliticization of democratic decision-making processes. The limitations of this approach might be more related to the maintenance of such agonistic situations – always bound to given conflict situations – whereas an unduly conflict aggravation could imply in the return of antagonistic "friend-enemy" relations, bringing about further destabilization and augmented societal violence, as for instance recently witnessed in Brazil. By contrast, there could also occur a transformation of such agonistic disputes "into rational technocratic problem-solving discourses that evaporate any chances of democratic contestation from competing discourses" (Sørensen & Torfing, 2007, p.245).

## 2.5 Comparing the theoretical approaches

This very brief revision of some of the approaches of post-liberal democratic theories, based to a large extent on the proposal of Sørensen and Torfing (2007), represent a first attempt to systematize theoretically these different approaches in order to guide our reflections about the democratic conditions of development processes aligned with the principles of sustainability. Albeit a quite significant range of differences and divergences identified in these theoretical concepts of democracy, there are likewise several overlaps and possible approximations which allow to establish a dialogue between these theories, making the interfaces between them possibly the most interesting aspect of such a conceptual confrontation.

Despite a clear emphasis on the calculist dimension of both the competitive and the outcome or substantive democracy – the latter maybe to a minor degree – cultural aspects cannot be totally neglected as there is evidence that the ideological discourses influence the structure of interests of the involved agents, the sub-elites (Etzioni-Halevy) or the collective organizations of society (Hirst). The competitive democracy, on the other hand, is also related to "*outcome democracy*", once the main argument Schumpeters in favor of competition within the political realm – therefore its characterization as economic theory of democracy – was precisely its alleged superior efficiency in generating results, that is, in promoting governability (Lenk, 1972, p.40).

With regard to *outcome democracy*, it is also obvious that the capacity to create desired results (Fung & Wright) by means of cooperation depends in turn upon cultural conditions, the dominant discourses in society, and upon the values disseminated by those discourses. By the same token, the negotiation about how to understand justice in the realm of communicative democracy and the development of a sensitive capacity concerning differences and the other (Young), depend on an intercultural approximation which requires more than rationalization, but rather involves capacity of empathy and thus cultural transformation.

Correspondingly, more culturalist theories do not reject completely the question of interests, rather they understand them as being part of the cultural dimension. It seems quite reasonable to assume that in societies of a more individualist culture – we can take as example the Anglo-Saxon cultures – calculist rationality has a major weight in politics; and certainly it's not mere coincidence that the theories of rational choice gained more followers and dissemination in this cultural context, whereas in more collectivist cultures, the cultural particularities of each nation or community should have a greater explanatory force to understand the dynamics and characteristics of political processes. Hence, agonistic democracy does not ignore the importance of negotiation and, consequently, the possibilities of reason in politics. The maintenance of continuous discursive contestation and the struggle for an alternative hegemony might inclusively derive from rational and conscious considerations, above all in heterogeneous societies, from part of minority sectors or from those sectors at the lowest level of the

social pyramid, insofar as such an emotional confrontation might be considered the most effective and maybe the only way to achieve their instrumental goals.

At the same token, the adherents of community democracy might recognize the need to resort to arguments of an instrumental and interest-oriented rationality, inasmuch as the set of values that assumingly unites the community turns out too fragile and civic virtues not sufficiently developed in order to achieve the desired consensuses. The *individual interest properly understood*, in the terms of Tocqueville, seems to provide an adequate basis for reconciling individual interests with collective interests or goods.

## 3. Strategic approaches of democratic sustainable governance

In view of such complex interrelations we want to suggest a distinct typology which considers specifically the challenges of sustainable development and which therefore starts from three different strategic approaches of democratic governance aiming at sustainability, that is, three possible paths to sustainability under democratic conditions, all of them attempting to avoid the authoritarian path for sustainability as conceived by authors like Ophuls (1977) with his conceptions on ecological authoritarianism.

The first proposal, more aligned to the *status quo*, and certainly the hegemonic model in contemporary democracies, we could denominate as of democratic-ecological modernization. This approach originates from liberal democracy and from the principle of instrumental rationality, but assumes elements of competitive post-liberal democracy, by valuing the involvement of new sub-elites (Etzioni-Halevy), whether they are representatives of universities or generally from civil society, or representatives from the productive sector. The knowledge and resources such actors potentially contribute with, as well as the influence they exert are seen as crucial to attain democratic-ecological modernization in view of the challenges of sustainable development. The approach incorporates also elements of deliberative democracy, the negotiation of consensuses, at least inasmuch as they do not contest the structural fundaments of capitalism and representative democracy. These are considered the pillars of progress and development. In the field of sustainability, this position corresponds to what Lee (2006) dominated as classical environmentalism, put into practice with relative success in the developed countries. The emphasis is placed on the advancement of "technological solutions and mitigations that permit the economic activities to be continued, while avoiding or limiting the damage to humans and ecosystems" (Lee, 2006, p.15). Thus, the mitigation of such local environmental problems is directly related to the enhancement of wealth in those countries (Lee, 2007, p.13) and does not call into question the foundations and the basic guiding principles of contemporary capitalism. Concerning global ecological problems, it is yet a limited strategy as it does not allow thinking in solutions for the transformation of our current predatory and unsustainable lifestyle.

In accordance to Jänicke (2001): "the concept [of ecological modernization] describes, in its original version, the huge segment of possible environmental improvements which could be achieved by technological progress going beyond end-of-pipe approaches, but without involving more far-reaching structural solutions". In contrast, the two other approaches aim at structural changes of the existing system, considering the current political and economic systems limited for facing the challenges of sustainable development, thus adopting a more radical perspective of "strong sustainability"[8]. Such a

[8] From an ecological perspective, "strong sustainability" is usually understood as the need of "keeping natural capital stocks intact over time", whereas "weak sustainability would require keeping intact the environmental functions of the natural capital, both human and natural. With weak sustainability, future generations would just need to inherit the same productive functions of a particular exhaustible resource, but not the resource itself" (Vojnovic, 2014, p.534). Compare hereto also Rydin (2008, p.583), who calls attention that within the notion of weak sustainability prevails the idea of "unlimited possibilities for compensating for environmental costs or losses through economic growth. Investment in other forms of physical and indeed human capital can be

more radical approach is considered inevitable for guiding the restructuration of the economic system and bringing it in line with the requirements of a sustainable future.

A crucial difference between the two transformational approaches is that the first one, that we might call dialogic-consensualist, places emphasis on the possibility of qualitative enhancement of political negotiation and decision-making processes by means of participatory and inclusive institutional arrangements. It aims at creating new procedures, which are open, transparent and facilitative, in order to establish an effective democratic process where different visions encounter space of expression, and to provide consensuses and agreements, and thereby respecting the differences and diverse perceptions of their co-citizens and of future generations. Thus, it is understood as transformation pushed forward by the social forces themselves, a process that comes into being internally, that counts on humanity's rational capacity of negotiation, but that doesn't exclude emotion as a rational and fundamental resource in seeking the common good. The approach differs from the approach of democratic-ecological modernization, by considering in its perspective the possible and necessary transformation of the socio-economic systems in view of the recognition of the limits of both capitalism and contemporary democracy. As the presence of nature and of future generations is impossible at the table of negotiations, the institutional arrangements have to ensure de effective presence of their legitimate demands by means of "negative coordination" (Scharpf, 1992, p.2), for instance, by intermediation of environmental movements supposed to assume ecological demands in deliberative processes.

Hence, emphasis is given to the overcoming of conflicts, nourished by the approaches of substantive and community democracy, but above all is part of the movement of the "deliberative turn", which from the 1990s onwards gained strength within democratic theory as a concept that aims "processes of judgment and preference formation and transformation within informed, respectful, and competent dialogue" (Dryzek, 2010, p.3). According to Young, it foresees the incorporation of the dimension of justice or, applied to ecological sustainability, of ecological justice, being thus in line with Dobson's concept of ecological citizenship (Dobson, 2007). The notion of ecological citizenship articulates the dimensions of interests and values. This extended concept of citizenship can be considered a promising mechanism to guide negotiation processes able to supplant habitual processes moved only by particular interests by the institution of new practices for the incorporation of common goods and of the interests of future generations or, within a less homocentric perspective, of the rights of nature itself. In this sense, the deliberative approach nourishes hopes related to the possibilities of our political systems to achieve, by means of dialogical discourse and supported by the principle of reasonability, overcoming our traditional anthropocentric view and substituting our predominant ethic of the presence through an ethic of the future, as conceived by Hans Jonas (1984) in his "principle of responsibility".

The third approach, that I denominated a strategy of conflictive-contesting or disputatious transformation turns out to be quite skeptical concerning the dialogic-consensualist perspective with its beliefs in rational consensuses, dialogically agreed, which at the same time should be able to transform substantially restrictive structural hierarchies. Within this disputatious perspective, the overcoming of socio-ecological conflicts requires necessarily an emotional and competitive confrontation, the building of counter-powers able to promote alternative hegemonic proposals. Though this substitution of the hegemonic model by a counter-hegemonic model must not occur by revolutionary means, but it's perceived as the result of processes of conflictive negotiation, of

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used to trade off environmental degradation. Thus, development in a rare ecological habitat can be compensated through creating other habitats or nature conservation features elsewhere". Here I adopt these concepts less focusing on its strict ecological meaning, but rather in a strategic perspective distinguishing strategies that aim basically to remediate and mitigate development-conditioned environmental problems (weak sustainability), from those strategies that intend to face and combat the structural contradictions of the political and democratic system, as well as the economic system of contemporary hyper-capitalism (strong sustainability), aiming thus to overcome the current predatory and unsustainable development path.

emotionally conducted confrontation, even though it involves processes of convincing, seeking favorable political conditions for the implantation of a counter-hegemony.

This proposal is definitely more aligned with the agonistic perspective, but finds likewise support in competitive democracy, in the idea of the importance of sub-elites, or counter-elites, or of civil society organizations, whose role should be considered crucial for the advancement of counter-models or of a different hegemony of development, in the same way as the principles of environmental justice and the empowerment of minority groups (outcome democracy) and the valuing of multiple identities and values (community democracy), have major relevance in seeking new democratic hegemonies.

In terms of citizenship, contesting concepts seem to arrive at restrictive dilemmas insofar as citizenship "in its primordial and basic sense, [...] implies in living in a nation state and having a commitment with it, with the rights and obligations considered appropriate in this particular system". It's expected a significant degree of identification and engagement of the citizen in his community: "it's expected that the citizen is taking part in the culture, which generally is supposed to be proper of the community" (Heater, 2007, p.262).

Proposals as Holston's "insurgent citizenship" (Holston, 2009 e 2013) are incompatible with the conception of liberal republican citizenship as it places emphasis in the daily struggle of survival and for a decent life in the peripheries of our huge metropolises. The exercise of such an insurgent citizenship appear in "circumstances of degradation and peripheries" (Holston, 2009, p.247), that is, it's related to a struggle seeking the right for the city, focusing on the locality, but evidencing limits in view of the necessity to think the multiple scales, which have to be considered by contemporary concepts of citizenship (Dobson, 2007; Heater, 2007).

A contesting form of citizenship that comprises the fundaments of ecological citizenship, has to recognize the historical condition of citizenship, which "in its origin, and, without any doubt, during the main part of its history, was basically the hallmark of an elite" (H, 2007, p.260), and therefore should value the growing extra-institutional struggles of local movements as well as the new patterns of mobilization from the part of the social and popular movements, more and more interconnected by new technologies. These act frequently at the margin of traditional civic spaces, or at the interface between the state and society, in different scales, from the local to the global, oscillating, as Scherer-Warren (2006) puts it, between collaboration with state agencies in formulating and implementing public policies, and the exercise of autonomous pressure on state structures.

"Building networks of movement networks and of plural identities, thus, radicalizing democracy from the local levels to the regional, the national, until the transnational in direction of planetary citizenship" (Scherer-Warren, 2006, p.119), seams the most promising strategy for the exercise of a collective and contesting form of citizenship seeking counter-hegemonies of development, or, in accordance to Michael Löwy (2005, p.53), "a new mode of alternative life, a new, eco-socialist civilization, beyond the dominance of money, of the consumption habits artificially induced by publicity, and the infinite production of goods harmful to the environment".

## 4. Final Considerations

Our capacity to adapt to the new political and democratic challenges that are proper to contemporary society, especially those associated to the conditions of risk society and to the requirements of sustainable development, is related, first and foremost, to our capacity to conceive new normative theories – and therefore new practices – about democracy able to provide new guidance for the inevitable institutional and procedural reforms which should allow us to bring forward and to

incorporate the worries about the common good and the survival of future generations, of humanity itself, in our daily practices of political decision-making and territorial planning; and that in all levels and scales, from the global to the local.

The success of such a paradigmatic change depends on the capacity of our societies to mobilize the main agents, the multiple knowledge resources, and diverse reflective and executive competences in order to enhance our capacity to imagine and conceive new sustainable modes of development and to implement them by means of new collaborative practices and against resistance associated to the destructive capitalism which prevails among us.

In this paper we discussed several democratic concepts that share convictions around the limits of the traditional institutions of representative-liberal democracy in attending the demands of a new form of development associated with the basic principles of sustainability, and the perception of the necessity of an ineluctable addition of post-liberal democratic practices of governance to the traditional institutions of representative democracy.

In spite of their different emphasis, these theories denote similarities and convergences and, at the same time, represent different ideological convictions and different expectations concerning the most adequate democratic strategies and the degree of radicalism to be necessary in order to handle efficiently the future challenges related to sustainability. It seems appropriate to assume that the specific empirical context where the different theories have been developed influenced the interpretation that each theory makes regarding (1) the need to go beyond democratic and ecological modernization – which turned out to be a relatively successful strategy at least in the more developed countries –, (2) the expectations to achieve more substantial changes by means of deliberative negotiation processes, or (3) the convictions that such advancement is only possible by adopting strategies of conflictive confrontation.

More contesting or agonistic approaches, where civil society actors become a decisive driving force of change processes, seem particularly essential in developing countries where consensus-oriented planning and governance practices tend to generate manipulative forms of unilateral imposition of consensuses by the main dominant political and economic elites over marginalized and weakly organized and articulated social sectors or civil society groups. The promising Brazilian experiences of participatory budgeting, public policy councils and city forums implemented by several left-wing parties, committed with the concerns of the marginalized social sectors, reveal on the other hand the continuing importance of government action and political planning in order to assimilate popular protest, to create political institutional arenas able to mediate conflicts, to introduce and bring them forward and implement them within traditional formal institutions. Here the role of sub-elites and civil society organizations became more and more essential for exerting political control and, in a Habermasian perspective, to exert pressure on and propel the central political system to incorporate demands and discourses occurring in a civil society driven public sphere. The importance of these intermediating actors – individual and collective – became evident when, due to the passing over of these agents to state agencies, assuming political positions within these left-wing governments, a process of demobilization of civil society took place, presumably responsible for the weakening of these transformative left-wing projects in Brazilian democracy. In addition, contributed to this loss of strength of these political projects, above all in the 2000s, the restricted financial and administrative capacity of local governments to implement effectively the proposals and plans elaborated with citizen participation, that is, its limited capacity to produce corresponding outcomes.

Thus, the Brazilian experience with participatory planning and management reveals the influence and explanatory relevance of the different post-liberal democratic theories and the necessity to adopt an

analytical perspective that takes into account these different theoretical approaches, exploring them concerning their specific contributions to understand concrete empirical planning and governance practices.

Hence, instead of seeking to identify a major theory able to interpret the entirety of the possible empirical fields, the different post-liberal theories form a general framework of reference that allows us to better understand and analyze the complex reality of democratic processes, involving interest, cultural values, conflicts, deliberation and negotiation. The three groups of theoretical concepts regarding democratic-environmental strategies – democratic-ecological modernization, dialogic-consensualist transformation, and conflictive-contesting transformation – could give support to a process of systematization of empirical experiences and permit verifying progress and limits of empirical processes related to their capacity to incorporate concerns related to the common good and the survival of future generations in our daily practices of political decision-making. Here, there is still much empirical research to be done. We hope that our theoretical framework may serve as heuristic reference for future research projects on democracy-environment interdependencies in local environmental governance and planning studies.

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# MIXED RENEWAL IN LOW-INCOME COMMUNITIES: A CASE STUDY OF JIANGJIABANG IN SHANGHAI

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Keywords: Community Renewal, Gradual Renewal, Low-income Community

**ABSTRACT**: *Many low-income communities have been lagged behind in the tide of development in Shanghai. With its huge scales and the complex inhabitants, low-income communities have a flood of impediments in its regeneration. Jiangjiabang is part of them.*

*This article presented a comparative analysis of the advantages and drawbacks between government-led big scope radical renewal and community-led small scope gradual renewal. After the field investigation, the author took comprehensive consideration of the features of the two methods, the physical situation and social demands of residents in Jiangjiabang.*

*The research demonstrated that because of the problems like the oversize scale, the complicated property right and social network, government-led big scope radical renewal was not suitable in Jiangjiabang. Simultaneously, the troubles like the low income of the residents and the weak forces of community organizations made the community-led small scope gradual renewal cannot be adopted either. Hence the gradual renewal which is run by government and operated by community organizations is much fit for Jiangjiabang.*

*The role of the government in the renewal process is the guide, the encourager and master planner, promoting separate renewal of the dweller and keeping the consistency of the regeneration. The role of the community organizations is the operator, participator and adviser, being involved in the renewal process and influencing the decision of government, guaranteeing the diversity of the development.*

*Consequently, creative renewal model should be invited to deal with the particular case when face low-income community renewal problems. In this way the complex problems can be resolved.*

## 1. Introduction

### *1.1. Background*

Urbanization is an inevitable process of human progress. Along with the urbanization process, the modernization goals would be realized. At present, the urbanization process in China has been

accelerated, reached the take-off line of the high-speed urbanization. The outline of 12th Five-year Plan has proposed to improve the layout and form of the city, and strengthen the management of urbanization. However, the faster the developing speed is, the more problems will be exposed. In the current urban development, low-income communities like "city village", "shantytowns" have been in the spotlight. These low-income communities mainly appear in megacities (such as Beijing, Shanghai, Guangzhou, etc.) with high-speed development.

*1.2. Definition of low-income communities*

Low-income community refers to the community where most of its inhabitant have income much lower than the average income level of the city. In other words, most of them are living at the bottom of society. Because of the low income, these citizens cannot afford some basic living environment, they can only chose these low-income communities to live which have terrible environment with some social problems (Mingfeng Wang, Xiaoling Lin and Yuemin Ning, 2012). The typical examples of this kind of low-income communities are ‘city village’ and ‘shantytowns’.

‘City village’: During the process of urbanization, because of all or most of the cultivated land being requisitioned, the residents transformed from peasants still live in the original villages which then turn into residential areas. Therefore, from the narrow sense, "city village" refers to the rural villages, also known as “village within urban area”. From a broad sense, during the high-speed process of urban development, "city village" refers to the residential areas behind the pace of development, free from the modern urban management and with low living standard.

‘Shantytowns’: it refers to the area in the scope of urban built-up area with high density bungalow, long service and poor housing condition, small per capita building area, insufficient supporting infrastructure, big problems in security and fire hazard, inconvenient traffic and poor environmental hygiene. In Shanghai, when we say "shantytowns", it means the region which belongs to the city area originally but now develops slowly with nature of the shantytown areas.

This article will mainly discuss the renewal of the second type of low-income community.

*1.3. The basic renewal model of low-income communities*

The renewal of ‘shantytowns’ is one situation of old city renewal. In China there are two kinds of renewal model for old city: one is government-led big scope radical renewal and another is community-led small scope gradual renewal. Government-led big scope radical renewal refers to the renewal which have large scale, high speed and integrity. Community-led small scope gradual renewal refers to the renewal which mainly done by the user with their own purpose for use. Both of them have their own superiority and deficiency and both of them are adopted in different places. Which model is suitable for the renewal of low-income community is the core content of this article.

### *1.4. Situation in shanghai*

As one of Chinese extremely crowded cities, Shanghai has a large concentration of external population and there are a considerable number of migrant workers come into the city to make a living. Low-income communities with low rent and low living expenses have become the main settlements of these new immigrants. However Shanghai, as the leading of economic developed city of China, has a variety of high-end industries gathered ((Mingfeng Wang, Xiaoling Lin and Yuemin Ning, 2012). While it also has a huge problem in its low-income communities. These problems is the stumbling block hindering the further urbanization of Shanghai. Therefore, solve the problems in low-income communities can help shanghai to promote its urbanization. In other hand, although the renewal of low-income community have been discussed for more than 10 years, and both the government and citizens wished to start renewal as soon as possible, the renewal didn't start even now. The reason for this situation is complex. This article will study Jiangjiabang, a low-income community in shanghai, as a case study to discuss how to solve its renewal problems.

## 2. Methodology

This article mainly adopted two approaches to do the research: comparative study and field research.
The article will firstly do a comparative study with government-led big scope radical renewal and community-led small scope gradual renewal to find the superiority and deficiency of them. Through this comparison, the article will find the special apply condition for each model. Secondly, the article will present the result of field research of Jiangjiabang and sum up the feature of this low-income community. Finally, according contrast between the apply condition of renewal models and the feature of Jiangjiabang, the author will discuss the suitable model for its renewal.

## 3. Two basic model of urban renewal.

There are two basic model of urban renewal in China which are government-led big scope radical renewal and community-led small scope gradual renewal.

### *3.1. Government-led big scope radical renewal*

#### *3.1.1. Definition*

Government-led big scope radical renewal is a kind of renewal launched by government. Government will firstly decide which land need to be renewed. Some experts will participate in this process. And then they will invite some urban planning companies to prepare urban planning project. With this project, they can reuse these land. This model have some features. Firstly, most of lands in this model will be totally demolished to support empty land for rebuilding. After rebuilding, almost all of the construction in this land are completely new. Secondly, government dominate the whole progress. The government led every step of the renewal. Thirdly, government always cooperate with developer who have profit purpose. Government can get money from developers by approve the right to use land for them, and

developers can get money from estate development. Finally, because the goal of the government is clear, they can easily to make decision. Therefore it will just take a short time period for the renewal of a large scale land.

*3.1.2. The superiority and the deficiency of government-led big scope radical renewal*

This model has been widely adopted in China. At the initial stage it achieved great results, but along with the development of cities, an increasing number of problems exposed. Many scholars have also conducted a number of studies on this topic. They got the superiorities and deficiencies of this model. In particular, it mainly includes the following aspects.

*Superiority*

Firstly, it makes urban develop rapidly. As mentioned above, due to the clear purpose of this model, governments can exercise their rights to promote renewal of a particular urban area in a short period of time. By this way it will speed up the metabolism of the city. In this process, the most terrible environment of the city can be improved fast. Therefore the development process of the city can be speeded up. Secondly, it can bring a good economic benefit. Due to the scarcity of urban land, large-scale radical renewal will undoubtedly make the land of old city can be used again. Redevelopment of the land can bring a good economic benefit. Thirdly, the new region constructed by the method will have good integrity. In practice, old city area which needs to be update will be given to one or several teams to design, so that the landscape of the entire region would look without too much chaos. They will have similar styles. This also helps to maintain the integrity of the city and solve some municipal issues on urban scale.

*Deficiency*

Firstly, it break the process of urban development and undermined urban development history. In the process of renewal, the landscape of the cities which have been formed in decades can be completely changed in one or two years. You can find nothing about the traces of the urban development in the new area. This kind of model have created a number of rootless city. Secondly, it takes a lot of start-up capital. The areas which adopt this model often have a large scale with a lot of people living in them. If you want to use the land for large-scale radical renewal, you must relocate all the people living in this land. Therefore it need a large amount of capital to compensate them. This situation will become even worse when face some special land with problems of estate rights. Thirdly, it impacts on the lives of lower level citizens. The objects of the city renewal tend to the place which have poor environment or old facilities. However, these areas are low-cost areas in the city and most low level citizens living in them. After big-scale racial renewal, these area will become expensive areas like wealthy neighborhood. The low level citizens will lost their living environment. Finally, it will separate social networks and damage social vitality. A healthy city is bound to have good interpersonal networking rather than strange feelings and inhospitality. The old city always have some social networks or neighborhood relationships which establish with a long period of time. Nevertheless, the big-scale racial renewal will inevitably lead to large-scale evictions. In this process, these social networks and neighborhood relationships will disappear.

### *3.1.3. The current situation in China and its reason*

The governments of China have partiality for government-led big scope radical renewal. We can see that many cities adopt government-led big scope radical renewal even though it bring some problems. There are four reason to explain this situation.

Firstly, this model have obvious market competitive advantage. On one hand, the capital problem have haunted governments when they face urban renewal problems. The local government will have a lot of financial pressure if they are at their own expense. Hence they need to seek money through the ways like real estate development (Jie Zhang and Jun Pang, 2009). On the other hand, the scarcity of old city land indicate its inherent economic value. However, the developers who pursuit maximizing profit will definitely become the chaser of old city land. They will look for opportunities to acquire land and use their funds for land development for interest returns. According to this, the government who have demand for funds and the developer who pursing profit will cooperate inevitably. There is no doubt this alliance will chose to adopt government-led big scope radical renewal which is much easier and faster to maximize their profit. Secondly, the assessment mechanism of government impelled the government to rely on big scope radical renewal(Jie Zhang and Jun Pang, 2009). In China, government is the absolute power to effect urban renewal. If there are some external negative factors impede the smooth progress of a project, the government will overcome all difficulties to ensure the renewal with its force and authority. This behavior occurs because of the current government assessment mechanism, which often regards revenues, urban landscape as the basis for assessment. Government hopes to change the face of the city dramatically in a short time to get better assessment results. This mechanism led to the government relies on big scope radical renewal to reflect achievements. Thirdly, tax distribution system of China makes government more like big scope radical renewal. Tax distribution system means that lower levels government must hand over their received tax to the higher authorities level by level. That is to say, financial rights go up, while the execution responsibility go down. In other words, the local government must finish their city management with litter revenue(Jie Zhang and Jun Pang, 2009). In this case, governments will rely on big scope radical renewal with which governments can get land revenue by land auction, real estate development. Finally, the lack of public participation contributed to the big scope radical renewal. During the actual renewal process, due to the lack of public participation and its incomplete associated regime, local government were free to command their powers according to their own cost-benefit and maximize its benefits. The authority transferred from the representation of ‘public good’ to "economic man" that make government put profit at first instead of ‘public good’ when they facing the old city renewal problems. That’s why the big scope radical renewal can always be executed.

## *3.2. Community-led small scope gradual renewal*

### *3.2.1. Definition*

Community-led small scope gradual renewal is a kind of renewal which aim is to return to the original development status of a city. That is to say, someone who live in this city want to improve their living environment after they have enough economic strength or their offspring want to enhance their quality

of life after they get better education, they will try to renew their own house.

This model also have some features. Firstly, nobody will force the residents to renew their own house therefor the leading role of this model is the residents who live in communities. Sometimes these residents will establish an organization to integrate different ideas and manage the renewal. Secondly, since the desire of renewal is come from the residents, they must pay for their own. Thirdly, it is impossible that all of the residents in a community have desire to improve their living environment at the same time, thus it will take a long time and it is a gradual process. Finally, it is easily to see the history of the land in this model for the change is not accomplished at one stroke.

*3.2.2. The superiority and the deficiency of community-led small scope gradual renewal*

Due to a series of problems brought by big scope radical renewal over the years, many scholars began to advocate to adopt small scope gradual renewal which make urban development return to its original rule. This small scope gradual renewal also have their advantages and disadvantages.

*Superiority*

Firstly, compared with the big scale radical renewal, it is cheaper and more flexible. The main body of this renewal is the occupants themselves, therefore the scope of update should be very small, without too much effect to other people around. The renewal of a single small unit will significant more economical than big scale renewal. Simultaneously, these changes are small, if they are not as you wish, it is much easier to make corrections. That is why it is more flexible. Secondly, it facilitates public participation. Community-led small scope gradual renewal was principally initiated by community members, and even the Community Management Department also represents the wishes of community members. Due to the small scale, the wishes of the people can be easy to collect and easy to coordinate. In this process, therefore, the degree of public participation is also much higher than big scale renewal. Thirdly, it can be economical to meet the residential requirements. this model change the living environment according to the wish of residents and use the money of themselves, therefore they will make most use of their money to satisfy their own needs instead of waste of them. In this case, some unnecessary functions and spaces will not be produced. Finally, it can protect urban historical environment. This model is a gradual process, thus the shape of the city which formed in a long period of time can be kept for a long period of time, too. When you see the landscape of the city, you can find many traces of history. These superiorities happen to be scarce in big scale radical renewal. However, it also have some special imperfections.

*Deficiency*

Firstly, it is a long term process. As previously stated, since this is a dispersion regeneration pattern, each resident are updated their living environment only when they are in need. Not all of the household are able to have demand at the same time, and the demand categories and cycles of different residents are multifarious. The time for completing the renewal of individual unit is short, while it will take a long time to update the whole region. Secondly, the integrity of this model is not enough which can easily lead to disorder urban landscape. Every resident have their own idea of their idea living environment.

Therefore this model with rely on residents can create a variety of landscape in different units which can easy cause disorder. Meanwhile, since everybody will just care about themselves, many public problem cannot be changed during the renewal process. Thirdly, funds are limited, the transformation may not be ideal. This model mainly depends on the personal or community property. It relieves a big burden of government, while because of the limited financial resources of individuals or communities, many renewal projects cannot be immediately enforced or using cheaper materials which cannot get satisfactory result. These deficiencies are the reasons why the community-led small scope gradual renewal is rarely used by cities.

*3.3. Apply conditions for two models.*

Neither of this two models are perfect, while in some cases the big scale radical renewal is more suitable than small scale gradual renewal, and in other cases the latter is better. There for they both have some apply conditions.

*Conditions for government-led big scope radical renewal*
Firstly, even though this is a big scope model, the scale should not too big. The too big scale need too much star-up cost and it will have more significant subversive to the urban environment. The bigger the scale, more obvious the deficiency of this model will be. Secondly, the environment problem of an area is too serious to wait. When the urban environment of a regional is too bad, the living standard of the residents needed to change as soon as possible, no one wants to wait a long time to gradually repair the urban environment by gradual renewal. At this point, the radical renewal is much suitable to be adopted to change the status quo. Thirdly, some important urban point which have high requirements of integrity need big scale renewal. Some point of the city have important location, but it have no symbol building or landscape in the past that need to create in the process of renewal. At this time it will have high requirements on the integrity of the landscape. This demand cannot be meet by gradual renewal.

*Conditions for community-led small scope gradual renewal*
Firstly, when the government don't have enough capital to do the big scope radical renewal, they can adopt some policies to encourage individuals or communities to use gradual renewal.
Secondly, if community organizations in the region is good, motivated, and the inhabitants have positive view of renewal, using gradual renewal will be better. Thirdly and the most important one, is that if the region has retention value, like it reflects an era of architectural features, it has some other irreplaceable role in the city or its construction quality is good, bulldozing and rebuilding is not only costly, but also not conducive to the sustainable development of the region.

## 4. Case study: Jiangjiabang

Jiangjiabang is an existing typical low-income community in shanghai. It is an old neighborhood which was began to build in 1957. In 1970, majority of these buildings are belonging to factories as dormitories. Then with the pass of time, the slow development of this region makes it lag behind the overall

development of Shanghai. And with living personnel changes, the living condition gradually became terrible. The government said that demolition and resettlement may take place in 1996. However, no demolition operation for big scope radical renewal have been taken until now. This area do have some special features.

### *4.1. Physical environment of Jiangjiabang*

*Location*

Jiangjiabang located near Kunming Road of Shanghai, China. It is about 3 km far from wujiaochang which is a subcenter of Shanghai. It have convenient transportation with two subway station near it.

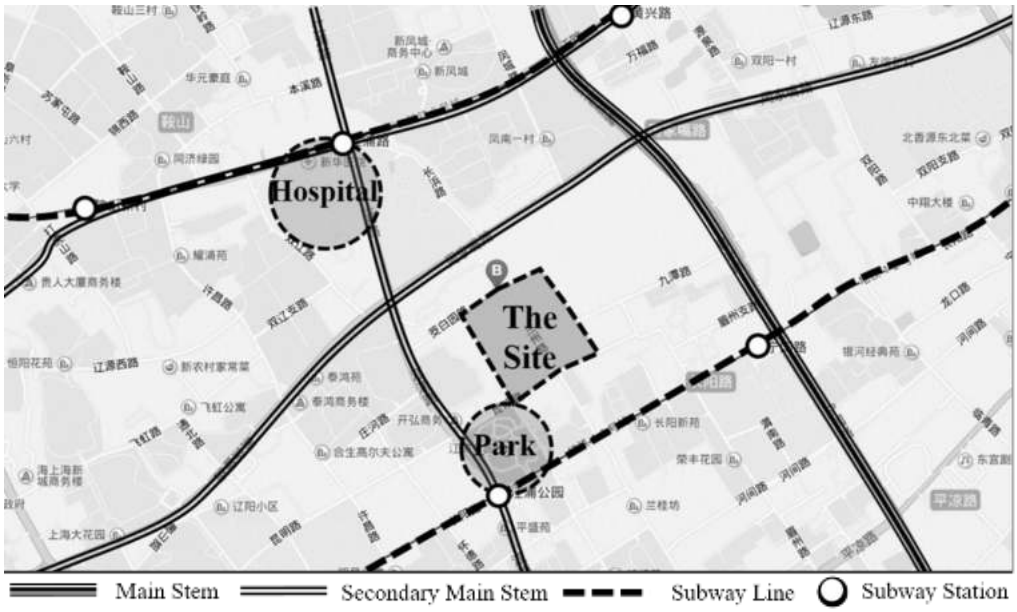


Figure 1. The convenient location of Jiangjiabnag

We can say, Jiangjiabang do have a convenient location. Therefore, living here can effectively save transportation cost. It will also have a large number of customers if doing business around it. Because of the location, it is also easy to buy all kinds of life necessities. As a consequence, this kind of places which have high land value and good location advantages but low living cost are undoubtedly the best choice the migrant workers and other immigrants.

*Scale*

The area of Jiangjiabang is 8.8ha which is equivalent to 13 times the size of standard stadium. It seems not too big in the city scale of shanghai. However, because of the living density of this region is high, it involves a large population. The high density can be seen from map. We can Assume that each House for 3 persons (in fact more), you can imagine how many people are living here.

*Living environment*

*The crowded street environment:* Since Jiangjiabang has been built for a long time, the size of spaces and streets cannot meet the modern way of life. For example, the crowded streets, narrow space, poor accessibility and pavement quality, as well as the filthy surroundings with huddle of wastes, all of this have reflected that Jiangjiabang is short of public space, and its quality need to be improved.

(1) *The uncomfortable housing environment:* The buildings in Jiangjiabang are mostly bungalows with one or two floors. They have characters as small areas with small width and depth, high density, messy and old appearance, disordered illegal structure, safety loophole, the dark and awful inner conditions, shortage of individual privacy with the windows and doors opening toward the streets. Thus, the housing environment is urgent to be improved.

(2) *Municipal facilities:* The incomplete infrastructure: Jiangjiabang has a deficiency of infrastructure due to its history. Since the plan of removal and relocation started in 1996, the infrastructure has always not been maintained. At present, the electricity pipelines and the water system become aging, conducing to a problem of drainage. Still, there is no sewerage, so the inhabitants have to prepare the closestools themselves.

In General, you can use three keywords to describe the physical environment of Jiangjiabang: convenient location, a large number of population and poor living conditions.

### *4.2. Social environment of Jiangjiabang*

*Residents*

Two types of people live in this area: original inhabitants, with Shanghai household register, are at the bottom of the society of Shanghai because of low income; and new migrants, coming from surrounding countryside, and are working in the city. Both of them have low social status with low income, and even suffer from other social class' discrimination because they live in low-income communities. These people are difficult to be adopted by the other social classes, thus dissociate at the edge of the city classes. The isolation of living leads to a serious social segregation, and generates a lot of social problems.

*Living cost*

Jacobs wrote in her book *The Death and Life of Great American Cities*, a city can not only have new and expensive buildings ,but also some cheap and old ones, so that to meet the different needs of different people. Low-income communities like Jiangjiabang, the cheap living cost is the one of its advantages.

The cheap living cost provide migrant workers with great probability of survival opportunity and can also support for their business. Undoubtedly, it will promote this part of population transforms from the rural population to urban population, and boosts the urbanization process. It' existence undertakes the social responsibility for the survival of low-income people , makes up for the lack of the city government behavior, unceremoniously challenges to the legal order of the city and the government's credibility at

the same time.

Table 1. The Rent of the Houses in Jiangjiabnag

| | Living Condition | Rent |
|---|---|---|
| ROOM A | • Just one room<br>• Public toilet<br>• You must be the friend of landlord<br>• 1-2 person | ¥800 |
| ROOM B | • Have a kitchen<br>• Private Bathroom<br>• 2-3 person | ¥1,000 |
| ROOM C | • Better decoration<br>• Bigger room<br>• 2-4 person | ¥1,200 |

Table 2. The Living Cost of Jiangjiabnag and Other Communities in Shanghai

| Income | | ¥2500 + ¥2500 = ¥5000 | |
|---|---|---|---|
| Expense | | Jiangjiabang | Other Places |
| | Rent | ¥-1,000 | ¥-2,000 |
| | Other expenses | ¥-1,200 | ¥-2,200 |
| surplus | | ¥2,800 | ¥800 |

*Community governance problems*

*(1) Informal employment:* We found almost all people living in Jiangjiabang had no formal employment through our interviewing. The main employments of them are small businesses, including fixed stall selling in markets and itinerant vendors without license. The fixed stalls in markets are legal but have high monthly rent, which is difficult to afford by some immigration just coming to the town. Itinerant vendors have inexpensive cost but high risk for paying a fine. These informal employments lead to residents and immigrants' insecure lives in Jiangjiabang.

*(2) Insurance problems:* Because of the informal work, most of the migrants did not participate in the insurance business. As a result, once they have an accident or diseases, they will have to bear all the costs which will give themselves and their families a tremendous burden.

*(3) The children education problems:* In the survey，it was found that many migrants are mostly migrant with their spouse. Whilst their children stay in their hometown, generally becoming left-behind children without the love of parents.

(4) *The crime problems:* Because of the complex personnel, criminal theft are particularly numerous in this region. Because of the lack of the formal registration and the large number of the crime activities, coupled with low-income communities' space and environment problem, it is difficult for police to solve the troubles. This also contributed to the further rampant of theft crime.

*Community vitality*

The face of the community is not just reflected by the appearance characteristics of the physical environment. What make the person shocked is the various activities take place in the space. Rich social activities in the low-income communities naturally form the colorful city life scenes.

*Group- oriented lease:* After investigation, the author founded that the immigrants of Jiangjiabang mainly came from Jiangxi province, and most of the leasehold relations are established by the introduction of the fellow friends. This kind of Group- oriented lease make the community to be an acquaintance community.

(1) *The neighborhood activities:* Jiangjiabang have relatively rich neighborhood activities, including chatting, chess activities, square dancing, etc. These rich community activities close the distance between the new immigrants, as well as the new migrants and local residents.

(2) *Market, social glue:* Through the investigation, the author found that the market is the most vigorous area in Jiangjiabang, Interestingly, through interviews and observation, we found that there are many high-income community residents nearby come here to buy fruits and vegetables and aquatic products etc. These high-income will keep the familiar relationship with some residents. Some of them will become good friends because of the long time.

## 5. Thinking of the suitable renewal model for Jiangjiabang

### *5.1. The evaluation of Jiangjiabang for renewal*

According to the current status of Jiangjiabang, the author summed up some of the regional issues and the According to the current status of Jiangjiabang, summed up some of the regional issues in the update and features in the renewal.

Firstly, the convenient location and the low cost of Jiangjiabang attracted many low-income people to live in (Jianjun Li, 2012). If using a big-scale renewal to address this area and make gentrification to it, that low-income people will be losing their living space (Rongyuan Zhu, Limin Zhang and Xudong Guo, 2006). Secondly, once the big scale radical renewal is started, it needs to compensate for all residents for the demolition. Compensate standards are difficult to set. If based on population, some members of a family have moved to live in other places with the household register still in Jiangjiabang, therefor it is hard to come by. If in terms of area, some buildings damaged and its area reduced with years, and the area of other buildings which built out by their occupants increased. Thus it is difficult to clearly define. Simultaneously, because of the large population, compensation will also be a large government spending.

Thirdly, as said above, Jiangjiabang already have deteriorated living environment which needs to change desperately, so it cannot adopt small scope gradual renewal, because the residents who are suffering the terrible environment couldn't wait any longer (Rongyuan Zhu, Limin Zhang and Xudong Guo, 2006). Fourthly, judging from the results of the investigation, the Community governance problems of Jiangjiabang illustrated that this is a community which has short living and non-fixed residents without public security instability. This point determines community spontaneous renewal will be very difficult in Jiangjiabang. In other words it is difficult to use the community-led small gradual renewal, and must adopt specific government policies to guide. Finally, the remarkable community vitality of Jiangjiabang observed by the author in the investigation, therefore, if we adopt big scope radical renewal to remove this area, it would be huge regret of the city.

### *5.2. Mixed Renewal in Low-income Communities*

Situation of Jiangjiabang decided that it will encounter a lot of obstacles to use either model of renewal. This is the reason why for so many years, it still doesn't start renewal. And this kind of situation represent the most features of low-income communities. As described above, the aim for some scholars to suggest small scope gradual renewal is to compensate for the problems arising in the big scope radical renewal. Analysis the advantage and disadvantage of two models have proved that they are complementary with each other although they are entirely different. Therefore, how about adopt both of them when facing the issues of Jiangjiabnag. That is so called mixed renewal. This can be achieved from two aspects: physical environment renewal and renewal governance reform

*Physical environment renewal*

The first step of physical environment is to evaluate the land. In Jiangjiabang, for example, the number of people involved in is too many to handle, while the government can just manage some important part of the whole area. It needs an evaluation to distinguish which parts should adopt radical renewal while other area need to adopt gradual renewal. This evaluation must be done with holistic view. The area which can be defined as the radical renewal area can be the place where the living environment and the building quality are too bad too live any more. Or these places are suitable for the services facilities while they didn’t have in the past so that the government can adopt radical renewal to demolish these land and building facilities on them. Or these places are the key points of this area which should be rebuilt. After evaluation, the rest things can be done as the government-led radical renewal. The other zones which are not need to renew immediately can adopt gradual renewal with some improvement. Firstly, these areas should be divided into several zones to be managed by different community organizations. The municipal facilities must be maintained and the sanitation and landscape environment must improve. The spontaneously renewal of residents will be encouraged. By this way, there will be no large-scale demolition so that the government will not have that much capital pressure. However, the areas which badly need to rebuild can be renovate and the living environment of the whole area can be improved. In this process, most of the areas in Jiangjiabang can be reserved. The vitality of Jiangjiabang can be kept and the living-cost of Jiangjiabnag will not sharp jump.

*Renewal governance reformation*

Both of government-led radical renewal and community-led gradual renewal are just rely on one actor. The mixed renewal should rely on both of them. The government have four responsibilities. First one is to do overall design for the whole area to keep the right development direction of the whole area. Then, the government should make some rules for the retained areas to avoid the excessive variability which happened when the community guide the renewal process. Next, the government must guide the communities and also organize them to propose some planning for renewal. At last, the government should provide some capital assistance by direct investments or help them to develop some financial platforms or build some financial systems. The communities in fact are established by the cooperation of government and the residents. The community have two responsibilities. First one is that it must be the intermediate between government and residents which in charge of collect the opinions of residents and monitor government actions. Then it should organize residents to do some renew by themselves with some advices and sometimes provide some technical support. This way can give residents more sense of participation and sense of belonging (Zhigang Li, 2011). The role of the government in the renewal process is the guide, the encourager and master planner, promoting separate renewal of the dweller and keeping the consistency of the regeneration. The role of the community organizations is the operator, participator and adviser, being involved in the renewal process and influencing the decision of government, guaranteeing the diversity of the development. Both of them are evitable. By this way, the Jiangjiabang can have renewal with relatively strong integration. And at the same time, the degree of residents' participation is relatively high and it can also ensure that the government will not become institutions which seek nothing but profits.

## 6. Conclusion

Jiangjiabang is a typical low-income neighborhoods in currently China. Due to various reasons such as history and geography, this kind of community will meet different sorts of special issues on the actual application process of renewal. A certain model of urban renewal, in particular, which have been used successfully on many occasions, will also fail when in the face of such complex issues. Therefore, in practical application, the creative renewal model should be adopted according to the actual situation in order to effectively solve the complex practical problems.

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# ACCOUNTABILITY AND RELATIONAL GOVERNANCE: THE CASE OF BRAINPORT EINDHOVEN, THE NETHERLANDS

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## Abstract:

*It has been argued that the new form of relational governance might lead to a substantial deficit of democratic accountability, but in previous studies less attention has been paid to what accountability is and how to systematically analyse it before announcing there are accountability deficits. In order to advance the knowledge of accountability and relational governance, this paper examines the notion of accountability and adopts a conceptual framework of public accountability established by Mark Bovens to conduct a case study of Eindhoven city-regional governance. Eindhoven city-region has been recognised as a successful story of high-tech development and its success is a result of a new form of relational governance—close collaboration between different levels of government and other parties, including high-tech firms and knowledge institutes. Major focus is put on the establishment and operation of the Brainport organizations, which perfectly represents the new form of relational governance in Eindhoven city-region. By mapping its networks of accountability and assessing its accountability arrangement, this paper finds that the degree of the Brainport organizations' accountability toward the municipal councils differs from municipality to municipality. While the councils of municipal stakeholders of Brainport Development NV may use municipal regular planning and control cycle of annual memorandum, reports, and budget to influence the content and financial frameworks of Brainport organizations' year plan to certain degree, the councils of non-stakeholder municipalities in Eindhoven city-region can hardly ever influence the decision making of the Brainport organizations. From either the democratic or the learning perspective, the institutional arrangement of the Brainport organizations insufficiently satisfy the criteria of accountability. This indicates large space for improvement. Further, the case study results remind us that comparing to the traditional governance mode the nature of relational governance is rather dynamic. It is a learning by doing process and is constantly shaped by the alteration of national policy as well as of the changing agreements between the municipalities. Thus, it deserves continuously monitoring and investigating the change of city-regional institutional setting and its influences on the accountability arrangement of the relational governance.*

Keywords: Brainport Eindhoven, Relational Governance, Democratic Accountability

## 1. Introduction

In the age of network society, a relational approach in spatial governance has emerged for more than a decade (Healey, 2004). The emphasis on competitiveness agenda has positioned city-regions in a European/global economic space (Albrechts et al., 2003). The focus of spatial relations and city-regions has encouraged levels of government to create new institutional arenas to work together and collaborate with private sectors that have access to a wide range of know-how and crucial resources that can help strengthen city-regional competitiveness. Eindhoven city-region in the Netherlands is a good example of such practices. Since 2004, the Dutch government has considered Brainport Eindhoven together with Rotterdam Seaport and Amsterdam Schiphol Airport the top three engines of the Dutch economy (Ministerie van Economische Zaken, 2004). According to Eurostat Regional Yearbook 2011, in Europe the Eindhoven city-region ranks highest in terms of patents per population (more than 2, 000 patents per million inhabitants). The successful story of high-tech development in Eindhoven city-region is a result of close collaboration between different levels of government and other parties, including high-tech firms and knowledge institutes.

However, the creation of new institutional arenas makes possible new alliances and realignments of

power to influence the decision-making of city-regional development. Issues related to accountability and social justice may emerge in the new governance practices (Huang, 2013). Some scholars have argued that the rescaling and reframing of governance space has increased the complex relationships between politicians, citizens, and other stakeholders, and created a post-political situation that may lead to a substantial democratic deficit (Buser, 2014; Swyngedouw, 2005). It is important to examine whether and how people are excluded or included in the processes and how the relationships between them are organized. In other words, the new forms of relational governance has challenged the capacity of traditional institutions of democracy and raised the concern of accountability.

Nevertheless, in previous studies—despite the growing concern of accountability deficit along with the emergence of relational governance—less attention has been paid to what accountability is and how to systematically analyse it before announcing there are accountability deficits. Bovens (2010) reminds that a lack of a consistent framework for the analysis of accountability is undermining accountability practices and preventing much empirical progress in accountability study. Moreover, previous studies often assumed a simple, linear cause-effect relationship of accountability mechanism and ignored 'the problem of many eyes' (Bovens, 2007, p. 455). In fact, there are various types of accountability that exist side by side and form complex networks of accountability (Buser, 2014; Scott, 2000). Some are less formal, less evident and mutually interdependent, such as the informal accountabilities of peer review in a particular community (Scott, 2000). It is inappropriate to jump to conclusions without carefully mapping the webs of accountability and systematically investigating the interrelationships among the webs in the new forms of relational governance.

In the light of these issues, this research first examines the notion of accountability and then adopts a conceptual framework of public accountability established by Mark Bovens to map the networks of accountability and to explore whether and how the new institutional arrangements of Eindhoven city-regional governance challenge the practice of accountability. Major focus is put on the establishment and operation of the *Stichting Brainport* (Brainport Foundation). Brainport Foundation consists of representatives of the regional governance body, local governments, knowledge institutes and high-tech firms. It is a collaborative body determining the development strategies of Brainport Eindhoven NV[1], the economic development organisation for the Eindhoven city-region. The empirical study is from 2008 to 2013, because since December 2012 the regional governance body in Eindhoven city-region, the *Stadsregio Eindhoven* (Eindhoven City Region, SRE), has undergone a process of institutional transforming (SRE Regioraad, 2013). This will influence the role and capacity of the SRE in the Brainport Foundation and the accountability arrangement of the relational governance in the city-region. In the final part of this paper, I summarise the research results to pave a way for more rigorous analysis of the accountability in the relational governance.

## 2. Analysing and Assessing Accountability

The application of accountability is important for democratic governance. It can not only contribute to the legitimacy of public governance, but also prevent and detect the abuse of public powers, and lead to reflection and improvements on the performance of public governance (Bovens, 2010). However, accountability is a very elusive concept. It 'is used as a synonym for many loosely defined political desiderata, such as good governance, transparency, equity, democracy, efficiency, responsiveness, responsibility, and integrity.' (Bovens, 2010, p. 946) Each of the political desiderata is an umbrella concept itself. Accountability in this broad sense more emphasises evaluative rather than analytical dimensions. Moreover, it has to be taken into consideration that the standards of accountable behaviour differ according to particular places, times and institutional settings.

[1] Brainport Eindhoven NV was established in 2008. Its forerunner is NV REDE. Since 1982, NV REDE had been the economic development organization for the Eindhoven region. It aimed to promote business and employment in the region, and its target groups were small and medium-sized enterprises in industry and services.

Specifically, accountability refers to the right to conduct *ex post* oversight and control rather than *ex ante* control and involvement in decision making (Scott, 2000). In order to let the notion of accountability be more operational and analytical, Bovens (2007, p. 450) proposes a more narrow definition of accountability—'a relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgement, and the actor may face [formal and/or informal] consequences', such as penalty sanctions, minister's resignation, and so on. This definition is centred on four essential questions regarding the institutional arrangements of accountability, including 'who' is accountable to 'whom', 'how', and for 'what'? To clarify the interrelationships between these four elements is a useful starting point for accessing accountability arrangements in particular institutional settings.

*2.1 Typologies of Accountability*

As shown in Table 1, seven types of accountability can be identified according to the nature of the forum and of the obligation. This identification is handy for characterising distinct accountability arrangements.

Table 1. Typologies of Accountability

| | |
|---|---|
| Based on the nature of the forum | - Political accountability<br>- Legal accountability<br>- Administrative accountability<br>- Professional accountability<br>- Social accountability |
| Based on the nature of the obligation | - Vertical accountability<br>- Horizontal accountability |

Source: Based on Bovens, 2007; 2010.

According to Bovens (2007; 2010), *political accountability* is exercised in the opposite direction to that of the delegation chain. Although the composition of the chain may vary in different countries, voters and the executive public servants are the two ends of the chain. In some countries, the media has become major informal forums for political accountability. *Legal accountability* is often based on detailed legal standards, so it is the least ambiguous type of accountability. Its major forums are courts, including civil courts, administrative courts, and so on. *Administrative accountability* refers to a wide range of quasi-legal forums, which vary from ombudsmen and audit offices at different levels of government to independent supervisory authority, inspector generals, anti-fraud offices, etc. This type of arrangement plays an important role to oversee the performance of quangos and executive public agencies.

*Professional accountability* relates to professional peer review on the basis of codes with standards laid down by professional associations. It is especially relevant to the public managers who are professionals, such as architects, urban planners, or civil engineers. *Social accountability* is an emerging concept responding to the urgent demands of contemporary civil society for more direct and explicit accountability relations with public agencies or individual public managers. Under certain circumstances, public agencies or individual public managers are asked to account for their performance to the public, or at least, to civil interest groups, non-governmental organisations, and other stakeholders.

Considering the nature of the obligation, two types of accountability can be categorised, including vertical accountability and horizontal accountability. *Vertical accountability* refers to a situation where the accountability is rendered to a higher authority, who formally hold power over the actor on the basis of a hierarchical relationship, or of laws and regulations (Bovens, 2007). *Horizontal accountability* may be rendered to parallel institutions (such as ombudsmen, audit offices, inspectors, and accountants), or to groups (such as civil interest groups, non-governmental organisations, and other stakeholders). A hierarchical relationship is lacking in this situation.

*2.2 Assessing Accountability from Three Perspectives*

If we see accountability as mechanisms to conduct *ex post* oversight of public governance performance, it must imply a sense of virtue, more specifically, substantive norms for the behaviour of public agencies or individual executives. Although the norms may vary according to different places and institutional settings, they do embed in the judgments, albeit implicitly. In order to allow others to review and to generate meaningful assessments and discussions, it is necessary to establish an analytical framework with explicitly explained criteria.

On the basis of scholarly literature and policy documents, Bovens et al. (2008) recognise that people often assess accountability from three perspectives, including democratic perspective, constitutional perspective and learning perspective. From a democratic perspective, accountability is important to provide a means for citizens and their representatives to monitor, influence and control government conduct. The means involves a responsiveness relationship between the actors in the democratic chain of delegation (Bovens et al., 2008; Bovens, 2007). The central criterion here is to what extent a particular accountability arrangement or regime enables democratically legitimised bodies to monitor and assess the conduct of executive bodies or actors and to induce modification of their behaviours in accordance with the preferences and priorities of the democratically legitimised bodies.

From a constitutional perspective, the main concern of accountability is how to prevent the executive actors from abusing public powers and resources. Its central criterion is to what extent a particular accountability arrangement or regime curtails the abuse. From a learning perspective, the purpose of accountability mechanisms is to encourage openness and reflexivity in administrative systems to enhance government effectiveness and avoid inward-looking conduct. In other words, the executive actors should truly communicate with outside actors, and act in accordance with the external feedback on their executive performance (Bovens et al., 2008; O'Loughlin, 1990). The central criterion is to what extent a particular accountability arrangement or regime can induce the executive actors to constantly take into consideration the wishes and priorities of contemporary civil society. The learning perspective is closely related to the notion of social accountability.

As show in Figure 1, an accountability arrangement consists of three major activities, including informing the conduct, debating and judging, which leads to formal or informal consequences the executive actor has to face. The institutional designs of the three major activities influence the effectiveness of a particular accountability mechanism. In view of this, Bovens et al. (2008) propose an analytical framework consisting of three concrete evaluation questions respectively from the three perspectives (see Table 2). Since this research more focuses on whether the issue of democratic deficit emerging in the relational governance as Swyngedouw (2005) argues, the emphasis of the empirical study is put on the democratic and learning perspectives of accountability assessment.

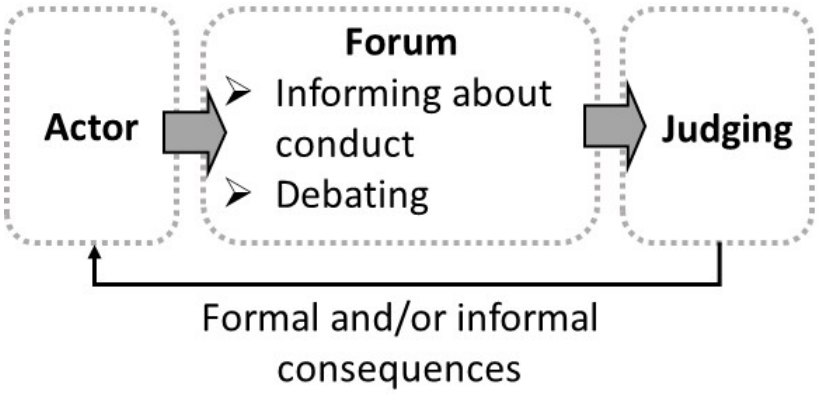


Figure 1. A Notion of Accountability
Source: On the basis of Bovens 2007.

Table 2. An Analytical Framework for Accessing Accountability Arrangements

| **Democratic perspective** |
|---|
| *Information provision*:<br>Is democratic chain of delegation informed about the conduct and consequences of executive actors?<br>*Debate:*<br>Do the debates between accountability forum and executive actors focus on whether the actor's conduct conforms to the democratically legitimized principal's standards and preferences?<br>*Consequence:*<br>Does the accountability arrangement provide democratic chain of delegation sufficient tools to influence the executive actor's policies? |
| **Constitutional perspective** |
| *Information provision*:<br>Does the accountability forum have enough investigation powers and information-processing capacity to evaluate executive behaviour, particularly regarding the conformity of laws, regulations and norms?<br>*Debate:*<br>Do the debate and questions concentrate on conformity of actions with laws and norms?<br>*Consequence:*<br>Does the accountability forum possess credible sanctions to punish and deter executive misbehaviour? |
| **Learning perspective** |
| *Information provision*:<br>Does the accountability arrangement yield executive actors and external stakeholders an accurate, timely and clear diagnosis of important performance dimensions?<br>*Debate:*<br>Does the accountability arrangement provide a setting and a set of interaction routines which induces ongoing, consequential dialogue among executive actors and external stakeholders about performance feedback?<br>*Consequence:*<br>Is the external stakeholders sufficiently strong to make accountors anticipate the desirable societal outcomes, yet sufficiently 'safe' culture to minimize defensive routines so that accountors adopt the lessons learned from performance feedback and stakeholder dialogue? |

Source: Based on Bovens et al., 2008, p.231-232, 238.

## 3. Accountability in Eindhoven City-regional Governance

Since 2004 the Dutch Ministry of Economic Affairs has recognised the Eindhoven city-region as the national important Brainport, a centre of innovation and knowledge in the Netherlands (Ministerie van Economische Zaken, 2004). However, the emergence of Brainport Eindhoven is not a spontaneous process but rather a result of close collaboration between the local governments, high-tech industries and knowledge institutes in the past two decades. This close collaboration was triggered by the crisis in the late 1980s and the early 1990s. At that time, the *Stadsregio Eindhoven* (Eindhoven City Region, SRE), local governments, business, and knowledge institutions joined forces to recover from the economic downturn. The SRE is a regional organisation made up of the city of Eindhoven, the city of Helmond, and another 19 surrounding municipalities (see Figure 2), which created a joint fund to strengthen the economic structure of the region and set up the Stimulus programme in 1995 (Brainport Eindhoven, 2011; Brainport Foundation NV, 2009). This collaboration laid the foundation for the Brainport of today.

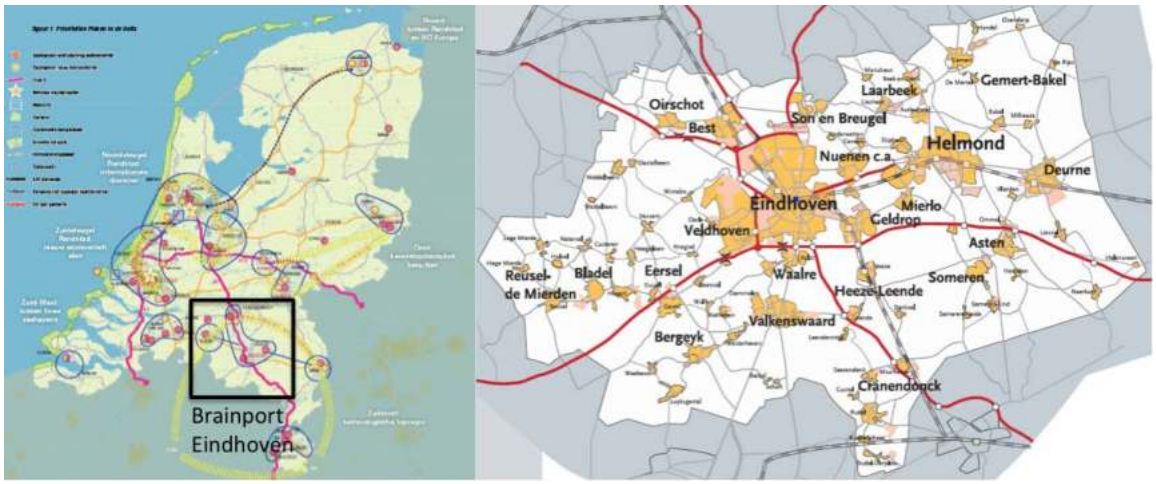


Figure 2. Dutch national strategic planning and Eindhoven city-region
Source: based on Ministry of Economic Affairs 2004, p.10; Brainport Foundation NV 2009, p. 32.

Due to the success of the Stimulus Programme in the late 1990s, people in the city-region have broadly accepted the idea that tight relationships between government, academia, and industry will encourage the creation of an innovative milieu. Since the beginning of the 2000s the SRE and the local governments have decided to adopt a triple helix model focusing on the development of hybrid organisations and tri-lateral networks that overlap and connect these three institutional spheres. The government first invited knowledge institutes and the business community to formulate and commit to a joint action-focused agenda and priorities—the Horizon Programme (van der Meer et al., 2008; Sistermans Commission, 2006; Programme Agency Horizon, 2004). On the basis of its success, in 2005 the government established the *Stichting Brainport* (Brainport Foundation) consisting of representatives of the three sectors, forming a platform as well as a collaborative body to determine the development strategies of Brainport Eindhoven NV and appoint *Raad van Commissarissen* (the advisory committee board) of Brainport Eindhoven NV (Brainport Development, 2012). The advisory committee board consists of representatives of the government, business sector and knowledge institute involved in the development of Brainport Eindhoven. They meet twice a year and act as a think-tank for the Brainport Foundation and Brainport Development NV. The representatives of business sector and knowledge institute are requested to represent the position and expertise they hold rather than a representative of that company or of the institute (Stichting Brainport, 2007).

*3.1 Mapping the accountability of Brainport organizations*

The accountability arrangement is mapped in Figure 3. There are two types of shareholders in Brainport Development NV. One is the triple-helix shareholder, the Brainport Foundation, which determines the development strategies of Brainport Development NV and appoint supervisory committee board. Brainport Foundation consists of twelve representatives from three sectors forming the triple-helix platform. The three sectors include executive committee of SRE, *burgermeesteren* (mayors) of municipal shareholders, presidents of research institutes, and CEOs of high-tech firms and/or chairperson of local business associations, such as East Brabant Chamber of Commerce or employers association. Their major responsibility is to set up strategic development agenda to improve the economic structure and the international competitiveness of the Eindhoven city-region as a whole. Supported by the SRE and the municipalities, the business sector together with knowledge institutes play a leading role in formulating and managing the development agenda (van Leest, 2012a). At the same time, the representatives of the two sectors may need to render accountability to their own boards of organization or councils.

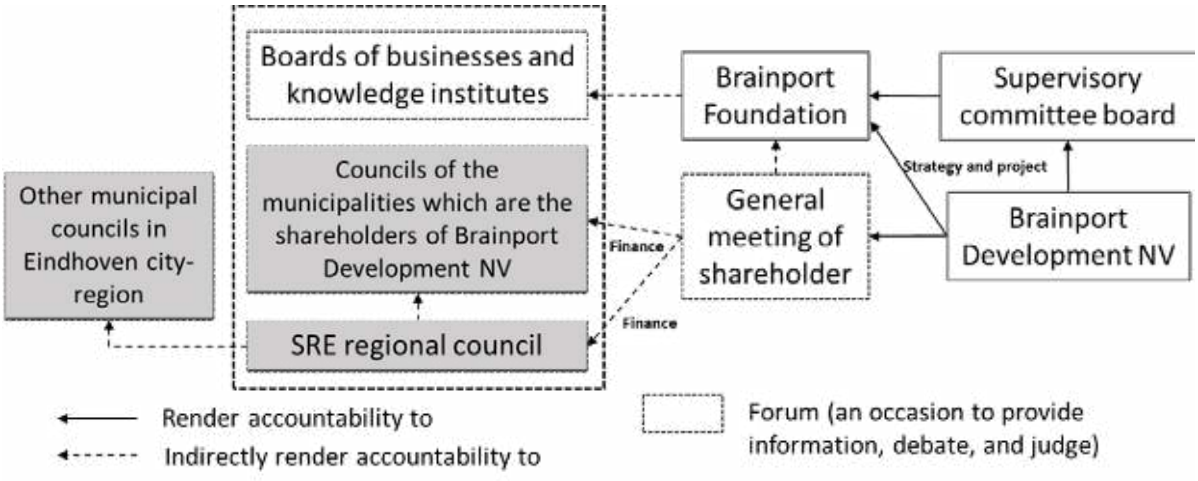


Figure 3. Accountability Arrangement of Brainport organizations

The other type of shareholders is governmental shareholders. From 2010 to 2013, the governmental shareholders included the SRE, Eindhoven municipality, Helmond municipality, and Veldhoven municipality. They were the major financial supporters of Brainport Development NV. Every year they together contributed four million euros as the basic operational funding of the regional development company, although the total amount of revenue depended on its activities of each year. For example, in 2011 the Brainport Development NV had a budget with13 million euros. Except for the basic operational funding, the other nine million euros was from different sources, including the EU, national government, provincial government, municipalities and private sectors. The three municipalities not only contributed through the SRE regional funding, but also provided extra budget to the Brainport Development NV according to their number of inhabitant (van Leest, 2012b). Since 2014, Best municipality has decided to pay extra budget to be one of the governmental shareholders in order to be engaged in the decision making process.

At least twice per year a general meeting of the two types of shareholders is held to check the annual report and annual accounts, and to determine the year plan for the coming year (Gemeente Eindhoven, 2010a). Any strategy, action plan or project that needs financial input from the basic operational funding has to be agreed by the SRE and the municipal shareholders. The councils of the municipal shareholders determine the content and financial frameworks in relation to their jurisdiction via the regular planning and control cycle of *Voorjaarsnota* (memorandum), reports, and annual budget of the municipalities (Gemeente Eindhoven, 2006). Their representatives in the meeting thus play a role of intermediary. In other words, Brainport Development NV has to render financial accountability to the municipal shareholders via their representatives in the general meeting.

*3.2 Assessing the accountability of Brainport organizations*

The assessment of Brainport organizations' accountability is summarized in Table 3. Regarding the information provision, every year Brainport Development NV provides at least three kinds of document to the public, including year plan, annual report and Brainport monitor. The year plan shows the target of their performance and action plans. The annual report is to demonstrate how much they have achieved in previous year according to the target they set in that year's plan. The Brainport monitor comprises 35 macroeconomic indicators (statistics) and an analysis of 70 study reports to provide a coherent picture of the regional economy (Brainport Development NV, 2014).

From the democratic perspective, the accountability arrangement slightly enables the municipal councils in Eindhoven city-region to monitor and assess the conduct of the Brainport organizations and to induce modification of their behaviours in accordance with the preferences and priorities of the municipal councils. Municipal councils can easily get the year plan, annual report and Brainport

monitor from the website of Brainport Development NV, but the information may not be sufficient. In 2009 Eindhoven municipality hired BMC Advies to evaluate the performance of Brainport Eindhoven program from 2007 to 2010 as a reference for municipal council to decide if the municipality should support the following program, Brainport 2020 (Gemeente Eindhoven, 2010a, 2010b). The report concluded that the council of the Eindhoven municipality did not have sufficient opportunity to play a role in the new city-regional governance model according to the BMC report in 2010. Its conclusion was mainly based on three findings. First, it was difficult for the councillors of Eindhoven city to evaluate whether Eindhoven city benefited from each Brainport project, because those projects were implemented for the city-region as a whole. Second, the substantive preferences of the Eindhoven city were not sufficiently visible in the outcome of those Brainport projects. Third, the report also found that coordination between the Economic and Culture sector of Eindhoven city and the Brainport Development NV was poor. It suggested that the Economic and Culture sector should play a leading role to coordinate the collaboration between the municipality and the Brainport organizations (BMC, 2010). The Economic and Culture sector is legitimized by the council and its priorities represent the preferences of the council. The poor coordination indicates a gap between the preferences of the council and the conduct of the Brainport organizations. This implies a danger of democratic deficit in the new governance model.

Table 3. Assessing the accountability of Brainport organizations

| | **Democratic** | **Learning** |
|---|---|---|
| ***Information provision*** | Is democratic chain of delegation informed about the conduct and consequences of executive actors? | Does the accountability arrangement yield executive actors and external stakeholders an accurate, timely and clear diagnosis of important performance dimensions? |
| *Assessing* | Yes, but slight. Twice per year an informative meeting is held for the municipal shareholders, but it is difficult for the councillors to evaluate the information. | Yes, but hardly at all. Every year, year plan, annual report and Brainport monitor are published on the website, but if it is difficult for the councillors to evaluate, then it is difficult for citizens as well. |
| ***Debate*** | Do the debates between accountability forum and executive actors focus on whether the actor's conduct conforms to the democratically legitimized principal's standards and preferences? | Does the accountability arrangement provide a setting and a set of interaction routines which induces ongoing, consequential dialogue among executive actors and external stakeholders about performance feedback? |
| *Assessing* | Yes, but slight and the quality is difficult to evaluate. | Yes, but hardly at all. Occasionally, the company may hold conferences. |
| ***Consequence*** | Does the accountability arrangement provide democratic chain of delegation sufficient tools to influence the executive actor's policies? | Is the external stakeholders sufficiently strong to make accountors anticipate the desirable societal outcomes, yet sufficiently 'safe' culture to minimize defensive routines so that accountors adopt the lessons learned from performance feedback and stakeholder dialogue? |
| *Assessing* | Yes, but slight. Only when the municipalities are the shareholders, their councils may have some chances to influence Brainport policies and programs mainly through financial mechanisms. | Not yet find any evidence. |

Regarding the forum for debate and the mechanism to oversee and control, the only official forum is an informative meeting held twice per year by the director of Brainport Development NV to the councils of the governmental shareholders (Gemeente Eindhoven, 2010a). Although the

representatives of the SRE and the municipal shareholders may convey the councils' opinions to the Brainport organizations during the regular meeting of Brainport Foundation and the general meeting of shareholders, their representatives are the mayors, who are not elected by the citizen and members of the municipal councils. The mayors render account to the Minister of Interior[2] rather than municipal councils. Under this circumstance, the councils of the governmental shareholders have very limited capacity to oversee and control the conduct of the Brainport organizations. The only tool the councils can use is to adjust the financial contribution to the Brainport program via the regular planning and control cycle of annual memorandum, report, and budget of the municipalities. But only the municipalities, which are the shareholders of the Brainport Development NV, can use the mechanism.

As for the non-shareholder municipalities, the SRE—the most important shareholder of the Brainport Development NV[3]—can be seen as their representative in the general meeting of shareholders, because the SRE is a joint administration and representative of the 21 municipalities in Eindhoven city-region rather than a fourth layer of government. However, the regional agenda and programs for regional collaboration of the SRE are determined by the *Regioraad* (Regional Council), which comprises mayors or *wethouders* (aldermen) of each participating municipality. As a result, although after the national government the 21 municipalities together are the second biggest financial contributor to the regular budget of SRE[4], the municipal councils have very limited influence on the decision making of the regional council. In fact, some municipal councillors in the Eindhoven city-region had doubted the democratic accountability of the SRE and criticised its lack of transparency in decision-making, although they identified the achievements of the SRE in promoting regional collaboration, lobbying, and so on.[5] Therefore, comparing to the municipal shareholders of Brainport Development NV, the non-shareholder municipal councils have even less capacity to oversee and control the conduct of the Brainport organizations. That is the reason why Best municipality in 2014 decided to pay extra budget to be one of the governmental shareholders.

From the learning perspective, it is hardly to infer that the accountability arrangement can induce the Brainport organizations to constantly take into consideration the wishes and priorities of the citizens in Eindhoven city-region. Every year the Brainport Development NV publishes year plan, annual report and Brainport monitor on the website, but if it is difficult for the councillors to evaluate, then it is difficult for the citizens as well. Occasionally, the company may hold a regional conference to collect opinions about the development of Brainport as a reference for its year plan, but in which situation the company considers it is necessary to hold the conference, and how they deal with the opinions and feedbacks from external stakeholders are not clear. Except for the two ways, the public may receive information via the public meeting held by the municipalities. But it is an occasion for the executive board of municipality rather than the Brainport organizations to render accountability to the public. It can only be seen as an indirect accountability arrangement.

[2] According to *Gemeenteweg* (Municipality Law) Article 61b, the mayor may at any time be dismissed by national government according to the recommendation of the Minister. If there is a difficult relationship between the mayor and the council, the council may, through the Commissioner of the King, recommend the minister to resign the mayor. But, before the council declares that a difficult relationship between the mayor and the council exists, they need to explain the difficult relationship and consult with the auditor.

[3] In 2011 its shareholders included the Brainport Foundation (50%), the SRE (25.9%), Eindhoven municipality (15.2%), Helmond municipality (5.5%) and Veldhoven municipality (3.4%) (Brainport Eindhoven, 2011).

[4] In 2010, 51 percent of the SRE revenue was from the national government, while 19 percent of the revenue was from the 21 municipalities (SRE, 2011).

[5] In 2010 Daniëlle van Lith, a municipal councilor in the Eindhoven city-region, criticized the direct accountability and a lack of transparency of the SRE in decision-making in the VNG Magazine. VNG is an association of the Dutch municipalities. It works as a platform for the Dutch municipalities. (http://www.vngmagazine.nl/weblog/706/hoera-afschaffing-van-de-wgr ; accessed in November 2012)

## 4. Conclusion

Obvious to all, the new form of relational governance in Eindhoven city-region has built consensus among and drawn resources from the three sectors, and offered the Brainport organizations greater flexibility and efficiency in decision making and action taking. However, after systematically assessing its accountability arrangement, this paper finds that from either the democratic or the learning perspective the institutional arrangement of the Brainport insufficiently satisfy the criteria of accountability. This may be due to three institutional weaknesses.

The first is the malfunction of the mayors and the *college van burgemeester en wethouders* (municipal executives) leading to a weak link between the conduct of Brainport organizations and the preferences of the municipal councils. According to the institutional settings, the mayors—the representatives of the municipality in the regional council and the Brainport organizations—should play a role of intermediary between the councils and the Brainport organisations. The malfunction occurs may be because the mayors are not elected by the citizen and they are supposed to render account to the Minister of Interior rather than municipal councils. Under this institutional setting, even for the Eindhoven municipality, the biggest player in the city-region, its municipal council did not have sufficient opportunity to play a role in the new form of relational governance.

Second, only the municipalities that pay the extra money can be the shareholders of the Brainport Development NV, so the degree of the Brainport organizations' accountability toward the municipal councils differs from municipality to municipality. While the councils of municipal stakeholders of Brainport Development NV may use municipal regular planning and control cycle of annual memorandum, reports, and budget to influence the content and financial frameworks of Brainport organizations' year plan to certain degree, the councils of non-stakeholder municipalities in the city-region can hardly ever oversee and control the conduct of the Brainport organizations. The degree of accountability that differs from municipality to municipality may affect the fairness of decision-making and result in an uneven distribution of resources in the city-region.

Last but not least, for the citizens in Eindhoven city-region there is no regular forum for debate. Only when the Brainport Development NV considers it is necessary, may they hold a regional conference to collect opinions. Besides, the Brainport organizations do not provide sufficient information of their conduct to the citizens. Although the citizens can easily find the three annual documents on the website of Brainport Development NV, it is difficult for the citizens to evaluate the information and find an occasion to express their opinions. This leaves a large space for improvement regarding the openness and reflexivity in the executive system of the regional governance bodies and the Brainport organizations.

Three lessons we can learn from this case study regarding the feasibility and applicability of the analytical framework, and the knowledge of accountability and relational governance. First of all, accountability arrangements can be considered a useful tool to link the conduct of public officials and institutions to the preferences and priorities of the democratically legitimised bodies, to prevent or reveal abuses of public authority, to enhance government effectiveness and to avoid inward-looking conduct. However, this does not mean the more is the better. The design of accountability arrangement has a manner of accumulation. Various types of accountability exist side by side and form complex networks of accountability. The accumulation of accountability arrangement may overload public officials and institutions with bureaucratic and complex procedures. Based on the understanding, the major question is whether the design of accountability arrangements actually work in the intended manner rather than trap public officials and institutions in overly bureaucratic procedures. The analytical framework proposed by Bovens does provide a useful framework to assess systematically whether a particular accountability arrangement is insufficient or not. But it is difficult to measure if the arrangement is sufficient enough, especially when taking into consideration the different perception of accountable behaviour within distinct places and institutional settings. A possible way to improve the analytical framework is to conduct a comparative analysis of similar regional governance settings within the Dutch context.

This links to the second lesson. That is, before making any conclusion, it is necessary to examine carefully the political and administrative systems the new governance mode embedded in and evolves from. This helps understand their influence on the new governance mode and make effective recommendations. Third, the case shows a dynamic nature of the relational governance mode. It is constantly shaped by the alteration of national policy as well as of the changing agreements between the municipalities, so dose its accountability arrangement. For example, since December 2012 the SRE has undergone a process of transforming from a governance body to an administrative platform, Metropolitan Eindhoven, due to the abolishment of *Wgr-Plus* (Joint Agreement Act Plus) in 2013. The Joint Agreement Act Plus had formed the legal base for the SRE to undertake the public tasks since 2006. Up to now, the role of the new regional governance body in the operation of Brainport organizations is unclear. The transformation result will eventually shape the accountability arrangement and affect the degree of accountability. Especially for the non-shareholder municipalities, it is influential, because the SRE could be seen as their representative in the Brainport Foundation and the general meeting of shareholder, but the SRE representative's position in the Brainport Foundation is vacant now[6]. Therefore, it deserves constantly monitoring and investigating the change of city-regional institutional setting and its influence on the accountability arrangement of the relational governance in Eindhoven city-region.

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# PARTICIPATION STRUCTURES TO SUPPORT THE INCLUSION OF OLDER PEOPLE ON THE NEIGHBOURHOOD LEVEL

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*For many older people their own precinct or neighbourhood gains in importance with increasing time spent at home and lower mobility (needs). The precinct stands thus for opportunities of communication and participation. Therefore, senior-friendly or age-integrated planning needs to include thinking about structures of communication and participation in order to support and enable older people taking part in the social life of the precinct and generally. This is what the research project "QuartiersNETZ" ("neighbourhood network") aims to develop. While the project includes the development and testing of innovative senior-focused technical interaction and communication media, this paper concentrates on the development of participation structures in the precincts. It describes the approach towards the so-called participation models and presents first steps and insights of the ongoing participation process. The paper also includes a discussion about different understandings of participation, with a focus on the views of planners and community workers, and reviews what the differences in understanding mean for the implementation of participation structures on the ground. This includes the balancing act between broad participation and the capacity to act. Furthermore, first ideas on how the established networks could continue after the termination of the project are discussed.*

## 1 Introduction

Demographic change leads to a number of challenges for planning and urban development in Western countries. It is characterised by different developments, such as population decline, a growth of the proportion of older people – both caused by low fertility rates and low mortality rates – as well as a growing diversity, e.g. ethnical and cultural diversity through immigration, changing and more diverse lifestyles and family and household structures. However, while those demographic changes take place overall, the intensity and occurrence differ between different cities and regions. For instance, some cities grow in population size, while others decrease. At the same time within those cities there is also a concurrence of growth and shrinkage as there are areas that grow and other areas that lose population. The same can be observed for the other characteristics of demographic change. Thus, demographic change is unevenly distributed.

Challenges for planning lie therefore in planning for a more diverse society and older population, in moving away from the growth paradigm towards planning for shrinkage and at the same time planning for different circumstances within the same city. Further current challenges for cities which also influence planning are the increasing competition between cities, the growing social fragmentation and polarisation processes as well as the growing call for (true) participation coming from different parts of the community (Schmidt, 2014; Roth, 2011).

This paper will focus on the challenges (and opportunities) arising from the ageing of society as well as the call for (true) participation. The consequences of the growing proportion of older people are discussed in many areas. The public discussion, for example, is mainly concerned with the effects on economic competitiveness and the future of the social security systems. Other discussions include the impacts on care and medical services and the implications for community work. The planning discussion started with a strong focus on barrier-free urban design and architecture, but has shifted to a more comprehensive view that includes issues such as local supply, mobility opportunities, social life etc. (Bleck et al., 2015).

Both within the planning discussion and the field of community work the debate has gained a focus on the significance of the neighbourhood as a spatial level. With increasing age the neighbourhood gains in importance for people because of lower mobility (needs) and the increase in time spent at home and within the surrounding area (Rüßler, 2007; Knopp & van Rießen, 2014). Low mobility

can be caused by health or financial reasons, while low mobility needs mean that people can fulfil most of their demands and needs within proximity and they are not required to travel elsewhere (e.g. for work). This underlines the significance of well-functioning neighbourhoods and areas where as many necessary services as possible are available. This also means that the neighbourhood stands for opportunities of communication and interaction for (older) people. Therefore, senior-friendly and age-integrated planning needs to include thinking about structures of communication and participation, in order to facilitate the involvement and contribution of older people to the precinct and its social life.

Another reason why the local level has become more prominent in planning is the trend towards (participatory) governance and the communicative turn in planning. The local level is often considered the most suitable for community participation as it is the level which is closest to the community and their lives (Roth, 2011). Also, local institutions and organisations are often less specialised and thus more open to community involvement. Furthermore, devolution means that the local level has gained in importance.

This paper brings together the views of planners and community workers on the neighbourhood, the ageing of society and participation. While community workers come from the "social side" and emphasise the empowerment of people and the need for inclusive neighbourhoods, the planners come from the "planning side" and emphasise the need for a more needs-oriented planning which leads to a better acceptance of projects, better planning and a better environment for the residents. This directs the planners to a "more social view" and the community workers to a "more spatial view".

The paper describes the research project "QuartiersNETZ" ("neighbourhood network") in which researchers and practitioners work together to involve older people into participative neighbourhood development as well as the development and testing of innovative senior-focused technical interaction and communication media. The paper concentrates on the participation processes and the approach towards the so-called participation models. The second section explores views on participation and governance and differences between the planning discussion and the discussion within the community work literature. This includes a discussion about the balancing act between broad participation and the capacity to act. This will offer the background for the discussion of first results of the project. Then the project QuartiersNETZ and its approach towards participation are explained and the four case study areas are described. Subsequently, the first steps and results of the project are presented. The conclusion reflects on the impacts of different understandings of participation and on the possibility of developing enduring structures.

## 2 Participation, empowerment and problem solving

The project QuartiersNETZ has as one objective to develop participation structures (and models) in order to include older people into neighbourhood development and to enable them to develop and express ideas they have about their neighbourhood as well as other parts of their lives. This raises the question how participation is defined within the project and whether all people involved have the same understanding of participation.

Project partners within the project come from different disciplines, such as social sciences, community work, planning and computer sciences. Participation is understood in different ways within those disciplines. This paper will focus on the understandings of social sciences/community workers and planners. Computer sciences are excluded within the discussion of this paper as their work within the project refers to different parts of the project and their participative work is more related to the joint development of concrete technical ideas.

As stated above, it can be said that community workers come from the "social" or "process" side to participation, while planners come from the more results-oriented "planning" or "efficiency" side. In other words, community workers advocate fairness and empowerment while planners advocate effectivity, problem solving and better acceptance planning. The background of these two views will be explained below.

Participation has become an important objective (and buzz word) for planners through the communicative turn in planning (Healey 1997) and the trend towards (participatory) governance, which is partly related to the communicative turn (Grote & Gbikpi, 2002; Walk, 2008; Schmidt

2014). Both trends acknowledge that government in general and planners in particular need to involve further actors and stakeholders, such as the people planned for in order to achieve better results.

Within the strand of governance discussion related to planning it is argued that the state has become an actor among others or that at least its role has shifted to a coordinating and enabling role while it still provides the institutional framework for governance at the national and sub-national level (Jouve, 2005; Benz & Papadopoulos, 2006). Reasons that are cited for the emergence of governance are the 'overload' of government and the 'ungovernability' of modern societies, referring to the growing diversity of society and the increasing load of complex and conflicting demands and expectations placed on the state by the public, organised interests or other actors (Schmitter 2002; Peters & Pierre 2006). Thus, there is a shift from (hierarchical) government to governance.

There are high expectations of the shift towards governance: It is hoped that the application of more participatory governance arrangements or in other words participation processes can lead to more political legitimacy, regained trust into politics, higher responsiveness of politicians and higher satisfaction of citizens with political decisions (Geißel, 2008). Within the context of neighbourhood development there are also expectations that the local cohesion can be strengthened, the self-confidence, responsibility and social capital of residents can be increased and that planning becomes more needs-oriented as residents are asked for their needs, and that this will lead to a better acceptance of planning projects (Schmidt, 2014).

Nevertheless, there are also problems with the shift towards governance. One problem is that often governance structures are not legitimated through democratic elections or similar processes. This can lead to the selective participation of certain groups if there are no clear rules for participation (Haus & Heinelt, 2005; Benz & Papadopoulos, 2006). Another issue is that there can be a tendency towards the involvement of more vocal groups while weaker groups or minorities are disregarded. A further criticism is that governance arrangements are often not capable of acting as they are not legitimised for action, but are only structures for discussion and development of ideas (Jessop, 2002).

It has to be noted that the shift towards governance does not only mean more participation and inclusion of stakeholders in decision-making but that it includes also a more economic approach of planning. This can include a focus on the competitiveness of the city or city region, (public-private) partnerships for previously public tasks or deregulation. The participative and economic trends can go together as improved planning or decision-making can improve or secure a quality of life that enhances the competitiveness, and as deregulation and devolution can mean more responsibility on the local level (Brenner, 2002; McGuirk, 2005). Therefore there is a risk that community participation and engagement replace tasks of the welfare state (Strube et al., 2015; Knopp, 2015).

Many of the governance processes on the local level – and in particular within socially integrative planning – seek to tackle the problems of governance by attempting to specifically include less vocal groups and by emphasising the high importance of participation through residents for the joint problem solution. Sometimes democratic legitimisation is given through the possibility to vote for neighbourhood representatives. However, the crucial question for each governance network is how the objective of broad participation can be brought together with the capacity to act, as mostly the participation processes are concerned with concrete problems or concepts that have to be solved or developed (Schmidt, 2014, p. 115).

In summary, it can be said that participation for planners means to include residents and other actors into the process of planning, in order to achieve better solutions, higher legitimation and also a smoother process of planning (because of less opposition) (Haus & Heinelt, 2005; Schmidt 2014).

For community workers, in contrast, participation is less about solving problems, but more about empowering and enabling people to take part in social life (Straßburger & Rieger 2014; Strube et al., 2015; Rüßler & Stiel, 2015). Participation does not mean to involve people in certain topics as a professional; rather participation is thought as a qualifying activity that enables participants to strengthen social as well as political competences which in turn enables them to articulate their objectives and to take part in decision-making. Through this participation has an integrative effect (Strube et al., 2015).

At the same time, participation is not only the activity of enabling and empowering people, but it is also the act of taking part in social life and decisions. It is an act of the individual; the act of participation makes it possible to influence results and to contribute to social and political processes concerning the own life (Straßburger & Rieger, 2014).
Therefore, for community workers and other social professions participation is about capacity building and processes where participants learn to reflect and to represent their own interests. It stands for social affiliation and inclusion in crucial areas of life (Strube et al., 2015). Participation in this sense does not start with a problem which needs to be resolved and where all stakeholders concerned need to be involved in decision-making, but it starts with the involvement in social and political life and the needs and objectives of the individual. Thus, when looking at neighbourhood development and urban planning, community workers support residents to articulate their ideas and needs. They take an emancipatory approach (FH Nordwestschweiz, 2015).
In summary, it can be said that for community workers participation is integration into social life, while for planners participation refers to joint problem solving and the involvement of the community and other actors into certain topics. The different understandings of planners and community workers explain the problem of the "effectivity trap“ (Munsch, 2005). The effectivity trap means that results-oriented participation processes working towards problem resolution can overburden some participants, particularly those not used to expressing their own opinion, so that they back out of those processes. Therefore participation processes need to be more adapted towards the participants, meet them at their situation, and be less middle-class focused. Thus, the processes need to have further objectives, such as social exchange and integration and not only concentrate on problems and their solution (Munsch, 2005). This refers back to the question how broad participation can be brought together with the capacity to act and is the reason why the project QuartiersNETZ seeks to bring together both sides of participation, the more results-oriented and the more socially and process oriented.

## 3 The project QuartiersNETZ

### *3.1 Older people as co-producers of neighbourhood networks*

The project QuartiersNETZ develops “real” and “digital” networks within neighbourhood precincts and within these networks ideas about how the quality of life and social networks can be improved within the neighbourhood. The development and the testing of ideas is undertaken in a participative manner; that means researchers, practitioners and residents work together. The goal of these networks is to support a self-determined life for (older) residents within the neighbourhood for as long as possible and to facilitate the cooperation and participation of local residents and stakeholders. The term “real” network refers to concrete cooperation and participation structures in the actual neighbourhoods (the four case study areas), while the term “digital” network refers to more technical structures such as a digital platform.
The full title of the project is “Older people as (co-)producers of neighbourhood networks in the Ruhr area”. This title already expresses the importance attached to participation and cooperation within the project. Particularly for the more technical innovations of the project, the concept of older people as co-producers is central and innovative in the sense that it shows the desire to switch from the acceptance paradigm to the participation paradigm (Sorgalla et al., 2015). The leading thought is to not only gather opinions or information, but to let people reach their own ideas and decisions. Similarly, within the real networks the involvement of older people is aimed to make them participants and co-producers rather than only voters and commentators on ideas and events within the neighbourhood.
As the project is funded within the funding priority area “Health and service regions of tomorrow” another important topic is how health services as well as other local services can be improved and interlinked and also how health or quality of life can be improved or maintained. This also includes the idea of shaping the demographic change occurring in the Ruhr area and to support the structural change towards an innovative service region.
The project has a number of sub-projects or sub-topics which include the participative development of: a) a digital platform, b) ideas for adapting technical devices for impairments of older people and

the adaptation of selected devices, c) a training and guidance concept which qualifies citizens to understand and explain technology, d) business models and service provider networks, and e) participation models. As these sub-projects are quite diverse project partners are from a number of different fields and backgrounds, including computer sciences, social sciences, gerontology and geragogy as well as research, care services, municipal government and individual businesses.

As a case study for the Ruhr area the city of Gelsenkirchen has been selected because it is a city that is greatly influenced by ongoing structural change and has experienced developments that are typical for the whole region. Both the Ruhr area and Gelsenkirchen have experienced a strong socio-economic structural change for decades and are particularly influenced by an ongoing decline in jobs as well as changes in the job market from a more industrial to a more service-oriented labour market. This has led to high unemployment and migration loss and thus a shrinking number of inhabitants which has exacerbated other effects of demographic change, such as the growing proportion of older people. It can be said that the Ruhr area is "ahead" of other regions regarding the effects of demographic change and therefore a good case study for developing and testing approaches towards supporting a self-determined life for older people within the own neighbourhood (Fachinger et al., 2015). Moreover, the city of Gelsenkirchen has adopted a master plan for senior citizens in 2005, which established an integrated approach towards senior citizens policy, and has since established corresponding coordination and cooperation structures.

Within the city of Gelsenkirchen four neighbourhood precincts have been selected as case studies. Local actors from the precincts were asked to apply for taking part in the project so that a certain interest in the project is given and there is already some interest in cooperation and working together for the precinct. From the application neighbourhoods were chosen that differ from each other with regard to population structure, building structure and other parameters. This was done to understand the importance of different prerequisites and what this means for participation processes. By working in differing neighbourhoods the need for different approaches in different circumstances can be highlighted, but it is also possible to find out whether some approaches are likely to be universally valid. Furthermore, results are more likely to be relevant for other cities when different types of neighbourhoods are considered.

Table 1 gives an overview of some of the characteristics and differences of the precincts. Already the number of residents differs to a relatively large extent, as the largest precinct has around 19,700 residents, whereas the smallest one has only around 4,200 residents. In the two larger precincts the percentage of people with a migration background is also higher with 37 % and 34 % respectively, in comparison to 11 % and 12 % in the other two precincts. The percentage of people aged 65 and older lies between 18 % and 29 %. The net migration loss between the ten years of 2003 and 2013 loss lies between 3% and 10 %. Differences of existing cooperation structures and relevant topics will be described below in the section on the steps and insights of the project.

Table 1: Selected characteristics of the case studies

| | **Precinct 1** | **Precinct 2** | **Precinct 3** | **Precinct 4** |
|---|---|---|---|---|
| Population | 19,700 | 13,600 | 8,900 | 4,200 |
| Population density (people/km²) | 6,486 | 4,233 | 1,671 | 1,843 |
| Percentage of people aged 65 and older | 18 % | 22 % | 29 % | 26 % |
| Migration net loss between 2003 and 2013 | -3 % | -10 % | -3 % | -4 % |
| Percentage of people with migration background | 37 % | 34 % | 11 % | 12 % |
| Percentage of unemployed | 15 % | 13 % | 4 % | 5 % |

| | | | | |
|---|---|---|---|---|
| Percentage of people receiving transfer payments | 27 % | 23 % | 6 % | 7 % |
| Percentage of people living less than 500m away from open space that is at least 0.5 ha | 37 % | 74 % | 86 % | 91 % |
| Dwelling vacancy rates | 11 % | 10 % | 4 % | 5 % |

Source: Own calculations based on City of Gelsenkirchen

*3.2Participation models*

This paper focuses on the participation process and the participation models which will be one result of the QuartiersNETZ project. The participation models are thought to facilitate the development of participation processes within neighbourhoods and precincts, similar to a field manual. They will include insights from the project regarding the incorporation of resources, potentials and knowledge of older people (and other actors), the initiation of self-organisation as well as the development of democratic processes within the precincts. This includes the establishment of networks, direct democratic structures as well as a connection between the residents and political and administrative structures. The models will present ideas and approaches according to the different conditions and requirements within the different types of neighbourhoods. Naturally, it will be difficult to generalise from the four case studies, but it is hoped that some useful rules of action can be highlighted from the work in the case studies, particularly in comparison to the experiences of similar projects.

To identify the basic principles for the participation models, participation structures are implemented within the case study neighbourhoods and participative processes initiated. The establishment of these processes will be described in the section below. Mainly, the content of the participation process will concentrate on neighbourhood development and structures that enable people of different age groups to live well in a neighbourhood precinct and to stay there as they grow older. Further topics may be included at a later point in time as will be the development of the democratic structures.

For the project QuartiersNETZ, discussions about problems with ageing and how technology could help and what kinds of services are needed would be particularly interesting. These topics may be introduced through the city-wide working groups described below or may need to be introduced into the precincts by project members over the course of the project. Possibilities include working groups at the neighbourhood conferences as well as focus groups or individual discussions with self-selected participants. How this will be handled will be decided over the course of the coming months and approaches are likely to differ for the different sub-projects.

The neighbourhood level offers the opportunity to ask the residents for their day-to-day expertise of living in their neighbourhood as well as their opinion and to acknowledge that they are experts of their precinct. The older residents are encouraged to develop ideas, start activities and think about what they need within their neighbourhoods and particularly what services they need to maintain their health and well-being, and how these services and their providers could be integrated into the neighbourhood and possibly also linked with each other.

The support of the neighbourhood networks and participation processes through technology, such as the digital platform or the improved handling of devices, is thought to support participation in social life and to prevent tendencies of (self) exclusion. Therefore their role usage will also be included into the participation models.

A crucial element of the participation models will be to bring together the two sides of participation in the sense of participation for integration and empowerment and participation for neighbourhood development (projects), as discussed above. While the latter is more results-oriented and concerned with (planned) projects, the former is more concerned with facilitating social integration and supporting self-organisation. Both forms of participation are necessary and have their merit but are often unconnected and particularly the participation for integration and empowerment does not exist very often within precincts. The challenge will be to bring actors of both forms of

participation, such as residents, community workers, service providers, municipal staff and politicians together.

## 4 First steps and insights of QuartiersNETZ

### *4.1Establishment of participation structures*

As described previously, participation structures have been established in the four case study areas in order to start participation and empowering processes and to find out desires and demands of older residents regarding their neighbourhood. The concept of older people as co-producers is also present within those processes. The processes taking place in the precincts over the project duration will provide the basis for the participation models.

As a first step "neighbourhood conferences" have been established in the four precincts. These conferences take place every three months and participants discuss self-selected topics and develop actions and activities. For the opening neighbourhood conference an official invitation from the mayor has been sent to all residents aged 50 and older. To motivate people to come to the event there have been additional efforts of approaching people within their networks and through multipliers for example within the migrant communities.

The precincts are at different stages with the conferences. While in precinct 1 the conferences have already been established three years ago in the context of another project, the other precincts have started in September 2014, March 2015 and May 2015 respectively. Reasons for this are the differences in already existing cooperation and participation structures and the related work to start those structures and to get local actors on board for the conferences. The conferences in precinct 1 have also been re-established and reorganised with a conference which doubled as a new start and an interim conclusion of the results that had already been achieved.

The neighbourhood conferences are about developing ideas and activities for the respective precinct. At the opening event ideas for and issues within the neighbourhood are gathered from the participants and in the following events working groups are established out of the collected topics which take care of the ideas and identified problems. It needs to be emphasised that there is no funding available from the project for activities so that the participants are required to think about what they can do, how they may get others to take needed actions and how they could get access to funding sources. They are supported by professionals within their working groups but they decide about the topics and activities that are undertaken.

In most of the conferences topics centre around issues like security, cleanliness, traffic, green spaces and housing. Topics that are not related to the urban and social situation of the precinct have not come up yet, but may be addressed with time.

The neighbourhood conferences are organised and undertaken by one of the project partners "Generationennetz" (generation network) which is a network of several city-wide organisations, including the city of Gelsenkirchen itself. The advantage of this is that the Generationennetz is already organised locally and knows many of the relevant local actors and, what is even more important, the actors also know the Generationennetz and know that they will stay and be available even when the project will be completed. This enhances trust into the project and improves the probability of enduring structures and processes. However, with the termination of the project funding for these local structures of the Generationennetz will decrease so that it is crucial to develop self-supporting structures which reinforce the developed activities and structures.

One crucial point is that the community involvement remains voluntary and that no one should feel obliged to take part. However, another central element is to avoid the effectivity trap and the reproduction of social disparities and to enable and encourage groups and people who may not be used to participate and express their opinion to take part in decision-making. This means to persist in inviting people to the processes and to develop and implement suitable enabling structures and low-threshold participation methods.

To reach out to certain groups that often do not take part in participation processes because of different barriers (Strube et al. 2015), a broad range of participation methods as well as specific invitation formats will be used. Apart from the neighbourhood conferences it is thus planned to develop further events and formats within the precincts in order to reach people who do not feel

comfortable with larger groups or "talking events". These formats will include events where being there or doing activities is the main requirement so that connections between people can form and no pressure for further participation exists. Those events are thought to enable people who would normally not come to participation events to make first experiences with these events and to integrate them into the process. What those formats and events will look like will be developed together with already participating residents and multipliers.
For further events and workshops of the project invitations will also be disseminated via medical practices, pharmacies, care services, self-help groups and other local organisations. To reach people with low or no knowledge of German, invitation letters will be translated into the most common foreign languages and where possible translators will be at some of the events. Additionally migrant groups and organisations will be approached and asked to be part of the process.
To enable households with low income to take part, the events will be held at central locations within the precinct so that no travel expenses occur and the locations are easy to reach. To reach less mobile people it is considered to offer transportation services. Outreach work and events that are held at already existing venues and groups are also considered. The experiences with the participation methods and enabling structures will also be part of the participation models.
Another strand of participation are the already mentioned four city-wide working groups which refer to four of the sub-projects. The groups discuss ideas for the digital platform, interaction and communication media, the training concept and the business and participation models. Officially, these groups meet only every six months, although some of them self-organise interim meetings. The groups are a form of advisory and idea-developing groups with participants including citizens, service providers, municipal staff and further relevant actors, such as relevant associations and organisations. As an example the working group on the participation models – which is partly combined with the group on business models for service providers – has so far discussed how more people can be reached in the precincts, what participation methods and activities would be useful for reaching "difficult-to-reach" groups and how networking between the different service providers can be initiated and organised. The developed ideas will be implemented and tested within the neighbourhoods. The dissemination of the ideas will be initiated through group or neighbourhood "ambassadors". The exact workings of this will be developed over the next meetings of the groups and the neighbourhood conferences.
When dealing with participation structures it is also important to understand that some people may use these structures for their own goals and objectives. This is not necessarily a bad thing as their goals may help the precinct as well, but it is necessary that there are some neutral actors without self-interest in the precinct which can coordinate the process and pay attention that every actor in the precinct has the same right to be heard and the same opportunity to express their opinion. One example of an actor with self-interest is for instance a housing association, but also a municipal planner who has planned something within the precinct and wants to get acceptance for his or her ideas. Here, the involvement of those actors in participation processes and the execution of how they present their ideas and how others are allowed to comment on this is crucial. Someone needs to watch that the processes and structures are not misused and that especially actors or residents who are not used to play a part within those processes and to express their opinion are empowered and enabled to do exactly this. This is one of the tasks of the Generationennetz, but also of the people that already participate in the project and processes. How this is and can be handled will be one of the topics of the participation models.

*4.2Networks and participation structures within the case studies*

As described above, the precincts were selected because of their differences in order to understand the importance of different prerequisites and what this means for participation processes. It can already be seen that different topics are important in the different neighbourhoods and that diverse actors are involved in the local social life, participation, local supply, community work etc. Naturally, it is not possible to generalise from one neighbourhood or even four neighbourhoods how local actors will deal with certain problems and participation and empowerment. However, the

differences between the case studies may be able to show some specifics of the individual case and similarities may show problems and reactions that are similar in most neighbourhoods.
The precincts do have different issues and topics, even though they are all occupied with the challenges of the ageing process as well as service provision. In one precinct the main issue is that no venue exists where residents can meet or organise groups, so one of the first steps is to organise such a venue. In another precinct a strong network of citizens exists who have come together to improve the quality of life within their precinct, collect ideas of other residents and to organise neighbourhood activities so that this network builds an important base for the project. For a third precinct, integration is an important topic because a large part of the residents have a migration background and not all of them know German.
Differences exist also regarding the actors that are already active within the precinct. In one of the smaller precincts there is a large network of citizens already organised in different institutions, such as the local group of the social democratic party, the local union, the local group of the Workers Welfare Organisation and the sports club. These are mostly the same people and they form a group that is interested in the improvement of the neighbourhood and willing to take actions and personal responsibility. While this is a valuable virtue for the neighbourhood and helps to get things moving it is also important to keep in mind to include further residents into the process who are not organised within the already existing networks and who may not be as strong in debate.
One of the larger precincts has already a history of participation processes, on the one hand through a preceding research project trying to establish participation processes on the quality of life for older residents within the precinct (Rüßler et al., 2015), on the other hand through the federal support program "Soziale Stadt", as a socially integrative planning program. Therefore, a number of activities exist already and there is some funding for construction projects which have already been started or are planned. There is also a neighbourhood development office within the precinct which organises projects and participation processes for the support program. However, even though there is a history of participation processes, it seems that only a certain group of the local residents have been activated and that it is necessary to introduce further formats and events to reach and include further groups. Also, it will be necessary to re-motivate some of the residents or local business people who have backed out of the participation process at some point. A process which is more self-organised and bottom-up may be helpful to develop more enduring structures and to include more groups and residents.
Different objectives and time frames for participation also exist between the groups relevant to the neighbourhood. Residents tend to be less focused on time and fast results and more on developing ideas for the precinct as well as enduring structures. Business and service providers, in contrast, are more likely to watch the time spent on participation processes and to aim for (quick) results as they do not want and cannot afford too much "non-productive" time. Of course there are also exceptions to the rule, but during the first working groups and neighbourhood conferences these differences have come up relatively clearly with some of the professionals stating that the meetings were not enough results-oriented for them or that they would not be able to come to "too" frequent meetings.
The project QuartiersNETZ has therefore started to develop different formats for the different groups in order to do justice to their different needs and to ensure that they do not leave the process. Specific meetings for service providers have been set up in which the topic of networking between them is discussed and which are more results-oriented. These meetings are also incorporated into the sub-project concerned with the development of business models. At the same time the neighbourhood conferences and other participation formats with their focus on inclusion remain a crucial element to support the empowerment of residents and their ability to influence the future of their neighbourhood. The results of the "business meetings" and their participants will be brought back to the neighbourhood conferences at some point, to avoid the development of two or more separate structures and to develop joint ideas for the precinct.
Overall, the participation processes within the neighbourhoods had a good start with many people interested in participating and a good turn-out for the first conferences. The coming months will show whether participants will stay, what activities will be developed, whether "difficult-to-reach" groups can be reached, what formats need to be developed, and how those processes can be integrated into municipal structures.

## 5 Conclusions

The literature review has shown that different understandings of participation exist within different fields. This can also be experienced on the local level, where some local actors are focused on the inclusion of residents and the corresponding process, while other actors are more focused on the efficiency and results of participation processes. Each of those actors has their reasons for their focus. For example sometimes results are necessitated within a certain time frame so that inclusion efforts may take too long for the process in question. However, this does not mean that inclusion efforts can be dropped. Rather this means that inclusion efforts are a crucial basis for participation work and need to be implemented in all precincts of a city. If participation processes for inclusion already exist, participation processes that are seeking results will be able to include more residents and avoid that only the well-organised groups and "usual suspects" will be able to participate. This means time and effort need to be put in for the "inclusion and empowerment" process so that when results-oriented processes arise the residents are already "prepared" for the corresponding participation process. However, this also means that people will be ready to express their opinions and develop their own ideas and participation will occur bottom-up, something that planners may not be used to, but that is crucial for the democratic process of urban development. In any case, both sides of participation are necessary and need to be organised within a precinct.

It will be one of the challenges for QuartiersNETZ to develop processes for both kinds of participation and to interconnect them with each other. It will be necessary to include a number of different groups into the project (and the precinct) to achieve this. For example the municipal administration will need to be brought into the project more strongly, as the ideas and activities developed within the neighbourhood conferences will need to be coordinated with municipal projects and vice versa. This will also necessitate bringing together the more results-oriented thinking of the administration with the more inclusion-oriented thinking of the participation processes, or in other words bringing community workers together with planners.

This challenge will also be one important element of the participation models. The models will aim to make statements as to how the two sides of participation in the sense of participation for integration and empowerment and participation for neighbourhood development (projects) can be brought together. The integration of the neighbourhood participation processes into the local democratic structures will also need to take into account the different understandings of participation.

The project QuartiersNETZ has started to develop different formats for different groups as well as for different topics, in order to do justice to the different needs. For instance, more results-oriented events are offered for service providers. By having groups with a focus on efficiency and results and groups with the focus on inclusion it may be possible to do justice to both sides of the participation conundrum. However, it remains to be seen how well the consolidation of the groups and topics at a later point in time works.

The participation conundrum also shows how important the development of sustainable structures is that continue when the project and its funding is terminated. Without the coordination through the project there may be no actors that maintain the focus on the inclusion side of participation and the results-oriented participation may predominate again. However, exactly this focus on inclusion may be the key to the sustainability of structures because once residents are empowered and involved, they are more likely to self-organise and demand their inclusion. Similarly, when the networking and joint business models are useful for service providers they will self-organise and maintain the network.

Yet, this leaves two questions: 1) how can neighbourhood networks be organised, established and maintained without project funding (within the budget of a municipality)? and 2) is it possible to completely leave the precinct on its own or is it necessary to maintain some professional support? Currently, we would argue that it is necessary to maintain some professional support which can organise the relevant contacts to government and other actors and which can ensure that the inclusion of all population groups is still a relevant goal within the precinct and which can act as a "neutral" actor and a network node and multiplier. Similarly, the establishment and organisation of neighbourhood networks is possible without targeted project funding – as the city of Gelsenkirchen has shown with their already existing structures – but needs the commitment of the municipality

(or other actors) to put in at least *some* effort and staff in order to initiate and support such processes. How exactly this can be organised will be another element of the participation models at the end of the project.

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# EMERGING GOVERNANCE MODELS IN THE INNOVATION OF URBAN SERVICES: RISKS AND OPPORTUNITIES

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*The proposed paper considers that cities are facing challenges to maintain urban infrastructure and establish efficient, open and participative innovation processes to jointly create the applications and services able to respond to citizens' needs and to develop more inclusive and democratic urban processes. It accounts urban services as crucial factors for the innovation of urban governance. In particular, it focuses on public-place keeping services as paradigmatic examples of an active participation of citizens and different kind of institutions to the maintenance, creation and re-activation of public space within an innovation perspective. These public-place keeping services are potentials activators of the so-called 4P model (Private, Public, People Partnerships). In fact during the last decades it was suggested that it is possible to establish public-private partnerships (PPPs) for services supply so integrating the potentials of both the sides public and private* (Osborne and Brown, 2011a). *Nevertheless, many criticisms have been raised against PPPs that are charged to not be a real occasion of cooperation* (Jessop, 2002; Miraftab, 2004). *Some scholars begin to consider the potentials of new possible models for the management of public services. This paper, analysing two case studies from two different European cities (Athens and Rotterdam), will focus on which can be the role of the public sector in defining/envisioning possible futures in a 4Ps perspective.*

## 1. Public services innovation

The nature of public services, and of public service organizations, has changed over the past thirty years and is still changing. This phenomenon is caused by the mutation of political and socio-ecological contexts in which they develop. These changes can be required by a sudden unforeseen crises, which can be environmental (i.e. earthquakes, hurricanes, etc.) health related (as the Ebola cases in Africa in 2014) or a man-made crises (i.e. arsons) (Osborne and Brown, 2005). They can also derive from the change of the local and national political system and of the actors involved in public services provision, and from the growing scarcity of natural and economic resources and also from the changing in the relationship between the different actors involved and between all these factors (Ostrom and Cox, 2010), as for example the changing of global economic factors, government funding and economic structures (Harding, 1994) innovation funnel.

These changes are forcing and challenging cities to maintain and upgrade urban infrastructures and establish efficient, effective, open and participative innovation processes to jointly create the innovative applications and services able to respond to citizens' needs. In particular in this time of growing complexity, due to the crisis of representative democracy, the globalization of culture and economy, the rising cost of energy, the financial crisis and the subsequent economic crisis, the problem of fragmentation (diversity), the ageing of the population, the increasing interest (at all scales from local to global) in environmental issues (Albrechts, 2013).

During the last thirty years the partnership approach received a widespread support from across the political agenda across the local and the supra-national level (McQuaid, 2000), aiming to answer to the new need of people caused from the changes of the different context and environment. Public-Private Partnerships (PPPs) have been proposed as a key tool of policy across the world (Osborne and Brown,

2011b; Osborne and Murray, 2000; United Nations Economic Commission for Europe, 2008). Nevertheless, many criticisms have been raised against PPPs that are charged to not be a real occasion of cooperation (Jessop, 2002; Miraftab, 2004). Some scholars begin to consider the potentials of new possible models for the management of public services. The literature is trying to show how it is possible to develop a new partnership involving the public and the private sector and people (Public, Private, People partnerships, the 4P model) (Kuronen et al., 2010; Majamaa, 2008).

Starting from the evidence that public-place-keeping services are showing up as real occasion for the innovation of urban services and the related governance structure (Hou, 2010), this paper will analyse (in section 2) the Public-Private Partnership model (3Ps) versus the Public-Private-People partnerships (4Ps), which will be better present in this section; then (in section 3) it will describe the concept of public-place-keeping services and (in section 4) analyse two European cases as examples of the dynamic arising in public-place-keeping services, analysing them on three characteristics of the partnerships model. Finally, (in section 5) it will discuss some specific governance aspects of 4Ps arising from the examples shown, and (in section 6) it will present some conclusions and implications.

## 2. Emerging governance models

### *2.1. The partnership paradigm 3Ps versus 4Ps model*

The supply of public services is associated with two types of agents: public or private. As highlighted before, during the last thirty years the partnership approach were believed to embody many advantages which are coincident with the presently acknowledged main criteria for sustainability – it requires consideration of multiple stakeholders' interests, it implies a long term perspective based on common goals, and can accommodate a wide range of conflicting perspectives (Leach et al., 1994). The partnership approach stimulated also new reflections about innovation and causes a new wave of state reforms, starting from economic liberalization, then more focused on administrative reforms and now searching for new more collaborative models.

Going beyond the PPPs model, which started to be questioned, for example Hood (Hood, 1991) states that the advent they has changed little and all the old problem and weakness remained, some scholars begin to consider the potentials of new possible models for the management of public services. What is considered actually is a third tier, the people, regarding the fact that citizens can contribute significantly to service delivery (Ahmed and Ali, 2006). A new vision of governance is emerging that includes the three main sectors (government, the private sector and civil society), a user-centered model that emphasizes process between many actors with different and sometimes conflicting priorities, looking at the way in which the empowerment of people can be achieved in emerging governance system. Far from the urban literature, this model arose with the Toyota 4P model (Dahlgaard-Park and Dahlgaard, 2007; Dahlgaard-Park, S. M. Dahlgaard, 1999; Nonaka et al., 2008). After that, Majamaa et al. (Majamaa et al., 2008) have proposed the model of *Public-Private-People Partnership* (4Ps) for public service provision involving real estate development. In this perspective, the 4Ps model would support active end-user participation in the production of public services, approaching the idea of *co-production* (Leadbeater, 2004).

Against the concept of 3Ps, which represented a formal and well established agreement between the parties, the 4Ps model represents a more informal way to cooperate between the stakeholders (Concilio and Molinari, 2014). In this model of delivery the emphasis is on horizontal relationships between partners, rather than hieratical structures of planning and delivery that are found in state-centred or market-centred delivery. Usually, the stakeholders involved have a direct interest in the quality of the spaces and related services (Carmona et al., 2008).

In a 4P setting there is a fluid networking between partners, which are not expressing the same role over time, their role may change also in relation to their knowledge and capacity in relation to the different challenges that they should face up. People would have, besides the formal channels of local democracy towards the public body, also informal channels to influence the public and the private provider, which, in turn, would be encouraged to develop its service provision further - and even to create additional third-party services, in response to the end-users' further needs on real estate and facility development, exceeding the actual legal requirements on the public service in question. Indeed, citizens are becoming more and more important as *city makers*: they, act at the micro-scale, do things to achieve urban changes and transformation and, at the same time, they are acquiring a more important role.

## 3. Public Place Keeping Services

### *3.1. The concept of Public-Place-Keeping Services*

The concept of *Place-Keeping* was coined by Wild (Wild et al., 2008) and it is related to what happens just after high quality places have been created. This means maintaining and enhancing the qualities and benefits of places through long-term management (Dempsey and Burton, 2012). In this perspective, many aspects of places influence the maintenance of them. It is not only related to physical or ecological aspects, but also to social and economic issues (Ostrom and Cox, 2010). Hence, *Place-Keeping* it is described as 'long-term and responsive management, which retains and enhances the social-environmental and economic quality and benefits which a place brings now and in the future' (Dempsey et al., 2014, p. 14).

*Place-Keeping* it is obviously affected by the different contexts within which it occurs. These dissimilarities implies that not only the physical structure or subject can change, but also that places are affected by a variety of uses and users that will ask for different requirements. This paper considers *Place-keeping* as a process characterized by maintenance, recovery and restoration of the existing environment, but also by a regularly day-to-day capacity of use of the place (i.e. daily use, social, cultural and special events, etc.). This means that also the frequency and quality of the use of that place are significant.

Different kind of *public-place keeping* exists. This paper refers to processes taking place at a micro-scale like a pocket parks, small shared gardens, small abandoned plot. Considering that many experiences of experimenting new models for the implementation and management of the urban public services are related with the management of urban green or abandoned areas and public space, due to the fact that in many cities open space and green areas maintenance is challenged by the economic crises so asking for innovation not only in the way maintenance is carried out but also in the service conceptual framework[1].

On one hand green areas represent a very traditional urban public service that a municipality is asked to supply and maintain to assure a high quality of life in the city, health, security, a good quality of the urban environment, sports, and *loisir,* but also good urban ecosystem to address some of the most important challenges such as climate change, water and food security. On the other, abandoned areas are spreading around many cities due to the contextual changes related to the political, environmental, social and economical issues.

They are one of the most evident examples of the people's reaction against the ineffectiveness of the

public service management[2]; they are considered catalysts of growing civic activism. There, new forms of dialogue between citizens and institutions are developed and experimented, while also shaping new governance frameworks (Concilio and Molinari, 2014). These *public-place keeping* services can represent a long-term management way to focus on public open space maintenance. Restoring abandoned or not well-maintained green areas, where *place keeping* doesn't occur, can represent a considerable economic and social cost.

These kinds of place-keeping actions are carrying innovation dynamics, which are leading to the creation of something new, which is not necessarily a new product, but they produce a process that becomes accepted in an organization or in the society (National Audit Office, 2006).

### *3.2. Four lenses on Public-Place Keeping Services*

The innovation of urban services that take place within socio-ecological system, such as cities, is the results of complex dynamics, actions, socio-spatial system of resources, actors, and context issues. These different dynamics are affected, fostered or impeded by the related governance system. In this paper we want to look at some initiatives, proposed as example of innovation of urban services, which are affecting through three specific lenses, chosen within a wide range of possibilities (Ostrom and Cox, 2010):

1. The promoter: These are the actors that activate the emergence of Public-Place-keeping initiative at the beginning (citizens, which can be part of the local community or external promoters, civil servants, department of the public administration, a private foundation, a public body, etc.)
2. The participants: They represent the different stakeholders taking part in such experiences (local community members, citizens groups, sponsors, civil servants, etc.)
3. The level of formality of the agreement (formal, informal, etc.)

These lenses could be useful in understanding and interpreting the intrinsic dynamic of service innovation and the related governance structure.

## 4. Two examples of Public-Place keeping services

### *4.1. Pocket park in Victoria, Athens*

The creation of a pocket park in the Victoria area of Athens in Victoria wants to answer to the lack of green areas and playground around the city of Athens, matching with that the problem of vacant and abandoned spaces. It was proposed and realized by the local community guided and engaged by *Atenistas*[3], an open and active community of citizens of Athens. They are a group, not a legal body or

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[2] See for example:

- Salem Public Spaces / Salem-MA (USA)
- Isola Pepe Verde / Milan (IT)
- BOST / Bankside-London (UK) (8)

[3] Their beliefs are concentrated in areas of interest such as (i) Free access to pedestrian streets, pavements and squares, (ii) Cleanliness of the city, (iii) Due process of law, as many of problems in Athens come from the non-law enforcement, (iv) Promotion of tourism (since tourism is one of the biggest industries of Athens) since they have the ambition to make the city of Athens friendlier, with more services to tourists, (v) Promotion of public transportation and bicycles and the creation of bicycle lanes and pedestrians streets, and (vi) Raising money for good causes through the sponsoring of the city by private companies and the citizens (http://atenistas.org).

a political party, who wants to stimulate the creative participation of people to the issues that are afflicting Athens. The group was born in 2010, triggered by the action of one professional. Although many emergent initiatives that are arising around the city in the last years (since 2008), *Atenistas* are the best known, they are seen as a blue print for social movements in Greece (Malkoutzis, 2013). Several activists participate to their actions, but the core group remained the original one; they are the supervisors, guided by one leader, who has the ultimate control over all actions of the group. The small active group had since the beginning a distinct graphic identity and mainly use Facebook and Twitter to advertise their actions, events and gatherings. This kind of participation is free and informal anyone can participate without giving personal data despite an email in order to be part of the newsletter list and to participate to their action.

Figure 1. An image of the Pocket Park in Victoria

In 2011 two *Atenistas' activists* discovered a big, fenced-in corner plot filled with garbage, embodying the ruins of a torn-down building. They started a research about the area and discovered that half of the plot belongs to the Social Insurance Institution (IKA), and the other half is private. After almost a year of consultations with the City Council, the IKA and the private owner, the demolition permission for the building was granted in April 2012, and in May the wreck was torn-down[4], with the permission of Athens municipality that lighted the area and cleaned the plot. On Saturday June 23rd 2012 and during the following week, *Atenistas* proceeded with the final stage of the makeover (tree planting, installation of benches made of discarded pallets, path formation, litter bins positioning, etc.). After this action, the local residents had embraced the new open space had made it their own. They had adopted the trees and plants and watered them throughout the all year, and the owner of the mini market has undertaken the management of the space. One big issue remained to be solved at the end of this action: the necessity of water supply, which was still under discussion with the Athens Water Supply and Sewage Company. In May 2013, Atenistas's Green Team decided to revisit the pocket park. The spot needed a second, better-designed intervention, with more plants and trees and playground gear. The new design plan enriched the space with new elements: colourful murals on the surrounding walls, new playground toys, more plants and trees, etc. Residents and kids collaborated

[4] http://atenistas.org/2012/06/25/feron/

with *Atenistas* in the construction of the pocket park, painted the walls (with the help of the *Atenistas-Creativa* group) and learned how to plant flowers and herbs[5]. After this second intervention also the local primary school started to use the spot in doing their classes.

*4.2. Tuin aan de Maas, Rotterdam*

The Mullerpier area, in Delfshaven-Rotterdam, was the scene of a big intervention of urban development. The first block of houses was completed in 2002, but only one unity was ready. The rest of the area was left as a large plot of sand and weeds. The Public Administration publicly declared that that area would not be build immediately, as promised before, but just after some years. Hence the residents of the area decided to act in order to improve the quality of the public space around their homes and to have a place where share time and chats between neighbours.

In 2004, a group of four or five people decided to organise a restoring action in the area, taking advantage from the public initiative 'Groene Duimen', which gave a small amount of funds to the citizens who wanted to activate a new agricultural initiative in the city. To obtain this funds in an easier way, the group decided to become an official foundation. They started to restore a small part of the land around their houses and grow small plants and vegetables. The initiatives obtained a great success and started to involve more people from the neighbourhood. After some time, the first initiative was destroyed by construction machinery that had to restart the official works of urban development. After this episode, the works stopped again. The reaction of the residents was immediate, they didn't like that their work was destroyed without having nothing in charge. For this reason, during 2008, the initial group decided to make a new garden in the same area, the "Pilot garden" to see if there was the possibility to make it better than the first one. From this test, the experience was completely successful and by 2010 the *Tuin aan de Maas* was completely shaped as a residents' initiative and in 2012 they decided to double the area dedicated to the garden creating a trees and flower garden.

Figure 2. An image of the Tuin aan de Maas

[5] http://atenistas.org/2013/05/28/feronfylis/

After the first experience of destruction of the area, since the agreement between the residents' group and the city council was informal (the group just asked and obtained the permission to take the area sending an e-mail), the Foundation of Tuin aan de Maas decided to ask for a more clear agreement between the parts. The residents were aware of the temporary conditions of the pocket park; they didn't want a formal contract with the City Council, but they wanted to be informed before on the decisions about the area. They didn't ask to have the responsibility of the area, but they wanted to have the time to move the plants, the vegetables and their things from the garden and, just in case, to replace them somewhere else.

The core of the active residents' group still consist of four or five people, who are part of the foundation, but they have involved forty or fifty people who are working at the garden and use to enjoy it. They did a good publicity to their initiative, using Internet and social media and they obtained funding for their activity also from private funds, obtaining prices as social initiative. They were able also to attract people from the other neighbourhood of Rotterdam.

*4.3. Two experiences: similarities and differences*

These two experiences cannot describe the whole complexity of what is happening around the two European cities, chosen as case study. But they still stimulate some reflection about the peculiarities of the characteristic of these *Public-Place-Keeping Services*.

Table 1. Analysis of the Public-Place-Keeping Services initiatives

| **Initiative** | **Promoter** | **Participants** | **Agreement** |
|---|---|---|---|
| *Pocket Park in Victoria* | • External body | • 15/20 members of the promoter group<br>• 30/40 members of the situated community<br>• Private companies | • Informal |
| *Tuin aan de Maas* | • Member of the local community | • 4/5 core members<br>• 40/50 residents<br>• Private foundations | • Informal |

Analysing these two cases on these components helps in develop some considerations about them and capture some differences and similarities. These Public-Place-Keeping initiatives are related to small abandoned plot of the city. The first (*Victoria*) is situated in a central area of the city of Athens, the second one (*Tuin aan de Maas*) is next to a neighbourhood of new and not completed development in Rotterdam.

The promoter of the initiatives in the Rotterdam case was part of the situated community, who wanted to improve the quality of the space around the area and to better know the neighbours. In this case, being part of the community was a point of strength from which start to make the area liveable for all. In the Athens case the project came from an outsider promoter, a group, who experienced the same problem of abandonment and scarcity of quality of the public space around the whole city. The residents accepted the project easily. They found it as good opportunity to restore the area and to re-appropriate of the area in order to have a spot to use and to share moments and chats between neighbours.

The ownership of the land can represent a big issue for public-place-keeping services. In the examples presented above we can notice that in the first case the process of activation of the initiative was stuck

at the beginning waiting for the permission of each stakeholders involved. In the second case just an e-mail was necessary to start the process. Since, the property was unitary.

The participants in Athens were just "outsider" at the beginning but this issue was not an obstacle; it helped the local community to become aware of the problem. In this case, it turned in an opportunity, it was the occasion for activating the citizens' reaction in maintain the area. An issue arise when the time to restore and renovate the design of the area occurs. The local community didn't have the knowledge to do it by itself and for that reason involved again the promoter group in order to restore it. These shared-working days worked as practical and learning workshop. In *Tuin aan de Maas* the commitment of the local community was high since the beginning, but it spread around in a different way. The foundation was able to involve many people from the area and from other neighbourhoods around, but the real commitment for the place keeping was still in the hand of the core group (only4-5 people). They tried to involve other participants in the foundation but most of the people like to enjoy the place without having stable duties on it. In this case the design and maintenance of the pocket-park was totally realised with the internal shared knowledge of the group.

The level of formality of the agreement it is different in the two cases. It is possible to classify the *Victoria* case as semi-informal. Since the permissions were asked at the beginning of the process, but they were given by e-mail without the necessity to sign contracts between the stakeholders involved. In Rotterdam the agreement was more or less the same at the beginning of the story; then, after the "destruction event" occurred, a contract was necessary to ensure the needs of the foundation. It was not a necessity for the City Council to have a contract and fix the responsibility on the area, but it was a strong need expressed by the community, since the situation of instability that they were compelled to live.

## 5. Governance models arising in public-place keeping services

The two case studies presented above are an example of innovation of public-place-keeping services. They represent an innovative way for long-term management of these small plots, transforming them in pocket-parks aiming to enhance the quality of life of local communities. Analysing the promoters, the ownerships, the actors and the level of formality of each agreement helps in understanding the specific governance structure that allows such organisation.

In fact, these kind of public-place-keeping services are calling for innovative governance structure. As highlighted before, more than one solution for the management of the public space exists. Between public, private and public-private partnerships these services are calling for more fluid, dynamic networking and alliances, such as Public-Private-People Partnerships (4Ps) (Concilio and Molinari, 2014), where trust and collaborative values assume a contractual power among participants (Blomqvist, 2002). The different kind of agreements informal or temporary allows a fluid exchange of flows, dynamics and knowledge between participants and stakeholders.

These informal agreements between the different actors involved foster a continuous testing and learning of innovative solutions. The role of each actor is not defined before through a contract, but is dynamic, temporary and –probably- the best for that solution in that specific moment, but it can not always be the best solution ever. Such changes in the roles allow and force the stakeholder to a continuous dialogue to find solutions to different issues through a top-down and bottom-up interaction as an external and internal exchange of values. For example in the *Victoria* case the involvement of the City Council helped the initiative starting with a top-down decision to allow these actors to act in that place, but

These continuous exchanges of ideas and knowledge trigger the building of trust and confidence, within the community and between the community and institutions. Indeed, it is also evident that sometime the use of formal agreement (see the *Tuin aan de Maas* case), acting as forms of reciprocal commitments, help in building trusts between the parts and in clarifying the intents.

The governance structure, which is emerging is open, involves public, private and people stakeholders. The people involved in such initiatives may change over time, although some heroes and leader can be identified in each story. Groups are not pre-defined as stable, they are open in growing in numbers and in changing as people. In the same way public and private actors can assume different forms and responsibility each time.

## 5. Conclusions

The analysis conducted in this paper contributes to the theoretical discussion on the governance models of Public-Place Keeping Services. It is possible no one-fit-all solution elitists. Along the Public-Place Keeping innovation process more than one model is necessary to answer to each innovation challenge posed by citizens' needs. It could be a combination of bottom-up or top-down initiatives and a combination of 3Ps or 4Ps partnership. Indeed it is not yet clear which governance approach will be more successful, but their applicability depends on the specific properties of the long-term problems they are intended to solve (Siebnhuner et al., 2013). In the innovation process more than one governance models can be practicable and/or necessary and they evolve from one to another not necessarily in a continuous way and related organizations can be simple or complex but are rarely stable; more often are temporary or ephemeral.

The replication or adoption of the changes related to public-place keeping it is not always a planned or intentional activity, but it is often something that can be understood better as an emergent process and practice. This does not mean that it is necessarily a bottom-up process, coming from situated people. External factors and actors can also activate a place-keeping process; it is something that happens in relation or consequently to specific circumstances.

Moreover, the increasing of the number of partners does not necessarily equate to more successful partnerships. More partners can bring added challenges for communication and coordination, and building trust between partners who are not used to working together; reconciling profit-driven motivations with users-focused ones can be an issue.

In such context, the coordination of these kinds of processes is not linear; it shifts from one stakeholder to another. These kind of environments shows up the opportunity for urban administrations and institutions to play the role of 'growers' (i.e. "capturers, ", drivers and facilitators) of scaling-up processes, of urban forces showing innovation potentials and self-organizing ability in facing socio-urban problems has been analysed through the consideration that they can capture the innovation potential intrinsic in every urban complex system to foster innovation of public services (Puerari et al., 2013). Hence, it is possible to assume that public institutions can be the crucial capturers of *innovation epiphanies* and crucial aligners of innovation forces towards creating a new perspective for the re-organisation and implementation, hopefully innovation, of public services.

Public administration should not just shift the responsibility of the provision of urban services within a urban innovation environments, but they should be able to foster the innovation epiphanies in order to capture the opportunities within them without loosing the capability of doing things, but being there to help in sustain them.

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# PROVISIONAL AND PRECAUTIONARY POLITICS AS FOUNDATION FOR PLURALITY PARTICIPATION IN URBAN DEVELOPMENT – A POLITICAL CULTURE THAT INCORPORATES THE "WISDOM OF THE CROWDS" WITHIN A SOLIDLY UNITED PLANNING AND PARTICIPATION PROCESS.

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*Cooperation and participation have today become regular components of planning processes. Processes that take the ideas and concerns of citizens into account are recognised as more suitable and are therefore more easily accepted. The protests against the infrastructure project "Stuttgart 21", however, have demonstrated that the so-called "communicative turn" in planning theory has failed to install a planning and policy-making process on a level playing field with the citizens.*
*What is missing is an approach which brings the actors jointly to the table. In real life practice, politics, public administrations, and citizens are often parallel worlds with their own general rules and rituals, and with little mutual understanding. The concept of Provisional and Precautionary Politics can provide the stimulus to change the culture of local planning and policy-making processes. This kind of politics means a radical break with the rational planning model, which assumes that everything can be planned. By contrast, it aims at a common and mandatory process of open-ended knowledge generation, in terms of a body of experience and feedback. Provisional and Precautionary Politics is based on the assumption that in a changing world and due to human fallibility, knowledge and actions can only be preliminary. Therefore, it is important to preserve maximum scope for future action. According to this proposition, the "wisdom of the crowds" helps in solving complex social problems, while, in turn, planning and politics can help the "wisdom of the crowds" to achieve common action*.

## 1. Introduction

Already in the seventies and eighties, the academic discourse on planning had departed from a planning culture that still perceived the planner as having a "God the Father" type role and saw the world as being predictable by planning. The fantasies of omnipotence of a rational understanding of planning were set against the so-called "wicked problems" (cf. H. Rittel, 1973, p. 20). Owing to their quality of being socio-culturally constructed, these "wicked problems" led to the derivation of the demand for greater citizen communication, culminating in the so-called "Communicative Turn". Suddenly, the citizens became the focus and efforts were undertaken to ensure their participation in planning, which had until then mostly remained a sovereign affair. In the meanwhile, a broadly differentiated collection of formats for participation has developed. However, in political and administrative practice, the classic representative division of labour all too often still holds sway, following the motto: "Politics and planning decide, and the citizen must live with it." The fact that this outdated conception of planning is still deeply ingrained in Germany was last demonstrated by the controversies over the infrastructure and real estate project *Stuttgart 21*. By the autumn of 2010 at the latest, when the images of the police operation in Stuttgart's palace garden flashed around the world, the calls for better citizen participation in politics and planning in Germany became so loud that the search for new forms of participation and cooperation gathered renewed momentum everywhere. The Green Party-Social Democratic state government, in the meanwhile, even has a state councillor for civil society and since 2013, the University of Stuttgart has been offering a new master's course, "Planning and Participation", for studying citizen participation, while municipalities and administration departments are increasingly experimenting with various formats of participation. (cf. Selle, 2013, p. 337). However, parallel to these efforts, an old debate resurfaced between those who wholeheartedly proclaimed a new "culture of being heard" (cf. coalition agreement of the Green Party-

Social Democratic state government of Baden-Wuerttemberg, p. 1) and those who tirelessly warn against ungovernability and the decline of Germany as a business location on account of the attacks on representative democracy by enraged citizens (cf. Kurbjuweit, 2010, p. 26). In the light of such statements, the question arises whether things have really changed since the events of Stuttgart 21. Is it not true that soap-box oratories pay lip service to the "culture of being heard", but that in everyday life, the effects of participatory projects on the actual practice on the ground turn out to be rather modest? If this is true, why then is it so difficult to actually progress with "plurality participation in urban development"?

It should be noted that in the current debates over concepts of participation, a central aspect is often missed out, namely that the success of participation significantly depends on the decision-making processes in which it is embedded. This means that for participation to work, one has to particularly take a fresh look at processes in politics and planning. The search for ever new participation procedures seems to remain less expedient as long as the actual causes lie in the democratic deficit within the routines and processes of planning and politics themselves. The basic proposition of this paper is as follows: **Without fundamental changes in the decision-making processes in politics and planning, participation will, at best, remain little more than a well-meaning spectacle of participation, while the opportunity to fundamentally improve planning and political decisions in urban development by means of plurality participation is lost.** As long as politics and planning on the one hand, and plurality participation on the other, stand against each other in parallel worlds of sorts, as is the case today, many efforts go in vain in spite of planned communication. This is not only because the interfaces and time schedules of participatory processes don't fit to the processes in politics and administration, but also because according to the classical understanding of representative democracy, the field of politics and administration is not prepared to hand over decision-making authority. Frustration and conflicts then seem inevitable for both sides. Indeed, the problem faced during Stuttgart 21 was not a lack of participation but that the existing participation remained ineffective because citizen demands failed to flow into the planning. Already in 1997, open citizen participation was invited for the future city quarter. After three months of intensive work by the citizens, the city council adopted the framework prepared by the administration without any major changes – hardly surprising since the city council had decided on the main planning parameters in a basic agreement already in 1995 (cf. Süddeutsche-Online, 2011). In 2012, the Deutsche Bahn AG and the state of Baden-Wuerttemberg held the so-called "Filder dialogue" on a section of Stuttgart 21. However, the dialogue did not result in adhering to the route variant preferred by the citizens, but to that from which the Deutsche Bahn AG would have profited the most (cf. STZ-Online, 2012). It is not for nothing that, in numerous debates, Stuttgart 21 is cited as a dissuasive example for how politics and planning should not be conducted.

If one follows the above-mentioned proposition, the usual viewing framework shifts away from the search for new participation procedures and towards the specific practice of politics, administration, and planning. Hence, when we ask ourselves how participation, politics, and planning can come together in future, the answer can only lie in a mutual process of change. On the one hand, participation procedures should be better integrated into political and planning processes, and on the other, the organisational and methodical foundations within future political and planning processes to make plurality participation work must first be created. This includes that the specific changes in the decision-making of politics and planning don't function without a transformation in the culture of politics and planning. What is being seen as constituting this culture, is the proposition that the search for answers to the question of "how we want to live and produce in future" can only be a joint search by politics, planning, and citizens. On this basis and under the term of "provisional politics and planning", this text intends to develop preliminary approaches for the construction of a new understanding of politics and planning as processes of joint learning with the citizens.
At the start of this paper, the most important terms used and the intellectual approach are clarified. In the second stage, an own approach for "provisional politics and planning" is developed, taking Christoph Hubig's deliberations on provisional ethics as a starting point. In the third stage, the consequences of the basic proposition that it is the field of politics and planning processes in particular

which must change are taken up. In the conclusion, the most important insights are summarized and the further research needs stated.

It is to be pointed out that whenever there is general talk of politics and planning, it always refers to the sphere of municipal politics and planning in Baden-Wuerttemberg.

## 2. Provisional politics and planning as cooperative knowledge-generating process

For a better comprehension of this paper, it seems useful to briefly address the author's understanding of politics and planning.

### *2.1. What is understood by politics and planning*

The understanding of politics and planning which is taken as a basis here is oriented towards Benjamin Barber's definition.
"the need for politics arises when some *action* of *public* consequence becomes *necessary* and when men must thus make a *public choice* that is *reasonable* in the face of *conflict* despite the *absence of an independent ground* of judgment." (Barber, 1984, p. 122).
According to Benjamin Barber, politics always has to do with taking action or not taking action, whereby politics, in his view, "only" refers to the publicly relevant realm of taking action for which people are obliged to come to public decisions without having any "independent ground" to refer to as basis for decision-making. Barber describes politics as a negotiation process which is supposed to produce reasonable decisions in spite of differing views and disagreements. (cf. Barber, 1994, p. 106ff). This view of politics as being a negotiation process which, despite a recognised pluralism of values and a given uncertainty regarding the future, is condemned to come to "reasonable" decisions, connects with Christoph Hubig's theoretical deliberations on smartness which are discussed later. Since the discussion on different perceptions of democracy is not the main subject of this work, it may just briefly be mentioned here that Barber's conception of "strong democracy" most closely matches an understanding of democracy as "provisional politics and planning". In both approaches, citizen participation and participation in planning and politics serve as a kind of political epistemology which makes possible – albeit not in all cases but where it matters – citizen self-government. (cf. Barber, 1994, p. 146)

If one agrees with Horst Rittel's proposition that planning is an integral part of politics (cf. Rittel, 1992, p. 35), Barber's definition can be transferred almost one-to-one to the planning process in urban development. Especially when it comes to questions of urban development, it is considered necessary to arrive at reasonable decisions despite different views on one and the same problem. For example, to a traffic planner, a car parking space represents an entity that can be compulsorily determined from the legal framework according to precisely defined regulations. For a retailer, a car parking space may, proverbially speaking, be a locational advantage. For a pedestrian who is obliged to squeeze himself between parking cars, it is a traffic hindrance, and for a child it represents an area which could have been better used for a playground or for a tree to climb. To be able to come to a publicly useful and balanced decision under precisely these kinds of differing viewpoints and interests, is the planning-related challenge and - in keeping with the approach chosen here - simultaneously politics-related challenge of planning. Barber's definition, however, also allows another analogy. In planning, just as in politics, absolute truths don't lend themselves for use as independent justification. This perspective on planning and politics breaks with the view that there allegedly exist absolute truths that form the basis for decisions that permit no alternative and a "take-it-or-leave-it" manner of politics of any kind. However, it also breaks with the planners' understanding of themselves as experts with a "God the Father" type of role in developing cities.

Based on an understanding that views politics and planning as a negotiation process which despite differing perceptions and disagreements is supposed to lead to reasonable decisions, the proposition is

made here that there can be no sound decision-making foundation for complex urban development processes without "plurality participation". Why is this so?

### *2.2. Dealing with uncertainty and insecurity*

In contrast to routine tasks such as the issuing of a building permit, the problems of urban development are usually complex. This means, for example, that these questions depend upon a variety of factors which are probably not all known, but are often dependent on each other and have their own unforeseeable dynamics (cf. Schönwandt, 2013, p. 22).
This situation is aggravated by the circumstance that the penetration depth of human decision-making vis-à-vis global ecosystems, for instance, has increased owing to the advancing dynamics of "techno-economic superstructures" (cf. Hubig, 2007, p. 134). This, however, also leads to growing uncertainty regarding the effects of such human interventions. Politicians and planners whose plans and decisions are oriented towards future action are thus confronted with considerable challenges. In a constantly changing world, one may ask what is at all certain except the certainty that nothing is certain?
To avoid ending up in fatalism, planners and politicians depend on enlarging the knowledge base of their decisions for which they require the knowledge of the citizens. Klaus Selle (2013, p. 353) justifies plurality participation vis-à-vis the experts with the observation that there isn't just "knowledge" but that planning and politics requires various forms of knowledge. As such, planners are especially needed where "explanatory knowledge" or "instrumental knowledge" is needed, i.e. knowledge of how things are related to each other in the world, and of how to act. The citizens, in turn, are to be called upon when it's about the knowledge of "what is" and of "what ought to be". According to Klaus Selle, planners and citizens are simply experts in different fields, as the case may be, though all their knowledge and views are indispensable for successful planning.
To jointly learn from this communication, it is necessary to place political and planning decisions under the condition of human fallibility, since knowledge and the world are constantly changing and only a small part of the world and of knowledge is open to individual human beings (cf. Hubig, 2007, p. 129). Instead of making the individual knowledge-bearer the starting point of decisions, plurality participation in political decision-making is required, as Aristotle had already demanded. "[...] Since there exists a plurality of persons, each one of them may possess a part of the virtue and wisdom, and the entirety, in coming together, may become like a single person with many feet, hands, and senses." (Free translation from German, Aristoteles, Politik 1281b 5-10).

If the goal is to base political and planning decisions on the knowledge of real societal and social relationships, then plurality participation is indispensable. It represents the only possibility to integrate the day-to-day world and thoughts of the concerned and participating persons into the decisions. Moreover, politicians and planners usually don't have to (and in purely physical terms, can't) live with the planning effects which they have caused. More often than not, this leads to a lack of experience on their part, though an "experience-rich capacity for judgement" is necessary for assessing their own decisions. In order to improve political and planning decisions, politicians and planners thus depend on the experiences and the local knowledge of multitudes or pluralities on a feedback level (cf. Hubig, 2007, p. 129).

The „wisdom of pluralities" can thus serve as a pool of experience and a feedback level of politics and planning with a view to solving complex problems.

### *2.3. The wisdom-related ethical consequence of value pluralism*

The understanding of societal and social relationships such as the question "how do we want to live in future?" is an exceedingly normative process. This means that such an understanding is a negotiation process about what should at all be perceived as a relevant problem or a desirable goal. Assuming that every value requires higher-level recognition by the decision-making subject, value pluralism and hence value conflict are bound to emerge in an increasingly pluralistic world (cf. Hubig, 2007, p. 137). Final justifiability for public decisions is lacking. As mentioned above, Horst Rittel calls these socially constructed problems "wicked problems" because there supposedly is no scientific solution-finding

routine for them as there is for the "benign problems" of, say, the engineering and natural sciences. At first, there usually is disagreement over what is and what ought to be, urgently requiring any form of decision-making on how to act in future.

However, in the light of these conflicts and uncertainty, how can balanced planning and decision-making processes be possible? Ever since the philosophers of the world have attempted to find justification instances for human actions, there have, in turn, been disputes over precisely these instances. In principle, even the most diverse approaches are all based on the attempt to derive from higher-level rules justifications for dealing with value conflicts. Broadly speaking, one can distinguish here between utilitarian, discourse-ethical and smartness-related ethical approaches (cf. Hubig, 2007, p. 119). In most cases, deliberative democracy theories which can be included in the group of discourse-ethical approaches, and following Jürgen Habermas, for example, are cited for justifying "plurality participation". The approach attempted here to describe principles for a culture of provisional politics and planning also draws on particular smartness-related philosophical deliberations which Christoph Hubig has developed as "provisional morals", based on Aristotle and René Descartes. These theoretical deliberations represent a pragmatic approach for processes in planning and politics. In contrast to discourse-ethical approaches, real negotiation processes are less burdened by strong entry preconditions such as the demand for a domination-free discourse or the demand for consent of all concerned persons as justification instance.

At this point, it should be noted that Christoph Hubig (2007) developed his provisional morals as an ethics of technology and not as an aid for politics and planning. Nonetheless, his basic ideas which are meant to help come to reasonable decisions in the face of "dynamic situations of uncertainty" and existing value conflicts, are very interesting for the similarly complex decision-making situations in planning and politics.
From Hubig's deliberations (2007, p. 119ff.) and going beyond "plurality participation", the following requirements of provisional politics and planning can be derived:

1. Provisional politics and planning is problem-oriented and situation-specific.
2. Provisional politics and planning makes sure that individual decisions and actions are conducive to the strategic goal of a good life for the community (cf. Hubig, 2007, p. 128).
3. Provisional politics and planning includes human fallibility, especially under dynamically changing conditions, in its plans (cf. Hubig, 2007, p. 130).
4. Provisional politics and planning orients all decisions towards the goal of preserving the conditions for action.
5. Provisional politics and planning takes provisional decisions.

### *2.4. What does provisional mean?*

The term "provisional politics and planning" has been deliberately chosen to be provocative to make clear the break with the terms relating to politics and planning prevalent in Germany today. In this context, "provisional" should by no means be confused with "arbitrary" or "weak". Here, "provisional" signifies an approach that allows to react flexibly to changing circumstances and to learn from human errors. "Provisional" should, as such, be understood in its threefold meaning of being foresighted, protective, and reversible. This makes provisional politics and planning an approach that delivers error-friendly and, hence, robust decisions.

In his deliberations, Christoph Hubig refers to the image of "tent morality", which René Descartes had developed already in the seventeenth century. For Descartes, in the time of change in which he lived, there was no moral foundation anymore. He spoke of there being no fixed house of morals anymore (cf. Hubig, 2007, p. 133). As a reaction to the loss of a secure assessment instance, Descartes developed his thoughts on provisional tent morality as transit morality. In this image, the tent becomes the symbol for at least providing a minimum measure of protection and comfort for the journey to a new, yet-to-be-found solid house of morals. Christoph Hubig takes up this tent notion and transfers it to our present time to derive a canon of features from it with which particular options for action can be

marked as preferable. In doing so, Hubig concretises Descartes' approach for a tent morality by developing assessment criteria from the image of the flexible and easily transportable tent. Flexibility, adaptability, reparability, error-friendliness, and optimisation ability, but also the possibility for easy revision, represent some of these criteria. A tent should, however, should also have the ability to be carried on many shoulders, which brings Hubig to the issue of diversity and participation. It is striking that these criteria also include the main criteria for sustainability (cf. Hubig, 2007, p. 136).

The limits which provisional politics and planning defines for future decisions and actions assume special significance here. These limits result from the basic smartness-related ethical demand for preserving the conditions for action. To retain the possibility to learn from errors and to be able to deal with changing circumstances, provisional politics and planning takes into account, in every decision, the goal of preserving the ability for action and the possibilities for action, for future action. As such, all actions which question the subject of action (or its ability for action as self-determined being) should be avoided, just like actions that endanger future scopes of action (possibilities for action). Hubig distinguishes between the option values and the bequest values. The option values, like the sustainability criteria of renewability and diversity, for example, aim to keep open future scopes of action. Bequest values aim to preserve social structures such as education and upbringing, etc., as well as corresponding organisations and institutions. According to this, bequest values are basic conditions which are necessary for the formation of autonomous subjects and their value competence (cf. Hubig, 2007, p. 142).

This self-limitation not just allows joint learning processes but also allows the sphere of politics and planning to admit that it doesn't always know the one solution that's right for all. On the contrary, provisional politics and planning aims to make planning and politics permanently negotiable anew by preserving the scopes and conditions for future decisions. Once planning and politics are permanently negotiable anew on account of plurality participation, it can be ensured that the wisdom of the plurality not only represents an additional feedback level, but in fact turns into a strategic control level in an iterative optimisation process. Moreover, once politicians and planners accept this understanding of provisional politics and planning, a new dynamics in politics and planning can emerge. As such, political confrontations over what constitutes "the only correct decision" would relax, since the retention of smartness-related ethical limits will permit to tentatively commit oneself to a particular course of action (and perhaps also risk an experiment) and then, if necessary and under plurality participation, to continually readjust or, if need be, even revise the decision in favour of another variant. Under the conditions of provisional politics and planning, disagreements revolving around the question of "how we want to live in future?" are not decided once and for all, but form important resources to optimise and correct provisionally taken decisions. By means of the concept of provisional politics and planning an understanding of planning and politics becomes possible that practices plurality participation as a joint learning and knowledge-generation process.

## 3. Plurality participation in urban development

Following the rather theoretical deliberations on an approach for a new understanding of politics and planning, as described above, the next chapter is about the practical difficulties of plurality participation in urban development. At the beginning of this chapter, the main terms such as "plurality participation" and "urban development and urban planning" are briefly determined in more detail.

### *3.1. Urban development and urban planning*

In this context, urban development, following Klaus Selle, is viewed as a joint effort by entirely different actors (cf. Selle, 2013, p. 13). The actors can roughly be divided into three supersets: market actors, state or municipal actors, and a group of citizens who belong to civil society in all their diversity. Cities develop in an interplay of these three sets of actors. Urban development, in turn, can be described in more detail by means of an arbitrarily differentiable range of characteristics. The different actors all contribute in their own way to the constructional-spatial, social, ecological,

economic, and cultural development of cities (cf. Selle, 2013, p. 77). As such, urban planning is viewed as the attempt to steer the diverse urban development processes which are taking place anyway in the direction of strategic goals for the public good. In doing so, urban planning is not restricted to constructional-spatial uses only (comprising areas and facilities), but endeavours to influence the social make-up and institutions by creating organisations and guiding attitudes (cf. Jung, 2008, p. 28ff)

### *3.2. Participation*

Numerous actors are involved in all these diverse processes. This text specifically focuses on the participation of inhabitants as actors of civil society in the field of urban development. Inhabitants participate in urban development in diverse ways. Citizens can, by their own actions, participate directly in urban development, for example for the cause of neighbourhood gardens, building owners' associations, and much more. They can also, however, participate with others in the form of collaborations and co-operations such as housing or energy associations (this type of participation is only briefly outlined here; in any case, it represents the area where civil society actors become new market actors). Finally, they can participate in opinion-making by means of protests and campaigns, and in decision-making of local democracy by means of elections and referendums (cf. Selle, 2013, p. 60).
Participation, in this context, is understood as a broader concept, similar to the participation of citizens in decision-making processes initiated by politics and planning. From this understanding of participation, it becomes clear that what is needed is more than a mere "culture of being heard", but rather a culture of "joint effort".

### *3.3. Practical prerequisites for plurality participation in urban development*

In his polemic interjection, *Stop participating*, Klaus Selle (Selle, 2013, p. 337ff) concludes that "never before has there been so much participation". However, true cooperation on an equal footing with the citizens is hardly evident in everyday administrative and political practice. Traditional understandings of roles, as well as a deep-seated distrust of the citizen as troublemaker and the alleged necessity to stay "among themselves" and "not go public" means that participation is often futile. A lack of support for participation within politics and administration certainly also is an important aspect. Just as decisive, however, is the situation that participation and politics today are still separate worlds. As a rule, the classical representative division of labour holds sway here too: The planner plans, the moderator/mediator facilitates participation, and the politician decides. Thanks to this division of labour, even well-constituted, methodically mature, and comprehensive participation processes are doomed to failure, as they are usually poorly or not at all integrated into the "parallel universes" of municipal politics and planning (cf. Klaus Selle, 2013, p. 372), or encounter deficits of democracy there (see below).

Conceiving of politics, planning, and participation as belonging together, not only right from the start, but in actual practice too, is a conception that faces considerable unsolved challenges today due to the constitution of planning and political processes in Baden-Wuerttemberg, which is unfriendly to the citizen. In the following section, some of these challenges are briefly discussed.

#### *3.3.1. Inadequate transparency and impossible control*

In the political practice of municipal politics in Germany, citizens today still stand in front of closed doors. The legal possibilities for citizens to demand transparency and information on political decisions usually fail due to an inadequate legal basis, including a lack of municipal statutes on freedom of information. In addition, in municipal practice, basically almost every issue undergoes preliminary discussion in non-public committees. The tendency towards confidentiality increases to the extent that municipalities privatise their organisational units of city administration and their public services, or at the very least, organise them on a market basis. Conversely, market players often gain direct access to decision-makers' backrooms (cf. Lobbycontrol, 2013, p. 9). In this way, secrets of

trade and competition lead to non-transparent procedures. Frequently, however, transparency fails simply because of the required human and technical resources in the municipalities. As such, documents of meetings, for example, often only reach committees at the expiry of the minimum period, while protocols usually take longer than prescribed.
**Need for change:** The creation of the legal prerequisites for ensuring transparency of municipal freedom of information statutes, as well as the personnel-related and financial means for transparency must be ensured by the municipalities. Existing information gaps otherwise make it impossible for the citizen to trace or control political decisions, let alone to intervene in advance and at an early stage, or even to contribute new arguments for decision-making. Moreover, a self-conscious use of direct democracy rights such as a referendum is significantly hampered.

### *3.3.2. Inadequate formal procedures*

In municipal practice in particular, where planning projects directly concern citizens, the formal participation procedures are inadequate. Municipal codes, such as in Baden-Wuerttemberg, exclude direct-democratic decisions on the budget statutes of municipalities as well as on urban land-use planning. An amendment of the municipal code of Baden-Wuerttemberg, planned for this year (2015), is envisaged to at least make the decision on development plans referendum-capable. Whether this will give an actual impetus to participation remains to be seen. Experience has shown that formal "participation at an early stage", provided for by the building code with regard to the preparation of urban land-use plans, often proves futile. This has a very simple cause: At the time of "participation at an early stage", the consequences of plan change, and with it, the citizens' own concern, are inestimable for the citizen. From the point onwards when it becomes clear "what actually it is that's coming", which results in growing citizen concern, most of the fundamental decisions have already been taken. The leeway of citizens then usually approaches insignificance. Citizens are left with the means to "object and suggest" and the thankless role of being commentators of an evaluation process which, according to municipal code of Baden-Wuerttemberg, can only be decided upon by the municipal council. The planned amendment of the municipal code will not change this procedure in any fundamental way. Participation prior to or during decision-making assumes the presence of an activated citizenry which, at such an early stage, only appears likely in exceptional situations.
**Need for change:** Though correct, it is insufficient that drawing up of development plans should now become referendum-capable. Citizen participation should also become possible when goals are turned into concrete resolutions.

The formal procedures are inadequate not only in terms of the specification of the type and extent of future development by means of a development plan. As we have seen, many suggestions by citizens go far beyond the steering possibilities of classic urban development instruments. For example, the demand for lower prices in local transport lies outside the sphere of statements and regulatory possibilities which can be decided by a plan (cf. Selle, 2014, p. 29). However, even taking a municipal transport company as an example, citizens in Baden-Wuerttemberg lack an obligatory option to oblige the municipality - by means of a referendum - to lower fares and, in a countermove, to increase a tax to finance it, for example. Just as in the case of statute resolutions of land-use and development plans, direct citizen participation is not permitted by municipal code in Baden-Wuerttemberg for the preparation of a municipal budget. Due to this, there is a lack of formal instruments to decide on obligatory financing through participation processes. Hence, no matter how well participation procedures are constituted, the ideas of citizens, in most cases, finally depend on implementation by the municipal council. When other priorities are pursued in a cash-strapped financial situation, or a municipal council is simply voted out, there may well be a lack of funds for measures which are, per se, welcomed by all.
**Need for change:** The formal instruments of participation in decision-making should be expanded in the municipal codes of the federal states. In particular, it is a matter of formally guaranteeing participation in statute resolutions of land-use and development plans, as well as in city budget preparation. Only in such a manner can emancipatory budgets such as in Porto Alegre also become possible in Germany or in Baden-Wuerttemberg.

The expansion of formal instruments places higher demands at the implementation level of municipal administration, which not only pertains to the above-mentioned demand for greater transparency.

### *3.3.3. Administrative organisation doesn't fit to the aspirations of participation.*

In many cases, it is simply the internal routines and rites of administration which make it so difficult for participation to connect. Participation processes mean additional administrative burden for which there usually isn't any staff, money, and time in the departments. If, in addition, the participation processes are looked after by external professionals, it can easily happen that subsequently simply no one in the administrative departments (which are usually organized in sectors) feels responsible for the implementation of the "unsolicited" outcomes. The result is a kind of diffusion of responsibility. The numerous ideas of citizens disappear in the „depths of municipal administration" (Selle, 2014, p. 29). Should there, indeed, be somebody to take responsibility, specific agreements often remain valid only until the next change of head officials or department heads.

However, even before outcomes and agreements begin to be implemented, it quickly becomes apparent that administration departments, which today are mostly organized according to hierarchies and sectors, reach their limits when confronted by citizen participation. Even where citizen participation and a given municipality happen to be dealing with the same problem, their way of working mostly differs fundamentally. In participation processes - as would seem natural - discussions take place based on a problem definition. The ideas and preferences of citizens thus emerge in a thematic and spatial context and are derived from the given problem definition. While all discussants in participation processes (excepting certain work phases) take part in a discussion, municipalities work in a much more specialized manner and in specific departments on account of their organisational form. In cities, such as in the state capital Stuttgart, municipalities usually are complex administrative units with several political departments, which are divided into administrative offices, which, in turn, are structured into divisions. Except for necessary project meetings, divisions working on the same problem do so in parallel, however, each with a specific professional orientation. These sector-wise competencies thus, for example, lead to a laborious coordination routine, so that every responsible person touched by a specific problem is actually involved, and legally watertight procedures finally ensue. Freely adapting from Garry D. Brewer, one could, as such, conclude that "participation knows of problems, while municipalities know of departments".

Apart from the different professional departments, the different hierarchy levels of administration departments must also, however, be involved, and the different political committees heard, until a political decision can be reached. This usually laborious coordination procedure not only takes time, but also leads to successive changes and coordination processes during its passage through the various offices, and thereby leads to constantly changing drafts of one and the same resolution proposal. As such, it is difficult to ensure that citizens' patience doesn't wear thin, since being active on a voluntary basis means that the citizens lack the time to check and comprehend constant changes.
Furthermore, the different competencies and authorities in administration can also be used to always delegate responsibility to precisely that department or person which/who happens to be absent. Justified citizen concerns often prove futile when the key responsible person is absent.
**Need for change:** The planning and decision-making processes in administration must be newly organised according to the principle of "gathering everyone around the table". The appropriate demand to follow this maxim in participation processes not only applies to concerned citizens, but also - and particularly so - to the authorities and responsible persons in administration. For these processes, the necessary staff-related, financial and temporal resources should be made available.

### *3.3.4. The numerous informal procedures don't fit to the structures of the established routine of politics and therefore often remain non-binding advisory procedures.*

Following a brief problem outline, many participation processes begin with a brainstorming on or other creative methods applicable to the ideas and aspirations of citizens. In most cases, however,

there is no time to direct a structured negotiation process on the usually divergent aspirations and wishes. As such, participation only serves to collect ideas and, if necessary, criticism. The actual negotiation process on what should bindingly be implemented in the light of usually scarce resources is left to the municipality and the politicians. This division of labour corresponds to the common perception of parliamentary democracy where parliamentary processes are merely supplemented by citizen participation. This is the principle according to which most of the municipal participatory budgets currently function, including the participatory budget in Stuttgart. The decision-makers in administration and politics are, in such cases, left with almost nothing else but to simply pick out from this "motley bunch of flowers" what would anyway have fitted to their concept. In Stuttgart, the municipal council is presented with a citizen wish list containing over 100 suggestions on the budget discussions. Such procedures have little in common with participation processes.

Since informal procedures, for a start, take up discussions from the perspective of the issue at hand or the problem faced by (and wishes of) the citizens, it is difficult to ensure at the beginning whether ideas can at all be realised via the municipal-politics level. The different political competencies in a federal Germany, and the different regulation possibilities derived from them as restrictions of municipal politics and planning, at first understandably play no role in the participation process. However, if such a reflection is missed until the end of the participation procedure, "inappropriate" results of participation may correspondingly often be present.

Besides the fact that many citizen demands can, indeed, not be decided upon at the municipal level alone, suggestions of participants often depend on the initiative of private actors for their implementation. This presents a difficulty for many politicians, as often the political will to intervene by steering the organisation or the behaviour of private actors is lacking. It becomes particularly complicated when powerful market players such as large investors or employers in the city are negatively impacted by the implementation of participation. Thus, till now and in spite of a delinquency procedure of the EU, no traffic-restricting measures are being taken to reduce air pollution in Stuttgart. The argument usually goes that the city is an important automobile industry location and must therefore also consider its interests. According to the Stuttgart action plan, *Nachhaltig Mobil* ("Sustainably Mobile"), "it's not about the question as to whether one is for or against cars, but about how well-networked mobility can be set up and organised in our city. This is also and precisely in the interest of our automobile industry." (cf. Aktionsplan, 2014).
**Need for change:** Even if this democracy deficit on a municipal level cannot be cured by a procedure or by local politics, it is at least the task of the participation procedure to carry out mutual qualification as well as joint consideration and prioritisation. For these comprehensive processes, the necessary time and money must be planned right from the start. If this is not the case, the ideas of the citizens often don't really fit well into the political arena. They are not or only partially taken up, which, in turn, leads to frustration on the part of the citizens since all efforts have been futile.

## 4. Conclusion

Understanding politics and planning as provisional precautionary, plurality participation becomes a necessity for arriving at wise and balanced decisions. While retaining smartness-related ethical limits which aim at maintaining future possibilities and abilities of action, politics and planning as a joint learning process comprising politics, planning, and citizens becomes possible. Provisional politics and planning allows to flexibly react to dynamically changing local and global conditions by taking into consideration the changeability of every decision.

The shift of the prevailing examination framework, away from the search for new participation procedures and towards current processes in politics and planning, delivers concrete insights on the changes required to make plurality participation successful. These changes range from obligatory rights such as municipal freedom of information statutes and

more resources for transparency to the expansion of direct democracy rights, so that urban land-use planning and municipal budget statutes become referendum-capable to the point where concrete organisational and methodical changes are made which permit plurality participation in political and planning processes.

It must be the goal of further deliberations to concretise the thoughts outlined here, in order to develop a more concrete understanding for a provisional politics and planning, as well as more concrete suggestions for plurality participation, following the maxim of bringing "everyone to the table". In practice it will surely be impossible to have everyone always negotiate everything around one table, as it were. More likely, it will be a question of scheduling the phases of task distributions by targeted links ("everyone to the table") and improved interfaces (transparency) in such a way that joint cooperative problem resolution between politics, planning, and citizens becomes possible.

In conclusion, it remains to be mentioned that provisional politics and planning can only function if the possibilities and abilities for participation are available to the plurality. Without the associated guaranteed participation in education and social prosperity, and without sufficient time, plurality participation in urban development remains an empty promise, or rapidly assumes a skewed social and exclusive position.

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# Crafting Tools of Planning Practice and Pseudo-Participation: Hegemonic Power Relations in Decision Making Process of Urban Development in Turkey

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***Abstract***
*The development of urban areas has a strong relation with the cultural structuring and traditional praxis of a community. In planning practice, the cultural context not only affects urban spatial configurations and societal considerations embraced within, but also legislative and administrative systems and their operations dictates the process and production of those spaces. The debates that concentrated on the disappointing side of the reality of planning attempted to unfold the hegemonic relations of power in decision making process (Hiller 2002; Flyvbjerg 1998). This paper focuses on the emerging traditions of planning practice in Turkey whereby quick solutions to end daily conflicts and power relations in planning have altered planning practice. Within this context, this paper is concerned with the ever widening gap between the idealised steps of planning practice and reality, which challenge ethical planning practice and limit democratic participation, in which the lack of the former also distorts the nature of the latter. This paper argues that, the decision making process of planning in Turkey is embedded in implicit structures and relations. It also highlights that participatory and democratic ethos of planning are merely enacted in a superficial and often conditional manner. Therefore, the real practice presents vanishing of that participation and loosening of the professional ethics. The lack of professional and institutional ethics in the planning process is further revealed when it is considered how legislative structures are being crafted in favour of particular interests of powerful actors, thereby diminishing the chance of rightful participation.*

**Keywords:** Planning Practice, Power Relations, Ethics in Planning, Participation

## 1. Introduction

The relations of power has become the cog-wheel that constantly applies its own rules in the reality of practice and has been in tandem with distortions contrary to the ethos of planning via decision making processes. This situation on one hand challenge ethical planning practice and on the other hand limit democratic participation, in which the lack of the former also distorts the nature of the latter. Therefore, this paper aims to unfold the planning practice in Turkey, where the context dependant conditions and quick daily solutions have become a tradition. In addition,, while the planning ethics quest for inevitable human values and higher priorities for the all members of society (Wachs 1995); the matters of process decision making, planning practice and ethics, and public interest emerges as delicate issues. It is because each brings its own ambiguities and questions that further can be answered differently in different contexts, cultures or circumstances. Who is the real decision maker? Who governs (Dahl 1961). Who makes the city? Who obtains (or should obtain) planning ethics?

Although above mentioned matters and questions can be increased in number, owing to the scope of this paper the focus will be on the 'dark side' of planning (Flybjerg 1998) that leads to distortions in practice and in ethics via non-participatory processes, dominating decision making processes that is embedded in implicit structures and relations. As planners are not the only agency of the planning practice, even in some cases they are the least authorised ones, it is important to realise the responsibility of ethics can not merely be handed on planners. There, the allied relationship between decision makers and developers; pseudo-participation of the some and non-participation of the rest of

the actors; crafting statutory tools reveal how power operates in reality and how the hypocrisy within planning practices condoned by benefit holders are uncovered.

The present research unfolds the relations of power in reality via analysing the production[1] process of two shopping malls: Armada and Kentpark in the capital of Turkey, Ankara. The main data for this research gathered via archive researches of the regarding municipalities, and from the interviews conducted with the key informants of the process. However, during the investigation new faces of practice and new actors emerged who further unfolded the above mentioned production processes and uncovered the driving forces of deformation in planning and planning ethics. Therefore, a detailed investigation for revealing all the actors and their relations within the process become prominent. Therefore, this research investigates these hegemonic relations and conditions that drives these relations, and the way that these forces operate are explored in order reveal linkages ethics in the whole process that is beyond the ethics of the merely planner. With this regard, the interviews were carried out with political, managerial, professional representatives from both the public and the private sector, some of whom can be considered to be urban elites. There, 16 interviews were conducted and all relevant municipal documents of the selected cases (plan proposals-approvals, opposing petitions, commission reports, and council decisions) and court documents, some of which are gathered from lawyers of the processes, were investigated.

In this study, the word planner is used to represent the planners with reference to the municipality in which they work in their direct quotations, and their names have not been revealed at their request. Therefore, for example they are named as Planner_MM for the planner from Metropolitan Municipality. Moreover, although a planner and the head of directorate of construction affairs of each municipality (Head_MM for Metropolitan Municipality) and Deputy Mayor of Cankaya district municipality were interviewd, due to the limitations of this short paper only some of the direct quotations were presented. However, although the head of the Chamber of Urban Planners as the other actors named above has a planning background and runs his company as a planner, he was interviewed because of his position in CUP; therefore he is referred to as Head_CUP. Finally, the expert assigned by the courts of the selected cases (is also a planner and an academic) and the lawyers of the processes (the lawyer of CUP and CCCAA – NGO named the Contemporary Capital City Ankara Association) were also interviewed.

## 2. Power to plan or power over planning

The urban spatial problem arose around the relations between political economy and urbanisation. However, while urban planning is being criticised for serving for the interests of the dominant classes through space production of capital accumulation and consumption (each dialectically requiring the other to survive), a constant and inevitable need emerges that keeps the operation of the process alive by producing more space by using the tools of state and local governments to attract more capital to be fixed in urban space (Harvey, 1981; Molotch and Logan, 1987; Logan and Molotch, 2010). There, the spatial fix in the local economy refers to land and property markets, investments and ownership relations reshaping the built environment and serving as a development strategy, especially after the 1980s (Healey, 2006), which ignore long-term consequences and have actually been neither a ‘placebo’ nor a ‘panacea’ in the regeneration of local economies, as they lead to land speculation and short-term growth benefits (Turok, 1992). Therefore, local governments’ structure in the decision-making processes and the approaches concentrating on space production and the role of power became an important tool, not only for revealing administrative processes but also for investigating the direct

[1] The word production is selected intentionally as will be seen in the empirical examples the process is not limited to planning nor to decision making but to a whole process starting from plan proposal (actually even before) to actual construction and operation of the structure.

and indirect roles of power, as this power became suitable to craft legitimate tools to favour the *capital*[2] holders.

On the other hand, planning and planner ideally appears to be as the problem solver. Therefore, urban planning is considered to be a political and a professional practice (Low, 1991), and a powerful instrument that produces and reproduces urban space, *ideally* aiming for democratic social change (Forester, 1989) and a moral praxis as well as a technical and an utopian discourse (Friedman, 1989) however that recently has become more entrepreneurial (Friedman, 1998). However, within the praxis the planners face with various challenges and dilemmas, which cannot be limited to subjective individual values nor mere preferences (Hendler 1995) and can be partially beyond the planning profession, where the participation of the planners themselves is superficially provided and instead the only effective practice is operated via various hegemonic power relations. In addition, planning as 'the expert's realm of true essence or idea, striving to partake of the ideal good within the physical world' (Gunder, 2003, p.238), has a reality that 'often disappoints' (Hillier, 2002, p.3). This is because the practice of planning ends up serving the political economy for urban development, due to its deployment in power relations and planners 'on the side of those with power, specifically powers of the state' (Friedman, 1989, p.129), especially in some contexts and cultures more than others where the ethical considerations are also challenged via time honoured daily solutions to potential conflicts.

Furthermore, as the research deals with the dark side of planning that dominates the reality of the urban development, it is a prerequisite to understand the current theories of planning that directly or indirectly relates with power relations in the planning literature. There two main streams emerge. The first group briefly addresses the matter of power and attempts to review planning and planner's role with regard to Habermasian communicative approach (Forester, 1989; Hillier, 2002; Albrechts, 2003; Healey, 2006). The other group, on the other hand, following Foucauldian approach provides a critique of planning practice (Flyvbjerg, 1998; Flyjbverg and Richardson, 2002), even some extend their criticisms to the very nature of planning, as the agency of social control and oppression (Yiftachel, 1998; Huxley and Yiftachel, 2000).

**Communication centred approaches**

The first group, although acknowledging the existence of complex power relations, focuses on what should be done and what planners could do by offering the Habermasian communicative approach (1984), where common principles should be accepted to generate communicative exchange, and suggests communicative and collaborative approaches (Innes, 1995; Healey, 1996, 1998, 2003; Forester, 1989; Hillier, 2002; Albrechts, 2003; Booher and Innes, 2002). In addition, there are also researchers who focus on individualistic conditions and the position of the planner while supporting the communicative approach in planning (Tewdwr-Jones 2002; Tewdwr-Jones and Allmendinger 1998). Within this thought, the centre of attention is the moral obligation of the planner, whether s/he is a public- or private-sector planner; and the planner's 'thought' (consisting of the interaction of values–behaviours and ideals) as an expert privilege prior to action (Tewdwr-Jones 2002). Similarly, while Marcuse (1976) put the emphasis on the planner as the as the median of ethics in practice; Hillier (2002) emphasised the importance of the role of planners within planning systems and practices, where the planner and the government has a primary and a fundamental power to define (redefine), to organise (reorganise) urban space in order to generate a place of their choosing. However, the communicative and collaborative approaches still give little attention to the already existing distortions generated via the traditional, cultural and contextual ways of dealing with things

[2] However, it is important to highlight here that the 'capital' refers not only to economic capital, but also various other types of capital, each of which is intertwined with the others. As Bourdieu (1986) and Coleman (1990) also suggest, networks of relationships generate and develop various types of capital (economic, political and social), each of which would have its own unique position in the power struggle of the urban context.

which become normalised through time and are even converted into planning tradition. This approach also underestimates the subtle empowerment of other actors and power plays among them which are beyond any planner and cannot simply be referred to as a non-decision process (Bachrach and Baratz 1962) (or simply as another face of power) or cannot either be defined as mere corruption. This is because this power generates itself through different types of capital and acts through the complexity of urban reality. Therefore, this research provides a realisation of context specific and authentic conditions instead of accepting what has been suggested as idealised – in a way utopian – types of solutions.

**Power relations centred approaches**

The communicative centred approaches are usually lacking in addressing the more veiled and informal conditions of power, as they mostly set more idealistic conditions and contexts. Therefore, they become weak in revealing the conditions where the state or its institutions themselves become the underlying apparatus for mutual interest (with capital holders) for the production of urban space (Yiftachel, 1998). Therefore, although 'power may become the acid-test of planning theory' as Flyvbjerg and Richardson emphasised (2002, p.44), specific factors and traditional praxis requires a better acknowledgement within the current planning practice. This is because, as this research also presents in the empirical sections, so-called public-interest representatives (some planners, some institutions and use of state tools) have themselves become the agent of the hidden exercising of power and the protection of special interests by revealing how legitimate tools and frameworks of planning 'are crafted' 'in favour of particular interests' (ibid.; Flyvbjerg 1998). This approach, using phronesis (Flybvjerg 2012), criticises the Habermasian communicative approach for ignoring the nature of the capitalist condition and the strong structural position of the state and its institutions, and instead states that focusing only on the communicative processes would blind the approach to the non-communicative (or implicit communicative) processes in which most of the decision-making processes take place. However, in the power concerned approach analysis of real rationalities is seen as the main pillar of any power investigation as it helps to reveal the asymmetrical relations between power and rationality. There the latter is dominated by the former within the complexity of the dynamic reality, while at the same time producing that reality (Flyvbjerg, 1998–2002), in which the domination and production concurrently weakens modern democracy and planning by generating distortions; therefore, planning practice and democracy within that praxis have gone 'astray' (Flyvbjerg, 2002, p.357). In addition, Huxley and Yiftachel (2000) remind us of the dependence of planning on state regulations; thus, regardless of the inclusiveness of the communicative and collaborative approaches on the surface and the good intentions of the planners (Yiftachel, 1998), in the background the state and its tools will be driving the process through its interests. Thus, planning becomes the tool of the process. Hence, urban planning practice, being responsible for the production–reproduction and organisation of urban space and inherently a state apparatus, becomes vulnerable to power relations and ethical distortions while at the same time being their active partner.

Furthermore, the communicative approach is criticised by the latter group for being 'too idealistic and often unrealistic' (Yiftachel, 1998, p.297); while the Foucauldian approach is also criticised for not suggesting any solution but providing mere narratives (Forester, 2001). There are also others who suggest a different perspective and advocate the importance of *trust* in the planning profession and criticise the privileged use of the word 'power' in the planning vocabulary (Stein and Harper, 2003). They state that power-centred research undermines positive productivity and blinds us to the distinction between what should be done and what is actually being done (ibid). however, while it is important to realise that 'obsession with power is dangerous' (ibid:125) it is also critically relevant to not to ignore the intertwined and dynamic nature of power which is able to generate its own actors and its own strategies to by-pass potential obstacles that are initially suggested by the idealised planning approaches.

Nevertheless, it is also important to keep in mind that the gap that emerges via subtle power relations is not only between theory and the reality but also in the structures and levels of the implementation process. Therefore, in order to provide a better understanding of these constraints and driving forces of power relations, the historical and traditional ties need to be shown in relation to theory and practices (Marcuse, 1976; Fischler, 1995). Therefore, instead of adopting one of the abovementioned approaches to the existing Turkish context throughout this research, the investigation will concentrate on revealing the dimensions and the possible reasons for this theory-practice gap, to be bridged later by policy practice, providing historical and current perspectives.

**3. Contextual inputs: power to plan or power over planning?**

Urban development which evolves through relentless investment in the built environment and maximisation of urban land value, especially for developing countries like Turkey, is usually recognised as the main pillar of success of local and national governments; therefore, it usually has a central position in local and national agendas. However, the experience of disruption in urban development in Turkey cannot be simplified just through pointing out the maximisation of the urban land value, and thus the commodification of urban space. A distorted legislative system and administrative praxis, the power of *capital*, networking and the tacit relations between the various layers of authority and actors should also be identified. There, although urban planning, as a state apparatus, has the aim of managing land use within the city, in reality the redundant flexibility of the land use terms and lack of limitation in using them has become the mode of city management, which is left in the hands of the few.

In Turkey, urban power relations among various explicit and implicit actors have usually been the basis for the decision-making processes and production of urban space. Urban populism, through urban planning and urban development, has been perceived as a good new business with short-term profit inquiries (Ersoy, 2001; Tekeli, 2001). Moreover, electoral appeal and network relations of power have led to clientelistic relations and distortion of the system where the decisions and/or the processes of urban planning are perceived as a structure that can be 'relaxed, modified … in response to particularistic and individualistic demands' (Oncu, 1988, pp.44–45). In addition, the political/economic milestones of the country (post-1980s and post-2000s as the latest two periods) altered the urban management structure, therefore the condition of planning, (from centralisation to decentralisation and later recentralisation) by using (and in some cases reshaping and crafting) the legislative tools that further manipulated public perception.

The aim of the government of the above mentioned periods has been to manage the needs of international capital and internal struggles and conflicts within the party, and to maintain public attention over forthcoming elections as well as election promises on built environment development. This led to a significant focus on metropolitan centres as the representatives of internationalism 'and as the most likely bases of its clientelistic networks and electoral appeal' (Keyder and Oncu, 1994, p.400). Especially after 1980s the urbanisation of capital has become more apparent. The cities became an investment arena; the 'non-material resources which do not have immediate monetary costs' and 'selective implementation of regulatory powers of local government' instilled a sense that the regulatory systems regarding the built environment might 'be relaxed, modified … in response to particularistic and individualistic demands' (Oncu, 1988, pp.44–45). In this period the local administration system was revisited and the two-tier municipal system was introduced (as metropolitan and district municipality). Nevertheless, this change in the local administrative hierarchy and creation of an 'all-powerful metropolitan mayoralty' (Keyder and Oncu, 1994, p.405), decentralised powers over the built environment brought about additional conflicts of interest at the

local level due to different representation of interests. Moreover, the urban entrepreneurships that focus on gain through investing in the built environment due to their economic capacity also generated global networks and concurrently developed a capacity to manipulate elected officials (ibid p.415). In addition, privatisation projects through government tenders and additional financial incentives emerged; thus, real practice of the decision-making process reconfigured: '[those] who have been on good terms with cabinet ministers have benefited from speculative deals in real estate, fictitious exports and development of tourist resorts' (Helvacioglu, 2000). As a result, from the mid-1980s, the built environment became particularly crucial for various interests and urban planning has started to be treated as municipalism instead of developing a better understanding of city-making. As also Oc and Tiesdell (1994) stated "in Turkey, planning decisions are often transparently distorted or biased in favour of powerful individuals and businesses or are expedient populist measures to engineer political support. This short-termism and partisan nature of planning decisions is actually counterproductive" (pp.108–109) and this also disturbed the 'jewels of planning' embracing reason, democratic process, community and nature (Blanco 1995) and therefore the notion of ethics within planning practice. Therefore, in practice, urban planning regenerated its meaning from the non-professionals' perspective that is dependant to quick solutions to daily conflicts and thus made the condition of urban site more vulnerable to exploitation.

Moreover, following that period the 2000s witnessed further aggressive development of built environment, where the construction sector was seen as the main pillar of the economic growth of the country more than ever. There, further changes enacted in relation to 80s decentralisation approach that was initially towards a more powerful metropolitan municipality and mayor as the city-boss. Owing to this change metropolitan municipalities were empowered to be able to overrule or to exclude the district municipalities in the planning processes if needed (mostly when the interests of these two conflict). This also promoted mayor centred approaches and fortified alliance of the private sector with public sector, as now the developers do not necessarily get approvals from both levels of municipalities and instead having a good relations with metropolitan municipality (in other words with the mayor) would be enough the get the approval. Nonetheless, in the cases of Turkey this condition may get further aggressive when the metropolitan municipality is ruled by the same party with the central government as then their demands are welcomed in terms of enacting context specific legislations via crafting the existing ones. Therefore, such metropolitan municipalities have used their ability and powers under the regulations to provide required modifications and cooperation to favour private partners, and the project returns are then shared with that authority, thus both sides benefit and achieve their goals (Uzun 2007). There on one hand the private developer would get the project done and on the other hand the municipality would promote itself based on that investment. However, recently, by 2011, the decentralisation approach reversed and the central government re-centralised the administrative hierarchy for planning, where the central government via ministries empowered with authorisation of overruling any local government (both metropolitan or district) further causing conflicts in planning practices. For instance, now two different plan proposal for the same area may be approved by both metropolitan municipality and ministry yet without being clear which one would be applied.

### 3.1 Planning practice given terms, idealised steps and ethical considerations

Not only enacting laws, but also using open-ended and flexible terminology, paved the way for the investors to work around the system in pursuit of their interests. For instance, the terms Urban Services Areas (SA); Urban Working Areas (WA); Central Business Districts (CBD) and Urban Regeneration areas (RA) have been given the rights to be used for the same or similar land uses and owing to their vague configuration become time honoured tradition of planning and treated as synonyms. In addition, although there are various tiers of planning with various scales in Turkey it is

usually the *plan modifications* that lead the planning practice and urban development. There, the term has become the widely used tool for urban development in most cases to change existing plan decisions and/or to generate more flexibility concerning urban land (Ersoy, 2001; Tekeli, 2001; Kilinc et al, 2009). Thus, plan modifications maintain a very important role in Turkish planning as they have become the main praxis of planning, and through them any existing plan decisions can be changed.

Nonetheless, another problem is the incompatible condition of idealised steps of planning practice with planning in real practice. Below figure[3] presents the idealised steps of planning procedure provided by the Ministry. Here, the ministry presents the idealised procedural processes in accordance with the given legislative system. Here, after a plan gets approval, there is a 30-day consultation process which is usually carried out via the announcement boards within the municipality and more recently through the websites of some of the municipalities. Any objection to the approval must be presented within these 30 days. The objections are assessed by the relevant local government within 15 days and the plan decision is then finalised. In addition, after the final decision, there is a 60-day secondary consultation process, in which period opposition may be expressed through filing a lawsuit.

*Figure1. The approval procedure of master and implementation plans*

### 3.2. Ethics in Turkish planning

Especially in large cities of developing countries, there has been a relentless commodification and privatisation of urban land, which on the one hand has reshaped the spatial condition of urban space and on the other hand has reformulated the urban power relations operating at each level of urban development. In this regard, the nature and relationship between the public and private sectors in the socio-spatial production and management of built environment has been altered. Consequently, the inexorable changes in urban space, driven by the ephemeral urban politics focusing on possible economic benefits have also led loosening of professional and institutional ethics. However, the researches on ethical matters are very limited. There, the research in consideration to Turkish planning system was conducted by Kilinc et al in 2009 via EU research project. According to that research urban land rents, the weakness of legal sanctions, rapid urbanisation, the mechanism of expertise (the moral character and philosophy of the ethics of regarding occupation, education, experience, place of work); moral duality; working conditions of urban planners; the lack of planned land; and the structure and profiles of the city and council members are revealed as possible sources of ethical problems in planning in local government level. In planning processes at the local level, the councils have the sole authority to give approval or to make any change, which gives them a significant ability to exercise

[3] Due to the scope of this paper only the approval process is shown as the process after approval is usually prone to conflicts

power. This becomes important; especially when one considers that the council members do not necessarily have much proficiency regarding urban planning. The above mentioned research also demonstrates that the proficiencies of the council members lead the way regarding urban development, i.e. the council members may be builders, tradesmen, managers and civil engineers, and as the majority of their proficiencies are related to construction, those members 'have a tendency to approve all the plans which accelerate the construction sector without any limitation or evaluation about whether the plan is good or bad' (ibid, p.73). In addition, planners can also be added to the list with unethical behaviour, some of whom become active participants in power relations as some of who have tendency to accept any job for its monetary and networking benefits. Moreover, the normalisation of corruption among professional actors, as well as public perception, is also presented as the final word on the subject: here, the new motto of 'they steal but they serve' (ibid, p.75) for urban political figures has become the traditional perception of the public.

## 4. Empirical research: two different cases with similar practices

The two cases Armada and Kentpark and their planning processes have revealed the challenges and the real practices of planning for private developments in Turkish cities. For the urban development of selected cases, the common tendency is to start with a plan modification that comes from either a single investor or from a private company as the developer. Then, the process continues with the assessment of the proposal by the directorate of construction affairs of the relevant municipality, which later obtains final approval from the council by voting in their meetings and if there is any problem the proposals are then passed to the planning commission for further consultation. During this period the planning commission delivers an assessment report, although the council may decide whether to issue a final decision in parallel with the commission or not. After the approval of the plan by the council, there is a period of one month in which any objections should be raised in the format of a formal petition. However, according to the district municipal interviewees, such applications do not have any significance, as they can easily be rejected by the municipality. Therefore, the main conflicts and disputes start within the secondary objection process (a period of 60 days after the initial 30 days) where a lawsuit is entered against the approval, in order to suspend (or cancel) the project (by law NGOs or even a citizen may enter a lawsuit and therefore can become a stakeholder in the process claiming public interest). In the case of Ankara, it is usually the district municipalities, the Chamber of Urban Planners (CUP) or NGOs (e.g. Contemporary Capital City Ankara Association – CCCAA in this study) who raise objections and enter lawsuits; according to them they are the only organisations to reclaim the rights and represent the views of public and of the public interest in the city. As, in the planning process there is no direct participation by the public themselves; the power relations and planning process inherently omits them and instead continues between decision makers, developers and opposing actors. This process is also the phase in which complex power relations surface, as otherwise (without any opposition) there would not be any attention given to specific matters and the practice of the relations of power would be completed unnoticed.

### Armada Shopping Mall

The Armada commenced construction in 1999 and was completed and opened to its users in 2002; and as a result of the high competitiveness of the market, a second phase of development (Armada II), was completed by October 2012. The west axis of Ankara has been significantly developed through the 1990 Ankara Master Plan and through other scales of plans where Armada and some other recent malls were located and had the land use of *SA*. The initial planning proposal for the plot of Armada in 1998 suggesting higher building rights owing to a modification plan approved by the district municipality. There was no further change in the process until 2008, when a new plan modification was suggested including the nearby plots. This was all declared to be one big urban regeneration area (*RA*) yet was not approved by the Metropolitan Municipality due to the overlapping and conflicting planning notes of the

declaration. Following that, in late 2011, the same architectural company proposed another modification plan, referring to the Armada and the adjacent plot for Armada II. There, although the same planning notes of the declined proposal were used for the new proposal the proposal was conditionally[4] approved by the council of the metropolitan municipality in 2012 regardless of the adverse report of the planning department. However, in the meantime, the Chamber of the Urban Planners (CUP) entered a lawsuit against the approval objecting to some of the planning notes by claiming those were seeking *'tailor made'* adjustments. Yet, while the lawsuit was still pending the implementation plan was quickly approved by the Metropolitan Municipality council to enable the construction. In addition, the district municipality Yenimahalle, was excluded from the recent decision making process and all the proposal-approval and negotiations were done between developer and the Metropolitan Municipality; and therefore by using strategies (either via declaration of RA or completing the approval process via 1/5000 scale plans) the participation right of the district municipality has transformed to non-participation. However, the project was completed by October 2012 and running since then regardless of the conflicts emerged.

**Kentpark Shopping Mall**

Kentpark started the construction in 2006 and completed in 2009 on and opened in 2010. The area had been used as the land of Agricultural Machinery and Equipment with 0.2 precedent building via parcelling plan approved in 1976; later it had been used as a showroom of Fiat – Tofas automobiles. However, the area was planned as *SA* like the most of the parcels on the highway and therefore got higher building rights from 0.2 to 2.00 after 1990s. Compared to Armada the conflicts and complexities were higher in the planning process of Kentpark. The planning process for the Kentpark shopping centre started in 2005 and since then until 2011 the approvals of plans for the mall subjected to 10 different lawsuits in total. Each approval for the site was faced with a lawsuit either entered by CUP or CCCAA or by the Cankaya District Municipality.

The mall proposal came first came in 2005 via two different plans both approved by the metropolitan municipality on the same day. There one proposed a gigantic statue which can also be used as commercial-cultural centre run by municipality and seek for an increased building rights and an additional residential area in the project. The second proposal on the other hand was to support the first by proposing a RA declaration in order claim the Metropolitan Municipality as the only authority. After their approval both proposals faced with different lawsuits entered by CUP, CCCAA and district municipality in the same year. However, as it becomes a usual custom while the lawsuits were in process, an implementation plan was prepared and quickly approved by the metropolitan municipality in order to start the construction in 2006. From this point on new proposals[5] as a tactical action quickly approved, yet all faced with further lawsuits entred by the above mentioned. The process that started in 2005 with RA declaration and approving a gigantic statue allowing cultural-commercial centre in followed up with a declaration of CBD while the lawsuit on the previous approval was due. After the CBD declaration has also faced with lawsuit the site was declared as RA once more which again has been subjected to further lawsuits.

The court for each lawsuit consulting to assigned urban planning experts, first gave a decision of suspension of execution and that is usually followed by a full rejection of the approval. However in the meantime the construction continued with full flow based on the implementation plans; construction and building permits, and the mall construction was completed by late 2009 and started to run by 2010. As nearly all approvals faced with court conflicts ended with rejection or suspension, one last strategy was

[4] Here the condition for the company was to build a school in one of the regeneration projects of Metropolitan Municipality in a different district with turn-key basis; and the turn-key basis means: until the company would complete and hand in the key as they agreed with the municipality, in this case the school of the other *TA* project, they will not be able to get any occupation permit for the mall.

[5] However, each new plan proposals most of the time have either the same the planning notes or similar ones with minor changes, even though these were the main reason of objections in the lawsuits.

proposed by the developer and approved by metropolitan municipality in 2011. This time, as the construction was already finished and the mall had started to operate, therefore the main purpose of that new plan was entirely focussed on legalising the current structures on the site. This also got its ground from another ambiguous term, which has become almost a tradition in the history of Turkish planning stating: "current status of the site is the planning status of the site", meaning: whatever structure is on the plot would be treated as the legalised planning status through a provided plan. Then, another lawsuit was entered by the CUP against that final attempt, and although once more the experts and the court were against the latest planning proposal, no sanction was issued for the completed mall and it is still continuing to serve. The situation implicitly points out many "dark sides" and "shadows" generated by some power that even become higher than the courts. Therefore, the case of Kentpark proves that, in Turkey, urban planning practice, especially for large projects that provide quick returns, lacks consistent and just authorisation, and the correct use of legislative tools; participation and monitoring have become mere rhetoric. In addition, the planning practice in reality on the land has become an apparatus that is theoretically attached to the state but is operated by the hands of a few who favour holders of capital for mutual benefit.

### 4.1. Echoing actors: the relations among and the pseudo or excluded participation

In Turkish legislation, it is not mandatory for municipal authorities or private developers to include an additional consultancy or seek the participation of professional representatives, NGOs or citizens. Thus, the voices of these civil actors can only be heard in the event of objections. The process in actual practice displays the pseudo-participation of external[6] actors. It is 'pseudo' because it occurs only if the process includes a legal challenge, as the ordinary process does not provide any option for participation. Thus, it is vitally necessary to understand ongoing power relations because only then can the routine of the distortion of planning practice be broken (Forester, 1989). Moreover, the pseudo-participation, emerging only in the case of opposition, also makes mutual trust building and reliability of the process vulnerable, which is suggested to be central to planning (Stein and Harper, 2003). This is because the representation takes place only in the condition of opposition and thereby the purpose is synonymised with 'to oppose' and thus creates discontent. This also redefines the decision-makers' perception of the representation of civil action, claiming that it is biased and is done for the sake of opposing; therefore, NGOs and particularly CUP have been criticised for that and for being 'stubborn and raising opposition only to be obstinate':

> *The CUP and other organisations should participate of course but only if they are going to give positive critiques not negative, if you are going to give a negative critique why would I invite you? The chambers are not giving up just to be obstinate* (Councillor_MM).

Therefore, the process suggests the representation of the non-governmental actors is limited to two aspects: the first one is non-functional and ineffective even if realised; and the second is redundant because there is a bias held by the authorised governmental actors who also question practice-related proficiency and disregard the planning profession. Turkish planning practice assigns greater authorisation to council members and their will; even if they do not necessarily have professional expertise in urban planning, their opinions have higher status than planners'. Therefore, urban development, based on the councillors' will, has been left to daily experiences rather than professional expertise. Supporting that the interviewed councillor expressed his content on his position and his colleagues and he rather criticised the role of planners especially the experts that are assigned by the courts and who are usually academics in well-known universities. Similarly the head of metropolitan municipality planning department also raised his criticism by putting all blame to planning academics:

[6] Here 'external' refers to actors like CUP and CCCAA which are only able to participate externally through raising an objection.

> *You academics! You put obstacles in the way of everything, in the way of every investment* (Head_MM).

> *Who are experts? They are academics, they are also preconditioned. Think: the municipality has 500 employees and they gave a decision, then 3 professors are appointed by the courts to challenge that decision. How many plans have these professors done in real life? What have they done throughout their life apart from being an academic? They say urbanism principles, which principles? There is no such thing. You can't think everything is for the public interest … The experts should also investigate the daily conditions of how much money was spent for that investment, how many people will be suffering from their decision* (Councillor_MM).

Since 2004 (the enactment of Law for Metropolitan Municipalities), the metropolitan municipalities have been the higher authority and have been able to overrule the district municipalities, and have right to enact new regulations or to propose new legislation as mentioned the declaration of RAs has been one of the examples, There the new situation not only widens the scope of authorisation of the metropolitan municipalities, but also eliminates possible opposition that might come from the districts. In other words, in some cases the opportunity for the district municipalities to participate democratically in the projects within their borders is further restricted and has allowed metropolitan municipalities to disregard the democratic participation of district municipalities:

> *I wish they wouldn't be obstinate on these things, because at the end of the day they are just a district municipalities* (Councillor_MM).

Nevertheless, on the opposing side, the representatives of CUP, CCCAA and *ordinary planners*[7] working in municipalities further uncovered the 'dark sides' within the current planning practice in Turkey. As was clear in the above explored cases, the process continued with an alliance between the approving institution and private developer (the proposing side) engaging in various tactical and strategic actions to end the conflict. Thus, the existing structures and distortions bred from the realities experienced have leveraged the already powerful in the system, while causing the powerless to lose yet more.

> *Even since the beginning of the first planning experience, the rulings of plans were undermined. This might happen even more nowadays … At the implementation of a plan, a request comes from an individual or friendship or old-boy network, such that you are not able to refuse the request. This is what usually happens* (Planner_MM) *There have been many interesting incidents that we had faced on these issues, well things that you cannot even take a note of them let alone recording, mafia style with brute force, let me only tell this much* (Lawyer_CCCAA).

Furthermore, ethical considerations were also frequently brought up by the interviewees. Added to the results of Kilinc et al (2009), this present study puts forward that the lack of professional ethical considerations and aggressive yet hidden distortions are also fed by the existing relations of urban power. The legislative grounds, jurisdiction, individualistic perceptions of planning principles, actors and interactions have been changing in an interconnected mechanism while having a significant impact on the performance of the planning profession; and thus, on the ethics of the profession and values in planning. Following a similar pattern the relaxation that has happened within legislative structures and the ethos of planning has also become relaxed by the actions of some of the planners, and ethical considerations and professional morals have been reduced to a way of thinking: 'if I don't

[7] With no decision making status therefore less authorised yet have a relaxed position in criticising the institutions even if its where they work.

do this for that company someone will do it anyway, so why would I miss that job', as stated by some of the interviewees, revealing the 'allegiance' condition in professional ethics (Marcuse, 1976) yet lack of fulfilling other principles of planning ethics.

> *Obviously these kinds of plans are prepared by certain names. However, it is not because of the powerful economic capital relations. It is a kind of closeness to the authority. 'Whose plans are able to get approval from this municipality without a problem?' This question is a frequent advertisement tool for those names* (Head_CUP).

**5. Conclusion and discussion**

This study provided further realisation of vernacular politics within the process of urban development and planning practice of shopping mall development in Ankara. There while the kinship embedded in the process with social ties built close circuit consensus between decision makers and private developer, any attempt to intervene that consensus or its decisions were defeated by the consensus itself having its power from the above mentioned driving forces. Through the analysis of the cases it become clear that the already powerful public institutions, generating their power from gaps in the legislations and the status given by that legislations, form an alliance with the capital holder while the rest of the less powerful governmental institutions or non-governmental organisations are deliberately excluded from and externalised in the process. The cases proven that the complex hegemonic power relations that are sequential are also definitive for the whole process of urban development. These hegemonic relations can be represented in two ways in the process: the institutional (internal) that is built up through the hierarchies in the authorisation added to the traditional structures; and individualistic unorganised that is built up through the interrelations of networks of external actors with internal actors. Here what is meant by institutional in practice is the governmental structures that has its own hierarchical structures (mayor, council members, departments and hierarchies within the department), whereas the unorganised refers to private companies; developers and their non-legislative relations with the authority. Therefore, using the legislative tools in favour of private investments and easing the path for the investors by the local authorities via relaxing and crafting the tools in responding individualistic demands (Oncu 1988; Flybjerg and Rirchardson 2002) can also be considered as distortion in planning and of institutional ethics that requiring mutual negotiations to benefit both sides in the end.

The cases revealed that idealised steps provided by the ministry which are confirmed by the municipalities and have been taught in the planning schools, are in reality unpractised. These steps as proven through the cases are providing an idealised structure but become invalid within the struggle of the power relations and planning praxis. In reality the planning practice continues mostly through proposal of plan modifications and through the use of recent planning trend 'urban regeneration area declarations'. In addition, the focus of the all planning practice has become the approval process and generation of strategies to provide the approval without much of a challenge, instead of focusing and elaborating on the production of the plan, which should have been the process of participation and any possible negotiation towards a consensus building among actors. The investigation of municipal archives and interviews with key informants has revealed that the reality of planning, as Hillier (2002) emphasised is disappointing, as the idealised steps of planning. Through this investigation a new insight to define and redefine the actors came to surface, some of who were hidden within the idealised formal processes defined by legislation (see Figure 1). The additional processes and actors of planning practice for the selected cases surfaced via plan modification proposals, approvals and formal objections; each step bred antagonism among the actors engaged in various tactics. Thus, the usual flow chart of the planning process needed to be revisited with regard to the selected cases (Figure 2).

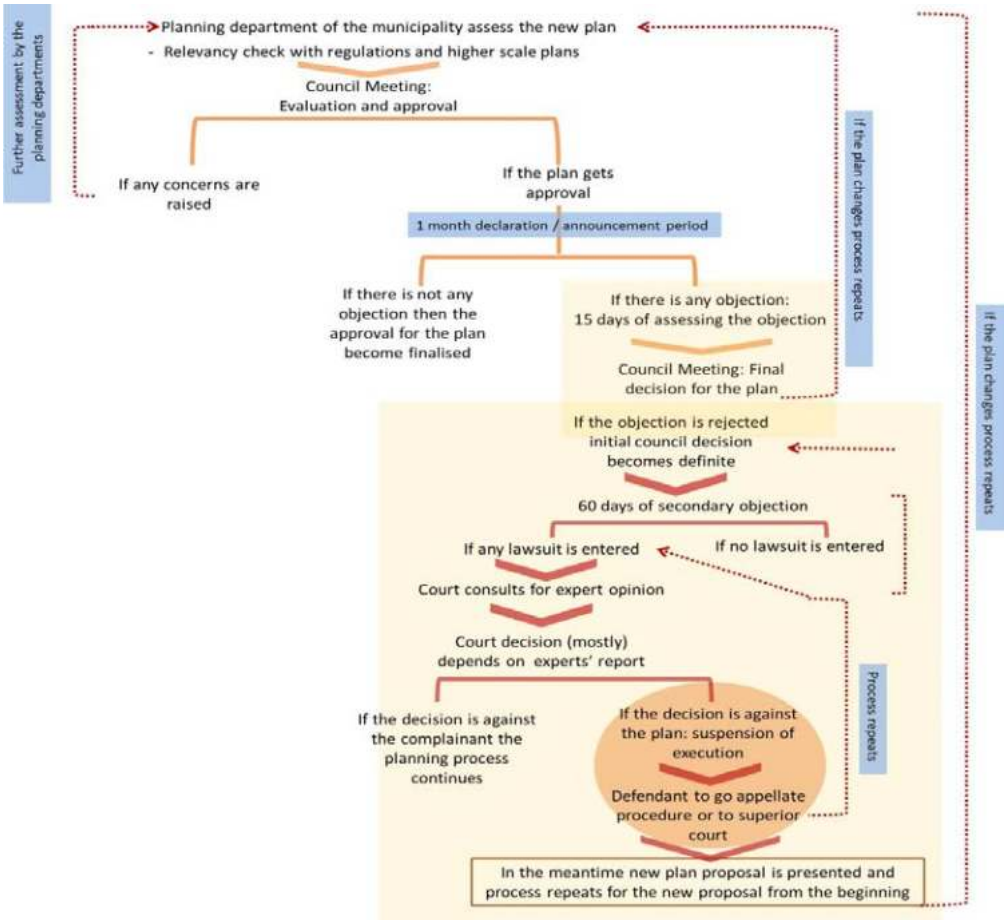


*Figure 3. Redesigned flow chart of the formal processes with regard to real practices*

In addition, what is noticeable here is that the metropolitan municipality is mostly subjected to lawsuits as the defendant, as they are the ultimate decision-makers on urban development by virtue of new legislation. The developers have been aiming to develop good relations with that authority and inevitably participate on its side in the courts. Thus, in those cases they act collectively, operating through various strategies with mutual interests. As seen in the cases, if the lawsuit continues by a decision to suspend proceedings by the court, then in the meantime (during the time between the suspension decision and the application of the appeal procedure) another plan proposal is prepared by the private representative and approved by the council in order to be able to continue construction and gain time. However, this new proposal can also be (and mostly is) subjected to further objections, continuing with lawsuits, and the process then repeats as happened in Kentpark. However, attending to these strategies requires an intense and a careful follow-up by the institution opposing the development, due to the lack of transparency in planning practice. Echoing that, during the interviews both the district municipalities and CUP members stated that they assign one of their members only to follow up with the new proposals approved by the metropolitan municipality, in order not to miss the objection period as defined by law.

Moreover, the perceptions of the actors for each other also contribute to the powerfulness or the powerlessness of the actors. The incisive and prejudiced thoughts of the actors for each other, as presented in the statements of the decision makers against oppositional actors, expose a clear antagonism shaped by bias; mistrust and disregard for the profession. This situation on the one hand proves the mistrust and lack of quality of dialogue leading to an emergent of antagonism; on the other hand underpins the powerless condition of the opposition.

Finally, adopting the ways which the planning is practiced in accordance with the beneficiaries' demands (i.e. using certain terminologies in the legislations which already encapsulate an indefiniteness and flexibility); the clash of the authorities and; lack of transparency are paving the way through a distortion in planning and ethics where also not having effective sanctions makes the supremacy of the legislative system to be treated nothing more than rhetoric in the practice. Overall, resultantly, the struggle in the power games of the urban space while being reshaped via interrelations of the powerful actors and their tactical actions, is also incapacitating powerless opponents consistently which also get weakened further by the degradation over the perceptions of planning principles and ethics. Thus, the representation of public interest and the essence of planning principles are silenced through manipulative and hegemonic power relations.

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# LOCALISM IN ACTION: POST-POLITICAL NEIGHBOURHOOD PLANNING

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*The paper presents emerging primary research, in the form of two 'inner-urban' case studies, which investigates what Localism in the United Kingdom - specifically Neighbourhood Planning - means for processes of planning within an English northern city. That is to say, it discusses Localism's impact(s) upon the process and content of plan making within a post-political perspective. In England, Neighbourhood Planning is grounded in the localist narrative of the United Kingdom Coalition Government to 'devolve power to communities'. Neighbourhood Plans represent a way in which people may be included in the planning system and participate in decision-making by allowing the creation of a statutory document of the local plan. However, it has been argued that planning has been underpinned by a form of post-politics, with outcomes that are often constructed on vague governance objectives, normatively 'sustainability' and 'growth'. This has been most notable in the 'spatial planning' approach of New Labour, which attempted to speed-up the planning system through achieving a meaningful consensus in development decision-making. In seeking to achieve this consensus, it has been argued that conflict and dissent have been marginalised and carefully managed within a variety of styles and scales of planning. The crux of the argument is as follows. Whilst on the face of it, 'spatial planning' within political narrative appears to have vanished, to be replaced by processes of Localism, spatial planning doctrine as mind-set and professional practice still remains.*

## 1. Introduction

The concept of the neighbourhood within city planning is viewed with some suspicion by Jane Jacobs. Neighbourhoods are sentimental constructs that are akin to a valentine, attempting to merge and distort two very distinct paradigms of the city and suburban life. Neighbourhood plays on emotions of sentimentality, rather than rational, or good sense. Cities on the other hand are different. Cities, if they are created by everybody, can provide for everybody (Jacobs, 1992). If the neighbourhood is something everyone can relate to – sentimentally at least - it is something that they can control, can create. Perhaps neighbourhoods are to be seen as building blocks of cities created by everybody.

Engaging with theories of post-politics, the working paper discusses state primed localism, followed by the emerging empirical study. The aim of the paper is to demonstrate how 'Localism' in England may be an attempt at the continuation of a post-political spatial planning and in doing so outlines emerging findings of two inner-urban Neighbourhood Planning case studies. The paper charts emerging findings based on the attempts of Government to deploy Localism, the issues encountered by those involved in making Plans, and the responses of local government and planning profession. Discussion takes place of an era of political, regulatory and policy flux, post-2010, characterised by a British coalition government consisting of the Conservative Party and Liberal Democratic Party. To be clear, Localism and Neighbourhood Planning in this paper refers to that developed by the Coalition Government. Along with the National Planning Policy Framework these are applicable to England only, due to the devolved nature of planning in the United Kingdom.

Localism is enacted by the Coalition as part of an on-going political localist narrative that appears to prioritise scales beneath the 'national' in decision making. Neighbourhood Planning is a key component of Localism, a tool, or more accurately is a set of 'rights', that is "promoted vigorously"

during the initial stages of the new legislation (Parker, 2012, p4). The Neighbourhood Development Plan sits within the wider package of Neighbourhood Planning 'rights' that is created, of which there are three; a Neighbourhood [Development] Plan; a Neighbourhood Development Order; and the Community Right to Build. Neighbourhood Planning is also promoted alongside a plethora of other 'rights' that purportedly allow greater control over subjects of economic development, buildings, and public service delivery (Locality, n.d.).

Planning in England is inherently political in its nature, due to the nationalised structure of development rights and land use regulation against which decisions are made in the United Kingdom (Booth, 2002). As a result, competition between many actors is intrinsically part of the planning system when decisions are made, with the state making decisions on behalf of the people, with a range of solutions and theories which attempt to reconcile differences and achieve consensus (Healey, 1997). Decisions are made within a system characterised by a plan-led structure, created in the early 1990s. Being plan-led, the system is such that at the local level, local planning authorities create forward looking development plans for their area, on which the public has a legal right to be consulted, before becoming legally binding documents. Planning decisions are then made by the local planning authority based on legislation, case law and local and national policy. This is the primary way in which Neighbourhood Development Plans appear to have influence and the principal way in which they are intended by Government to be used (UK Parliament, 2011; 2012). It is the process of creating such a policy that is the focus of the paper.

Neighbourhood Planning is pronounced politically as an opportunity to influence decision making, to create neighbourhood. Neighbourhood Development Plans are intended to "...give [people] the opportunity to make their own choices..." (Clark, 2011, no page). Emerging criticism of Neighbourhood Planning perceives the policy as a method for removing politics from decision making, by foreclosing debate around carefully selected parameters (Allmendinger and Haughton, 2012). Political ideology is removed from decision making, reducing decisions to "technocratic deliberation" (Deas, 2013, p.75). To do so, a variety of mechanisms can be deployed, including the use of vague nomenclature and 'governance' arrangements without a specifically clear overall objective. There are well-choreographed processes within which conflict, or the potential for it, is displaced or residualised (Allmendinger and Haughton, 2012).

Conversely, in areas that have taken up Neighbourhood Planning, there may be an "antagonism developing" at the neighbourhood scale that is contrary to this post-political analysis (Bradley, forthcoming, p.4). It is argued that in creating a nationally deployed framework of post-politics as Localism, Neighbourhood Planning has given people a collective identity. Rather than politics being residualised and reduced to a technocratic procedure between competing interests, antagonism develops to question political structures and ideals (Bradley, forthcoming). However, these can't be seen as being on a linear axis of 'post-political vs non-post-political'. A post-political analysis of cities goes much wider than this and as antagonism develops in one area, post-political responses may emerge. There are various trends which may highlight a post-political condition within planning, from a variety of sources. If Neighbourhood Planning is to be understood from a post-political perspective, and as such the concept of 'neighbourhood' within cities, it must be noted that the concept does not exist in silo.

Empirically the paper engages with two 'inner-urban' Neighbourhood Planning case studies within Leeds, England. The case studies are constructed of semi-structured interviews with members of the neighbourhood forum creating the neighbourhood development plan for two areas, in addition to local authority planning officers, elected councillors, developers, planning consultants and national civil servants. Observation data in the form of notes is also used to support the discussion, made during

forum meetings and discussions with individuals outside of the semi-structured interviews. A review of material produced by the neighbourhood forum within each area, including forum and boundary designation applications, leaflets and consultation information, minutes of meetings and discussion papers, also supports the case studies where necessary. It is recognised, that whilst these case studies tell only a fraction of the unfolding localist experiment of contemporary planning, they make a contribution to the development of post-political analysis of a recent, specific concept of localism that it appears will remain.

## 2. The post-political condition

### 2.1 Spatial planning

Spatial planning is deeply embedded within English planning, so it is worth briefly highlighting, in order to understand the impetus for Coalition changes. Despite the significant reforms to the planning system, and absence of 'spatial planning' from political rhetoric, it is likely there will be a residue left behind. Certainly, the potential for such entrenched thinking remaining in the planning system is predicted:

> "...while the reforms are radical and represent a potential critical juncture in the evolution of local governance, problems of implementation are likely to dilute to dilute radicalism in favour of more incremental change. In particular, we argue that New Labour's approach to local governance – with its emphasis on performance, partnership and participation – has become so deeply entrenched at the local level that the Coalition's reforms will inevitably be interpreted and refracted through this lens" (Lowndes and Pratchett, 2012, p.22).

Spatial planning emerges within contemporary planning as an assemblage of approaches appearing globally and "appealing to many diverse constituencies" (Allmendinger and Haughton, 2012, p.4) by offering a progressive way forward, whilst delivering economic growth. Spatial planning as a turn of phrase is used in the United Kingdom by the State, professional groups, academics and politicians and others to describe diverse processes of planning reform, policy integration and strategic governance (Tewdwr-Jones *et al*, 2008). Likely emerging out of re-territorialization, europeanization and integration debates (table 1.0), as a concept, it is difficult to pin-down and a variety of components of spatial planning may exist, all present within academia, policy making, professional doctrine, politics, and as a way of thinking about concepts that intersect with planning.

| Debate | Summary |
|---|---|
| Re-territorialzation | The re-territorialization and rescaling of policy-making |
| Europeanization | The European origin and development of spatial development |
| Integration | The push towards sub-national agency and institutional integration |

Table 1.0 - three theoretical and political origins of UK spatial planning (Tewdwr-Jones *et al*, 2008)

### 2.2 Post-political spatial planning

Post-politics arguments are underpinned by changes to the global political system, economic globalisation and increasing acceptance of diverse lifestyles (Allmendinger and Haughton ,2012). People live their lives within fluctuating identities, with an acceptance of individualism. As a result, 'Partisan conflicts are a thing of the past and consensus can be achieved through dialogue" (Mouffe 2005, p.1). Fundamental to these arguments are changing theories and models of democracy, which

sees a shift from aggregative democracy, towards deliberative democracy and finally a shift towards governance processes (Allmendinger and Haughton, 2012). Temporally it appears inevitable as a result, that an unspecified era is to become synonymous with a "policy imperative for planning practice to become more oriented towards consensus building" (Allmendinger and Haughton 2012, p2). The political climate at the start of the New Labour era, however, appears to have created perfect conditions for a substantive shift towards this.

With these larger, fundamental changes to the global political system taking place and planning as a profession so deeply hinged on conflict, the New Labour era may also simply represent another stage in the shift to ever increasing levels of conflict choreography. New institutions of Government are created by New Labour, based on the consensus building 'Third-Way' approach (Allmendinger and Haughton, 2012, p.3). In that perspective, spatial planning departs from land use planning in that it focuses on "consensus brokering, allied to approaches designed to speed up planning decisions in order to facilitate economic growth" (Allmendinger and Haughton, 2012, p.12). Conflict is carefully managed and subsequent debate is foreclosed around issues based normatively on 'growth' or 'sustainability' for example, key features of the dominant contemporary planning agenda (Owens and Cowell, 2010). A 'spatial planning' system is created that operates with indiscernible strictures - portrayed as an arena for debating hefty issues, a way forward for society.

Whilst a post-political condition is most evident within spatial planning, these approaches may be one step further, rather than the end in itself. Primary to the argument of this paper is this formation of a 'de-politicized' consensus, or "crisis of consensus" when attributed to spatial planning (Allmendinger and Haughton, 2012). The impact of that trend is neatly summarised on the planning system:

> "This system gives the superficial appearance of engagement and legitimacy, whilst focusing on delivering growth expedited through some carefully choreographed processes for participation which minimise the potential for those with conflicting views to be given a meaningful hearing" (Allmendinger and Haughton, 2012, p2).

Post-political criticism emerges, which sees spatial planning as not progressive, that rather it's a cleverly managed process within deliberately designed constraints. From this perspective, contemporary spatial planning loses its meaning. What is it for? Spatial planning's use of abstract nouns and vague nomenclature allows objections to coalesce and significant opposition creates fractures, allowing challenges to spatial planning and its consensual underpinnings and leading eventually to planning reforms from the Coalition government.

## 2.3 Emerging post-political trends

To be clear, whilst the primary focus of the paper is consensus, there exists a variety of trends that may be identified as post-political. Research and discussion of post-politics takes place at the 'macro' scale, including discussion of entire planning systems, metropolitan regions,and cities, whilst at the neighbourhood scale, a post-political literature is also developing (Davoudi and Madanipour, 2015). To this end, post-politics analysis anticipates neoliberal and localist strategies to be embedded in planning processes at a variety of scales (Allmendinger and Haughton, 2012) and as a result a post-political landscape is emerging across scales of planning. The main thrust of the paper is to investigate the extent to which a post-political consensus remains. However, within that there are six key post-political trends that are identified (Figure 1.0) (Clarke, 2015).

1. *Prior condition: national austerity policies and cuts in local funding.*
   These measures "bring shifts in the 'strategic priorities of city government and coalitions" (Macleod and Jones, 2011, 2444).
2. *Widespread agreement over conditions that exist and what needs to be done.*
   Despite conflicts of interest and opinion, there is widespread agreement over conditions that exist and what needs to be done (Ranciere, 2003).
3. *Growth in managerial approaches to Government.*
   Government is reconceived as a managerial function, deprived of its proper political dimension (Zizek in Swyngedouw, 2011).
4. *Expert opinions called on to legitimise decisions.*
   Options presented as complex and in need of expert opinions to legitimise decisions (Sloterdijk, 2005).
5. *Politics as a distribution of spaces.*
   Importance of activities that create order by distributing places, names, functions (Ranciere in Swynedouw, 2011).
6. *Gradual 'de-politicization' and 'de-democratization' of significant institutional forms.*
   Urban institutions streamlined to foreclose debate and respond to market; now less accountable to the public (Macleod, 2011).

Figure 1.0 – six key trends of post-political cities – (Clarke, 2015, pp. 57-58)

Also identified as post-political, is the "distinguishing 'turning points' in which post political elements are emerging...the temporal and spatial nature of post-political forces" (Clarke, 2015, p.58). Furthermore, an 'ultra-politics' of consensus, to control that which might disrupt a consumerist city (protest and homelessness for example) is also highlighted (Clarke, 2015). It is conceivable that as one post-political trend appears, it is responded to by another post-political trend. These actions and responses may also occur within and across a variety of scales.

## 3. Coalition Government Localism

Coalition criticism of spatial planning emerges as a narrative of a democratic deficit. Consensus building approaches of spatial planning by New Labour had failed, the system was broken (Allmendinger and Haughton, 2012; Conservative Party, 2010). Much of the criticism levelled at spatial planning from all angles may remain as residue within the current system and are critical to a post-political analysis in the eyes of Allemendinger and Haughton (2012), so it is worth highlighting them here. Firstly, a rescaling of functions and processes takes place, especially through devolution, and there is emphasis on collaborative working. Despite this spatial planning is too driven by central priorities. Secondly, spatial planning is accompanied by "the emergence of multiple soft spaces and associated governance processes" (Allemendinger and Haughton, 2012, p49) which circumvent the statutory planning process.

### 3.1 The Open Source Planning idea

*Open Source Planning* (Conservative Party, 2010) is an example of the wider context out of and within which the Coalition Government develops; a rejection of the large and over powering state and to develop a capacity within 'civil society'. *Open Source Planning* promotes open source software development as being "...highly flexible and adaptable..." and that it "...values transparency and free access..." (Conservative Party, 2010, p.1). Applied to planning, it is necessary to reject the "[New Labour] Government's centralising, corporatist attitude..." (Conservative Party, 2010, p.1), rather planning is a conflict-free 'community', without regulation which just gets things done. Whilst open source software development may contain these values, it is embedded within a larger 'movement' of

community software development which requires managing and organising. It is an organic process, which may be flexible and adaptable. But this is not a process without its limitations and divisions.

## 3.2 Big Society

Localism, as enacted by the Coalition Government, followed on in much the same vein as *Open Source Planning*, emerging from the political rhetoric of the 'Big Society'. The 'Big Society' agenda, pursued by Ministers in the early years of the Coalition Government, challenges a state that is perceived as interfering, monolithic, slow and unifying, a state that has colonised people's lives. An economic recovery is needed, but so too is a social recovery (Cameron, 2010, no page). The agenda therefore advocates the rollback of the state, but acknowledges that the state must encourage concepts to replace it including 'social action' and 'public service reform'. Thirdly 'community empowerment' will create "communities with oomph – neighbourhoods who are in charge of their own destiny…" (Cameron, 2010, no page). Neighbourhoods are the polar opposite to the state. Neighbourhoods are exciting and energised.

The 'Big Society' and Localism promises to radically change the way in which governance, public services and policy are delivered. Neo-liberal ideas of economic growth are sutured to a desire to increase the number of actors in the system at the lowest possible level. Firstly, the state will "drive [power] down even further to communities, to neighbourhoods and individuals" as 'decentralisation' (Cameron, 2010, no page). Secondly the state will release data, under the banner of 'transparency', and thirdly it will provide limited finance directly to neighbourhoods. Purposes for the decentralisation of power within the 'Big Society' is clear within a series of Government financed and promoted 'vanguards'. The intention is to give these 'vanguards' the power to run parks and libraries but also to "plan the look, size, shape and feel of housing developments" (Cameron, 2010, no page). Neighbourhoods are expected to want to plan *for* development. The State is the enabler.

Austerity measures appear to create opportunities for voluntaristic experimentation in public service delivery. Major concerns about the UKs budget deficit gives impetus for the Spending Review, setting out areas for public spending reductions. Local government at the central level faced "a disproportionately high share of the cuts" (Lowndes and Pratchett, 2012). The Department for Communities and Local Government had its 'local government' budget cut by 27 percent and its 'communities' budget cut by 57 percent over four years (Lowndes and Pratchett, 2012). Austerity measures are the driving force behind the Spending Review. However, new freedoms for local government are also identified as a way to mitigate against long term effects of financial reductions. Specifically, the spending review identifies:

> "...removing barriers to greater independent provision, and supporting communities, citizens and volunteers to play a bigger role in shaping and providing services; and improving the transparency, efficiency and accountability of public services" (HM Treasury, 2010, p8).

Financial cuts that drive the Spending Review conversely appear be driven by an ideological attempt to allow rollback the state and thus allow greater innovation within public services, with local government seemingly given greater power over how to prioritise spending on public services. The point is, even in the face of massive cuts to local government, the State sees itself as the innovative enabler.

## 3.3 Localism

The structure of the Localism Act is such that it is an accurate indicator of the dominant belief at the time, that localist policy in planning is a way to deliver economic growth. Despite the attempts of Government to promote Localism as a tool for empowering 'communities', the structure of the Act appears to be clear on the role of planning. Neighbourhood Planning is situated within Part 6 of the Localism Act, within 'Planning' rather than Part 5 which is entitled 'Community Empowerment' (UK Parliament, 2011). As such, this accords with the movement of responsibility for Neighbourhood Planning between the directorates of the Department for Communities and Local Government in approximately the first year of its implementation. The responsibility shifted between the Planning Directorate to the Decentralisation and Communities team. The Planning Directorate has a clear remit of economic growth, demonstrated by the economic focus of the impact assessment for Neighbourhood Planning (DCLG, 2011), whilst the Decentralisation Communities team have responsibility for community empowerment aspects of Localism.

## 3.4 National Planning Policy Framework

Coinciding with the legislative changes was a period of policy flux, demonstrated by the removal of hundreds of pages of previous planning policy, replaced primarily by the 49 pages of policy in the *National Planning Policy Framework* [*NPPF*] (DCLG, 2012). This was justified at the time as being about 'reforming' a top-down and slow planning system (Clark, 2012) popularly reported and discussed in the profession as 'cutting red tape' (National Trust, 2015; Acres, 2012; Groves, 2014). Additionally, other key changes are the removal of regionally set housing targets and the entire regional layer of planning, previously existing in the form of Regional Spatial Strategies and created by Regional Assemblies (UK Parliament, 2009). A power shift away from the regional towards the neighbourhood scale is legislated for. Introducing optional 'rights' to be taken up, the plan-led system at the local level is retained, with responsibility for formal plan making remaining with Leeds City Council.

The policy within the *NPPF* is divided into key themes, which place emphasis on delivering economic growth and a rhetorical shift away from excluding and unaccountable decision making towards a devolved and inclusive planning system. Removing the regional tier of planning, reduced policy guidance and the rhetorical removal of targets may "free-up local authorities and neighbourhoods to plan in the way that they wish, as long as it is 'sustainable'" (Parker, 2012, p4). Planning's purpose is "helping to achieve sustainable development…[and]…this should be a collective enterprise" (DCLG, 2012, pi). A target culture and remote decision making are identified as a barrier and "Dismantling the unaccountable regional apparatus and introducing neighbourhood planning addresses this" (*ibid*). Localism is to help to deliver "sustainable development" (*ibid*) and the mechanism for doing so is via a Neighbourhood Plan. Neighbourhood planners are to plan in the way that they wish, supported by local authorities, as long as they plan *for* 'sustainable development'.

## 3.5 Neighbourhood Development Plan

How does state deployed Localism work? Neighbourhood Development Plans are legislated for by the *Neighbourhood Planning Regulations 2012* and as such there are five necessary steps in their creation. Neighbourhood Plans must first establish a geographically bounded Neighbourhood Area and determine the qualifying body. Secondly the plan must be prepared according to the 'basic conditions' and undergo an independent examination. The basic conditions stipulate that a plan must; have regard to national policy; contribute to the achievement of 'sustainable development'; be in 'general conformity' with the strategic policy in the local plan and; be compatible with EU regulations and

directives. If the plan is successful, independent examination is followed by a yes/no (accept/reject) referendum of the residents within the area and finally, a Neighbourhood Plan is formally 'made' by the local authority. At each stage a decision is required before moving to the next, with the exception of the area and forum designation which can be submitted for consideration concurrently.

A qualifying body is the legal entity which writes the plan. In areas that have a Parish or Town Council, they are automatically the only qualifying body within that town or parish boundary. The neighbourhood area boundary is established as the parish or town council boundary (or an area within it). Areas without a Parish or Town Council, mostly urban areas, must establish a qualifying body and neighbourhood area by making a planning application to the local planning authority. The qualifying body takes the form of a Neighbourhood Forum, consisting of a minimum of 21 people that "live, work or carry on business" in the defined area (UK Parliament, 2012, p. 3ff). A statement of rationale for why each should be designated must be submitted as part of this application.

**4. Case study: towards post-political Localism in Leeds**

This section begins to chart the impact of Neighbourhood Planning in Leeds. It outlines emerging findings of two case studies consisting of semi-structured interview data of people involved in the production of two Neighbourhood Plans. Most recently, supplementary planning documents have been produced for villages in the form of Village Design Statements, with this technique then applied to urban areas in the form of Neighbourhood Design Statements.

## 4.1 Emphasis on technical-managerial apparatus

Localism attempts to reinvigorate and energise the neighbourhood as a 'community'. However, during a period of austerity and funding reductions to local government, neighbourhoods are politically seen as a site to deliver wider political strategies of the local authority. Plans represent an opportunity for a "locally strategic" base, in the absence of resources for wider strategic service delivery. Despite the use of vague terms such as 'community' and what this might consist of, it is possible to differentiate between 'community' and the local authority. During an interview with a leading member of the community in Case Study A's Neighbourhood Forum, it is explained: "The local authority Councillors are involved, although when the Neighbourhood Plan was set-up they were told, I'm not sure by who, to take a back seat" (interview, 2015), with another ward councillor saying: "I heard about it through the grapevine...I didn't even know about it. We were then told to take a back seat...although maybe not in quite so few words, but I'm paraphrasing what was said" (interview, 2015). The chairman of the forum felt that this was a deliberate decision, due to the perception of the local authority: "To not be seen to be leading because it is seen to have become a council thing again" (interview, 2015). In areas where the local authority it appears has a bad reputation at an institutional level or there is a perception of previous failure, Neighbourhood Planning may represent a clean break from the past. As a result, officers approached resident's groups within the now defined Neighbourhood Area to create the plan. However, it is a political decision from within the local authority to encourage and develop a Neighbourhood Plan for an inner-urban area, the first one of its type within the local authority boundary. Local councillors, once they found out about the plan, then gave their support where they felt they could, acting as facilitators where major issues arise, but they didn't drive the plan in the early stages.

Spatial planning focussed on delivery, in an era of deregulation of the planning system. It attempted to bring together disparate fragments and deliver on the growth agenda of New Labour (Tewdwr-Jones *et al*, 2008). Spatial planning presented an opportunity to deliver "the social, economic and environmental infrastructure needed for our communities and it is the mechanism for managing this

delivery process" (RTPI, 2007, p.5). Such an approach echoes the current era of deregulatory policy flux, the residue of which clearly remains, albeit now an approach reoriented towards a specific Coalition definition of "sustainable development" with a strong 'growth' agenda behind it. A planning consultant working on Case Study A explained how this had worked in practice:

> "I feel that they feel that finally after many years of sort of...promises and failed strategies and initiatives and projects within [Case Study A] that the Neighbourhood Plan might actually be able to pull things together and provide some kind of reasonable framework for retaining the best of what [Case Study A] has got and improving it on a number of fronts for current and future residents" (interview, 2015).

Neighbourhood Planning in an urban area intersects with the local authority in more than one way, not just creating planning policy. There is a clear site of competition between a number of actors, that may develop into antagonism and conflict, primarily between services and Case Study A's intentions. Neighbourhood becomes a site of both a competition for resources, with a focus on delivery and efficiency and potential for conflict between competing priorities.

As a result, it is necessary to distinguish between 'neighbourhood' as stakeholder and 'neighbourhood' as process. Local authority stakeholders are brought together at the neighbourhood scale, to discuss a way forward with neighbourhood as a stakeholder, to plan for the future, based on vague nomenclature of growth for example. Neighbourhood as stakeholder requires 'managing' and working with, whereas neighbourhood may also be the process for galvanising service delivery and responding to fragmented governance around a collective way forward. The stakeholder as 'neighbourhood' in Neighbourhood Planning, is managed both internally within the local authority and as an external stakeholder, depending on the department. It is in the best interest for the local authority that the Neighbourhood Plan is successful, because Neighbourhood Forums will create a plan that becomes the responsibility of the local authority. The Neighbourhood Forum as an entity creates an arena for debate and discussion, which would otherwise not take place. Bringing together these various actors within the system brings with it antagonisms, but also new understandings between the neighbourhood and local government. The effect of this, however, is that rather than an arena for debate and disagreement, politics in Neighbourhood Planning is replaced by normative principles. These manifest themselves as instruments, processes or narratives within which 'things happen' to achieve a consensus.

Reaching a consensual way forward is also not constrained to the land-use planning policy that Neighbourhood Planning legislated for, as they are being used as a tool for reconciliation across boundaries and sectors. In urban areas, land-use and development appear to intersect with a wide range of other policy sectors and spatial planning previously attempted to integrate these. Localism appears to allow the same, focusing on the management and control of apparent complex and multi-scalar issues, albeit at the neighbourhood scale. Local government appears to be oriented more towards a mediation role, managing both internal departments and also external stakeholders in the neighbourhood.

## 4.2 Emphasis on narratives

The narrative of community within Open Source Planning translates into Neighbourhood Planning, within which it is established that the site of community is neighbourhood. Neighbourhood Plans must produce an acceptable 'good' outcome, based on discussion and deliberation between all interested parties. Two planning professionals from central government interviewed for the research, said Neighbourhood Planning is an arena for "...grown-up discussion to achieve a good outcome for everybody" (interview, 2015). This 'grown-up' conversation sentiment is echoed by two local

authority officers during the semi-structured interviews. Those creating a Neighbourhood Plan (whoever 'they' might be) must act in a rational, or sensible, way to achieve a 'good' outcome. In the eyes of the local authority officers, the grown-up conversation must come from all of those involved, including them. However, what is less clear to the officers is what a 'good' outcome must be. Given the legal context of Neighbourhood Planning and the need to climb through regulatory hoops, it becomes clear. Neighbourhood Plans must deliver a 'good' outcome, based on the poorly-defined governing normative principles of growth and sustainable development.

The post-political condition describes how new forms of governance have appeared in contemporary planning, attempting to reconcile conflict and competing agendas through negotiation, to reach "mutually beneficial agreement" (Allmendinger and Haughton, 2012 p.4) within a positive-sum game. This amounts to a post-political 'mode' of governing by technical-managerial governance, resulting in the taking over of "the space of the political by forms of consensual depoliticised governance" (Oosterlynck and Swyngedouw, 2010, p.1577). It appears that Neighbourhood Planning as an instrument or process relies on the narrative of 'grown-up' conversation, constraining the debate to deliver a good outcome – growth.

## 4.3 Emphasis on instruments

Neighbourhood Planning as an instrument - that is a combination of legislation and policy - attempts to ensure that an acceptable outcome is delivered based on the narrative of growth. The issue here is; in order to make the next stage, the Neighbourhood Forum must overcome the 5 legal hurdles in the regulations in a satisfactory manner. Neighbourhood Planning Regulations stipulate those hurdles, whilst aiming to deliver 'growth' through 'sustainable development'. At the 'macro' level, Government intentions are clear; Neighbourhood Planning policy is about "testing" (interview, 2015), whether Localism can make 'communities' more accepting of development (figure 2.0).

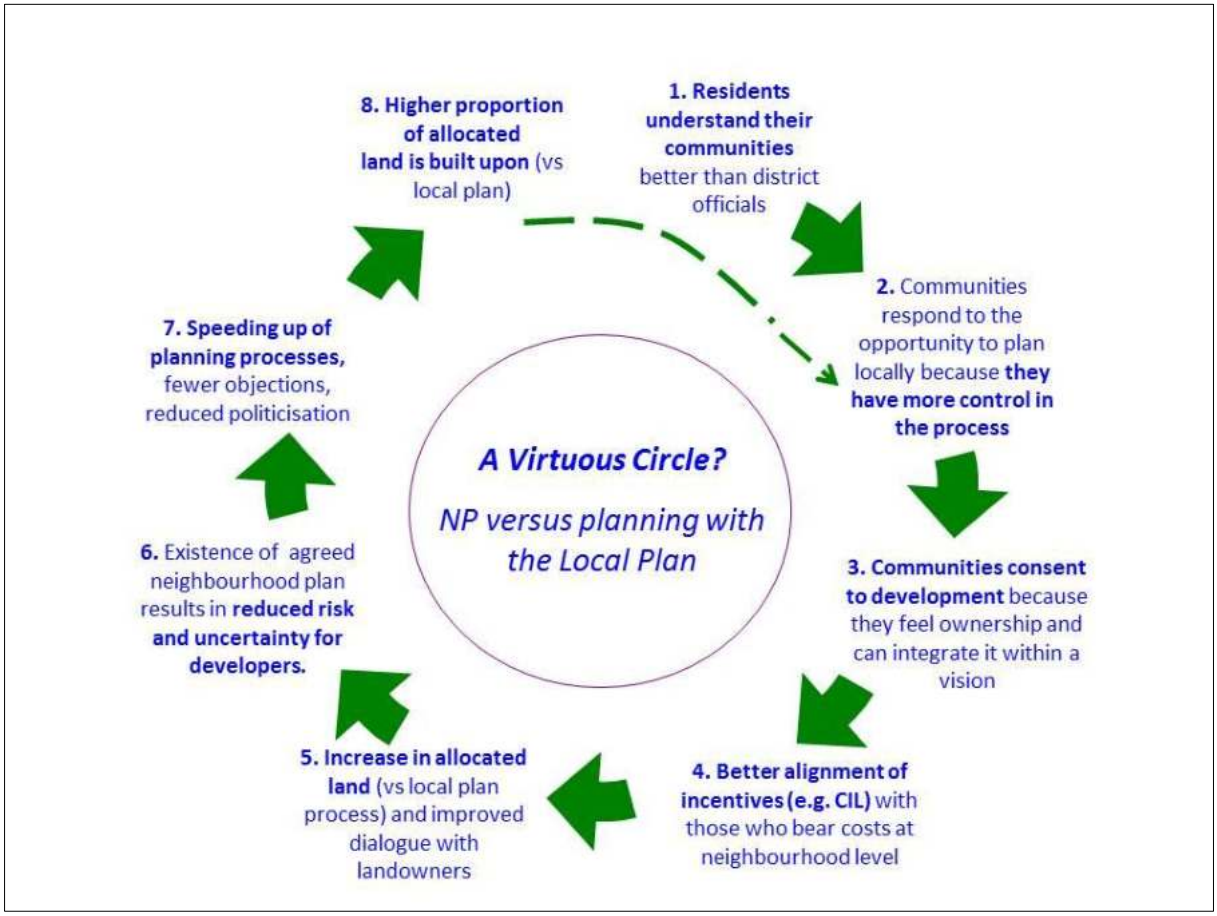


Figure 2.0 – testing Neighbourhood Planning – (DCLG, 2015)

The structure is such that despite the potential for conflict, Neighbourhood Planning is appears to be a "managerial-technological apparatus" (Allmendinger and Haughton, 2012, p.4), the aim of which is to produce a "good outcome" (interview, 2015). An instrument that is regulated by 'the police' (Ranciere, 2005), which are the "activities that create order...with agreed defined roles, processes and acceptable outcomes" (Ranciere, 2005 in Allmendinger and Haughton, 2012 p.4). Such an apparatus, it is argued has resulted in 'depoliticization' with 'politics' being replaced by "processes, instruments and narratives" (Allemendinger and Haughton, 2012, p.4). Neighbourhood Plans are structured so that the only way forward is to be accepting of development. Such a macro view, however, largely ignores the work required to overcome the legal hurdles put in place. Although this may represent an attempt at incremental decrease in the *potential* for conflict, each hurdle may be a site for conflict and contestation.

## 4.4 Emphasis on antagonism

Neighbourhood Planning may produce conditions for conflict and where there are deep rooted tensions, it is possible that an outcome which is acceptable may not be reached. Such conflict may be based on identities, not least at the boundary designation hurdle for example, (Bradley, forthcoming) which even at neighbourhood level take effort to overcome. There is potential for the boundary designation to generate "frontier effects by expanding the confrontation beyond the initial point of antagonism" (Bradley, forthcoming, p.10). In creating a legally marked neighbourhood, there is

potential for this to not only mark the edge of the Neighbourhood Plan, but also to create a political barrier between entities that has a practical and symbolic importance (Bradley, forthcoming). Boundary designation may therefore have deeper and longer-lasting effects.

The primary research for the paper found that boundary designation is a tricky legal obstacle to overcome, which can lead to antagonism that goes unresolved, yet delivers a boundary designation. This resulted in an underlying potential for conflict between the two Neighbourhood Forums that remains. The boundary designation for Case Study B was difficult due to the close proximity of discussions taking place for another Neighbourhood Plan, and their perception of place. Whilst it is acknowledged that competition can develop between stakeholders, a line of antagonism developed between two 'factions', who were intending to become a Neighbourhood Area and Neighbourhood Forum, which took 9 months to "resolve", according to members of the forum and officers interviewed (interview, 2015). The area in question is a small collection of shops, defined as a "local centre" within the settlement hierarchy of the local authority plan. Both groups lay claim to the area, with neither backing down. It became about ownership of the place and essentially which Plan would have control. Despite attempts at amicable resolution though deliberation and sensible debate, conflict remained, and it was the responsibility of the local authority to decide the boundary designation. During an interview a senior council officer stated how this happened:

> "The two groups couldn't decide on the boundary designation and at times the debate became quite heated.. so my suggestion to both groups was to go ahead and submit [the area application] and take it from there..." (Interview, 2014).

After the decision had been reached (although it took 9 months), a practical solution was delivered in that the smaller area, without another recognised 'local centre' in the settlement hierarchy was "given", in the words of a council officer (interview, 2015) the area. However, whilst the practical solution has appeared to resolve the issue, antagonism and bitterness between individuals still remains and this spills into the decisions made within the Neighbourhood Forum structure. The implications of this are at an early stage, but may lead to difficulties in encouraging "grown-up" discussion between the two Neighbourhood Plans, where they might be more suited to work together on 'locally strategic' issues. Again, whilst Neighbourhood Planning appears to give room for a meaningful debate, there is a regulated and mediated process to climb through, facilitated by the local authority, in what appears to be a logical order for only acceptable outcomes to be achieved.

## 5.0 Conclusion: post-political outcomes

The attempt of Government post 2010 to encourage popular participation in planning appears, on the face of it, to play on the emotion of neighbourhood. Despite rhetorical intentions of empowerment and greater control - described by a language of 'rights' and 'social action' to fix a broken system - state deployed Localism may simply represent a further relentless advance of a post-political condition. Opposition to previous New Labour spatial planning approaches appears to have coalesced as a result of the post-political condition of consensus, ironically parting the ocean to allow Coalition reforms. A symptom of the post-political condition is one within which objection to development is drowned out to deliver normative agendas of 'sustainability' and 'growth', packaged as 'governance'. The paper has charted the rise of a post-political policy, as a catalyst for the development of other post-political responses at the local and neighbourhood level.

Neighbourhood Planning is an attempt from Government at the macro- scale to manage conflict and reduce objection to new development, which it is hoped will succeed by only allowing the creation that is neutral or pro-growth. It is clear that Government intended Neighbourhood Planning to

facilitate growth, carefully managing conflict and resistance to development. Government aimed to "...give people real choice, real influence and real reasons to say 'yes' to development" (Clark, 2011, no page), but not no. Neighbourhood Plans cannot plan for less development than that contained within the local authority's plan. Neighbourhood Planning elevates the Forum creating a plan to a new status. Neighbourhood is created as a legal entity and the Neighbourhood Plan becomes part of the local plan. Therefore, the policy is structured in such a way, using a mixture of legislation, regulation and policy, that it is only possible to achieve the 'correct' outcome.

Competition from various actors is responded to by the local authority using a variety of means, whereby its function is primarily as a mediator and facilitator. Within the Neighbourhood Planning system, where antagonism appears to erupt from within processes, the local authority's role is to 'police' the way forward. It does so using the structure of Neighbourhood Planning to guide it. Political debate is largely residualised to 'grown-up' discussion and debate, as is the intention of Government and where antagonism cannot be resolved, the local authority makes the practical decision to get the plan going in the name of efficiency.

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# COMPELLING AND PERPETUATING: HOW AN UNPOPULAR INFRASTRUCTURE PROJECT STAYED ALIVE IN AN ERA OF PUBLIC CONSULTATION

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*The East West Tunnel, an AUD5.3 billion contract signed 29 September 2014 between the State of Victoria, Australia and East West Connect consortium, will not be going ahead under the new government elected in November 2014. The project was defeated because the community used their electoral power to revoke the right of the sovereign who had selected the project to conduct it. That is, the community elected an alternative government that would not support the project. This revoking of sovereign power was a last resort, after the community failed to compel the stopping of the unpopular project during community consultation processes. Several papers have already begun to document the process of community action through which this project was brought down. However the mentalities which brought the project into being in the first place are less well known. This paper documents this case study of a failed mega project, uncovering the knowledge, technology and rationality which combined to bring the project into being – and to sustain its existence despite widespread unpopularity and community objection. The paper uses Sturup's (2010) understanding mentalities of mega projects to tease out how this project was selected, and supported, even to the point of electoral loss. It focuses on the government and private-sector actors and their stakes in keeping the project alive and maintaining their right to decide which projects should occur. In doing so it validates and expands our understanding of the features of the art of government of mega projects.*

## 1. Introduction

This paper seeks to identify the "mentalities" of the mega project referred to as the East West Link, or East West Tunnel ('EWT')[1], in Melbourne Australia. This project was ultimately stopped at great public cost, after an election in which the political party attempting to complete the project lost electoral support and was removed from power. In identifying the mentalities underlying the project, we are seeking to document the knowledge, technology and rationality (Dean 1999) that combined to bring the project into being – and to sustain its existence despite widespread unpopularity and community objection. We then consider possible explanations for the apparent attachment to the project in terms of the theoretical functioning of mentalities of mega projects put forward by Sturup (2010). This theory indicates that key features of the art of government of mega urban transport projects are that they are strongly sovereign in the structuring of power, that they are difficult to observe critically from within because of the personal attachment people within the project acquire, and that they are difficult to unhinge because of an inescapable logic demonstrated by the construction of the project as a solution to some problem which can only be solved by the project.

[1] We are calling the project the East West Tunnel ('EWT') for clarity and to distinguish it from the larger East West Link which is a proposal to build a road link from the Western ring road through to the Eastern Freeway, of which it is part. Note that many references call this project the East West Link.

The first section of the paper sets out the methodological framework for the research and the key findings from Sturup's (2010) thesis. The second section documents the evolution of the EWT project, and the mentalities that went along with it. The final section discusses the findings from the project against those outcomes expected by our working hypothesis.

## 2. Method

This paper is based on findings from Sturup (2010), and examines the mentalities of mega project as they operate in the project referred to as the EWT in Melbourne. Sturup (2010) posits that the mentalities of mega projects can be understood as an art of government (Foucault, 1991), or world view from which people within the project operate, and from which what is logical to do emerges. Sturup (2010) found that key features of this kind of art of government, or mentalities, or world view, can be uncovered through development of case studies that closely examine the technologies, rationalities and knowledge used and produced in the project. These technologies, rationalities and knowledge are revealed through policy documents, legislation, public statements, public dialogue, and technical plans, and through interviews conducted using a story-telling mode (Snowden, 2003), and hypothesis based questions.

In this research, information was first collected from secondary sources including policy documents, legislation, public statements, and public dialogue. Because the project had not yet been built, few technical plans were available. Information was collected back to the first recognisable mention of the project in any form. A list of interviewees was generated from these secondary sources including government employees, politicians, community activists and academics. Interviews were sought from this selection of people, and snowballing technique used to determine further candidates. Because the project had been stopped following a change of government, and there have been accompanying legal proceedings, it proved difficult to obtain interviews from key persons involved in crafting the project. Most of the interviews collected have therefore come from those who opposed the project, or were observing proceedings at some distance. Our conclusions are at present preliminary as we have not yet completed our efforts at obtaining relevant interviews.

All information collected was coded using Nvivo software. Coding was initially completed against the nodes knowledge, technology and rationality, and against further nodes of interest that emerged from the data. Methodologically these codes of knowledge, technology and rationality are derived from an understanding that arts of government can be understood from observing shifts in technology and knowledge leveraged by institutions over time (Dean, 1999) and that projects emerge in a process of development of the problem and the project as a solution to that problem (Li, 2007). In the analysis of this data, what we are seeking is what is pointed to, or is in the unsaid, guiding actions and language. In this project, given we are looking to verify and validate a conceptual framework which has already been identified, we run the risk of finding what we seek. We use the inductive coding as a way of validating this, checking that there are not undercurrents hidden in the data that we are not directly using. Because Nvivo allows the same data to be coded easily against multiple nodes, we can also verify that the data we are using is not interpretable in a way inconsistent with our expected findings.

## 3. Theoretical Framework

Sturup (2010) found three main features of the art of government of mega urban transport projects. Firstly, the art of government is strongly sovereign in its power structure. The project comes about because someone with the power to do so said that it would be so. From this point all action in the project is based on the fact that the project will be happening. The question of whether the project should occur is no longer relevant and thus cannot be heard. Secondly, that mega projects are

developed as the particular solution to a problem, which is constructed during the process of developing the project as a kind of nexus. In this process of problem and solution construction, the problem is defined as solvable by the project. This creates political imperative to put in place the solution (since it is the job of government to solve problems, especially ones that are solvable). The problem solution nexus reinforces the impossibility of questioning the logic of doing the project as it has been defined, and creates sticky rationalities which keep re-emerging even if project construction does not begin immediately. Finally, mega projects have a kind of sublime, a succubus-like attraction, not only because of their engineering marvels (Trapenberg Frick, 2008) or their political appeal (Altshuler & Luberoff, 2003), but also because as a project they offer the opportunity to deliver the impossible without questioning whether it should be delivered. Mega projects require unwavering commitment, they use up those within them. They offer the opportunity to expend all of oneself in the service of something great (Shaw, 1973).

## 4. The Project's Historical Context

The piece of road represented by the EWT project, has a relatively long history of being proposed and then defeated. In fact, protestors against the project tend to refer to it as a zombie project, referring to the fact that they keep killing it but refuses to remain dead (per com Quantock, R. 2013). This indicates the kind of sticky logic found in many mega projects has occurred in this project (Sturup, 2010). As the until recently confidential EWT Business Case shows least one of the rationalities of the project is related to the irrationality of having a freeway that 'just ends' and the older dialogue that 'perceives of cities as circulatory systems and concurrently congestion as bad (Heynen, Kaika, & Swyngedouw, 2006)' (Sturup 2010 p.79). The East – West Tunnel Business case justification for building the eastern section before the western section of the project was "if constructed first, the Western Section will be another freeway-standard road that comes to an end in the inner city (similar to the current Eastern Freeway), potentially generating further congestion while still not offering a cross city alternative to the M1 corridor" (State Government of Victoria, 2013, p. 16).

There have been several attempts to build parts or all of the East West Link Project. The Project was originally proposed in the 1969 Melbourne Transportation Plan (Metropolitan Transportation Committee, 1969) as part of an inner city ring road, and adopted as policy in the 1971 'Planning Policies for Metropolitan Melbourne' document (Gleeson, Curtis, & Low, 2003). Despite major community protests about its path through the Yarra Valley, part of the inner-city ring (now the Eastern Freeway) was constructed. Fierce community resistance resulted in then Premier Bolte scrapping the segment of the inner-city ring similar to the EWT (Gleeson et al., 2003; Rundell, 1985).

A proposal to extend the Eastern Freeway as far as Nicholson St (approximately one third the length of the EWT project) was again proposed in 1994. Again it was scrapped after community resistance, when the resident group 'Coalition Against Freeway Extensions' set up a blockade of household junk in the Alexandra Parade median (Farrant, 1994).

The defeat of these earlier manifestations of the project cannot be put down to a general malaise of freeway building. Throughout this time, other major freeway projects were constructed, including the Westgate Freeway (1978), Extension to the Westgate Freeway (1987), the Western Ring Road (1992 – 1999), and City Link (2000). For a time after 1994 the EWT project lay dormant. The 2002 metropolitan strategy, *Melbourne 2030*, contained no reference to the Project, although it included another large-scale freeway now known as EastLink, which has since been completed (Department of Infrastructure, 2002).

The *Northern Central City Corridor Strategy Draft (NCCCSD)* of 2003 included a discussion of the Project. The NCCSD was centred on consideration of travel needs, and congestion problems of those in the inner north area of Melbourne, virtually the same area as the project area of the EWT project. The report found that through the implementation of *Melbourne 2030*, and by furthering the use of active and public transport, traffic along the Project corridor would be at or below 2003 levels by 2030. The report explicitly recommended against the construction of the Project, as the additional capacity would not be needed (Department of Infrastructure, 2003). An updated version of Melbourne 2030, known as Melbourne @ 5 Million, was released in 2008, and contained no reference to the Project (DTPLI, 2008).

The first stirrings of the zombie project can be seen in the release of *Investing in Transport - East West Link Needs Assessment (2008)*, by Sir Rod Eddington (*the Eddington Report*), which indicated that the EWT might be required around 2034. The Eddington Report provided a comprehensive analysis of potential future east-west travel needs in Melbourne, with a study area between the Western Ring Road at Deer Park and the Eastern Freeway at Abbotsford. It was considering traffic flows in an area much larger, and further west than the project area. The report predicted major increases in east-west travel volumes by 2031 – up to 42% on the M1 Corridor (south-west of Melbourne CBD) and up to 38% at other Maribyrnong River crossings. It recommended a suite of transport megaprojects to alleviate congestion and provide better east-west connectivity (Eddington, 2008). Among the projects included in the Eddington report was a complete East West Link, from the Western Ring Road to the Eastern Freeway terminus, via the Port of Melbourne and intersecting with the CityLink freeway. Importantly, Eddington noted that the Western section of the project should be built first as it would provide another crossing point for the Maribyrnong river. The eastern section was considered likely not needed until at least 2034, and the report modelling indicated that this section would not actually resolve the congestion issue along the roads between the CityLink and the Eastern Freeway no matter when it was built. As per Eddington's recommendations, the Western section of the Project ('Westlink') was included in the subsequent *Victorian Transport Plan* (VTP) (Department of Transport, 2008) and the Eastern section of the project (the EWT) was not. The VTP stated that while the eastern section of the Project would be worthwhile in the long-term, there were greater priorities that needed addressing in the shorter term.

In November 2010 Victoria held a state election which led to a change in the party governing the state. The incoming government was elected on a platform of public transport improvements, says Cr Fristacky in interview: "there was some elation that when they came in they would be supporting public transport projects […] which they had adopted and announced just three weeks before the election". For her, the EWT "wasn't part of the election platform".
Between 2008 and 2012 no further Victorian policy documents mentioning the road were released. The story of the project however continued in a new Federal forum, Infrastructure Australia. Funding for transport megaprojects in Australia usually comes from a mixture of sources. The States and Territories have a limited ability to raise taxation revenue, which is mostly collected and distributed by the Commonwealth. In 2008, Infrastructure Australia was created to distribute Commonwealth infrastructure funding through a merit-based process. It produced a series of annual 'Infrastructure Priority Lists' to the Council of Australian Governments, indicating projects of national significance. The 2010 Priority List contained reference to the Westlink project (Infrastructure Australia, 2010). In 2012, the original Westlink submission was updated to become the entire East-West Link (i.e. from the end of the Eastern Freeway to the Western Ring Road via the Port of Melbourne) (Infrastructure Australia, 2012). By December 2013, the Westlink component of the road is dropped, and this is where we see the Project in its current form finally appear in a public document (Infrastructure Australia, 2013).

There is political context to these developments, which altered the projects selected by Infrastructure Australia for Commonwealth funding (Interview Newman 2015). On April 4, 2013, then Leader of the Federal Opposition, Tony Abbott, made the following promise in the context of an upcoming parliamentary election (due September 2013):

> Now the Commonwealth government has a long history of funding roads. We have no history of funding urban rail and I think it's important that we stick to our knitting, and the Commonwealth's knitting when it comes to funding infrastructure is roads (Abbott, cited in Carey & Gordon, 2013).

This effectively meant that, were Tony Abbott's party to win a majority in the parliament and were he to become Prime Minister, funding to "build the roads of the 21st century" (Abbott, 2013) through Infrastructure Australia would be prioritised, and funding would be cut for urban public transport projects. As Newman noted in interview (see below), this came as something of a surprise to those in Infrastructure Australia.

Abbott's coalition of parties subsequently won the 7 September 2013 election leading to a major shift in major transport project funding across Australia. In newspapers and public statements, the EWT Project was suddenly labelled the most important piece of infrastructure to the future prosperity of Melbourne. Other projects, such as the Melbourne Metro, which until then had been reported by the Federal advisory body on infrastructure, Infrastructure Australia, as 'shovel ready' were heavily modified or effectively shelved. While providing one indication for the shift to prioritisation of roads in Victoria, this does not explain why the western stage of the project favoured by the Eddington Report and successive governments of Victoria (Westlink) was relegated to a less important status over the eastern stage, which according to the Eddington Report, the NCCC Strategy and the Victorian Transport Plan would not be needed for at least another 25 years.

The first mention of the EWT in a Victorian document was when it was declared as the East West Link Project (Eastern Section) under s 10 of the Major Transport Projects Facilitation Act 2009 in the Victorian Government Gazette 20 December 2012 (State Government of Victoria, 2012, p. 2893). This Gazetting was not accompanied by any discussion in the media or Parliament on the project, nor mention that the East West Link project had been limited to its eastern portion. Indeed in December 2012 the only parliamentary mention of the project was by Mr Elsbury who was expounding on the benefits of the Western portion in removing trucks from roads in Footscray and Williamstown. On May 15th 2013 the government announced $294m over two years for consultancies to support development of the project in its budget papers. There followed some media interest in the Age newspaper (Sturup & Low, 2013). In May 2013, the Victorian Government announced its intent to tender and construct the Project . The project would be delivered through a public-private partnership and cost up to $8 billion, with funding from the Victorian Government, private finance and a tied grant of $1.5 billion from the soon to be elected Liberal Federal Government through Infrastructure Australia. The Linking Melbourne Authority began to complete formal approvals and undertake procurement. Interestingly, consultation for the project would start after these processes. In July 2013, the Project was approved under s 77 of the MTPF Act 2009 (Gazette ref put in here).

## 5. Project Mentalities

The preceding history of the project demonstrates that the key features of mega project mentality identified by Sturup (2010) were indeed present. Further analysis shows however that these mentalities were functioning in different ways than in successful projects studied previously. We can see that although the project displays strongly sovereign structures of power, there is confusion in

which sovereign was the governing power. There is clear deficiency in terms of project commitment, not from political leaders, but from those who were to develop the project. We can observe clear demonstration of an inability to rationally critique the project from within, and the fact that this inability was never ameliorated by a proper gestation period for the project.

## 5.1 Sovereign Decision Making

From the public record, one could easily conclude that the EWT was an agreed major public priority. Plan Melbourne (DTPLI, 2014) is the most recent strategic and transport plan for metropolitan Melbourne. This document contained specific reference to the Project, enshrining it into the metropolitan land-use and transport strategy. Plan Melbourne argued the need for the Project, stating it was necessary for a more resilient and better connected road network, improved freight connections, improved local amenity and improved local and cross-town public and active transport connections. Further, the Project would be a major city-shaping project, fundamentally altering how residents interact with their city (DTPLI, 2014, p. 86).
However, as the previous section demonstrates, discussion of the EWT as a matter of public policy and action did not appear in the formal public discourse until 2013. This announcement was so low-key that it did not even make it into either of the major local newspapers, *The Age* or *The Herald Sun*, the next day. There is considerable evidence that the project simply sprang into existence following the announcement of the Federal Opposition Leader. Says Peter Newman, then on the Advisory Council for Infrastructure Australia,

> I think the pivotal event was Tony Abbott picking up the tab. Essentially the project was not even on the agenda until it was suddenly announced as a part of the election campaign. It had never been considered as a viable project on our table at Infrastructure Australia. It was not an option worth considering.

Key actors involved were also surprised by how the Victorian government brought the project into being. One example of this is in the interaction between government and the Ministerial Advisory Committee (MAC), a committee comprised of local academics and community leaders to advise the Minister of Planning on the development of a new metropolitan plan, *Plan Melbourne.* The MAC began work with the mandate to develop, among other chapters, a chapter on transport planning for the new strategy. They began months of extensive consultation which was then suddenly overturned. The Chair of the MAC, Roz Hansen, said in interview that during a committee meeting, the Planning Minster's Chief of Staff presented with a separately drafted version of the Transport Chapter of *Plan Melbourne* – which contained, no less, reference to the EWT. Hansen continues, explaining that the MAC Board resigned over the implementation of this 'other' Plan Melbourne. The willingness of public officials to eschew processes they themselves had devised in the assembly of the MAC, provides new information about how sovereign decision mentality effects the public service especially when combined with the eternal logic of road building. Says Roz Hansen:

> I also think that there was an underlying arrogance in this whole project, arrogance from ministers and [Victorian Premier] Napthine, arrogance from public servants, arrogance from people within transport, the department that were pushing the road. Engineers love building roads. ….So for them, to have the number one project in their department is a very powerful position in government…. [w]e've given that department and engineers in that department too much power. And they don't like giving it away.

## 5.2 Problem - Solution Nexus

For a mega project a gestation period of only five years does not provide 'time to breathe' which has been identified as critical for successful mega projects especially complex ones 'characterized by … agglomeration or secondary objectives' (Dimitriou et al, 2011, p.5). This gestation process is important for developing a logic or a nexus through which the project arises as the only solution to the particular problem it is supposed to solve. This nexus is critical to generating agreement about the project need, without which the project cannot be judged a success. This nexus was never properly formed in the EWT project, although it was in part formulated from the project articulated in the Eddington Report.

The historical development of the project demonstrates that although this project has a long history, much of the recent discussion of the project (NCCCSD and Eddington Report) were about how the project wasn't needed. Although there was a reasonably strong effort to develop the logic of the Westlink, or the entire East – West Link, the logic of the EWT had not been discussed, since it had been presented as a solution to the problem of 'freeways that simply end' in 1969. Its sudden emergence on the public agenda meant that the gestation period for the project was very short. The project has since been plagued by people asking 'but what is it really for?'

The Eddington report developed the logic of the East West Link as a project designed to solve the problem of traffic congestion on the Westgate freeway and limited crossing points of the Maribyrnong River. This document specifically precluded the EWT from the logic of the project. As noted above, even after the project was gazetted as only the Eastern section, people failed to make a case for the Eastern section. What problems the East – West Tunnel solved was never properly articulated. In fact initial public documents simply co-opted the problem solution nexus from the Eddington report even though that document suggested that the East – West Tunnel section may never be needed. The first newsletter on the project provided as part of the consultation process, documents the whole Eddington East – West Link, and claims that the project is needed because an extra 430, 000 crossings of the Maribynong River were forecast. This argument makes little sense in support of the EWT, because the project does not cross the Maribyrnong (Linking Melbourne Authority, n.d).

Even the Business Case for the project does not provide a convincing problem solution nexus. The Victorian Government refused to release the documents outlining the business case. In retrospect, the reason for this is clear: the government's own analysis projected to return a benefit-cost ratio of 0.4. To make it positive, the inclusion of wider economic benefits was necessary, as was the incorporation of ancillary works on the CityLink and Eastern Freeway (State Government of Victoria, 2013, p. 19). The stated objectives in the business case are related to solving congestion, providing alternative cross-town links, improving public transport, and to facilitate greater social and economic inclusion by increased access to services, education and employment (State Government of Victoria, 2013, pp. 14-18). The Project would support wider economic growth, and was needed due to changes in economic structure from being based on manufacturing to a globalized, service-based economy (State Government of Victoria, 2013, p. 12). Most of these benefits did not stand up to scrutiny from data which was publicly available (Dodson et al, 2014). Additionally, the business case was highly flawed, not specific about the data that it used, and did not provide data publicly so results could be verified independently.

Further doubt exists within the Business Case in terms of traffic demand and the road's purported necessity in reducing congestion levels. It accepted that due to "a number of high profile financial failures in the toll road sector in Australia […] the market has a much more limited appetite for taking on full demand risk in the absence of proven traffic volumes for a new toll road" (State Government of Victoria, 2013, pp. 20-21). To this end, the State Government accepted the demand risk, whereas the

selected contractor would accept construction and operation risk. The potential future private partners were not convinced the EWT would attract enough traffic. Following this process, a preferred bidder was named on 11 September 2014 – a consortium comprising Lend Lease, Bouygues, Acciona and Capella Capital. From this point, contract negotiations began, which was to be named East West Connect (EWC).

This lack of an understandable problem that the project was supposed to solve is also evidenced in the way those dealing with the project from outside the government felt when it suddenly emerged. Then-Mayor of the City of Yarra, Jacky Fristacky, stated

> I was mayor of the new council elected in 2012 for those critical two years of the East West link project…. [T]he [liberal] government was in opposition. I liaised extensively with the opposition over transport policy and they had picked up …. virtually everything from a 12-point program we put to [them]. [T]hat involved Rowville rail, Doncaster rail, airport rail, a range of other transport projects…. They did win the election on a platform of supporting picking up those projects. And so, there was some elation that when they came in, they would be supporting public transport projects. ….

Fristacky goes on to describe how she felt when it became apparent that rail projects had been deprioritised in favour of the EWT: "So as mayor, I was particularly horrified. All of us were horrified by that." Peter Newman from Infrastructure Australia describes how the tunnel never developed as a project outside of political circles:

> The project was never a viable project, and it was a dream…. It was never something that anybody would take seriously up until that point. But it became an election issue, which essentially meant that for Infrastructure Australia – because we'd never been able to support it – it became a 'rogue' project, a political project.

## 5.3 Attachment to Project and Inability to Rationally Review the Project From Within:

The previous section demonstrates how little rational consideration had gone into the project prior to its announcement as the EWT. The actions of the government after the project was announced, indicates an inability to rationally review the project from within. Sturup (2010) concluded that this inability stems from a combination of personal commitment to the project, and the requirements of the logic of sovereign power. This project brings to the fore how powerful the inability to question sovereign decisions actually is.

Throughout this period of construction of justification and project approval, an increasingly mobilised public began to openly resist the discourses and rationalities presented by the State. There were increasing calls for the forthcoming election to be a 'referendum' on the project, with an alternative government elected who would repeal the contracts. This proposition, which directly questioned the right of government to make unilateral (or sovereign power type) decisions was met with alarm. Suggesting that such action would create a condition of sovereign risk whereby future contracts would be burdened with extra costs. The legality of revoking contracts after they were signed was questioned. At a public seminar on the issue, the government's right to revoke previous government agreements under the constitution was demonstrated (Seddon 2014).

The City of Moreland and City of Yarra lodged an appeal against the Project in the Supreme Court of Victoria in September 2014. This appeal was essentially directly attacking the rationalities used by the Minister in approving the Project under the relevant sections of the Transport Integration Act 2010 and

the Planning and Environment Act 1987. These arguments related primarily to the purported social and economic benefits of the Project ("Moreland City Council and Anor v Minister for Planning and Ors [2014] VSC 468," 2014).

During these proceedings, the Minister for Planning responded:

> In considering the economic justification for the Project […] I do not rely on a business case. Further, it is not necessary for me to do so. It is sufficient for my purposes that the East West Link *(authors note - meaning the EWT)* is enshrined in Plan Melbourne […]. It follows that it is established as a matter of policy that the delivery of the Project will implement relevant planning objectives. It is axiomatic that, in the context of the approval decision, the Project will deliver a range of economic benefits (Guy, in "Moreland City Council and Anor v Minister for Planning and Ors [2014] VSC 468," 2014).

The opposition Labor Party received legal advice to the extent that, were the Supreme Court to hold that the s77 approvals made by the Minister for Planning on 30 June 2014 found the be invalid, then the State lacks the executive or statutory power to enter into a contract for the Project (Gordon & Cook, 2014). This led to the Opposition Leader, Daniel Andrews, to promise on 30/9/14 to tear up the contracts if the Labor Party were elected to office.

At this point it was clear that significant momentum had been gained around preventing the project by electing an alternative government which would not complete the project. Given the time between when the contracts were ready for signature and when the government had to cease government business due to the election was only three weeks, many would consider it reasonable and rational to have held off signing the contracts. Instead, these legal developments prompted the Treasurer of Victoria to enter into a secret side agreement with EWC (not actually made public until 4th February 2015), which stated that were the contracts to be voided, then the termination payouts in the contracts would nonetheless be met. EWC had informed the Treasurer that they would not be able to meet financial close were this extra agreement not signed.

## 6. The Aftermath

The November 2014 State election was argued to be a referendum on the EWT, with the governing Liberal-National coalition in favour and the opposition Labor Party against the project. Labor gained a parliamentary majority in the election, was able to form government, and claimed a mandate to stop the construction of the Project. The new Premier, Daniel Andrews, ordered a cessation of all work on the Project on 12 December 2014, and entered into negotiations with EWC to exit the project agreement. It was revealed during this process that the initial Finkelstein legal advice holding the contracts to be invalid due to administrative questions about project planning approvals was rendered inert by the Side Letter agreement entered into with EWC in the lead up to the election. During these negotiations, the Business Case and the Project Agreement were also made public. A final settlement between the State and EWC was reached on 15 April 2015. This settlement involved no new moneys being paid to the consortium (other than the AUD339,000,000 already paid), the consortium being purchased for one dollar ($1) by the State (ABC News, 2015), the LMA being disbanded (Premier of Victoria, 2015), loan facilities for the EWL being repurposed and the Commonwealth continued refusal to use the guaranteed project funding for non-road transport project.

Even in the aftermath, the Federal government is attempting to perpetuate rationalities around the project. Prime Minister Tony Abbott continues to insist that the funding set aside for the EWT can

only be used for the EWT. The rationality of constructing roads to reduce congestion has appeared on a billboard in Melbourne's Eastern suburbs, suggesting that voters blame the State Government for being stuck in traffic (Worrall & Tomazin, 2015) The zombie project may again resurrect; we will be watching this space.

## 7. Conclusion

The EWT project provides the opportunity to explore the workings of these features of mega project mentality under adverse conditions. We can observe a diminished and truncated process of developing the project as a solution to a particular problem in Melbourne. This led to a weak problem/solution nexus that allowed the subsequent Labor Government to decide not to continue with the project. The weak explanations provided for what the project was supposed to deliver were exploitable. The secrecy and connection to political manoeuvring at the Federal level provided an alternate story, kept below the surface, that this project was simply a political stunt. Combined, this created room for an alternate logic that the project was not needed, and that other projects were better.

Although we have not been able to directly discuss the mentalities of those in the project, we can observe that at least at the political level there were those willing to fall on their swords over their commitment to the project. There is evidence that the commitment of the public servants to the project was less than whole hearted, that it was more a perfunctory following of orders than a strong personal commitment. This suggests perhaps that one effect of creating a standard process for major projects is that it diminishes the personal courage and commitment required to produce them. In Victoria the Major Transport Projects Facilitation Act 2009 creates a standard process for planning and funding projects worth billions without parliamentary or public debate. The Linking Melbourne Authority was created to house project teams which would deliver billion dollar projects as a matter of daily business. This cannot but reduce the hype and individual conviction which can be seen in other projects. On the one hand this reduction could lead to better projects by reducing the sublime of these project, but on the other hand this may well make them much less likely to be built.

Sturup (2010) suggested that the sovereign power structures in projects make them difficult to question from within. In this project it can certainly be seen that the sovereign who had made the decision (the Liberal-National government at both levels) was unable to question its own decision. Even when it was apparent that there was strong opposition, which might well lead to an election loss, the Government held to its decision. Even after the project has been completely closed down the Federal Government and State Opposition are attempting to resurrect it. When the opposition suggested they would cancel the contracts on winning, the Government responded by agreeing to draconian cancellation clauses and signing the contracts in an attempt to bind future governments to the decision. This attachment could be explained through a desire, not simply to protect the project, but also to protect the sovereign's right to make decisions. This later has been called into question in the fall out of this project. It remains to be seen whether there has been sufficient reframing of sovereign rights around the cancellation of the project to have re-established these rights.

We set out in this paper to explore the mentalities of mega projects as they were expressed in the EWT project, and to learn more about these mentalities through observing how they have been expressed in a failed mega project. We have found that each of the three features of mentalities of mega projects, sovereign power, problem solution nexus, and a kind of sublime can be observed, although in this project they function somewhat differently. The logic of sovereign power was clearly apparent in this project, and emerged as a centre of direct concern. This was because this logic was used against the project to defeat it by electing an alternative sovereign. The project problem solution nexus was ill conceived and poorly developed. Thus its function to support and provide an uncontroversial

rationality to the sovereign decision never emerged. Finally we observe in this project a deep and as yet inexplicable attachment on behalf of the government to this project. This attachment is best reflected in the obsession with signing off the contracts before the election, and attempting to force the next government to abide by them. The work to date does not yet provide evidence whether this was a result of a kind of sublime, or an attempt to protect the right of sovereigns to make sovereign decisions. It is possible it was a result of a deep personal investment in the project by members of the government, a personal investment that was held despite never reaching the hearts and minds of either the public servants, or the public.

There remain many unanswered questions in this project, it stands as an example of how bizarre mega projects can become. Further research, and in depth consideration of the discussion started in this paper is necessary.

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# The Community Space Delimitation of Fuzzy Responsibility ——Based on the Comparative Study of Two Community in Shanghai

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*Abstract: In the Planning and construction of community, clear and definite public space is a necessary, and all community residents should be responsible to the public space. In China, however, with the acceleration of urbanization and the frequency migration of the residents, the responsibility for community public space has become blurred. Community wall construction was an Effective method for community governance，and now it was also used to delaminate of "fuzzy responsibility public space and Facilities"，which were considered to be open and shareable for the whole community when they were constructed. Thus, several problems appeared, such as the Residential segregation and the Security problems. Based on the six census data of Shanghai's communities and field research, two typical community was selected for the comparative study: the rental rate was 80% and the self-occupied housing rate was 20% in Sichuan north Road community, while the rental rate was 20% and the self-occupied housing rate was 80% in Quyang Road community. Finally, by associating the spatial distribution of communities walls in two communities, this paper eventually 1: found a complex relationship between community residential structure and spatial distribution of community walls between buildings; 2, indicated that the community walls reflected the community property cognitive differences between different resident groups; 3, put forward some management recommendations under the existing regulatory framework accordingly.*

Keywords (maximum 3): Party walls, Residential segregation, Comparative study

## 1. Introduction

### *1.1 The migrant population increases continuously in the metropolis of China*

With the continued advance of urbanization and employment opportunities continued to convergence in large urban areas, huge attraction are also produced by urban areas for the people of surrounding areas. In large cities, the proportion of foreign population gradually increased. In Shanghai City, for example, from 2008 to 2013, the population grew by 2,332,000 people, which means an average annual increase of 466,000 people, the proportion of the resident population of the resident population rose to 40% (National bureau of statistics of the people's republic of China, 2011).

Table 1. Population changes in Shanghai City, 2008-2013

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|
| Permanent Residents(million) | 21.41 | 22.10 | 23.03 | 23.47 | 23.80 | 24.15 |
| Native Residents(million) | 13.91 | 14.00 | 14.12 | 14.19 | 14.27 | 14.32 |
| Migrants(million) | 7.50 | 8.10 | 8.90 | 9.28 | 9.54 | 9.83 |
| Percentage of Migrants（%） | 35.02 | 36.63 | 38.66 | 39.54 | 40.06 | 40.69 |

### *1.2The confusion of rights and obligations for community public space*

Community public space was an important content in the construction of community planning, and all community residents are the owner of the community public space, and they should supply finance

support for the maintenance of community public space and facilities. However, with the enhancement of community residents liquidity, both "people who live in the house does not have the ownership of house" and "people who own the house does not live in the house" dual phenomenon are becoming increasingly apparent, community residents' groups in of China are becoming increasingly decentralized (Massey, 1988). This trend was not conducive to the maintenance of the atmosphere in the community building and community public space, and it also caused the fuzzification of the main responsibility of the community public space (Waters M C, 1990).

## 2. Residential segregation of Shanghai

In 2010, 39% of Permanent Residents of Shanghai are migrants, and the percentage of rent housing was also 39%. To prove the correlation between the migrants percentage and rent housing percentage, a spatial comparison was made as following:

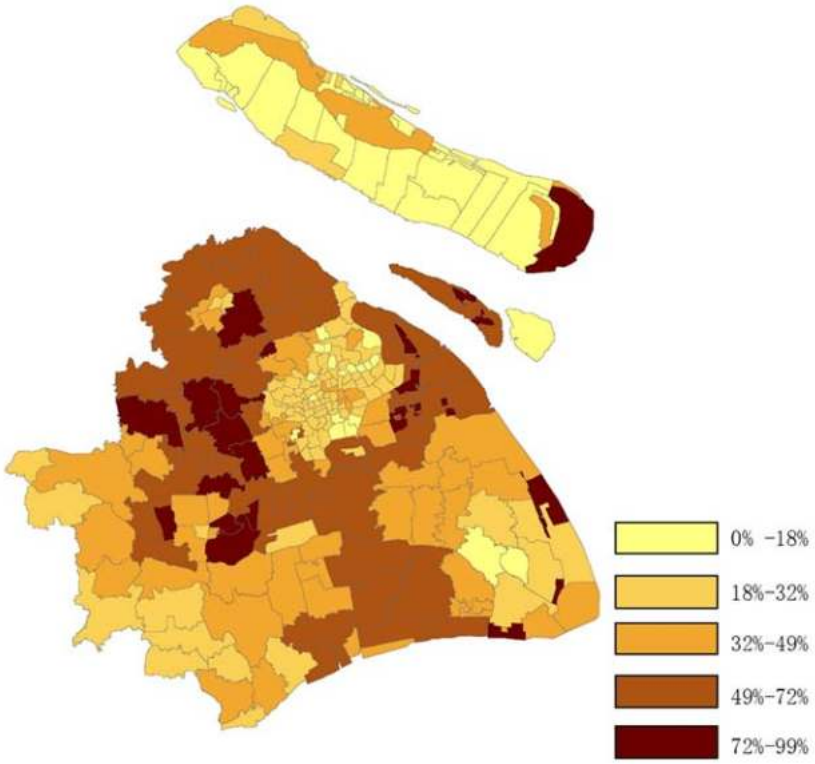


Figure 1. The Spatial Analysis of Migrants Percentage in Shanghai, 2010

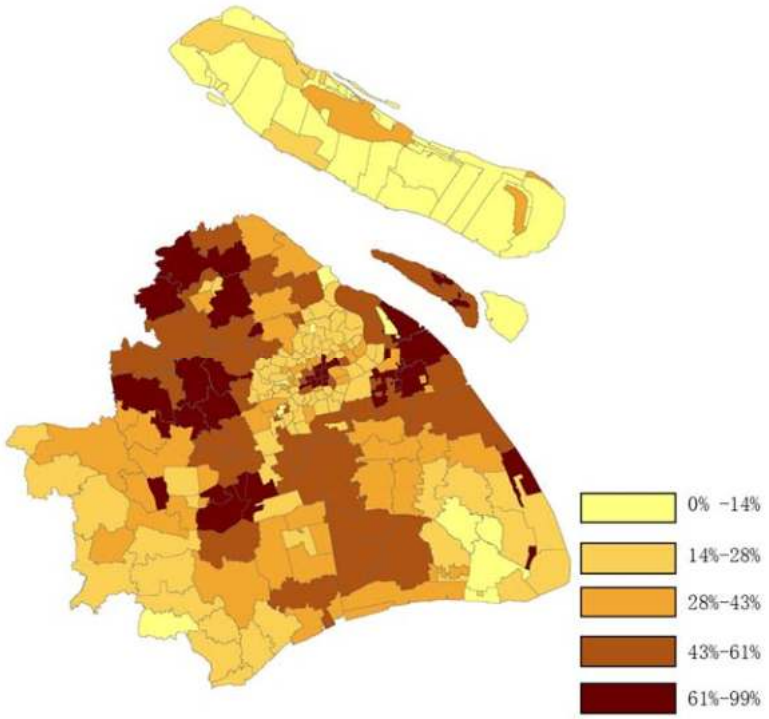


Figure 2. The Spatial Analysis of Rent Housing Percentage in Shanghai, 2010

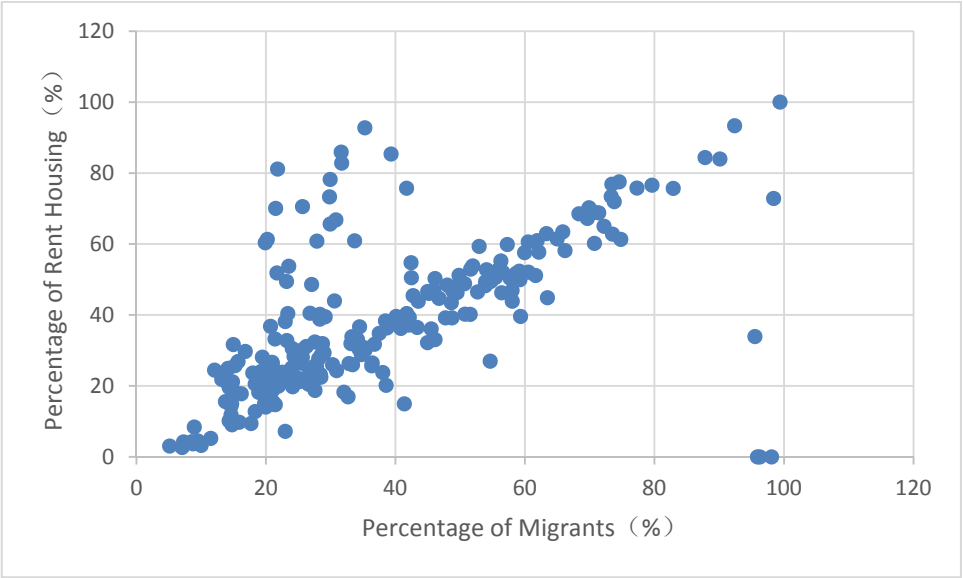


Figure 3. Correlation between migrants and rent housing in Shanghai, 2010

The positive correlation between the migrants percentage and rent housing percentage was characterized by figure 3. Generally speaking, a community with high percentage of migrants always show high percentage of rent housing.

### 3. Party wall as a symbol of residential segregation

A party wall was a dividing partition between two adjoining buildings (or units) that was shared by the tenants of each residence or business. When built for this purpose, the builder will lay the wall along a property line dividing two terraced flats or row houses, so that one half of the wall's thickness lies on each property. This type of wall was usually structural. Party walls can also be formed by two abutting walls built at different times. The term can be also used to describe a division between

separate units within a multi-unit apartment complex. Very often the wall in this case was non-structural but designed to meet established criteria for sound and/or fire protection between residential units.

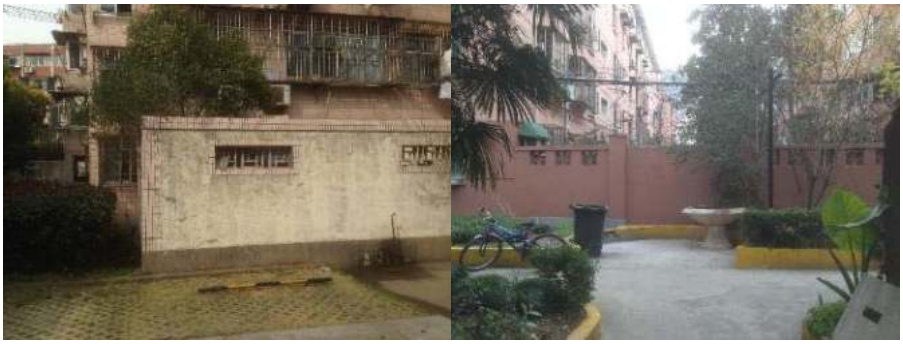

Figure 4 . Party Walls in Shanghai's Communities, 2014

The so-called adjacent relationship refers to the relationship between the rights and obligations of the neighbouring parties due to the exercise of ownership or the right to use. The fact that the wall space was established means that at least one of the rights of the neighbour was the default, and the violation of the wall was equal to the infringement of the right of the other party. Through the construction of community interior wall, the access control and community unit of residential community were divided, and the effective governance of community units was attempted. However, the construction of the community wall also led to the fragmentation of residential blocks and community groups, was not conducive to the creation of public life among community groups.

## 4. Comparative study of two communities in Shanghai

### *4.1Quyang Community*

Quyang community was located in the north of Hongkou district, Shanghai. With an area of 3.05 square kilometers, it had a resident population of 10.26 million, including 2.04 million migrants resident, which accounted 19.86%. The residential land of Quyang streets was 142 hectares, 13.8 square meters per person (National bureau of statistics of the people's republic of China, 2011).

Figure 5. Quyang community, 2012

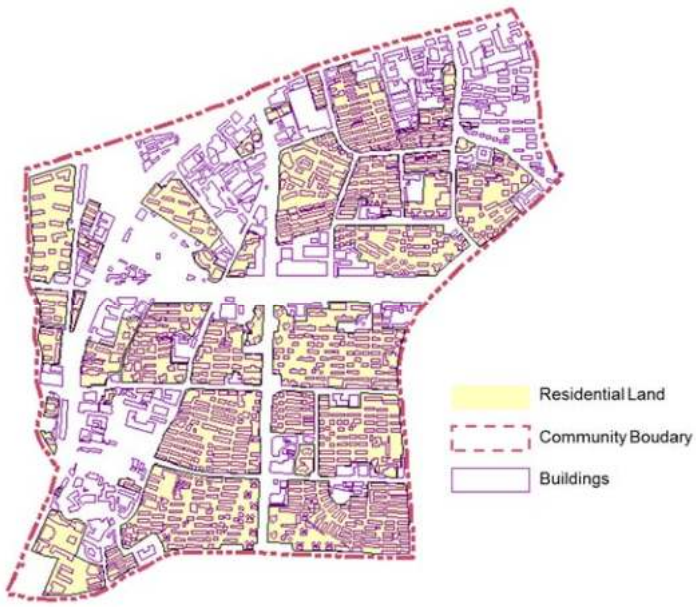


Figure 6. Residential Land of Quyang community

Through the investigation, 80 party walls were found in the Quyang community, and the longest was 362 meters, while the shortest 20 meters, the total length of 12216 meters, and the average length 152 meters. The 39 residential blocks were divided into 118 basic space units in the community by 80 party walls.

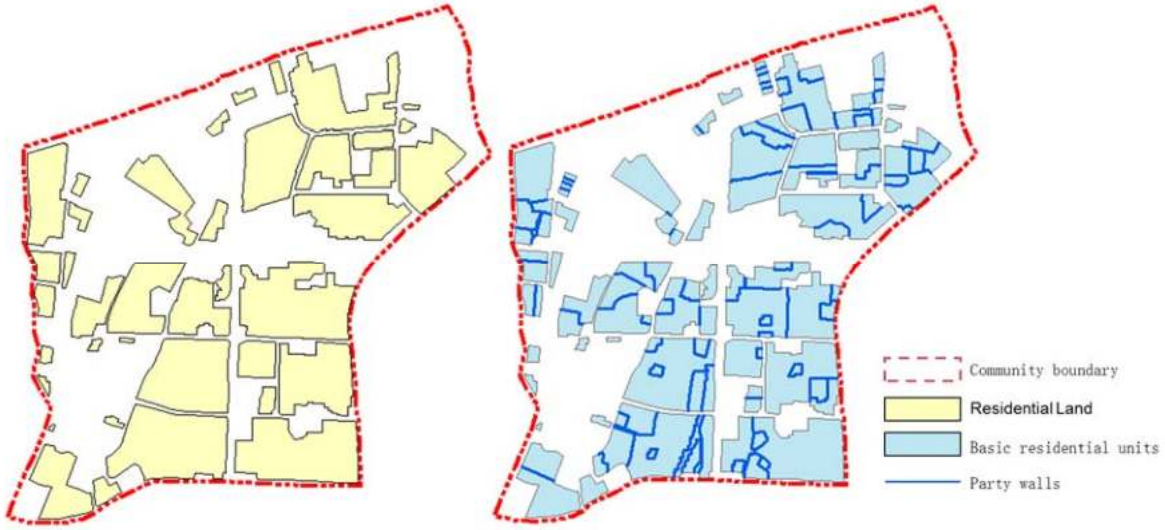


Figure 7. Spatial Layout of Residential Plots (left) and Basic Residential Units (right)

The residential land was made up with 39 plots, with the largest area of 13.62 hectares, the smallest area of 0.06 hectares, and an average of 3.66 hectares. The 118 basic residential units showed a different feature: the largest area of 11.09 hectares, the smallest area of 0.06 hectares, and an average of 1.22 hectares.

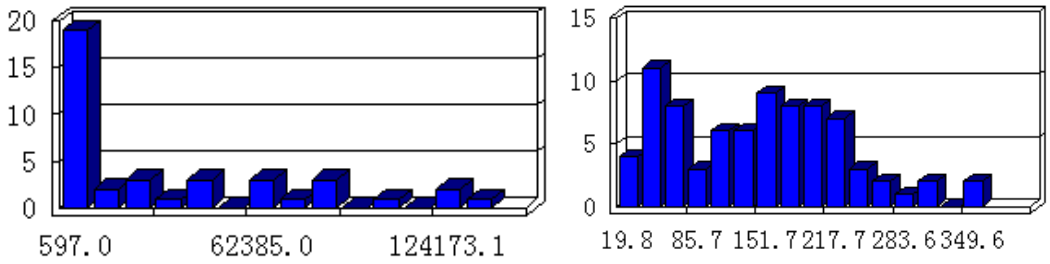


Figure 8. Statistical Chart of Residential Plots (left) and Basic Residential Units (right)

*4.2 North Sicuan Community*

North Sicuan community was located in the south of Hongkou district, Shanghai. With an area of 2.29 square kilometers, it had a resident population of 8.74 million, including 2.62 million migrants resident, which accounted 29.94%. The residential land of North Sicuan community was 142 hectares, 10.86 square meters per person (National bureau of statistics of the people's republic of China, 2011).

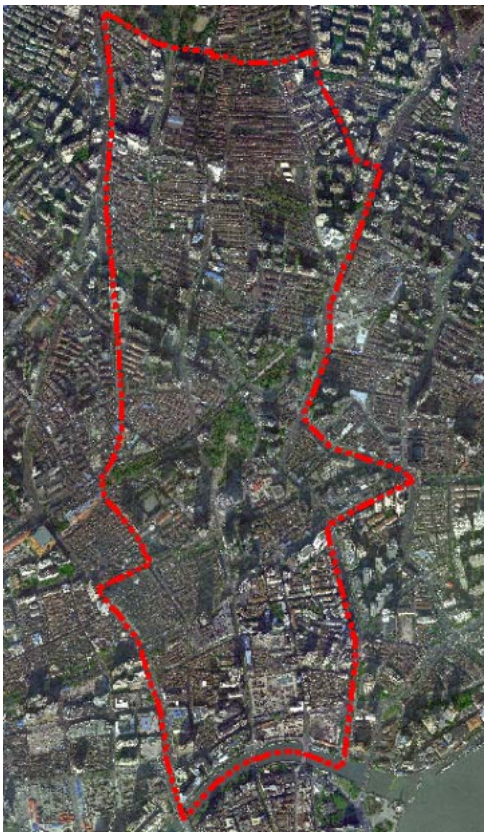

Figure 9. North Sicuan Community, 2012

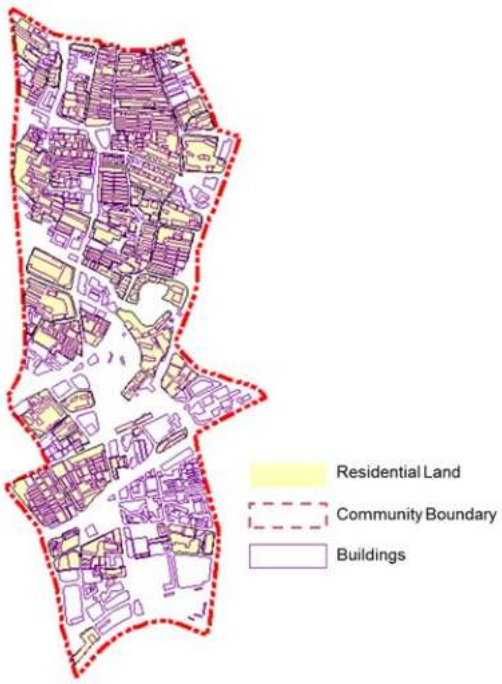


Figure 10. Residential Land of North Sicuan Community

Through the investigation, 33 party walls were found in the North Sicuan community, and the longest was 349 meters, while the shortest 19 meters, the total length of 3915 meters, and the average length 119 meters. The 58 residential blocks were divided into 90 basic space units in the community by 33 party walls.

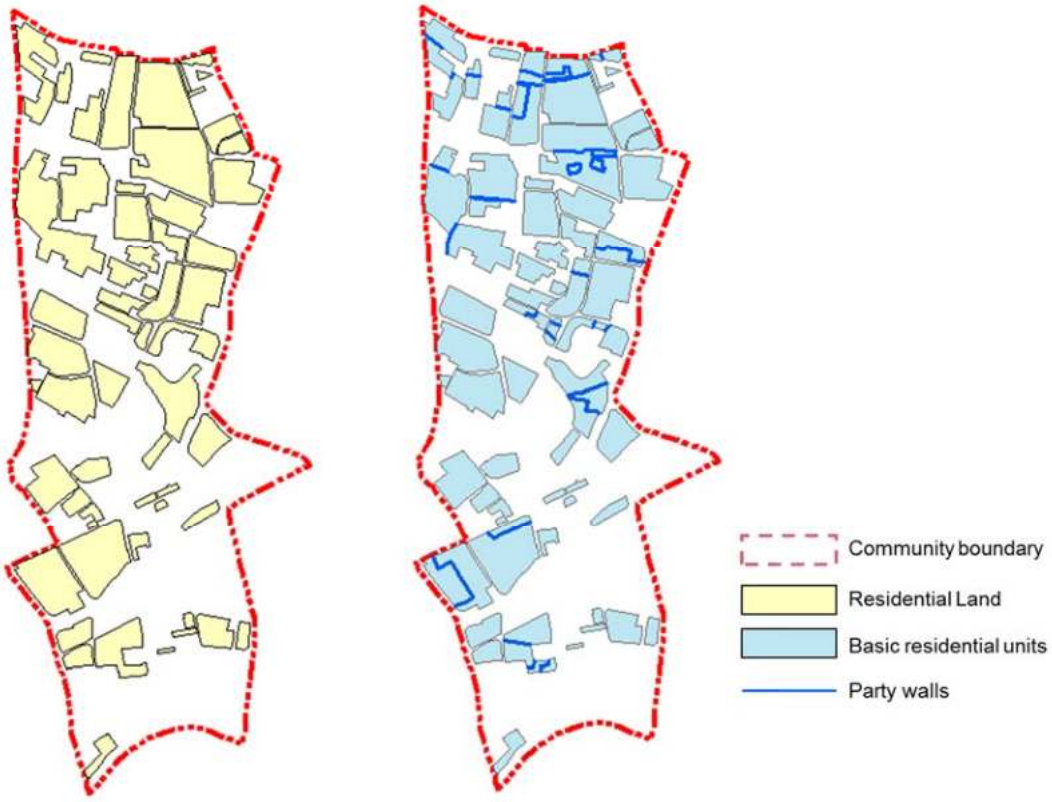


Figure 11. Spatial Layout of Residential Plots (left) and Basic Residential Units (right)

The residential land was made up with 58 plots, with the largest area of 69 hectares, the smallest area of 0.09 hectares, and an average of 1.64 hectares. The 90 basic residential units showed a sample feature: the largest area of 4.34 hectares, the smallest area of 0.06 hectares, and an average of 1.06 hectares.

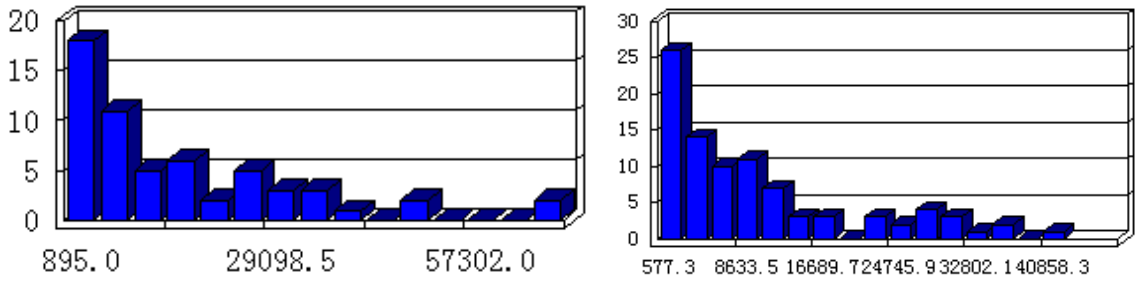


Figure 12. Statistical Chart of Residential Plots (left) and Basic Residential Units (right)

*4.3 Results*

Table 2. Compare between two communities

| | Residential land (hectare) | Length of Party Walls (meter) | Density of Party Walls (meter/ hectare) | Percentage of Migrants （%） | Percentage of Rent housing （%） |
|---|---|---|---|---|---|
| Quyang Community | 142 | 12216 | 86.03 | 19.86 | 18 |
| North Sicuan Community | 95 | 3915 | 41.21 | 29.94 | 78 |

As we can see in table 2, party walls density of Quyang Community was significantly higher than that of the North Sichuan community, while migrant population and rental housing had significant negative correlation. Therefore, one conclusion could be reached: with the increase of migrant population, the construction of party walls was slowed down, and the dilemma of residential separation was also improved (Semyonov M, 1981).

## 5 Conclusions

The difference between different living groups was constantly strengthening, and the party wall between different units was becoming a common phenomenon (Gieryn T F, 2000). The party wall also has an impact on the adjacent relationship, which defines the property rights of the property owners, but also brings some negative social impacts, such as the space segregation and the hindrance path (Miaoxi Zhao & Zilai Tang, 2007).

With the acceleration of the urbanization, more and more migrants occupy a more and more important study on the separation of the residence. However, through this study, we found that there was a positive correlation between the proportion of migrant population and community rent in Shanghai. And through the comparison between Quyang community and North Sichuan community party wall construction, it shows that with the increase of migrant population, the proportion of rental housing will increase, but the construction of the party wall in the community was somehow reduced, which also showed that the migrant population contributes a lot to alleviate the residential segregation.

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# TRACK 05

# Legal Environment for Effective (Good) Governance and Efficient (Sustainable) Use of Land

## Track description

Co-chairs: **Rachelle Alterman**, **Leonie Janssen-Jansen**

Almost all countries have laws, regulations and government institutions that determine a significant number of issues related to planning. These issues range from procedural matters that affect quality of governance, to substantive policies and instruments that may enable the creation of "definite spaces" and sustainable land use. However, the governance aspects of planning often encounter "fuzzy responsibilities". In recent years planning law (comprised of legislation and court decisions) faces additional challenges that go beyond the domestic domains into the even fuzzier, global arena. Can the laws and institutions that govern planning meet the challenges posed by climate change, sustainability, and increasing uncertainty? Are planning laws geared to handle distributive justice issues within cities, countries, and across borders? This track aims to provide a platform for sharing research on any of the following and related topics:

- Statutory (regulatory) planning systems and instruments: How well can they accommodate emerging economic, socio-demographic and environmental realities?
- Governance structures and procedures: How does planning law structure the relationships between central governmental control, local government, markets, and non-governmental organizations?
- How does the law frame public participation and dispute resolution;
- Regulatory land use instruments: local statutory plans, zoning, building permits, agreements with developers, "exactions" or "planning gain", regulation of open space and natural resources, historic-building regulation and other;
- Property rights: tensions between public/ private rights and responsibilities; land for public services, customary collective / private rights, expropriation, compensation, land readjustment, taxation of land values, transfer or development rights.

Contributions may look at the general theory of planning and law or investigate particular issues, focusing either on a particular country or cross-nationally. Since legal and planning systems vary greatly from country to country, authors should make the legal structures and procedures as transparent as possible.

# Conformance and performance in Taiwan and England: pragmatism in approach?

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Keywords: planning system, flexibility, discretion, certainty, regulation

## Abstract

There are two distinct planning systems: the discretionary system, such as that of the United Kingdom and the zoning system, typical of Taiwan and Europe. Askew and Chao (2012) have previously compared Taiwanese and English planning systems with regard to advertisement controls, using the conformance and performance models of planning (Steele and Ruming, 2012).

Rivolin (2012) and Buitelaar (2010) submit that these distinctions are being broken down across Europe. There is a view that the UK discretionary system (performance) is flexible, whilst the European (and Taiwanese) conformance model, offers certainty to developers, albeit very rigid. This inflexibility might result in development occurring outside the legal plan (Buitelaar, 2010), and probably means that the Dutch planning system does not provide the legal certainty it purports to do. The discretion of the UK system is becoming more attractive to countries with a conformance system, and vice-versa. In Taiwan, the zoning system prevails in urban areas. However, in rural areas, the system is more discretionary (Chen and Shih, 2010). In the UK, developers are suggesting that the allocation of land in a local plan, for, say, housing, should remove the need for further planning permissions – in other words, to create a legally binding plan (UK Treasury, 2014).

In comparing planning systems, there appears to be more similarity than there was. Whilst Rivolin (2012) considers that the mixture of systems is not good for Europe, can it be shown to be a useable and pragmatic option for Taiwan and the UK?

## 1. Introduction

Planning systems and regulatory regimes are extremely important in guiding land use and shaping cityscapes in every country. There are two distinct planning systems: the discretionary system of the United Kingdom and the zoning system of most the rest of the world, including Taiwan. Within these two systems, there are different approaches, many of which have emerged due to a rise in market economics and neoliberalism, including development-led and plan-led practices (Janssen-Jansen & Woltjer, 2010; Salet, 2006; Balz & Zonneveld & Nadin, 2014) which are adapted by different governments and result in very different planning approaches and outcomes.

But the purpose of this paper is to consider the application of discretionary and zoning systems, and the extent to which the two main approaches are being used side by side. Both

have their pros and cons in terms of development efficiency, flexibility and interpretation of how the planning system should fulfil its duty. As urban planning is considered as an applied science expected to evolve with time and needs, there are many hybrid attempts to mix two systems in the Europe and Asia. Even regarding the UK's long standing discretionary system, there are discussions about its suitability to encourage and manage development – especially since the system has assumed new levels of complexity in its regulations and legal processes for plan and policy making.

In the UK, developers are pressurising the government (for example, ref) to move towards a hybrid system whereby once land has been designated for development in an adopted local plan, then planning permission should not be sought again – rather the designation should confer permission for the principle of development. Such demands are highly controversial and represent a real change away from usual practices in the UK.

In addition, it is believed that further research will expose the dilemmas over flexibility and certainty in other countries, such as USA, Canada and Australia, where similar discussions are taking place (Booth, 1996).

These two approaches to planning are often considered to be opposites in the regulation of development, and are referred to as *performance* and *conformance* models, the former offering much flexibility, whilst the latter offers more certainty (Steele and Ruming, 2012).

The following table outlines the main differences between the two models:

| Performance (England) | Conformance (Taiwan) |
|---|---|
| Discretionary | Legally binding /zoning plan |
| Flexibility | Considerable detail |
| No certainty | Regulatory certainty |
| Policy base: primary material consideration is a statutory development plan | Rigid, based on zoning and building codes |
| Decisions based on a set of criteria/performance indicators | Decisions have to conform to codes and zones |
| Not land use based (necessarily) | Property rights important |
| Decisions built up through legal cases | Efficiency, accountability, transparency |
| Regulations devised nationally/centrally(England); applied locally | Regulations devised locally. |
| The point of decision is after an application for development is made | The point of decision is when the zoning plan is legally accepted |

*Table 1: Performance and conformance models (adapted from Steele and Ruming, 2012).*

In an earlier paper, Askew and Chao (2012) compared different approaches to advertising control in the UK and Taiwan, and applied this model. It was important then to see if the two different systems produced the desired outcomes of planning – in particular with regard to sustainability and place-making. In Taiwan and England, both systems are rooted in very different cultures, but in both, planning outcomes are underpinned by very similar objectives. These might be, for example, sustainability, good design, historic conservation, or economic

prosperity. So the research tried to answer how do regulatory regimes contribute to this? Despite such diversity, are the outcomes similar? Furthermore, what can each country learn from the other? These questions can be applied to development and planning systems more generally.

In both Taiwan and UK, there is a history of more than a century of planning. In Taiwan, the first planning commission was established in 1897; in the UK, the first act to deal with town planning was 1909. In both, planning is a highly politicised activity, which often attracts negative opinion when controls are implemented (Chen and Shih, 2010). There is an emergent lack of trust in government (Askew, 2006); and in Taiwan too, many communities distrust their local and central governments. For example, there were many protests in 2014 in Taiwan about trade agreements with China and then later, as the movement gained support, the opening of a new nuclear power station in Taiwan, when the so called 'Sunshine Movement' occupied the parliament for several weeks (Bloomburg, 2015). Enforcement is controversial, especially in Taiwan, although the UK has a well-established enforcement system, which underpins the very nature of development control. Illegal building in rural and urban areas in Taiwan is prevalent. In both countries, economic development is of utmost importance - lengthy planning processes are seen as delays to vital investment. Adams and Watkins (2014) argue that good planning contributes to economic development, rather than detracting from it, and this message is a vital one for planners to make to governments where planning is under attack.

It is this attack on the values of planning that has prompted many to question whether or not the systems are working properly. Such assaults do not necessarily refer to the public interest in their criticism on planning, but demonstrate a desire for an unregulated approach, which allows a market more freedom to proceed with development, it maintains is vital in the interests of economic growth.

How does this play out in Taiwan and the UK?

## 2. Taiwan

Taiwan has had a very early start of mixing these two systems in the 1970s when the Regional Planning Act (RPA) enacted in 1975. These apply differently to urban and rural areas. The RPA set up a clear rule for a discretionary system in rural areas, which occupy approximate 80 per cent of the land in the whole country. Any new development occurring in rural areas has to involve different levels of planning permission procedures depending on the context and scale of the development project. It serves a clear purpose to guide developments allocated to urban areas where zoning plans are laid out deliberately, and it aims to sustain the natural environment as usual for as long as possible. (Chen and Shih, 2010) However, the good intention has failed due to the poor enforcement and conflict which occur between property rights and development rights. One such example of this is in the Ali Mountain area, where indigenous peoples have strong property rights, and have actively engaged in making their own plans. (see for example, research project on reservoir planning by NCKU, 2013).

As in the urban area, although the plan-led zoning system has provided certainty to developers, the delay of the every 3-5 year review procedure usually results in the criticism of an out-dated plan, let alone the well-known flaws of rigidity and inflexibility. Hence, attempts have been made such as introducing the idea of "floating zoning" and "overlay zoning" in the Tainan Science-based Industrial Park Special District in 2009 in order to bring flexibility to the current conformance systems. (Chung & Hsu, 2013) Nevertheless, introducing flexibility also brought up the debates of lacking principles and worries of challenging the entire statutory system. It is obvious that how to achieve the delicate yet controversial balance between the conformance and performance is the difficult task for planners in both Taiwan and England. Hence, this paper will start with discussing the role and functions of planning system in the future world in react with foreseeable challenges i.e. climate change followed by debating the need for mixture of two systems from property right perspectives.

## 3. Taiwan: the future challenges and the changing role of the planning system

There is no doubt that no matter under what system, the planning system should regulate the development and seek to optimize the public interest. Planning involves making decisions about the future of cities, towns and countryside. It also includes considering the sustainable needs of future communities. The role of planning system also should include control safeguard, guidance provision and protection of the character and amenity of certain areas for the benefit of the public as a whole. Hence, because of the comprehensiveness and multi-function of planning system, it is always expected to deliver a scenario that could please everyone or balance most interests of public and individuals. Nevertheless, the role of planning system per se has contradicted with the value theory. For instance, the zoning plan-led system is always considered questionable from the property right perspectives. The concept of sustainability in the 1990s had brought the dilemma between environment-led planning and demand-led planning to the surface. (Owens, 1994) It was then that the role of planning system has started to be challenged by new circumstances constantly and seek for more tools to deal with the ever-changing environment.

To this day, although Taiwan had an early start to practise both discretionary and zoning systems in rural and urban areas separately for 30 years, how to balance the need for developments and threats of climate change has triggered some further changes in the current planning systems. Taiwan is a small island with total land coverage of 36000 $km^2$ at the Pacific Rim. It was ranked as the number one country of high risk to natural disaster by the World Bank in 2005 with more than 73 per cent of its total area exposed to three or more hazards. (Dilley et al., 2005) (Table 1) Considering the high risk of natural disasters, more rigid controls and enforcements over developments in the mountain and environmental sensitive areas are urged in the rural planning system due to the large land coverage. Hence, starting with the amendment of the Regional Planning Act in 2000 after the notorious 911 earthquake attack in 1998, each city and county has had to propose a plan-led regional plan with clear regulations, instructions development capacity cap for future developments happened in both rural and urban areas. So far, almost 22 cities/counties in Taiwan have

finished their regional plans with much stronger control over the potential developments on one hand, and introduced some discretionary guidance such as urban design guidance in the urban area to provide necessary flexibility for individual cases on the other hand. The table shows the vulnerability of Taiwan in relation to other nations.

**Table 1 Countries most exposed to multiple hazards in 2005**

*a) Three or more hazards (top 15 based on land area)*

| *Country* | *Percent of Total Area Exposed* | *Percent of Population Exposed* | *Max. Number of Hazards* | *Country* | *Percent of Total Area Exposed* | *Percent of Population Exposed* | *Max. Number of Hazards* |
|---|---|---|---|---|---|---|---|
| Taiwan, China | 73.1 | 73.1 | 4 | Vietnam | 8.2 | 5.1 | 3 |
| Costa Rica | 36.8 | 41.1 | 4 | Solomon Islands | 7.0 | 4.9 | 3 |
| Vanuatu | 28.8 | 20.5 | 3 | Nepal | 5.3 | 2.6 | 3 |
| Philippines | 22.3 | 36.4 | 5 | El Salvador | 5.1 | 5.2 | 3 |
| Guatemala | 21.3 | 40.8 | 5 | Tajikistan | 5.0 | 1.0 | 3 |
| Ecuador | 13.9 | 23.9 | 5 | Panama | 4.4 | 2.9 | 3 |
| Chile | 12.9 | 54.0 | 4 | Nicaragua | 3.0 | 22.2 | 3 |
| Japan | 10.5 | 15.3 | 4 | | | | |

Source: Dilley, M., Chen, R.S., Deichmann, U., Lerner-Lam, A.L., Arnold, M., Agwe, J., Buys, P., Kjekstad, O., Lyon, B., Yetman, G., (2005) Nature Disaster Hotspots- A Global Risk Analysis, The World Bank Hazard Management Unit, Washington, D.C.

Also, several new changes made in the long-delayed National Planning Act (draft) not only re-organize the future planning system to be more strategic and performance-oriented in order to respond to issues such as climate change, sustainability, healthy, and environmental justice but also recognize the concept of 'dual planning theory'. (Sager, 2013) It embraces the importance of social factors in the planning process. The latest vision of the National Planning Act (draft) clearly regulated the need for more public participation in the planning decision making process. By acknowledging the necessity of a bottom-up approach in the formal planning procedure, the Taiwan government is trying to offer a more conceptual tool that is less value-laden and normative in the current zoning systems. By doing so, the attempts are to break the distinct divide between zoning land use plan in the urban area and discretionary planning permission system in the rural area used to practice in Taiwan in the past 30 years. Of course, given the nature of civil law system in Taiwan, the legal-binding planning and land use control will still play dominant role in the future to provide a stable control base.

## 4. United Kingdom[1]

In the United Kingdom, there have been numerous changes to the planning system in the past twenty years. The basis of the UK planning system is the 1947 Town and Country Planning Act which remains the basis for all legislation, despite numerous changes to details since

[1] The UK has four devolved nations, each of which has a planning system that contains different details, with separately named statutes. However, the principle of discretion in the planning prevails, so where legislation is discussed, it is that legislation for England.

then. Importantly, the pioneering act nationalised development rights, and introduced the requirement for planning permission for all development. Each development was to be considered on its merits, with primary consideration given to policy or any statutory development plan prepared by the planning authority. The absence of plans in the local area would result in decisions being made based upon national policy statements, government statements in parliament, emergent policy at whatever level, and other material considerations, arising out of consultation with a variety of bodies, including environmental bodies and communities.

In 2004, the UK introduced a system of spatial planning (Nadin, 2007), but application of an integrated system that came so obviously from Europe proved difficult to implement in the UK. Whist this promoted a strategic planning approach, it did not suggest that European zoning systems should be part of a new approach to planning in the UK. The complexity which accompanied its roll out was the beginning of further changes in the planning system, and led eventually to two major events in the history of planning in the UK. The first was the Conservative Party's manifesto for the 2010 election, known as 'Open Source Planning', which promised de-regulation of the planning system. The second was the abolition of the regional level of planning in England, which was introduced through the Localism Act 2011, which also promoted neighbourhood planning. In fact, simplifying regulation is a common aim of all governments of all political persuasion (Baldwin, 2005; Baldwin, Cave and Lodge, 2011), most recently exemplified by the current UK government in its attempts to reduce regulation. This has largely been led by the UK Treasury, which perpetuates the idea that over-regulated environments and planning in general delay investment and delay economic recovery.

In fact, despite this effort and the words of successive government, de-regulation has not been achieved and what has occurred has been a considerable complication of the planning system in all the devolved nations, who continue to make changes to the system and to their statutes. Regulations are highly centralised in the UK, and in recent years, they have become in part impenetrable, with strong requirements for specific and expert knowledge in the private and public sectors to interpret them. However what these two events have achieved is a further dissatisfaction with planning in the UK, opening the way for developers to question the very nature of the planning system itself. They seek a more liberal system which in they assume will speed up the delivery of decisions on development and permits.

One issue for the UK planning system is the statute which grants development to minor developments. This is known as the permitted development regime, granted under a statute of 1995 called the General Permitted Development Order. This order, which has been amended many times since 1995, was looked at in 2008 under a government commissioned investigation, known as the Killian-Pretty Report, which was charged with simplifying the regime of permitted development. Recommendations were made to the permitted development rights (PDR) to supposedly simplify them. These particularly referred to householder rights for minor developments such as home extensions, garden sheds, garages

etc. Many planners and householders at the time of the change said they were more complicated than before.

A further layer of complexity was introduced which invited a half way house between seeking planning permission and having the rights to develop. This system is known as the 'prior approval' system and it particularly applied to agricultural developments in the countryside and, more significantly, to mobile phone masts. The relaxation of permits was to encourage the roll out of mobile technology to improve business and communications. Such changes required considerable amounts of paperwork, but there was a perception that planning permission was not needed, so it created bad feeling amongst communities and a good feeling amongst the industry, who thought they were avoiding the bureaucratic procedures.

Although experts told the government that the prior approval system did not work, (Askew, 2006), many more uses of land have been brought into this system, which is very complex and requires complicated procedures. One such use is a relaxation in 2014 of the change of use from offices to residential use, as the government considers that this might assist in the housing shortage by allowing the use of out-dated office space for housing. It is causing a decline in vital office space in some areas, such as in Central London for example, where 13,000 new housing units have been provided, but with a vacancy rate of just 4.9% in London, there is a shortage of commercial office space.

In addition, to the housing issue, the application to build a fifth terminal at London Heathrow Airport took several years for a decision to be made. This gave planning permission a very poor reputation and it was said that the planning system was holding up important economic development and growth. In reality of course, it was the political situation that was holding up development as no government wanted to be associated with granting permission for controversial applications such as an expansion of an airport, or the erection of a nuclear power station. As a result of this caution, a vast amount of assessments are required by local authorities when a planning application is submitted, resulting in time delays, but its contribution the final decision is doubtful.

The issue of housing is creating more problems in the UK. It is said that approximately 250,000 new houses per annum are needed to catch up on the gap created by the lack of affordable, public housing built since 1980 (Shelter, 2013; JFR, 2014)). The main issue for London is affordable housing, with prices rising above levels ever known, for example in Kensington and Chelsea the average house price is £1.2million (data.london, 2014) while the national average is just £178,000 (Land Registry, 2015). So the major question for government and local authorities is where to build houses, particularly in London, where land values have risen by 47% in the past five years, and only 2.3% in the rest of the UK (Knight Frank, 2014).

And so back to the production of plans. Prior to the Localism Act of 2011, regional spatial strategies allocated housing target numbers for each region and local plans had to comply with the housing figures and allocate sufficient land accordingly. House builders offered

even higher figures than local authority predictions stated and there were long and drawn out discussions about housing requirements for each area. The government knew that this was unpopular with local communities and also with house builders who wanted a more liberal regime for obtaining planning permission for houses. In particular, they wanted to build on green field sites, where possible. The 1997 – 2010 government had a strong policy that at least 60% of all new housing had to be on brown field land, and this is more expensive to develop.

In 2011, the new government introduced the idea that there would be local plans and neighbourhood plans and that each local authority must produce 5 year housing land supply. In the absence of this controversial decision, the government would deliberate on the applications for housing, based upon its own very general policies contained with the National Planning Policy Framework, which is brief and very general. It is difficult to not comply with it, it is so lacking in detail. This has been a gift to house builders who do not want to negotiate with local authorities if they can go straight to government for a decision. The government has also given the rights to neighbourhoods to create their own plans under the Localism Act, under the hope that communities might allocate land and welcome housing in their area. So far, this has not happened. Out of thousands of potential neighbourhood plans, only 140 have been made.

In addition, where land has been allocated for housing (successfully through an adopted statutory local plan), the house builders have argued that there is no necessity to go through the procedure for applying for planning permission under the discretionary rules. They argue that the designated land should in effect, grant planning permission in principle, and all they would then have to do would be to submit for details of design, siting, massing, access etc. They are arguing, in effect, for a sort of zoning system in certain circumstances in the UK.

So far, this has been resisted, as it would change the entire way in which planning permission is granted for development in the UK. It would not allow for changes in circumstances; local plans might be out of date; the house builders might continue to sit on and bank land until the market is right. Further calls for this system massively under-estimate the inflexibility of the zoning system. The fact is that the main difference between the zoning and the discretionary system is the point at which the decision is made. Where it takes a very long time to determine a planning application, it takes potentially longer to produce the legally binding zoning plan, and an inordinately long time to amend it when situations change. The table of performance and conformance illustrates when this can happen (see above).

## 5. To mix or not to mix, that's the question.

It is clear that both the Taiwan system, statutory zoning plan system and the UK system, discretionary planning system, are trying to adapt some essences or tools from the other planning system for different reasons with same goal of a more efficient and adaptive planning performance. The real argument that we are raising here is how far could each system go pragmatically. For the zoning system, how to set up performance standards without losing the refined and clear-cut planning instruction would be the greatest challenge.

For the discretionary system, how to provide a set of regulations that are realistic yet preserving flexibility and keep the nature of policy-oriented system is still debatable. As Mastop and Faludi's (1997) concern, it is very difficult to evaluate strategic plans. In a plan-led system, conformance between a plan and final outcomes is the ultimate test of effectiveness. However, for development-led system, it would be more difficult to foresee the overall effectiveness even with the policy goal set up in the beginning. Especially both Taiwan and the UK are islands that face the unpredictable climate change environment more than those continental countries.

The other question we want to raise is could all these changes really help to serve a better town and country planning function for future needs?

## 6. Conclusions and next stages of research

The next stage of the research will look further into some detailed case studies of where the two systems have been used in both countries. The research will also study some other countries where the debate rages – Canada and Australia perhaps, where zoning is being questioned as an efficient method of meeting the flexibility that development demands. Furthermore, in the UK, enforcement plays an important role in the management of development and in Taiwan, property rights are important, but less so in England, where development rights have been nationalised since 1947. Rights of the individual might assume greater importance in Taiwan where the public interest is not emphasised in the way it is in England. In examining these complex regulations, it might be concluded that the performance versus conformance model of planning might not be as clear cut as suggested in some of the literature. Certainty or flexibility cannot be dismissed as the preserve of one system over another – each offers a mixture of the two, and further research will examine this in relation to Taiwan and England

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# IS PLANNING BECOMING AN INVERTEBRATE? THE NEED FOR EFFECTIVE PLANNING ENFORCEMENT

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**Abstract**

Enforcement matters are frequently high-profile, and yet there has been relatively little practice/academic discussion and debate in comparison with many other areas of planning. Drawing partly upon recent research undertaken by the University of the West of England, Bristol, this paper investigates and concludes upon the vulnerable position of planning enforcement in England today and the potential impact of this upon the provision of a fair, just, ethical, pro-active, robust, effective, efficient, and delivery enabled planning approach.

As the backbone of the planning system enforcement supports and underpins; it ensures adherence to policy and regulation and plays an important role in the effective delivery of post-decision project management. It also provides the certainty and legitimacy required for effective governmental intervention into development delivery and place shaping. And yet today, despite the optimism brought about through spatial planning, planning enforcement is at risk of becoming a victim of the state of the profession in the current political and economic climate.

This paper will specifically explore enforcement within the context of planning's role in the successful management of the built and natural environment, the balancing of public interest and matters of social justice, and the adequacy of the current and potential legal mechanisms necessary for the operation of a fit for purpose planning system. The work will consider the risks facing planning enforcement and the associated implications upon the wider planning system, society and the environment.

## 1. Introduction

The modern English planning system has its roots firmly in the welfare reforms of the mid – late 19th century. The Industrial Revolution had resulted in the rapid growth of densely populated urban areas, the majority of which offered extremely poor living conditions and little, if any, form of sanitation. Nonetheless, a flood of economically driven migration to England's burgeoning industrial towns saw the country's population reject a traditional agricultural existence, creating a new (urban) working class (Rydin 1993).

The exceptionally high mortality rates, spread of disease and squalor prevalent in these new industrial centres led to increasing pressure on the ruling political class for fundamental welfare reform. Resultantly, the second half of the 19th century saw a stream of state interventions in the form of new legislation, which was to eventually lead to the first planning act, 'The Housing, Town Planning etc. Act 1909'.

In effect, the welfare reforms of the 19th century represented a movement to affect social justice. These were reformations borne out of the basic human instinct to protect and nurture. It is this guttural and emotional response to society's most challenging problems, which is largely absent from the current planning system. Issues of social justice, related to human emotion and a sense of fairness, do still resonate, however, within the sphere of planning enforcement (hereafter referred to as enforcement).

The historic treatment of enforcement, as a discipline somehow removed from forward planning and development management has acted to insulate the activity from ideologies that have transformed planning into a system for facilitating economic growth. The position of enforcement is therefore unique within planning. It is the only truly remaining vehicle for the delivery of the form of social justice from which the system originally grew.

**2. Planning, enforcement and social justice**

The history of planning is often told as a simple, linear journey in which the vision of delivering social justice was aborted in the face of harsh environmental impacts and political philosophies following the end of the Second World War. The timing of this abandonment could not have been more ironic, given the utopian vision of the 1947 Act. Nonetheless, in the decades that followed, the theories and politics that shaped the English planning system became discernibly less people-centric. This shift can be traced, in part, to the rise of a neo-liberal approach to socio-economic politics that have dominated the policies of successive British governments. This has transformed the purpose of planning into a means of wealth creation, both for the individual and the nation, and has led to the commoditising of planning, whereby decisions are made on economic grounds, as opposed to imparting any value led judgement. (Taylor 1980).

As the planning system has continued to evolve, new terms such as place shaping and sustainability have come to define its objectives. At the same time, the premise of delivering social justice has all but vanished from the agenda. This is surprising, given that planning has at its disposal many of the tools necessary to help address some of the most challenging and debilitating issues facing society. Tackling wealth and health inequalities, facilitating equality of opportunity and combating the threat of climate change, are issues that should be central to the planning objective. To which extent they are, is open to conjecture based upon the current direction of travel. This raises two very fundamental issues; to what extent is social justice a conscious consideration for key actors in the planning system and who or what are the barriers that prevent its delivery?

Through its pursuit of wealth creation the idea of place has come to dominate the planning landscape, often to the detriment of people. There is perhaps no better example of this than the revanchist tide that has washed over many of England's major city centers transforming them into shopping, leisure and entertainment destinations for out of town day trippers (Macleod, G 2002). In some cases these areas are within a stone's throw from several of the poorest and most deprived areas in the country. Furthermore, it is now approaching half a century since the Skeffington Report was published, providing evidence, if it were needed, that a clear disconnection between people and planning does exist (Ellis, H and Henderson, K. 2014).

Despite planning's changing relationship with people enforcement has remained the one area in which issues of social justice, equality and fairness, have been ever present. It is often the impact of unauthorised development upon a citizen's sense of well-being and their perceptions of justice that lead them to complain in the first instance. These concerns relate not only to the most basic and vital aspects of social justice but also the human condition. How enforcement has found itself in this space, however, is more through chance than design.

**3. The absence of control**

The reason for a robust enforcement regime can perhaps best be demonstrated by the story of the 'Plotlanders' movement. In the first four decades of the twentieth century a 'perfect storm' developed that led to a movement characterised by unauthorised development and driven by a quest for arcadia (Hardy, D and Ward, C. 1984).

The economic, social and environmental change witnessed in the run up to, during and after the First World War resulted in a growing quest for home ownership, and increased demand for housing post-war, and a demand for better quality housing. Transport enabled 'commuting' was also developing, as was the ability to 'escape' from the urban centres and working life on holidays and day-trips. In parallel, land ownership was becoming increasingly fragmented with the decline of Country Estates and the declining fortunes of farms. Importantly, all of this existed within a context of legislative weaknesses.

The manner in which this quest for arcadia manifested itself was in a series of unauthorised settlements which flowered mainly along the south and south east coast, and up the Thames Estuary. The name 'plotland' comes from the nature of the development activity; land, typically sold off by farmers and estates and of low quality, was purchased by speculators and resold on a plot by plot basis. These plotlands varied significantly in scale, quality, provision of infrastructure and degree of permanence but all had in common the fact that they were unauthorised. Despite strong opposition from some quarters of society to their existence, the fact was that legislation was weak and the ability of local authorities to remove these developments was limited.

It was only the advent of the Second World War and the subsequent post-war legislation that ultimately led to either the loss or consolidation of the plotlands and for some their evolution into legitimate settlements, albeit ones with a very unique character, appearance and ethos.

**4. Emergence and consolidation of an enforcement system**

Development such as the plotlands were wholly incompatible with the new plan led system of the post-war planning landscape. This new planning system included provisions to ensure that such developments could be controlled; the introduction of universal control made certain that all new 'development' would require permission. In addition, some legal powers existed to address unauthorised development that was undertaken although these were actually quite limited. The planning system that emerged was also designed to manage change through that system, rather than respond to changes that took place outside of it.

With regards to enforcement it was not until the 1990 Town and Country Planning Act that interest and recognition in its importance was truly ignited. That act established greater powers for local planning authorities to tackle unauthorised development and in doing so helped to raise the profile of enforcement. This was underscored by the publication of Planning Policy Guidance 18 in 1991, which among other things alerted LPAs to the consequences of failing to take appropriate action in cases where a harmful breach of planning control had been identified.

The noughties saw further and progressive change for enforcement. The emergence of spatial planning and the development management approach, courtesy of the Planning and Compulsory Purchase Act 2004, brought about a more holistic appreciation of the activity of planning. The development management approach particularly placed greater emphasis on the significance of project management skills and the desire to create a robust system and processes that would facilitate clarity, certainty, public and developer confidence, and deliverability (Shepherd, A. Britnell S. 2013). This succeeded in bringing enforcement into the centre ground of the planning discussion, due to its ability to assist the delivery of an end to end management of development.

In 2011 the Localism Act provided additional new powers for enforcement, including Enforcement Orders, to address issues of concealed breaches of planning control, and the ability for local planning authorities to refuse to consider planning applications for development against which an Enforcement Notice had already been served. These changes appeared to set the scene for a greater appreciation of enforcement, as a discipline in its own right, and within the delivery of a collaborative and solution orientated approach to development. However that has not materialised and the reasons for this may be found in the historic treatment of, and value placed upon, enforcement.

## 5. Still the 'Cinderella Service'?

In 2008 the Planning Advisory Service published "Case Study: A Stitch in Time", which highlighted the history of planning enforcement as a 'Cinderella service' that had not received adequate resources or attention. The report also pointed to the vital role that enforcement has in underpinning the whole planning system, within facilitating the development management approach and its positive impact on communities and the built environment.

That enforcement plays a vital role in the planning system cannot reasonably be disputed. It supports the entire system, including the policies and decisions made by local planning authorities. However, the economic and political climate of the past 5 years has already seen degradation in the role of the enforcement officer, as a planning professional, and the profile of enforcement as a professional activity. At some local planning authorities the enforcement service has been subsumed into a wider, generic enforcement team (Britnell, S et al 2014). While no doubt driven by essential financial considerations, these moves are threatening to undermine the positive changes that have been made in enforcement, specifically over the last decade.

The historic perception of enforcement, as a cost negative activity, is likely to play a key role in how local planning authorities choose to deliver planning services over the coming years. It is vital therefore that the success of enforcement is not measured on the balance sheet, but in terms of its ability to deliver social justice, and provide robust protection for the built and natural environment. There is a strong body of local, national and international evidence suggesting that social disturbance and environmental damage are realistic consequences of failing to properly manage development. Such circumstances have resulted in substandard living conditions and environments that fail to deliver social justice, from the extremes of illegal 'shanty towns' to the removal of a prominent and protected tree.

Perversely, it is the historic lack of interest and neglect of enforcement that now presents local planning authorities with the opportunity to deliver innovative and pro-active services. Paragraph 207 of the National Planning Policy Framework (NPPF), the only paragraph dedicated to enforcement, is less prescriptive in its requirements than it is of the forward planning and development management activities. This allows local planning authorities the chance to shape enforcement services in a way that is not afforded to the other planning disciplines. Critically, if local planning authorities can demonstrate the ability of enforcement to close the planning loop, by informing policy and facilitating an end to end approach to development, it may finally achieve parity with the much vaulted other members of the planning trinity.

## 6. The wider context

The current wider planning landscape is one of constant flux. While changes to regulations and policy affect all professionals within the planning system, it is the enforcement officer, always at the coal face, who is often the first to notice how they are played out on the ground. Keeping abreast of new policies, guidance and processes presents a huge professional and intellectual challenge. Failure to interpret and implement these matters correctly may lead to potentially expensive legal disputes, and could damage the profile of the planning department as a whole.

Despite the obvious challenges the changes imparted upon the planning system in recent years have been all too frequent and fragmented. While the NPPF initially promised consolidation, raising hopes of a period of much needed stability, the intervening years have seen a continuation, if not an acceleration, in changes. It is important to note also that these changes represent some of the most fundamental to the planning system in decades and have been implemented against the backdrop of austerity and biting local authority funding cuts. Not only have local planning authorities reduced staffing levels during this time but they will have also lost senior, experienced officers, who otherwise could have provided a steady hand through this period.

The changes to the General Permitted Development Order (GPDO) demonstrate the complexities of a scattered, incremental approach to regulation and policy. The GPDO now includes a number of new and complex procedures, including Prior Notifications, for issues as disparate as larger than normally permitted domestic extensions, to the conversion of agricultural buildings to residential dwellings. These permitted development rights are subject to a variety of convoluted and voluminous limitations and conditions, presented in a language and structure that is likely to be alien to all but seasoned planning professionals.

If the intention of amending the GPDO was to relieve pressure on local planning authorities, cut red tape and breathe confidence into the development sector, the recent changes appear to have done little to achieve this. They are only likely to result in precious local planning authority resources being expended in responding to queries, which if given concise and accessible regulations, there would simply be no need. Where development is carried out erroneously because of the difficulty in interpreting the regulations, it is likely to be the enforcement officer who is tasked with resolving any issues.

Changes have also been made to the Use Classes Order, the nature of which threatens to undermine the established plan led approach of the planning system, and the ability of local planning authorities to properly forward plan their areas. While Prior Approval processes attached to some permitted changes do provide local planning authorities with opportunities to consider, on limited grounds, the impacts of such development, the uncertainty over future uses is likely to impinge on the ability of authorities to robustly assess the future requirements of an area. Furthermore, local planning authorities who have already produced and adopted Core Strategies or Local Plans risk seeing years of meticulous planning undermined by these changes.

In addition to regulatory changes, the debate regarding devolution of political and economic powers to English cities, including mooted concessions over planning, is introducing a new dynamic that is yet to be played out. While this represents a clear synergy with the localism agenda and can only support the argument that decisions affecting local people should be made at the local level, any suggestion of further fragmentation of the planning system is a very real and fundamental concern.

**7. Conclusions**

The notion of the human condition is all but absent from the policies that guide the current planning system. Yet underlying key planning notions such as sustainability and place making is the fundamental experience of human existence. For enforcement, the historic view that it is the lesser activity in the planning trinity continues to cause damaging impacts to the profession. Still, addressing clear and harmful breaches of planning control resonates strongly with the notions of fairness and justice that sit behind the origins of the planning system. These issues present a dichotomy for the planning system, which is only likely to be resolved by a fundamental re-alignment that reconnects planning with citizens on a human level.

Changes to regulation, policy and processes continue at pace and the cacophony of constant upheaval in the planning system is threatening to undermine the recent advances in the profile and appreciation of enforcement. There is real concern that this hitherto forgotten service may once again be cast aside. It is vital in these circumstances that the voice of enforcement continues to be heard and that the drive for a progressive and innovative enforcement service is not lost in the noise.

Despite the warning signs the threat to enforcement services from the current political and economic climate has already been played out in some authorities; and with further potential cuts on the horizon, it is a scene set to be repeated over the coming years. Recent research (Britnell, S et al 2014) however, suggests that enforcement is not quite the financial burden it has always been perceived. Some local planning authorities point to the income generated through retrospective planning applications associated with enforcement cases and there does appear to be scope for charging for post-decision monitoring of planning permissions.

It is likely to be the case however that most enforcement services are run at a financial loss. Should that be true, it is a small price to pay for ensuring that the principles and operation of the entire planning system are protected.

While it is clearly hyperbole to suggest that enforcement alone can create a better society, its unique position within the planning regime does enable it to deliver social justice in a most direct and visible form. Furthermore, a planning system that dares to operate without a stable, robust and fully supported enforcement base runs the risk of facilitating both social and environmental harm. To avoid this, the planning system needs to refocus its meaning, from one primarily concerned with wealth creation to a return to the social visions of the original welfare reforms from which it emerged. And enforcement, for so long maligned, may just provide its vital starting point.

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# When POPS Travels: The Transnational Transfer of Incentive Zoning Policy and Its Implementation in Taiwan

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*POPS, as known for "Privately Owned Public Spaces", are amenity space built by private developers in exchange for additional floor area through incentive zoning ordinance. As part of 1961 New York City Zoning Resolution, their successes have drawn practitioners from local and aboard. In Taiwan, the concept of incentive zoning was first adopted in the capital city Taipei and later applied to all urbanized areas in Taiwan in 1984. Different from the original concept of "zoning" incentive with particular designated area in mind, the Taiwanese adaptation has been implemented as part of the building codes with site constraints only. What is the impact when the ordinance administered in the domain of building regulations rather than planning? Does the provision of open spaces serve in areas in need and who should hold accountable? These answers become fuzzy when the incentive zoning policy meets varying local conditions and morphological patterns. This paper takes Tainan City as a case study to examine the policy implementation in a historical yet less-densely built city. The POPS produced in lately 3 years are compiles from the building permit record system. To understand their spatial patterns at different scales, the distributions of POPS are identified in GIS and overplayed with existing socio-economic-physical variables. The types of open space, their patterns and use are examined through site visits and statistical analysis. This paper wishes to demonstrate the local adaptation of a transnational policy and develops a deeper understanding of its potential impacts.*

## 1. Introduction

In view of the demand of urban public space and the creation of open space by private sector, the first implementation of incentive zoning regulation began in New York City in 1961. In exchange for additional floor area, private developers can provide and maintain an amenity place for public use, which so-called Privately Owned Public Space (abbreviated as "POPS"). Incentive zoning add flexibility to the traditional rigid zoning regulations, and the provision of open space drawing practitioners from local and aboard.

In Taiwan, the concept of incentive zoning was first adopted in Taipei, the capital city, and later applied to all urbanized areas in Taiwan in 1984. Different from the original concept of "zoning" incentive with particular designated area in mind, the Taiwanese adaptation has been implemented as part of the building codes with the constraints of condition of sites only. What is the impact when the ordinance administered in the domain of building regulations than planning? Does the providing of open spaces in areas where the shortage happens and who should hold accountable? These answers become fuzzy when the incentive zoning policy meets varying local conditions and morphological patterns.

The problem of incentive regulation gradually happened (Shie, 2006). Due to the dispute about the openness of the POPS, residential area was excluded from the eligible application list in 1999 in

Taipei zoning regulations in consideration the difficulties of management. However, except for Taipei City, other cities in Taiwan still adopted in building code until now, in which condition of site is the main factor of the decision whether POPS bonus is applicable instead of planning. The doubts of benefits supplied by POPS still exist, and how its impact on urban open space is still unknown.

In the past, incentive regulations are mostly analysed in capital cities or big cities. For consideration the difference between the social and substantial environment, this research investigate the phenomenon in the secondary city—Tainan by using the building application information in past three years. To understand their spatial patterns at different scales, the distributions of POPS are identified in GIS and overlaid with existing substantial space map. By analysing the location and typology of POPS, this paper aims to demonstrate the local adaptation of a transnational policy and develops a deeper understanding of its potential impacts.

## 2. Institutionalisation of Market-oriented Policies in POPS

Since the 1970s, the globally interconnected crises of Keynesian Fordism and East Asian developmentalism have given rise to increasing neoliberalisation (Jessop, 2002). Neoliberal scholars claim that state should vigorously reduce authority, induce a shift to market-oriented economies (Brenner & Theodore, 2002). Neoliberalism emphasis on reinventing governance, and government must guide development and release authority. With globalization and the growing power of multinational enterprise, national government become gradually powerless to control the condition of economy and society, turning national development competition into urban or regional competition. Increasingly, urban policy in modern societies has a competitive character: It seeks to achieve the highest utility of socioeconomic progress and attract private capital investment. In a situation of devolution of nation-state administrative power, cities are bound to become more entrepreneurial, more market-oriented and more international with a view to participation in global networks (Nijkamp et al., 2002).

Influenced by liberalization and privatization of urban policy caused by the emergence of the neoliberalism, environment of urban political structure and governance mechanism is generally formed to being friendlier to developers and the alliance of real estate. However, these enterprise are profit-driven, causing urban growth coalition often trumps public-oriented planning actions. Neoliberalism brings conflicts and paradox of urban reconstruction, creating challenges of socioeconomic polarization, uneven geographical development and gentrification (Brenner et al. 2012, Jessop 2002, Pickvance 2012).

Public sector and private sector have already realized that both of them can't afford the responsibility of social operation by their own, wherefore to seek new cooperation relationship under the trend of neoliberalism (Wu, 1996). At the same time, due to fiscally strained of government and popularization of privatization, the public sector has to cooperate with the third-party to achieve public goals. The number of planning practices where collaboration models applied has rapidly increasing. In particular, public-private partnership solutions have become popular in the areas of infrastructure provision (for example, parking facilities), affordable housing constructions, and urban redevelopment and revitalisation projects.

Public-private partnerships (abbreviated as PPPs) become a popular strategy and rhetoric in the context of neoliberalism. PPP provide a unique perspective on the collaborative and network aspects of public management. PPPs can be defined as 'co-operation between public and private actors with a durable character in which actors develop mutual products and/or services and in which risk, costs, and benefits been shared' (Klijn and Teisman, 2003). PPPs put spirit of business management into

administrative system, making public sector more efficient, marketability, and entrepreneurial. It's not only a pure mutual relationship, but also a win-win game of integral resources. The essence of PPPs are privatization and economic decentralization, may result in the malady of local policies controlled by enterprise, causing private sector gain profit with cost put upon the citizens.

Policies are not physical objects that can be transferred with their content intact (McCann, 2011). Since neoliberal governance is improvisational and produces locally unique forms of urban governance wherever it takes hold, there is an identified need for informed case studies on how 'actually existing neoliberalism' is produced in situated settings (Brenner and Theodore, 2002) Evidence of neoliberalisation in Taiwan is increasing, ranging from relaxation of regulations on land supply and planning procedures to provide public goods by the private sector. We focus on examining how a series of 'keenly negotiating, processual, and space-mobilizing constructions' (Wilson, 2004: 780) have driven incentive zoning mechanism as a deregulated, market-based policy. The aim of this research is to discover whether quality of substantial amount of POPS achieve the original goals of the policy, and the adaptation of incentive zoning policy in Taiwanese practice through investigating its implementation in Tainan City.

## 3. Spatial Influence of the Policy

Floor area control, or floor area ratio (FAR) is part of the zoning regulations. The main purpose is to control the intensity and distribution of urban development, ensuring the quality of living environment and the provision of public facilities. However, due to rapid urban development and fiscal crisis of the local government, problems such as lacking of urban public facilities, difficulties of promoting public infrastructure, and low quality of public facilities is becoming more serious.

To solve the shortage of public services provided by the public sector, governments increasingly tend to improve the urban environment by public-private partnership mechanisms, where " incentive zoning" is one of the solutions for the shortage of open space provision in traditional "land use planning" (Yang, 2007). The mechanism of incentive zoning encourages private sector to provide open space in exchange with extra floor area space of their development projects.

### *3.1 Policy and the provision of POPS in the United States*

As the originator of incentive zoning regulations, New York City implemented open space bonus FAR policy in 1961. The program encouraged private developers to provide spaces for the public by allowing extra floor space in certain districts. In the New York City, the policy of POPS was influential to the cityscape, especially in the commercial districts. During the past five decades, the incentive mechanism of POPS has created 85 acres of public open space in the boroughs of Manhattan, Brooklyn and Queens (Schmidt et al., 2011). The open spaces provided by POPS in New York City are claimed to be beneficial and influential to citizens' daily life.

As part of 1961 New York City Zoning Resolution, their successes have drawn practitioners from local and aboard. With the extensive application of incentive zoning, many local governments realized that the mechanism has to consider comprehensively. To make the incentive policies complement one another in a city, local governments should quantify the goals of policies, ensuring the necessity of incentive, arrange the priority and making differences of inducement (Yang, 2007).

Using incentive mechanism without consideration of the overall effect will cause the zoning regulations be destroyed, resulting in the chaos of urban function and the disorder of real estate market, which used to happened in Seattle and Portland (Yang, 2007). Therefore, many local

governments in the United Stated set goals of each incentive mechanism, with the development location been decided and the standard of FAR bonus been designed purposely. The priority be reorganized based on the political target each year, and the total amount of incentive zoning will also be regulated. Government will rectify relative regulations regularly to ensure each policy reach the targets.

### *3.2 Policy and the public space in Japan*

Basically, the planning system in Japan followed that of the Western countries. These zoning regulations are used to deal with reconstruction after disasters, such as earthquake (Liu, 2009). Unlike the United State, incentive mechanism in POPS isn't only applicable in commercial districts, but also in residential and industrial area as well (Gao, 2001). Japanese POPS is implemented in two regulatory system: both zoning and building code regulations.

The urban population rapidly growth in the late 1950s, caused deterioration of urban environment, especially in commercial area. To prevent the further deterioration, Japanese government modified zoning regulation, setting a new zone where the density regulation is flexible. The FAR bonus will be implemented in this new zone if the open spaces created during development. Although this new regulation considerate the location of FAR bonus and surrounding area from the view of overall urban development, the decisions are practically made by governments, causing questioning of legitimacy due to the absence of public participation (Chen, 1995).

The further expansion of FAR bonus into the building code system was to stimulate the real estate market in Japan in 1970s. The Japanese government modified building codes in 1970, allowing development site exceed certain size to be eligible for gaining FAR bonus of the provision of open space, traffic and safety can be accommodated in the project. The incentive in the building code system has being adapted more often than zoning in Japan due to its greater flexibility. Yet the regulation broadens FAR only with limited site constraints, without considerations surrounding land use and capacity of public facilities. The provision of POPS were distributed unevenly and caused serious burden of public facilities in some areas (Chen, 1995).

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### *3.3 Policy and the public space in Taiwan*

The planning and regulatory system in Taiwan was highly influence by Japan and the United States due to the colonial governance and post-World war II assistance respectively. Due to the colonial governance by Japan, Taiwanese incentive mechanism was at first significantly influenced by Japanese regulations, especially in the building code system. With the aid from the State during the post WWII, the planning system and zoning concept becomes the core of land use planning in Taiwan. Influence from both countries result in a hybrid-nature in the development control system in Taiwan. When a new policy is about to propose, we often see a strong tendency of looking after two country's models among scholars and officials to find a proper balance in between.

Taiwanese incentive mechanism was first implemented in Taipei City in 1983. As capital of Taiwan, urban planning in Taipei started in 19 century during the era of Japanese colonization. To coordinate the demand of urban construction and development, Taipei City first adopted FAR control in 1967, and then, to complement the shortcoming of zoning, the government introduced the mechanism of urban design deliberation and incentive zoning, aiming to improve the rigidity of zoning and to a create better urban environment. The initial goals of the policy adoption in Taipei City were as followed: encourage integration of site and overall development, provide urban public open space,

give flexibility of building design, promote disaster prevention function, and regenerate old downtowns etc..

Similar to that of Japan, incentive mechanism was first introduced in zoning regulations in 1983 in Taipei City and later integrated into part of the national building code in 1984. As part of the building codes, the FAR bonus is applicable to anywhere in every cities with restrictions of site area. The key restrictions of FAR bonus applicable site are street-width (greater than 8 meters) and minimum size of site (1,000 square meters in commercially-zoned area and 1,500 square for residential). According to the regulations, open spaces are specified as a space for pedestrian passage and leisure function for public at certain size. Type of open space includes 'pedestrian space' and 'plaza', where different incentive coefficients are given to calculate the extra FAR bonus gain from the open space provision.

The problem of the lack of management of incentive regulation has gradually emerged. Due to the social dispute about the accessibility of the POPS in the residential projects, 'residential zone' was excluded from the applicable list in 1999 in Taipei's zoning regulations (Shie, 2006). However, incentive mechanism of POPS still applied everywhere through building code system in other Taiwanese cities until now. As the result, the locations of the POPS are then determined by the site conditions and less concerned about the overall provision of public space to meet the planning and social goal. This pattern bring up our main questions of inquiry: What are the patterns of distribution of these POPS with the spatial constraints by building codes? Are these POPS located in the area in need?

## 4. Data and Methodology

This paper takes Tainan City as a case study to examine the policy implementation in a historical yet less-densely built city. The study area covers the developed centre of Tainan, consisting of East Dist., West Central Dist., North Dist., South Dist. and Anping Dist.. There are 53 building permit applications involved in POPS from May 2012 to March 2015 being analysed in this study. The data is compiled from the building permits issued by Department of Buildings Management of Tainan Public Works Bureau. This study synthesized and analysed the information of these 53 cases, including the administrative area, zoning, the developed merchandises, the type and area of POPS, quantity of FAR bonus and whether its applied TDR.

The empirical analyses are divided into two steps. We first mapped the 53 projects sites applied for POPS by geocoding each project and overlay with the figure-ground of existing city to see its geographic distribution. Second, we investigated the planned and current states of public open space in each district to compare their differences and to identify the districts in need of POPS in supplementing open space provision. By comparing the two we intend to identify if there is a spatial mismatched pattern in provision of POPS as a neoliberal policy. By these two steps of analysis, this study examines the preliminary effects of POPS policy in Tainan, Taiwan.

## 5. POPS Analysis—Empirical Study in Tainan City

### *5.1 The Distribution of POPS in Tainan*

There are a total of 53 projects applied for open space FAR bonus in the past three years, and in total account for a provision of 7.07 acres of new POPS in Tainan. Among these projects, 18 cases are located in Anping Dist., 13 cases in West Central Dist., 12 cases in South Dist. and the rest of them distributed in two other districts. As the number mentioned above, the area amount of POPS in Anping Dist. is the largest (2.33 acres), followed by South Dist. (1.96 acres) and West Central Dist.

(1.34 acres). The research measure the area of POPS in each cases, finding that the average area of area per case in East Dist. is the largest (2,252 square meters in each case), while the average area of POPS in North Dist. is the smallest (634 square meters in each case).

Table 1. Projects with provision of POPS in District in Tainan between 2012-2014

| Administrative district | population | Number of New Projects | Number of projects applied TDR | Area of POPS ($M^2$) | Average area of POPS per person ($M^2$) | FAR Bonus by POPS ($M^2$) | Potential increased residents by POPS floor bonus |
|---|---|---|---|---|---|---|---|
| West Central Dist. | 78,064 | 13 | 10 | 13,388.13 | 0.172 | 30,406.55 | 278 |
| North Dist. | 132,459 | 5 | 5 | 3,170.50 | 0.024 | 6,689.93 | 69 |
| Anping Dist. | 64,745 | 18 | 16 | 23,331.26 | 0.360 | 45,345.22 | 440 |
| East Dist. | 190,360 | 5 | 0 | 11,257.89 | 0.059 | 14,625.81 | 108 |
| South Dist. | 125,650 | 12 | 12 | 19,592.00 | 0.156 | 24,310.53 | 445 |
| Total | 591,278 | 53 | 43 | 70,739.78 | 0.154 | 121,378.04 | 1,340 |

The actual distribution of the POPS showed a much evident pattern as compared to the aggregated data presented by administrative district. In the figure below, we identified the spatial distributions of POPS in GIS and overlay it with figure ground map of Tainan. Most of the 53 POPS are located in or near the periphery of the cities where more vacant space available, instead of located in earlier developed area near the core of the city.

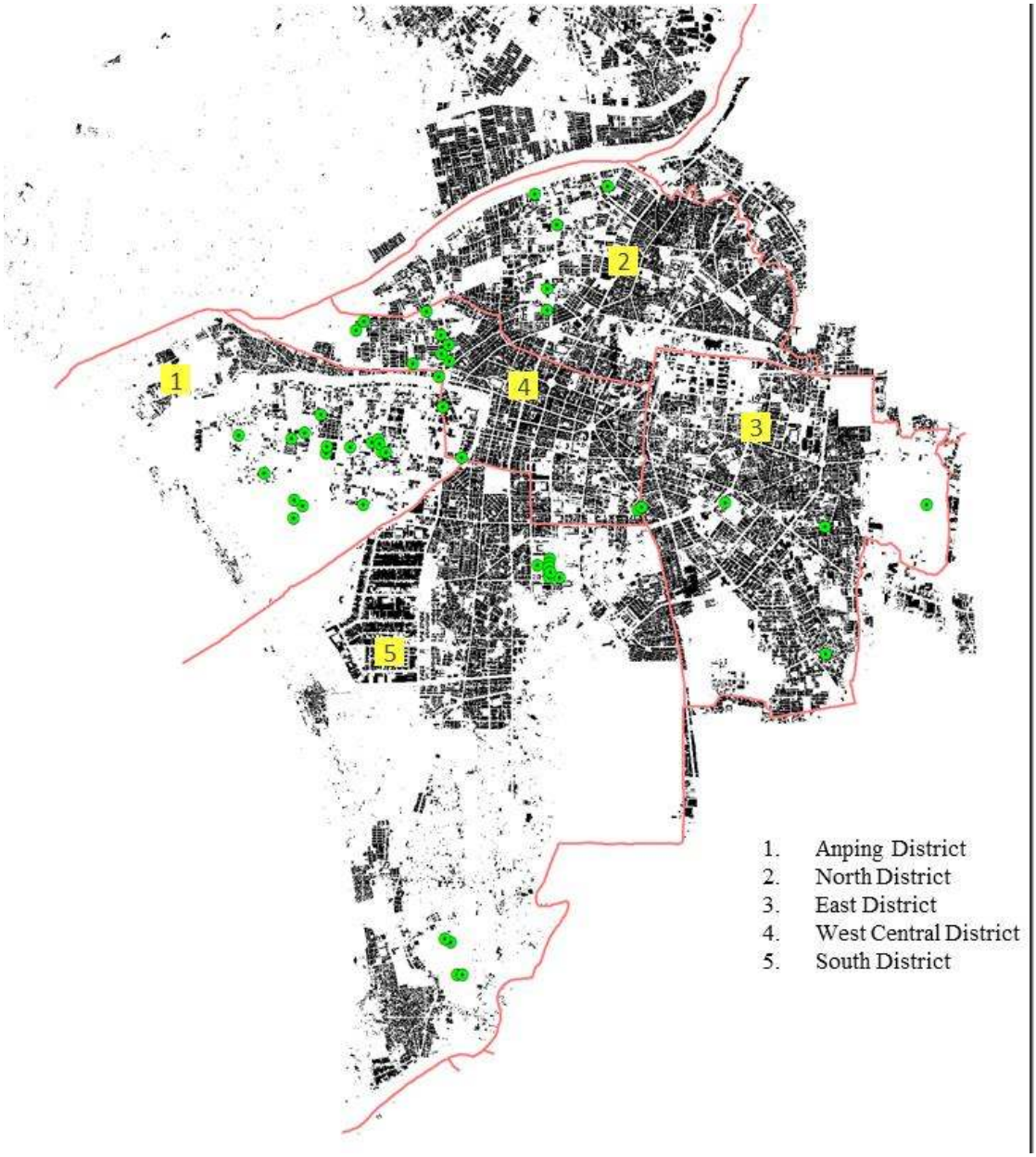


Figure 1. Location of Projects with Provision of POPS

We further analyse the distributions of POPS based on zoning and the primarily land use of each project. From the zoning perspective, more than 70% (39 cases) are located in residential zone and 30% are located in commercial zone. However, the publicness of POPS may differ by its primary land use. We examine the details and found out only 2 out of 51 cases are commercial properties (hotels). The rest are 25 mixed-use projects with residential plus ground commercials, and with the rest are purely-residential properties. The publicness of private-owned public space usually decreases from commercial to residential. In the case of Tainan, the POPS in commercial properties are less likely to be friendly or accessible for public with hotel uses. The one are more likely to open for public are those mixed-use projects, which account for only about 50% of the total POPS cases.

### *5.2 The mismatched of the provision of POPS and the Needed Area for Open Space*

As one of the oldest city in Taiwan, Tainan City was colonized by different nationalities (such as Dutch, China and Japan) since seventeen century. It used to be the center of colonial government, making itself transformed from undeveloped region into a city. With the construction of commercial harbour and the government buildings, West Central Dist. was developed earliest in Tainan City. With urban development and expansion of the city, areas such as East district, North Dist. South Dist. And Anping district have been incorporate as part of urban area from its earlier rural conditions.

The initial goal of the POPS is to improve the overall urban environment by provide public space for the area in need. To measure its effectiveness of POPS in Tainan, we further examine the allocation of existing public-owned public space. What we included in the open space calculation are park, green space, playground and plaza. We found out that the overall provision of open space in Tainan City is unevenly distributed and highly correlated with its history of development. Older area on average has less open space than newer area. Geographically, the amounts of urban open space provided in central district are less than other surrounding districts.

Viewing the average open space per resident in each district, the amount of service level of West Central Dist. is the lowest, followed by East Dist. and North Dist. The newest development areas, including Anping Dist. and South Dist., share the largest amount of open space per residents on average. The open space each resident shared in South Dist. (9.25 square meters per resident) is five times greater than in West Central Dist. (1.61 square meters per resident).

Table 2. Provision of Public-Owned Open Space by District in Tainan

| Administrative district | Population in prediction | Population in reality | Total area (acres) | Planned open space (acres) | Area of open space per resident (planned) ($m^2$/person) | area of open space per resident (current) ($m^2$/person) |
|---|---|---|---|---|---|---|
| West Central Dist. | 107,600 | 78,064 | 628.87 | 17.28 | 1.61 | 2.21 |
| North Dist. | 177,050 | 132,459 | 985.48 | 70.92 | 4.01 | 5.35 |
| Anping Dist. | 96,500 | 64,745 | 603.98 | 44.02 | 4.56 | 6.80 |
| East Dist. | 243,200 | 190,360 | 1,430.54 | 80.49 | 3.31 | 4.23 |
| South Dist. | 160,000 | 125,650 | 2,714.92 | 147.98 | 9.25 | 11.78 |
| Total | 784,350 | 591,278 | 6,363.79 | 360.69 | 4.60 | 6.10 |

If POPS play an important role for supplementing of public-owned open space, we should see the old center receive the largest amount of POPS. Comparing Table 1 and Table 2, it is evident that POPS in West Central District do not sufficiently supplement the lack of public space in this area. While Anping and South districts where the greater amount of open space on average are received also get more POPS on average than the city center.

### *5.3 The analyses and impact of POPS*

POPS does not take place in the right location and right property in Tainan. Due to the existing saturation of downtown, there are rarely large-area undeveloped site in West Central Dist. and East Dist.. Requirement of scale of site are in building code regulation is a possible key factor causing the

lacking of POPS in the right place. Urban fringe or other sites without land assembling issues are preferable sites for tall building development that applied for POPS incentive FAR bonus. In addition, these spaces are mostly privatized place for residential properties. Compare to the Capital City Taipei, the population density in Tainan is a lot less, about 1/10 of that in Taipei. The commercial developments primary take place on the street-level retails, with very little commercial real estate on office development. As the result, most of the tall building developers prefer residential properties because of its marketability in real estate market. Compare to the general application of other countries in commercial area and offices, whether the public benefits and accessibility of POPS are in line with the expectation may become an issue in the future study.

POPS are not free meal. Each comes in exchange of floor area space for additional development in each project. These 53 cases in total applied for about 121,000 square meters of bonus floor area for the open space it provided for public use. This extra space could accommodate at most extra 6,086 living units and 16,000 residents. In addition, the research also discovers that about 80% of these POPS cases are also the receiving site of transfer development rights (TDR). The total amount of extra FAR these projects applied is able to accommodate about 2,840 additional residents, adding about 17.5% more of new residential population that does not included in the land use planning. The additional residents come with the floor area bonus which may influence the carrying capacity and lower the service standard of public facilities in each district.

## 6. Conclusion

Policies are not physical objects that can be transferred with their content intact (Therdore, 2010), instead, imported policies are stripped down to their administrative or methodological 'essence' and then re-embedded into local contexts (Peck and Theodore, 2001: 435). Through the Taiwanese experience, the study discover that the regulations consisting of different spirits of the United States and colonial government make site condition become the main factor which decides whether incentive of open space is applicable. Practically, the locations where POPS happens are not the location where the demands are strongest, which disobey the original goals of the regulation, since the development location can't be decided by spatial planning and the public goods provided by market without management.

This situation of POPS in Tainan responding to the real exist neoliberal marketed-oriented public policy in cities. The observation is a powerful indicator that real estate capital fully exploits market-oriented POPS policy in pursuit of profit, causing provision of POPS didn't set in the demand location where the public services is difficult being provided by public sector. The development of POPS didn't reach the initial policy goal, which is providing urban open space in poor public service region and promote urban regeneration in old downtown by public-private partnership.

In conclusion, the incentive mechanism of POPS has been significantly diverted from its original utility as open space provision in commercial area in New York City. This research investigates the impact of locally adapted POPS in Taiwan, verifying that urban development under neoliberalism become more uneven, inhomogeneous and polarization. The neoliberal effects identified in our analysis contribute empirical depth to the scholarship on urban policy mobility, which remains theory and process-oriented.

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# Transient and Informal: Negotiating Temporary Use in Portland, Chicago and Detroit

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***Abstract***

*Using the framework of the Tragedy of the Anticommons and informality this paper explores how some actors have attempted to navigate the complicated tangle of intersecting and contradictory property rights and regulatory regimes in the US and ambiguous position of temporary uses within these spaces. Using this framework, three examples – food carts in Portland, Oregon, neighborhood markets in Chicago, Illinois, and pop-up shops in Detroit, Michigan – are used to highlight specific challenges faced in trying to negotiate informality and the complicated task of navigating local land use regulations, retail markets and political environments to successfully create viable activities that contribute to revitalization.*

*The paper demonstrates that temporary uses can be valuable contributors to revitalization and emphasizes the importance of for providing an avenue within planning for temporary uses. However, these cases also reveal some of the potential drawbacks of temporary uses including entrenchment of these uses frustrating attempts to develop permanent uses (Portland), cooptation of temporary uses crowding out small entrepreneurs (Chicago) and transition of temporary uses to permanent uses requiring substantial time and skill (Detroit). They also reinforce that the process of formalizing informal uses can be a new avenue for the exercise of power and the reallocation of resources.*

## 1. Introduction

Over the past ten years, there has been a growing interest in the potential for temporary uses as a flexible response to vacant lots and storefronts and a tool for encouraging revitalization. This paper attempts to expand understanding of the temporary uses by using the framework and literature of the Tragedy of the Anticommons and informality to explore how temporary uses have emerged as a potential solution to the tangled array of overlapping property rights and regulatory regimes that have limited the redevelopment, rehabilitation or reuse of underutilized properties.

This paper begins with an explanation of the concept of the anticommons and an analysis of underuse and stalled revitalization using this lens. Particular emphasis is placed on the underlying logic of US planning and regulatory regimes in both hindering the development of temporary uses and providing spaces for their creation. This framework is then used to examine how actors have attempted to navigate the ambiguous position of temporary uses within local planning regimes through the presentation of three examples: food carts in Portland, Oregon, pop-up retail in Chicago, Illinois, and pop-up shops in Detroit, Michigan. These examples are used to highlight specific challenges faced in trying to negotiate the complicated task of navigating local land use regulations, retail markets and political environments and informality to successfully create viable activities that contribute to revitalization.

## 2. The Tragedy of the Anticommons

The concept of the anticommons was developed by Michael Heller in 1998, building on a concept introduced by Frank Michelman in 1982. Conceptually, the Tragedy of the Anticommons was described as symmetrical tragedy to the Tragedy of the Commons. The Tragedy of the Commons scenario describes a situation where too many actors hold the right to use a particular resource and lack the right to exclude others with the same right from using that resource. Behaving rationally, each individual actor will maximize their use of the shared resource even if this results in overuse of the resource to the point of its destruction (Hardin 1968). Typically cited examples of tragedy of the commons scenarios are overgrazing, overfishing or climate change (Heller 2008). In contrast, an anticommons exists where every individual in a society has the right to exclude all others from the use of a given resource; that resource can only be used only with unanimous consent of all members of the society. As a result, the resource is prone to underuse, sometimes to the point of being unused altogether (Heller 1998).

As a thought experiment, the Tragedy of the Anticommons was fascinating, but not terribly useful as it was nearly impossible to identify a real-world example of this type of anticommons. Building off this initial concept, Heller (1998, 2008) elaborated a situation where not everyone, but instead a limited number of actors possess the right of exclusion. In effect, no actors have privilege of use, each actor requires the cooperation or permission of others to use the resource. Using the case of post-Communist Russia, Heller used the anticommons to explain the proliferation of both empty storefronts and informal street kiosks. In this case, four main actors possessed overlapping rights to commercial storefronts: owners, users, investors and regulators. Without the cooperation of each actor, the storefront would remain empty. In contrast, operating an informal street kiosk was comparatively simple as it only required the assent of only two actors (Heller 1998).

Heller's original (1998) and more recent (2008, 2013) analysis of the problem of anticommons has focused primarily on property rights, that "wasteful underuse can arise when ownership rights and regulatory controls are too fragmented" (Heller 2013, 10). Others have emphasized the problem of coordinating and assembling those rights (Schulz, Parisi, and Depoorter 2003, Fennell 2009). Fennell (2009) describes the anticommons as being primarily a problem of assembly. Assembling the fragmentary rights held by different actors into a single whole requires incurring transaction costs (often

from simply finding out with whom one must negotiate) and overcoming strategic holdout behavior. The more actors that are involved in this process, the more difficult it becomes as "misreadings and miscalculations become more likely…and mundane transaction costs associated with identifying and communicating with the other parties rise as well" (Fennell 2009, 14).

## 3. Anticommons, Planning and Real Estate Development

The literature on the anticommons suggests, and I argue here, that real estate development is particularly vulnerable to this dilemma as it is more prevalent in situations where vertical exclusionary rights exist, where there are few substitute goods, where projection of future value is difficult and where goods are "lumpy" (Schulz, Parisi, and Depoorter 2003, Fennell 2009). Each of these is present in real estate development. Real estate development in the US often requires navigating multiple layers of hierarchical, sequential review and permitting often involving multiple levels of government, increasing transaction costs and coordination difficulties. As each individual property is essentially unique and the exact same building on a different parcel is not a perfect substitute, real estate is particularly prone to strategic holdout behavior.[2] Real estate typically has a very long usable life compared to other goods, potentially lasting through multiple economic cycles and multiple changes in consumer preference making miscalculations of its most efficient use and potential value more likely. Finally, while certain financial instruments can spread the return on a real estate development out over a longer period of time, real estate development is inherently lumpy, potentially increasing holdout behavior.

My argument here is that, while Heller's example was of post-Communist Russia, the situation occurring in many US cities with regard to redevelopment can be described as an anticommons scenario. The abundance of vacant lots, abandoned buildings and empty storefronts in some locations may not be simply the result of a lack of market demand for goods, services or real estate. Instead, an anticommons exists where the participation of too many actors is necessary to successfully redevelop, reuse or revitalize these properties. Property owners and government regulators both have direct rights to exclude, while financiers and users may possess actual or defacto rights of exclusion. "Strategic" positioning by these actors and high transaction costs associated with assembling their cooperation may prove too substantial a barrier. This argument is implicit in much of the literature on temporary uses that advocates using temporary uses where permanent development is infeasible or "the realisation of the future function is delayed for various possible reasons, including planning processes, financial complications or unexpected technical issues" (De Smet 2013, 2).

As with Heller's original case, the successful execution of a real estate redevelopment in the US typically requires the cooperation of property owners, investors, regulators and users. The interests and behavior of each can impede redevelopment. Property owners will seek to maximize the rent they can extract from a property. In doing so, they may misread the market, overvaluing their property and/or setting rents too high for users, particularly new, start-up businesses. Based on these assumptions, they may choose to hold out with the hope that they will eventually be able to secure their asking price/rent. This problem was particularly pronounced during the recent Great Recession when many property owners retained unrealistic expectations about their properties based on the previous market. Property owners may also be constrained in their ability to vary their expectations by equity partners or an existing mortgage that requires a specific return. In many cases the desire to bring in a tenant to glean some rent was overridden by the need to generate a specific net operating income and a fear of extending a long-term lease cutting off the ability to sign a more lucrative tenant.

[2] This is essentially the argument made to support the use of eminent domain to facilitate redevelopment in the US, a practice most recently upheld by the US Supreme Court in 2006 in *Kelo v. City of New London*.

While they are not always involved, most redevelopment projects in the US require the participation of lenders and/or equity partners, giving them real or defacto rights of exclusion. Lenders and equity partners will demand certain benchmarks be met in order to extend financing, benchmarks that may be difficult to meet in redevelopment projects, particularly those in weak markets. Lenders or equity partners may also be most familiar with specific markets and/or product types and less willing to extend financing to projects outside their ken. Adding to the level of difficulty, lending standards in the US tightened during the Great Recession and individual lenders judgment about the suitability of a project was restricted, making it more difficult to undertake a redevelopment of a vacant site or renovation of an outmoded space. Lenders are also often involved in financing the users of redevelopment sites. New, start-up businesses may be seeking to enter a new market unfamiliar to lenders and may lack the proven track record to secure the necessary financing to start their business. In both cases, the transaction costs associated with identify, negotiating and securing financing may be prohibitive.

Users may also possess real or defacto rights of exclusion. They may demand certain types of spaces or they may only be capable of paying only a certain level of rent. These may not match those required by the property owner. Users may also have long-term leases that afford them veto power over redevelopment proposals. Users without leases might also make claims on the space, citing squatters rights or using popular appeals to support their claims.

Planners and regulators can also complicate the ability to quickly or easily revitalize vacant space. Regulations including zoning and building codes are designed to promote order and efficiency and to protect health and safety. Obtaining approval to redevelop or rehabilitate a property involves processing fees, document requirements, staff reviews and on-site inspections which can impose substantial transaction costs. In simple cases, it may only be necessary to seek a Certificate of Occupancy verifying a user is allowed to occupy a space. However, redevelopment of a site, substantial renovations or tenant improvements, or a change in use[3] can trigger a more comprehensive review. As previously mentioned, the approval process is often multi-layered with applicants needing to satisfy multiple regulators reviewing the proposals compliance typically in sequence (i.e., zoning approval is required before seeking building approval). In many cases, additional reviews such as environmental reviews are required or public incentives are sought which may involve interaction with an additional level of government or quasi-governmental agency. In many cases, the specific actors within these agencies tasked with reviewing proposals do not have the authority to deviate from the specific standards set forth in plans and codes. Finally, plans and regulations in the US tend to focus on the long-term use of a site. These long-term projections can lead to miscalculations or disagreements about the most efficient or equitable use resulting in holdout behavior.

## 4. Anticommons, Informality, and Temporary Use

The role of plans and regulations in creating an anticommons situation bears additional exploration, particularly as it relates to temporary uses. The literature on temporary uses includes extensive discussions of how these uses can provide solutions to many of the problems presented above. Temporary retail can allow both businesses and property owners to test the viability of the relationship. It provides the property owner with cash flow from a vacant property or storefront without having to invest in significant tenant improvements or impede the opportunity to secure a more lucrative permanent user. It allows the business owner the opportunity to demonstrate the market for the business

[3] Change in use reviews are required for changes from one use class to another such as from office to retail, but may also be triggered by changes within a category if the uses are not considered sufficiently similar. For example, a change in use review would not be required for a change from a millinery to a flower shop, but would be for a change from a bank to a boutique or from retail to restaurant.

to justify sales forecasts and lending requests. Filling vacant spaces can also help create a brand and image for a neighborhood and build community, building a market for businesses and raising property values. They can temporarily activate a space and create visible changes in an underutilized building, lot or block while increase foot traffic and eyes on the street, increasing perceptions of safety (Temel and Hydn 2006, Overmeyer 2007, Oswalt, Overmeyer, and Misselwitz 2009, Blumner 2006). In essence, temporary uses temporarily resolve an anticommons by providing incentives to avoid strategic holdout behavior (e.g., property owners holding out for the most lucrative user) and reducing transaction costs (e.g., legal costs associated with lease negotiations).

Conversely, public sector plans and regulations and bureaucratic inflexibility in applying these regulations are often cited as being as much an impediment to temporary uses as permanent. One group advocating for more temporary and interim uses in Cleveland acknowledges that actors might find it simpler to act illegally than to try to conform to plans and codes, encouraging actors to "do your best to follow all the rules and keep everything by the book, but you make compromises and take short-cuts when absolutely necessary" (Pop Up City 2014, 1). It is not surprising that public sector regulation would prove to be the key veto preventing temporary uses as in using this to address an anticommons, public sector actors face an awkward problem. While there certainly are benefits to the public sector from allowing temporary uses, doing so undermines a fundamental justification for the plans and codes they are enforcing.

The most common types of plans and regulations governing real estate development in the US, comprehensive plans, zoning ordinances and building codes, are all predicated on identifying long-term, permanent uses for sites. Comprehensive plans present a community's vision of where their town will be and what it will look like 20, 30 or even 50 years in the future. The long-term nature of these plans serves several purposes. First, comprehensive plans are intended to provide a guide for capital improvements expenditures. The long time frame of these plans is intended to better match the time horizons for large capital improvement projects and to insure that capital expenditures are made in a way that best supports future growth. Second, it provides a guide for property owners, investors, business and residents on intended future growth allowing them to calibrate their own plans and investments to match. Zoning ordinances, like the plans on which they are (usually) based, present a snapshot of the pattern of permanent uses that are desired, or at least acceptable. Both also represent significant built consensus. Building codes are also designed around insuring the safety of permanent buildings and improvements.

When temporary or transient uses are addressed, the regulations governing them are more often than not designed to discourage or prevent these activities as undesirable impediments to reaching the desired end state. Many zoning codes contain no specific protocols for temporary uses. Others contain provisions only for specific temporary uses such as construction staging areas or seasonal Christmas tree sales. And when addressed, local codes, as Portland's Zoning Code does, will often explicitly state that temporary uses have "no inherent rights within the zone in which they locate" (Portland Zoning Code 2012, 296-1).

The problem facing public sector regulators is that public sector plans and regulations are not intended to promote temporary uses or facilitate immediate, flexible responses to changes in demand. Rather, they are to provide certainty. Allowing alternative uses of sites, even temporarily, undermines one of the most important bases upon which the plans and regulations are built. Comprehensive plans and zoning ordinances are inflexible and, unless regularly monitored and updated, largely static instruments that are not responsive to short-term changes. Yet part of their strength comes precisely from this lack of flexibility. Early arguments in favor of zoning made this case explicitly,

> "With a city entirely zoned, they [realtors] could assure purchasers of residential property that their neighborhoods would never be encroached upon by business, while on the other hand, zoning would give business property a touch of monopoly value. Accordingly the signs went up on vacant lots: "zoned for business," or "zoned for apartments," with the definite implication that such action on the part of the public authorities had resulted in giving the property a higher and more assured value than it would otherwise have"

Changing plans or regulations or granting exceptions too often would undermine this confidence and devalue the consensus represented by a plan. Returning to the anticommons framework, planners and regulators have a very strong incentive to engage in strategic holdout behavior and not encourage temporary or long-term uses that deviate from the agreed to permanent use.

This dilemma may explain why observers of temporary uses have noted a tendency for temporary uses to seek out informal spaces and solutions. While some temporary uses have engaged in illegal activities, many have sought out the "spaces of exception" created by regulatory regimes (Roy 2005, Porter 2011). A widely cited example of this is Park(ing) Day where groups pay parking meters and then temporarily turn the parking spaces into miniature parks. While turning a parking space into a park is not strictly permitted, neither is it specifically prohibited. The silence of most plans and zoning ordinances on temporary uses creates an opportunity (and challenge) by situating them in an ambiguous position. They are not the permanent uses formally allowed to exist, but they are not specifically excluded either. Rather, they are informal uses that exist outside the bounds of, or within the unregulated spaces created by, the normal planning regime.

Many temporary uses exist, at least initially, in these informal spaces. This position is often seen as a challenge requiring revision to local plans and policies to formalize. Formalization of these informal uses is typically dictated by powerful interests (Gebhardt 2013). Returning to Heller (1998, 641),

> "existing rights-holders, including local government agencies and the private actors who have invested in reliance on the current property regime, may cling tenaciously to their rights. Many now have plausible claims that their rights have vested, and redefining rights to bundle them more sensibly would amount to a compensable taking of their property."

The tendency toward informality also appears in the solutions that have been devised and advocated to respond to the constraints imposed by planning and regulatory regimes. Rather than deviations from existing plans and regulations, solutions focus on lowering transaction costs through informal activities and policies such as dedicated staff to provide technical support and facilitate permit applications, permitting and licensing templates, site inventories of spaces for temporary use, and informal coordination across government departments and agencies (Blumner 2006, Overmeyer 2007, Haydn and Temel 2006).

## 5. Case Studies

The following section presents three case studies that each highlight an aspect of temporary uses and their relationship to the anticommons and informality. The first case, food carts in Portland, Oregon, examines the ambiguous and informal space often occupied by temporary uses and the ways in which allowing these uses can lead to their entrenchment. The second case, pop-up retail in Chicago, Illinois, discusses the potential role of large institutional actors in facilitating temporary uses and the ramifications of introducing these actors as an intermediary. The last case, pop-up retail in Detroit, Michigan, explores the emergence of an active program to use temporary uses to revitalize neighborhood commercial districts and the difficulties of translating between the temporary and the permanent.

### *5.1 Food Carts in Portland, Oregon*

Unlike many cities, Portland has long allowed street vending and street food. Hot dog carts, catering trucks and coffee carts were fairly common activities by the mid-1990s. All foodservice businesses in Portland were and are regulated by the Multnomah County Environmental Health Department. Food carts must obtain a license from this department and are subject to semi-annual inspections. Up until 1997, mobile food vendors were not allowed to prepare food on-board. Instead, food had to be prepared at a commissary to which the mobile unit had to return every evening. Rule changes in 1997 allowed food to be prepared on-board and units to remain parked in a single location provided they remained capable of moving. These changes, and the relatively low cost of obtaining a license, facilitated growth in licensed mobile food vendors in the County from under 100 in 1997 to over 300 in 2000 and nearly 800 in 2013 (Multnomah County Health Department 2014).

While these rule changes allowed more freedom for food carts to operate, they initially occupied a legally ambiguous state under City of Portland codes. Food carts operating in the public right-of-way are regulated by the Portland Bureau of Transportation and are subject to elaborate and detailed rules regarding location, design, and hours of operation (Portland Municipal Code Section 17.26). However, no such regulations existed to govern food carts operating on private property. These food carts occupied an informal space left by the regulatory regime as they were neither explicitly allowed, nor explicitly prohibited by Portland's codes or regulations.

Interest in food carts swelled during the Great Recession amongst both entrepreneurs (many of whom had lost and/or were unable to find employment) looking to start an inexpensive business and property owners searching for a way to secure some return on underused property. This growing interest put pressure on the city planners to develop a formal approach for regulating the operation of food carts on private property. Rather than create a new ordinance and set of regulations, city planners chose to reinterpret existing code. Food carts would be allowed to operate on private property in non-residential zones. As long as they were less than 16 feet in length and had a working axle and wheels allowing them to be moved at any point, they were considered commercial vehicles and were exempt from most zoning and building codes. Food carts could not have any permanent structures – awnings or canopies could not touch the ground – and had to be fully self-contained – they could not have plumbing facilities. Carts with electrical service needed to pass an electrical inspection and were allowed a single A-board sign that needed to be approved under the sign ordinance (signs on the carts themselves were exempt) (City of Portland 2014). In addition, these policies are generally enforced on a complaint basis meaning that, if no one complains about an infraction such as the addition of permanent structures to a food cart, the City will generally overlook them.

As a result of the regulatory regime adopted by the city, Portland's food carts have clustered into food cart pods on private parcels throughout the city. This spatial arrangement is quite different from other major US cities and has contributed to the positive regard. Portland's food carts are now widely known for creating highly eclectic environments both aesthetically and gastronomically. Low barriers to entry are touted for allowing small entrepreneurs entry into the market and for encouraging experimentation. Portland's food cart pods each have their own identity which is often associated with the neighborhood within which they reside. Downtown pods typically lack amenities, while many neighborhood pods have tents, seating and restrooms. The pods have created activity on numerous formerly vacant lots or along the edges of parking lots[4]. While estimates of the total impact vary, food carts have also had a positive effect on tourism.

[4] This is enhanced by Portland's general walkability. Portland's city blocks measure 200 feet by 200 feet, approximately one-quarter the size of a block in most other US cities.

The development of food cart pods on private property has allowed the development of a unique food cart culture marked by diversity and longevity. While the long-term, stationary nature of Portland's food carts is an important element of their success, this has also resulted in the entrenchment of these temporary uses. Portland's real estate market has recovered from the Great Recession and there is significant demand for land for development.[5] Over the last year development proposals were announced for two long-running food cart pods. The resulting outpouring of support led to the rescinding of one of the proposals. The property owner of a third pod received an unsolicited bid for his property, but rejected it in favor of keeping the food cart pod. One of the first and best-known of these pods is located on a prominent parking lot near the center of downtown. While this parking lot has long been identified as a prime development site and falls within an area with the most permissive zoning in the city, the owner of the parking lot has expressed no interest in developing it further. The guaranteed return from the food carts and the potential negative reaction to the carts removal outweighs any potential return from a new development.

### *5.2 Pop-Up Retail in Chicago*

The Hyde Park neighborhood of Chicago has long been regarded as an island of relative affluence amongst a sea of poverty. Located on the south side of Chicago in the heart of what used to be known as the black belt (Burgess 1925), the neighborhood is home to two large institutions, the University of Chicago and the Museum of Science and Industry, and managed to retain a strong black middle class presence while surrounding neighborhoods did not. However, despite a potentially strong retail market, the neighborhood experienced a long period of commercial decline. Redevelopment under Urban Renewal altered the fabric of some commercial streets and perceptions of the south side as a poor retail market were applied to Hyde Park uncritically. Thus, while there was a market for retail development in the neighborhood, up until very recently, it has been largely underserved resulting in considerable leakage as residents and workers left to shop in other neighborhoods (South East Chicago Commission 2000).

In 2000, the City of Chicago and the University of Chicago began working together to address the dearth of commercial development. Targeting 53rd Street, an historic commercial street, the produced a revitalization plan and designated the area a tax increment financing (TIF) district with the vision of creating "a cohesive and vibrant mixed-use commercial district that provides a comprehensive range of commercial and retail uses" (City of Chicago 2001, 1). The plans called for working to expand and improve existing businesses, create an identity for the area, and address the need for parking and access. The City and University held multiple visioning sessions between 2007 and 2009 and conducted a survey of the University student body to determine the type of retail development desired.

Representatives of the University have been vocal about their interest in revitalizing the street to enhance "the quality of life for students and faculty who are used to the kinds of amenities you find in places like New York, Boston and Palo Alto" (Sharoff 2012). As a result, the University played a key role in implementing the plan by aggressively acquiring property along 53rd Street including the former Harper Theatre in 2002 and Harper Court shopping center[6] in 2008. These properties were redeveloped into a 600,000 square foot mixed-use project completed in 2013 that was intended to serve as a catalyst to

[5] The development of infill sites in Portland is strongly encouraged by the city and regional planning frameworks and the urban growth boundary that restricts the supply of ready greenfield sites.

[6] Harper Court shopping center was initially developed as a relocation site for small, neighborhood businesses displaced by Urban Renewal. It was largely financed by the University of Chicago and Archdiocese of Chicago and featured subsidized rents.

drive revitalization. The retail space in this project has largely been filled with regional and national chains, but rents have been too high for small retailers (Urban Land Institute 2012, Cholke 2013).

In addition to the Harper Court redevelopment project, the University has also purchased or negotiated long-term master leases for many of the other buildings along 53rd Street. Many of the previous tenants have been relocated or not had their lease renewed (Cholke 2013). The University has used these retail spaces to temporarily bring apparel, home goods and toy stores to the commercial district as pop-up shops. The stated reasons for using pop-up shops are to allow small retailers to test their concepts in the neighborhood and to provide local residents a wider variety of choices. It is also explicitly aimed at A a consistent issue identified through a variety of reports, analyses and meetings that few retailers have been willing to be pioneers where there is limited familiarity with the customer base. The pop-up shops serve to demonstrate a market for the types of retailers that had been identified as both retail types missing from the neighborhood and those that are difficult to attract (Sharoff 2012).

Currently, the third set of pop-up stores is finishing their run. The University closely screens and recruits the retailers that operate the pop-up shops. All of the pop-ups selected by the University are small retailers that have already had success in other neighborhoods in Chicago. In addition to identifying and recruiting the pop-up retailers, the University also provides funds to set up the space, covers insurance for the space and facilitates all necessary approvals. All three of the current group of retailers already operate successful stores in affluent north side neighborhoods. Thus far, the pop-up stores have been successful with operators stating that it was a "perfect way to get my feet wet" and "great because you can kind of test the waters" (Bishku-Aykul 2014). One of the pop-up retailers has transitioned to permanent businesses in the neighborhood (closing their existing shop on the north side), and another expressed interest but was unable to break their current lease (Cholke 2014). The pop-up retailers also help fulfill the University's commitments to both the neighborhood and the City that they made as part of securing development approvals to bring in local businesses that serve the neighborhood residents as well as the University community.

### *5.3 Pop-up Retail in Detroit, MI*

Pop-up retail has become popular in Detroit over the past several years as a potential solution for few proven markets, shrinking market base, and high retail vacancy rates. Temporary retail uses have emerged as a way to demonstrate market demand, increase vitality, create an identity and cultivate entrepreneurs.

A variety of neighborhood actors have worked as facilitators of temporary retail including business improvement districts, neighborhood organizations, and community development corporations focused on commercial development. In addition, a program citywide program called REVOLVE has been started by the Detroit Economic Growth Corporation, an organization working to promote neighborhood economic development. This program is specifically aimed at using temporary, pop-up spaces to recruit new businesses, encourage public and private investment, and change the image and narrative of neighborhood business districts (Revolve Detroit 2014, 9). They recruit, vet and link potential businesses and properties in target neighborhoods. They assist start-up businesses with training, support and funding. They provide a checklist for potential pop-up businesses that explicitly identifies costs and processing times for required tasks including business licensing, permitting and lease negotiations (Revolve Detroit 2014, 27-30). Also provided is contact information for permitting, insurance and equipment rentals as well as sample lease agreements.

One example of the use of pop-up retail spaces is the Chalmers Square redevelopment in the Jefferson-Chalmers retail district near the boundary of Detroit and Gross Pointe. Chalmers Square was a

redevelopment project that renovated three vacant, historic buildings into a mixed-use building with 47 affordable apartments and 17,000 square feet of retail space. The project was put together over a ten year period by the local business association who facilitated transfer of buildings from City ownership to the private developer and completion of Phase 1 site assessment. While the residential units were absorbed fairly quickly, the retail component did not (Jefferson East Business Association 2013).

The Jefferson East Business Association, working with the property owner and the American Institute of Architects, developed a plan to open the spaces for pop-up retail. Seven pop-up retailers were recruited to fill the five storefronts to operate on a temporary basis during the annual Jazz on Jefferson music festival. The event was dubbed June on Jefferson and ran through June and July 2013 (Clark 2014).

One of the pop-up retailers that operated during the event chose to transition from a temporary to permanent use. The Coffee and (_) shop selling coffee and whatever baked goods the owner felt like making that day. The site lacked kitchen facilities. The owner baked the goods at a separate location and brought them to the shop. The shop attracted a strong neighborhood following, but closed at the end of its pre-determined temporary run. After a short hiatus, the owner decided to attempt to open a permanent business in the temporary location and was allowed to reopen her temporary business while undertaking the necessary work to prepare the space and acquire the necessary approvals (Trudeau 2013).

Despite having support of the Business Association and a cooperative City staff, the process has lasted over a year. Initially, the City was going to force her to close the shop while she pursued her permanent Certificate of Occupancy at the expiration of the Temporary Certificate of Occupancy. After the intervention of the Business Association, she was able to stay open during the process (with only a brief closure to finish construction). It took months of work to comply with historic preservation, building and sign permit requirements (Trudeau 2013, Trudeau 2014, and Revolve Detroit 2014).

Revolve Detroit uses this case as an example of the difficulties of transitioning from temporary to permanent use. The lessons learned from this particular case are instructive. They note the significant difference between planning for and executing a temporary use and a permanent use. Additional due diligence is necessary to understand the existing space and what level of investment and approval will be necessary to maintain a permanent business in that location (Revolve Detroit 2014). Designing, financing and building a permanent space requires knowledge and expertise well above that needed to cobble together a temporary space. Interior space, fixtures, furniture, and signage that might have previously been borrowed or rented, one of the hallmarks of temporary uses, must now be bought or built. Permits for permanent uses are considerably more expensive than those for temporary uses. The level of scrutiny applied to permanent uses by the local authority is also much higher. Permanent uses must meet all city codes including zoning, structural, mechanical, plumbing, and electrical.

While temporary uses may be allowed to operate in spaces not intended for that type of use (for example, the coffee shop occupying a retail space without a kitchen), permanent uses may not. Changes in use, even those that may not require a zoning amendment such as a change from a retail to a restaurant use, may trigger an additional review resulting in added time and cost. Even without a change in use, becoming permanent will require obtaining a Certificate of Occupancy. Technical assistance on a variety of subjects including business operations, access to capital, legal assistance and local authority approvals are very often necessary to insure a successful transition from temporary to permanent. Lease negotiations can also be time consuming and complicated.

## 6. Conclusions

In the case of food carts in Portland, food cart operators were able to identify and occupy an informal space within the regulatory regime by locating their carts on private property. Supportive property owners and politicians provided space for planners in Portland to formalize this arrangement by permissive interpretation of existing ordinances and codes, navigating a narrow path between upholding existing plans and codes while facilitating the temporary use of vacant lots and parking lots. While this maneuver is widely regarded as successful, as Portland's food cart pods have gained local and international acclaim, they have also become deeply entrenched. The strong claim asserted by the food cart operators to the sites they now occupy has created a new anticommons, albeit one that might not be particularly tragic. However, it does serve as a cautionary note.

The Chicago pop-up retail establishments demonstrate the potential value provided by temporary uses for efforts to revitalize struggling commercial districts. The temporary uses in this case were employed in conjunction with a broad revitalization strategy that also included a large, catalytic redevelopment project. They filled an important role in this larger strategy by providing space for small businesses and for recruiting specific types of retail businesses identified as lacking in the neighborhood, satisfying neighborhood resident demands. The pop-up shops served as a demonstration of the potential of the market to support these types of businesses. In this case, the anticommons was overcome by a single, powerful actor, the University of Chicago, absorbing the transaction costs and using its power to assemble the necessary rights. A hefty endowment and strong bond rating rendered investor veto meaningless and deep ties with the City eased permitting issues. However, in doing so, it displaced existing local businesses that were deemed less desirable. This type of cooptation of temporary uses to serve the needs of powerful actors does not fit easily into the narrative that is often told about temporary uses. Yet with the growing popularity of temporary uses, it would not be surprising to see this strategy adopted more widely.

Finally, the Detroit case vividly illustrates the use of temporary use to activate vacant retail space and reads like an example of best practice. Part of a larger citywide effort to use pop-up retail to attract small entrepreneurs and investors to struggling commercial districts, the June on Jefferson event achieved multiple ends. It filled Chalmers Square's empty retail spaces temporarily providing the property owner with a short term return and the business operators with an opportunity to test the market and their concepts. The event also raised the profile of the commercial district citywide. The process was facilitated by a citywide non-profit and a neighborhood business association working with a receptive city government which lowered the transaction costs for the actors involved. The event also resulted in a best case scenario with one of the pop-up retailers deciding to transition to a permanent use. However, the process of transitioning was very difficult with the regulatory regime creating particularly significant barriers. The transition took much longer and was much more costly than anticipated. This demonstrates that, while temporary uses may provide a short-term solution to an anticommons, they do not necessarily resolve it.

The three cases presented above further illustrate that temporary uses may be valuable contributors to revitalization and emphasizes the importance of for providing an avenue within planning for temporary uses. They demonstrate the ability of temporary uses to provide a short-term solution to the anticommons. However, these cases also reveal some of the potential drawbacks of temporary uses including entrenchment, cooptation and transition. All three cases illuminate the role that powerful actors can and do play in sanctioning and enabling temporary uses.

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# The integration types of agricultural space in urban community scale: The case study of Hamburg, Germany

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*Faced with agriculture recession, food crisis and a series of environmental problems caused by urbanization, the introduction of urban agriculture and promotion of shifting city-model from a consumer to producer is one effective strategy to achieve sustainable urban development.*

*Urban community is a certain self-organization and could reflect differences in different social factors. It's a good space for urban agriculture and an appropriate platform to carry out agricultural activities. This paper studied the integration model of agricultural space in urban community scale by choosing a representative city, Hamburg, Germany, as empirical objects. We aimed to explore the integration models of agriculture in urban community, figure out the features of spatial layouts in different models and analyze on participants in corresponding communities.*

*With literature review and field research to obtain one-hand and second-hand information, firstly we collected the types of agricultural space in communities of Hamburg, then analyzed and compared representatives for each type in terms of agricultural space layout model and participation of people, etc. Descriptive statistics is the key method used for collected materials.*

*Conclusively, it has found that in the city of Hamburg, community-scale spatial patterns of agriculture include the residential community, enterprise organization, city park and commercial-business community. Different types have their own emphases according to space layout, including horizontal, vertical, green roofs, etc., corresponding with different integration models and specific functions. Meanwhile, demographic structures of the participants, forms of participation and interaction modes vary based on the types of agricultural space.*

## 1. Introduction

The city has experienced a transition from an agricultural society to an industrial society and till today, an information age. Along with the rapid development of industrialization and urbanization, urban area expanded rapidly with a massive rural-to-urban influx. A lot of energy and natural resources were devoured, while agricultural civilization was considered a laggard civilization that hindered urban development, and had been gradually squeezed out. Urban and rural areas became more and more alienated. Their developments showed increasingly imbalance as well, which exacerbated the deterioration of the above crisis, and posed great challenge to sustainable development.

Most recently, information bloom enhanced human being's living standards significantly. Population issue, food security, energy shortages, environmental degradation and other practical issues received more attention. Urban and rural areas relationship and their partnership on development have been reviewed. Urban agriculture is to make agricultural production, supply and consumption concentrated in urban area. It will help improve the self-sufficiency of cities, and to a large extend, ease the food, energy, environment pressure and other issues, promote the change from consumer aptitude to production aptitude which is more flexible and resilient.

## 1.1 Definition of urban agriculture

Urban agriculture first appeared in developed countries across Europe, America and Japan at the first half of the twentieth century. Then it was spread and developed rapidly in other developed countries and regions. In late 20th century it has been widely introduced to the developing world. Compared with conventional agriculture, urban agriculture is a brand new concept. From the dependency of agriculture and urban development, urban agriculture is not a specific form of agriculture, but a concept which emphasize the synchrony and synergy of agricultural and urban development (Cai, Yang, 2008).

### 1.1.1 Concept of urban agriculture

The concept of urban agriculture has yet to form a unified conclusion worldwide, but the connotation of urban agriculture has basically reached a consensus. First, the spatial layout of urban agriculture mainly involves inner-city and suburban areas. Second, the carrying out of urban agriculture is to fulfill urban demands, including several aspects of the production, ecological, landscape in essence. I defined herein for urban agriculture: it is a new type of modern agriculture locates in the city center or suburban areas, focusing on integrating production, life and ecology to serve the city in a better way.

### 1.1.2 Functions of urban agriculture

As a new type of modern agriculture, urban agriculture has a couple of new features. From city demand fulfillment perspective, besides economy function, we're developing more functions of urban agriculture such as ecological function and social function, thus full functionality agriculture.

In conclusion of various definitions of urban agriculture functions, although the expression is different, but the essence is consistent, namely: it has many functions simultaneously, economic, ecological and social cultural. It provides high quality agricultural products for urban residents and meanwhile provides a large number of job opportunities. It helps improve the ecological environment of the city to a large extent. It also fulfills increasing residential spirit demand and reflects educational value.

### 1.1.3 Types of urban agriculture

According to the layout of spatial location, urban agriculture can be divided into two forms –suburban agriculture and inner-city agriculture (Mougeot, 2000). Suburban areas are less restricted by land. So there is more macro-level large urban farm, such as ecological agriculture garden, allotment garden, leisure farms. Inside-city areas are impacted by the built environment. So it appears in the forms of mid-level residential community, such as small business farm, agriculture theme parks and micro-level presence as roof gardens, squares farm, vertical farms.

## 1.2 Research background

From early 20th century to recently, studies of urban agriculture has become a research field addressing economic, social and environmental issues, involving interdisciplinary research in the field of agricultural science, economics, geography, architecture planning, sociology, ecology, and many other disciplines. Based on theoretical research, urban agriculture practice was also carried out adapting to local conditions, and became a hot topic of urban construction and development worldwide. Based on different extend of economic and social development, climate condition, agricultural infrastructure, urban agriculture development pattern differs from countries to adapt to their own characteristics.

There are mainly three patterns: first is the economic function-based model, represented by massive urban agriculture along Atlantic coast in US and highly intensive agriculture in Israel. This model strengthens people's initiative and weakens the natural environment initiative in ecological economic system. Second category is social ecologic function -based model, represented by European cities, such as Germany's garden city, UK’s Forest City. This model emphasizes harmony between human and natural environment, requiring government’s issuance of laws, regulations and policies to regulate the development of urban agriculture. Last category is economic and social ecological function-mode, represented by Japan. This model emphasizes the use of advanced science and farming techniques. Agriculture resides in urban ecological environment, so as to provide certain amount of agricultural products and perfect public goods (Li, Xu, Wang, 2006).

While developing countries (South America, Asia, and Africa) place urban agriculture to alleviate the country's economic pressure, improve the urban environment and enhance the quality of life, make urban self-sufficiency and promote the steady development of the city.

## 1.3 Research issue and objectives

### 1.3.1 Research object and scope

Current research on urban agriculture has penetrated multidisciplinary field. This article is based on architectural planning aspect, covering agriculture and urban spatial integration model research and

discussion, focusing on selected representative on urban agriculture activities in the German city Hamburg as empirical study.

Urban Community is at certain level self-organized and could reflect differences in different social elements and it is also a good platform to create urban agricultural space and carry out agricultural activities (Gao, 2012). Therefore the scope of this article is limited to urban built-up area.

#### 1.3.2 Research objectives and significance

In this paper, the study on community level spatial pattern of agricultural research of Hamburg, is to explore the following three points: 1) What're the integration models of agriculture in urban communities; 2) characteristics in different modes, including integrated form, special layouts and agricultural function; 3) community corresponding analysis, including forms of participation and interaction models vary based on the type of agricultural space. May hope this paper provide a reference value of urban agriculture activities undertaken in the context of urban built-up areas through empirical research on the practical level.

### 1.4 Methodology

In this paper, the writer used literature review and field research to obtain one-hand and second-hand information about urban community agriculture space. Literature review is mainly used in previous study, with a view of urban agriculture concept, function types, and the development process to get comprehensive understanding. And then analyze and compare representatives for each type in terms of agricultural space layout model and participation of people.

Field research focused on study subjects. Firstly understand the types of hamburger community agriculture space, then for different types trying to select one representative agricultural space to analyze and compare layout mode and participation status. In the field survey, the writer collected data and information through pictures, interviews, follow-up feedbacks. And descriptive statistics is the key method for collected materials.

## 2. Case study

### 2.1 Overall introduction of Hamburg

As one of Europe's great ports, Hamburg is located in the northern part of Germany, which is the second-largest city of this country, home to 1.8 million people within its city limits and 4.3 million in the metropolitan region (Braunstein). It is made up of seven boroughs, which are Altona, Bergedorf, Eimsbuttel, Hamburg-Mitte, Hamburg-Nord, Hamburg and Wandsbek, accompany with almost 2500 bridges spanning the canals and waterways (Figure 1).

Figure 1. The location of Hamburg in Germany and the distributions of its boroughs
*Source:* http://en.wikipedia.org/wiki/Hamburg

Hamburg has served as a trading hub for centuries, and in modern times as a major industrial center in Germany. Still, Hamburg is impressively green when compared with most cities of similar size, with over 16.7% of forests, recreation and green spaces in urban area. In 2011, it gained the prestigious European Green Capital mainly for its achievement of high environmental standard, further ambitious goals for environmental improvement and sustainable development.

In those further specific planning, there is one called A Green Network, 'will connect parks, recreational areas, playgrounds, gardens and cemeteries through green paths' (European Commission, 2011, p23). The plan aims to form a green link from the outskirts to the city center with two inner loops and several landscaped axes together (Figure 2). It is a great opportunity to combine different types and scales of green lands and public spaces into a greener network in order to make the city more sustainable and resilient. Urban agriculture spaces are also as public greenery lands included in the green network which helps to have a more potential development of its own and better connection with other urban public spaces.

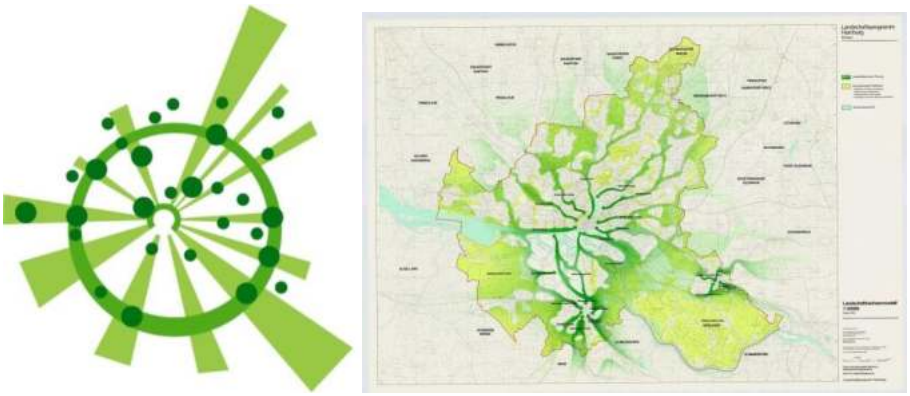

Figure 2. The green network plan of Hamburg
*Source:* http://www.hamburg.de/gruenes-netz/

### 2.2 Basic information of urban agriculture in Hamburg

Urban agriculture has a long history and successful experience in the development of Germany. In the early 20th century, the first form of urban agriculture, "allotment garden" appeared in Germany, and after 100 years of development and improvement, the current urban agriculture works vigorously with a set of ecological, social and economic functions. Its main purposes are: 1) to enhance the ecological and environmental quality of the city, 2) to create entertainment, farming experience and learning platform for education, 3) to provide healthy and safe green fruits and vegetables.

As Germany's second largest city, the urban agriculture in Hamburg has a relatively long history. Especially in recent years, with emphasis on the ecological environment of the city and the pursuit of sustainable development, the development of urban agriculture is in great esteem by the government and positive response of the public to form a government -NGO- citizens system, including the top-down and bottom-up implemented in two forms.

Among them, the government for the development of agriculture and urban agriculture enacted The Hamburger Agricultural Development Program 2015-2020, which clearly referred that urban agriculture is an important part of the Hamburg economic policy, and will promote the development of urban agriculture through a series of measures to protect its space, function, technology and other aspects (Meinecke, 2015). In addition, several projects are with the government's guidance and assistance.

Furthermore, NGO has played a very important role at the launching of urban agriculture, currently there are several civil society organizations in Hamburg as CSA Hamburg, LGH (Landesbund der Gartenfreunde in Hamburg EV) and so on, who design, build urban agriculture space and organize unregularly activities to attract public members to participate, better play the role of urban agriculture. Meanwhile, the Hamburg public enthusiasm for urban agriculture is also very high that urban agriculture activities carried out by the growing number of people spontaneously, such as moving farm, street gardens, etc.

## 2.3 Study on agriculture spaces in urban community scale

### 2.3.1 Urban community and integration of urban agriculture spaces

The word “community” is derived from old Latin, which was firstly applied by Ferdinand Tönnies, Germany’s sociologist, in his famous work “Community and Society” (1887). One broad definition which incorporates all the different forms of community is “a group or network of persons who are connected (objectively) to each other by relatively durable social relations that extend beyond immediate genealogical ties, and who mutually define that relationship (subjectively) as important to their social identity and social practice.” (Anonymous, n.d.). This shows that there are several characteristics of community, be: 1) in certain geographic region, 2) having a certain number of

population, 3) common interests and consciousness among residents, 4) with relatively intimate social interaction. In this paper, the concept of community keeps the same as previously mentioned.

According to the degree of intervention, agriculture and urban space integrated model is divided into the following four categories: reservation, insertion, substitution and reconstruction. Among them, the reservation refers to keep some existing agricultural space in the city; insertion means, full use of idle space into agricultural space when maintaining the original function of urban space; substitution means partial function replacement in the urban space to convert other space function into agricultural function; while reconstruction refers to building new urban space systems and space unit.

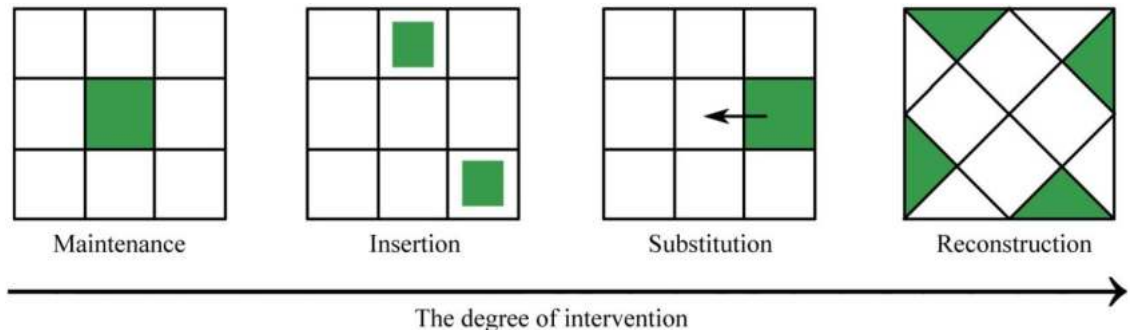


Figure 3. The integration modes of urban agriculture
*Source:* writer's own drawing

From the reservation to the reconstruction, the degree of intervention in the agricultural space to the city enhances gradually. Wherein the reconstruction as a subversive space construction, will form a new city structure, so it is more in the planning and construction of a new city but has greater difficulty in the city has been built. The other three modes are easier to integrate in the space within the city and suburbs, with a strong operational.

### 2.3.2 Types of urban community agriculture

According to the relationship with the land, the space for urban agriculture may include urban green space, city squares, buildings, etc. Taking into account the compatibility of urban agricultural production and urban construction land as well as the community connotation, the paper divides the basic unit of urban agriculture in the community level into four types: residential areas, parks, enterprise organizations (schools, hospitals, units, etc.) and commercial business districts.

With the Collection of information from literatures as well as field research, the current agricultural space in the city of Hamburg includes the following four types:

**A. Allotment Garden (Kleingarten)**
Allotment garden originated from Germany in nineteenth-century. It means the farmer or a specific organization offer the land and help the plant management, then urban residents rent and participate in

farming, harvesting their products which owned to them. Currently in Hamburg inner city, allotment gardens are mainly by certain NGOs planning and organization, to provide the public different locations in the city for the planting and harvesting of crops. One representative NGO is the LGH (Landesbund der Gartenfreunde in Hamburg E.V.). Now it has already have almost 1400 hectare lands, 33000 allotment gardens in 9 districts all over the city, managed by the club members (LGH, n.d.).

**B. Community Garden (Gemeinschuftsgarten)**

Community gardens is a very famous type of urban agriculture in Hamburg in nowadays that there are some different forms, like stationary farmland, moving garden, roof agriculture and so on, which provide fresh produce and plants as well as satisfying labor, neighborhood improvement, sense of community and connection to the environment (Hannah, Oh, 2000). To some extent the community garden is related to the allotment garden, but the existing forms of it are more flexible and abundant.

**C. Intercultural Garden (Interkulturelle Gärten)**

Intercultural garden is a characteristic type of urban agriculture in Germany. It firstly grew up as a project of the German Association of Intercultural Gardens (Interkulturelle Gärten e. V.), and the goal is a further intercultural competence and racial integration among refugees, immigrants and natives. The intercultural garden consists of planting vegetables and fruits as well as public space for community events and activities.

**D. Professional Garden**

Compared with the types of urban agriculture above, professional garden is a comprehensive concept. It includes the gardens especially for culture and education, the gardens owned by certain organizations, such as school agriculture, company agriculture etc. Now in Hamburg this type of urban agriculture is having a rapid development that it offers the agricultural experience to wider range and more citizens.

Corresponding to urban community, the urban agriculture space mainly includes community-scale in meso-level and scale of buildings and spaces in micro-level. It should be noted that, in the paper, private gardens and other private space are not included. When matching the four types of community agriculture basic unit and the types of urban agriculture in different scales, there is a table to show the proper agriculture forms in different communities (Table 1).

Table 1. The characteristics of different community agriculture

| | Residential community | enterprise organizations | City parks | commercial and business area |
|---|---|---|---|---|
| Allotment garden | √ | — | √ | — |
| Community garden | √ | √ | √ | o |
| Intercultural garden | √ | o | — | — |
| Professional garden | √ | √ | o | — |

| | | | | |
|---|---|---|---|---|
| Roof farm | √ | √ | — | √ |
| Vertical farm | — | o | — | √ |
| Street garden | — | — | — | √ |
| Square farm | √ | — | — | √ |

### 2.3.3 Research on different types of community agriculture in spatial layouts

According to the basic four types of urban community agriculture, the writer has selected several representative cases of urban agriculture in Hamburg that own to different types in order to study on and compare the characteristics of integration models, spatial layouts and the space functions in different community agriculture types.

**A. Urban agriculture in residential community**

The residential community is the most common form for urban agriculture in the city. Closely related to people's daily life, residential agriculture offers a public space which is attractive to the residents for participating and experiencing.

- **Gartendeck**

The Gartendeck is an urban agriculture project in Hamburg St. Pauli, working as a temporary roof garden on a parking deck. The roof area offers 1000 sqm for flexible agricultural spaces, like around 650 baker boxes and a container. This garden offers green vegetables planting, herbs growing, and also there are three beehives and a worm box.

This residential community garden is a moving farm that every week it has regular opening time to welcome all the residents in neighborhoods coming by and participating in. As the self-organized community center, it offers a rent-free and use-free space for neighborhood meetings, sociocultural facilities, collective gardens etc. to improve the integration and communication among residents and help shape new forms of urban community with locally food production. The integration model of it is insertion, which means to turn the fallow land into productive green (Figure 4).

Figure 4. The location and image of Gartendeck
*Source:* http://www.gartendeck.de/

- **Keimzelle**

The Keimzelle is located in Hamburg as a small social garden since May 2011. In the garden, variety of vegetables and herbs are grown as well as fruits to offer the residents a natural environment with plants and insects that not as likely to find in a big city. Everyone can use the site jointly, whether for gardening, a meeting or just a short break.

This site lies in the road turning as a green plaza before, then turned its function to the urban agricultural space. The integration model of this form is substitution that actually the garden is still a greenery in the city but add the social and economic functions in accompany with the environmental one. The cultivation forms in the garden include the stationary land and mobile boxes, which offer the participants more chances to join in the urban agriculture activities to take over the design of their living and working environment and especially a part of the food production back into their own hands (Figure 5).

Figure 5. The location and image of Keimzelle
*Source:* http://keimzelle.rindermarkthalle.de/

The above urban gardens are two typical examples in residential community in Hamburg, and with the information the writer has searched and the field research in the city, there are some more types of community agriculture in residential areas, such as the allotment garden, cultural and educational garden, etc. The main integration models are insertion and substitution with both stationary and flexible spatial layouts in relatively small sites.

**B. Urban agriculture in school**

As one of the representative types of enterprise organizations, the school is a proper subject to implement the urban agriculture that offer the students knowledge and practical experience about the agriculture. Hamburg is paying attention to the school garden in different education levels, from kindergarten to the university, there're many agricultural activities happened.

- **Ganztagsgrundschule**

This school is located in Hamburg Bernstorffstraße 147, including a primary school accompany with a nursery. It has a big campus with a school garden on the south side of the main building. The school consists of seven parcels, each of which is assigned to a class.

The reason for creating a school garden next to play and sports facilities is to bring the city kids to nature. A school garden provides the opportunity to see plants from seed to harvest for the students to design the ground, experience in the agriculture space and finally eat the vegetables and fruits of their own work. Not only for the spare time, there are also some relevant classes taking place in the garden, which contributes to health education as well as the social experience (Figure 6).

Figure 6. The garden and agricultural activities in Ganztagsgrundschule
*Source:* http://www.schule-bernstorffstrasse.hamburg.de/index.php/article/detail/1037

The Hamburger Bildungsserver accounts and shows some basic information of the school garden in Hamburg. To collect the information together can find the main characteristics of current school agriculture. Firstly, the gardens extend among all the school levels with the main functions of education and social experience. The types of farmland mainly include the public ground and roof gardens, and in some schools, the agriculture spaces also exist in the buildings like gym and lab. What's more, both inside and very nearby the school of the garden exist at the same time.

### C. Urban agriculture in city park

The parks work as attractive public greenery spaces in the city's green system. Traditionally, parks offer ecological environment and places for social communication, while in nowadays, urban agriculture has emerged in some city parks in Hamburg, creating more abundant greenery forms as well as functions of the park.

- **Hammer Park**

The Hammer Park was belonging to the family Sieveking in 1826 and less than a hundred years later, it transformed the originally landscape of English style garden as a public park in Hamburg. With at

least 16 hectares, it offers plenty of space for communication, play and fun.

Since 1982, there is a herb garden in the Hammer Park. The herbs can be cultivated as well as harvested by the citizens. The herb garden was formerly used well, but later became oblivion over some years that the variety of herbs decreased and the herb signs and information board turned empty. Trying to make the garden more attractive, the organizer has dealt with this issue to search for effective solutions. So far, several effects have been achieved, such as more herb diversity, better management with the support of certain club, regular events and herb festival, etc. (Glöckner, n.d.). In 2013, the garden has received the support of North German Foundation for Environment Development to offer a herbal workshop for seniors. With those efforts, now the agriculture activities in Hammer Park work well, making a creative agricultural space opening to all the citizens (Figure 7).

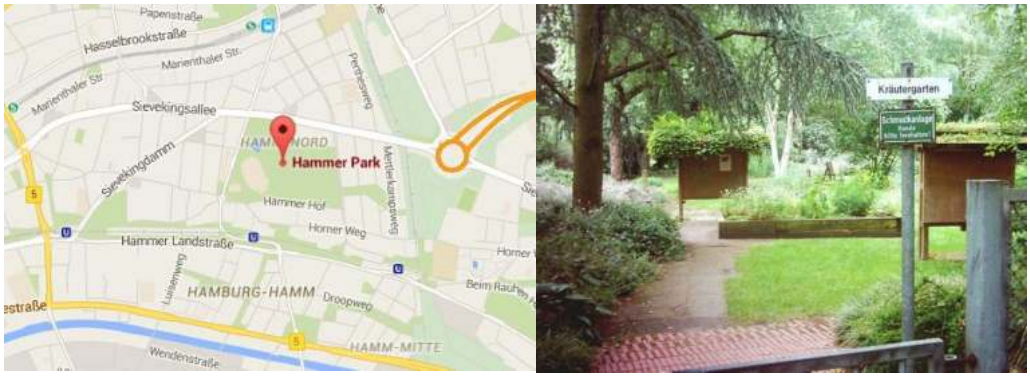


Figure 7. The location and image of Hammer Park

*Source:* http://www.google.com/maps & http://de.wikipedia.org/wiki/Hammer_Park

Compared with other urban community agriculture spaces, the advantage of city park is that it offers bigger green and public space to create agriculture production and activities. The common practice is to divide a certain area in the park as agriculture space, with unified management and unlimited participation. The integration models are mainly reservation and insertion, and the stationary land is the prior form for cultivation.

## D. Urban agriculture in commercial and business community

The commercial and business area is generally located in the central and sub-central parts of a city. In comparison with other areas, the commercial and business community seems with higher density, more complex context and less functional public spaces for agriculture. So trying to find more fallow land for urban agriculture is the key point.

- **Kallersche Gärten**

This project was aroused by Keller, a 79-year-old grandpa in 2003, on the traffic islands at Barcastraße/Ecke Ackermannstraße. It is located in the center of Hamburg old city as a typical example to make full use of fallow space in commercial and business area.

In the first few years, the garden was the responsibility of the old man dealing with the planting and reservation, but after his death in 2011, more and more citizens around this area even from other parts of the city joined in the urban agricultural activity, opening up more land on the traffic islands and the street green belt. The green plants and flowers not only beautify the environment, but also supply the green agricultural products for the citizens (Figure 8).

Figure 8. The location and image of Hammer Park

*Source:* http://www.google.com/maps & http://www.kallersche-gaerten.de/

### E. Summary of urban agriculture characteristics in different communities

After the analysis on typical cases of different community agriculture and some further related information from internet and literatures, the writer summarizes the characteristics of different communities in the aspects of integration model, spatial layout and main function (Table 2).

Table 2. The characteristics of different community agriculture

| Type | Integration model | Spatial layout | Main function |
|---|---|---|---|
| Residential community | Insertion / Substitution | Fixed / Mobile Ground / Roof | Improve the communication and locally food production |
| Enterprise organization | Insertion / Reservation | Fixed / Mobile Ground / Roof | Educational and social functions for specific groups |
| City park | Insertion / Substitution / Reservation | Fixed Ground | Visit and experience the agriculture landscape and activities |
| Commercial and business area | Insertion | Fixed / Mobile Ground / Roof | Full use of fallow space to create agriculture landscape |

### 2.3.4 Participants involved in agricultural activities

Relying on certain involving people, the community agriculture space has different target groups

according to the types, layouts and functions of it. In this paper, the urban community agriculture is defined in four different types: residential area, enterprise organization, city park and commercial-business area. The demographic structures of the participants, forms of participation and interaction modes vary based on the types of agricultural space.

### A. Demographic structures of participants

In the residential community, the agriculture garden is mainly focusing on the residents in this area as their target group because of the proper service radius and the functions of residential agriculture, offering a public space to improve the communication and integration among residents and create a locally production environment. All the ages are invited.

The enterprise organization like school is the specific area for fixed service groups. So the related participants are mainly the people in the organizations. For example, the agriculture space in school is for the students and teachers only on educational and social functions.
For the city park, the urban agriculture is more open to all the citizens in the city for visiting and experiencing, while the commercial-business area is relatively flexible in demographic structure of participants according to the agriculture forms.

### B. Forms of participation and interaction modes

Generally speaking, in spite that the enterprise organization is owned to specific groups, participation and interaction modes of other three types of community agriculture include two main forms, unlimited participation and membership participation. The membership form usually exists in the allotment garden, which mainly in the residential community and in some professional parks, while the unlimited participation distribute in all the three types. What's more, no matter of which types, the citizens can experience the entire process from sowing to harvest.

## 3. Conclusions

Firstly, the paper studied the research background, content and development process of urban agriculture, then defined the study range in the urban community level and selected German city of Hamburg as the research object. Based on the types of agriculture inner the city and the divided basic units of community agricultural types, the writer analyzed a few representative cases, focusing on the integration types, spatial layouts, functions and participants in different community agriculture types.

Conclusively, urban agriculture in Hamburg shows good momentum that urban agriculture works in all the types of residential communities, enterprise organizations, parks and commercial business district, both the forms of variety agriculture gardens in meso-level and small farms in micro-level attached to the buildings and sites.

Due to the low replacement rate of public lands, the integration model in commercial-business area is relatively simple, mainly the insertion; while the city park is most abundant, including the forms of reservation, insertion and substitution. Each community has a variety of agricultural space forms, including ground, roof, fixed and mobile, etc. The main functions of different types have own emphasis, but the core lies the social, environmental, economic integration, which pays more attention to the effectiveness of the social and environmental aspects.

Because of the target groups varying from different community types, the demographic structure, participation forms and interaction patterns are not the same. But all the communities offer participants personally involving in the whole process of production, which makes urban agriculture more practical significance through the communication and interaction with the participants.

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# ROLE OF SCALE LEVELS, UNITS AND LAYERS OF BUILT ENVIRONMENT IN PLANNING PROCESS

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Keywords: planning system, built environment, scale levels

*Abstract:*

*Gradual changes in social sphere, politics and economics (in context of Czech Republic accentuated in last twenty-five years of rapid growth following neo-liberal shift in planning policies and urban management) have serious impact on transformation of forces that are shaping our cities nowadays. Notable increase in range of project sizes (often including large portions of public space), varying typology and forms of development, shift in periodicity of changes in urban structure results not only in ambiguity in current notion of "public" and "private" both in spatial sense and division of responsibility, but as well in disconnection between planning tools and real processes in built environment, thus increasing instability and "fuzziness" in roles and responsibilities within the system.*

*In this context, the master planning system can hardly be derived only from institutional responsibility. The paper therefore explores alternative point of view on decision making process in urban planning and architecture, based purely on built environment and its parameters. The layers of urban environment (public spaces, built mass, infrastructural systems, programmatic pattern etc.) are examined and systemized using case studies of different urban setting and theoretical models. The research sets up a comprehensive framework of singular planning decisions that consequently form the urban structure by studying syntactic units of built environment and their role in different scale levels. In today's situation demanding flexibility in decision-making process, the results can serve as a ground for optimization of urban planning processes, standards and legislation.*

## 1. Introduction

Gradual changes in society and economics have significantly influenced the mechanisms that shape the form of contemporary cities. The significant enlargement of projects size diversity, the expansion of building typology range or the shift in the periodicity of changes in different layers of built environment have all led to a lower predictability of development, and greater demands placed on the tools of urban planning. Construction of public systems (including even such matters as public space) frequently comes under the control of the private sector. As a result, we find an increased ambiguity between public and private responsibilities, further accompanied by a loss of compatibility among urban-planning methods and other processes within the framework of urban development and the organisation of built environment in general.

The situation in the Czech context has, moreover, been accelerated by developments over the past 25 years, related to the sweeping political and economic changes in society since 1989. Radical shifts in property and particularly land ownership, along with significant urban growth, have been accompanied on the other side by a significant limitation of the role of the public administration in organising built environment, significantly below the level common in Western Europe.

For orientation within this context and the search for adequate strategies for the possible redistribution of responsibilities, it is essential to abstract from the current institutional framework of the system of urban planning and to examine the organisation of built space in terms of its physical essence and internal organisation. The theme of the presented work is henceforth the systematic description of the components of built environment and the issues connected with the organisation of its development and management within a hierarchy of proportional scales and units derived from the actual organisation of the environment. Specifically, the goal is to describe the relation of components of the built environment to their various scales, in other words how are the individual subjects of regulation related to scale levels and spatial units, how are they described within these units, how the methods of working with them have changed and on what scale they manifest themselves spatially. Equally the aim was to show the tie between the scale levels of the built environment and key decisions for the shaping and regulation of the city.

The paper describes the phenomena that are related to the given scale in general, i.e. without direct specification of the interface between public and private (responsibilities). This interface, it must be noted, varies dramatically with the amount of investment, method of construction, and needs for coordination in each specific locality. A great many of the themes described below could, therefore, be the subject of private decision-making, yet this does not mean that they can be omitted from the process of organising built space – only that the responsibility for them in a specific situation is entrusted to individual developers.

Presented in the text are partial results of a broader research assignment *The local plan in the system of urban planning in the Czech Republic* under preparation at the CTU Faculty of Architecture in Prague. The research is primarily oriented towards themes connected with larger cities, though nonetheless selected parts have been verified, in terms of the broader scope of description specifically with regard to urban and land-use planning systems, for smaller settlements. The work primarily concerns the common residential and mixed-use environment. At the same time, it also focuses on specific types of structures (large enclosed compounds, major industrial facilities etc.) and the expansion into the rural area and descriptions of themes related to the organisation of the landscape.

## 2. Units of the Built Environment

The presented text is based on the assumption that the built environment is structured into units that roughly correspond to the following descending classification:

- town
- district
- neighbourhood
- block
- plot / house
- flat
- room

These units are derived from common terminology used to describe parts of the built environment. Various methods are used to address them, from legislation regarding land use to a broad palette of theories of the built environment – from the Central place theory and it'shierarchies (Christaller, 1933) through the hierarchical structure of individual settlements (Doxiadis, 1966) up to the levels of the Open building system(Kendall, 2000).

In turn, these units (at least at the lower levels of the hierarchical system that the user commonly encounters immediately) are graspable by human senses (i.e. usually visible) and consciously distinguishable (i.e. usually commonly conceivable). In addition to being a physical whole, each

unit also reflects the social image and shared concept of a community (Kohout, 2010). At the same time, this scale of units is bounded by the parameter of the lifespan and periodicity of replacement of the individual elements (Kendall, 2000). Invariably, it holds that the lifespan of the elements on the lower hierarchical levels tends to be significantly lower than the lifespan of higher elements (typically the arrangement of space in a room changes on a scale of single-digit years, the arrangement of rooms within a dwelling changes on a scale of decades, the arrangement of urban blocks on a scale of centuries, etc.). The organisation of the environment on the level of neighbourhoods and blocks regularly implies decisions with a lifespan stretching across generations (Habraken, 1998).

No less important than the delineation of the units themselves is the question of their mutual hierarchical relations (Kohout, 2011). Each unit of a selected scale contains all units of a lower scale, as well as its own specific elements – tare (Berghauser Pont, 2010). In turn, these specific elements of each scale organise the units of lower scale (e.g. the communicative spaces in a building determine the position of living units; a standard street defines the organisation of its houses etc.). These specific elements are usually represented by a selected type of shared space (in the event of lower hierarchic stages) or of public space. And, in succession, these connecting elements then become the image (Lynch, 1960) of the units of the urban fabric – i.e., the space where these units can be "grasped", "lived" and "comprehended" (e.g. the organisation of a building can best be understood from the main communication area, typically the staircase; the overall setting of a district can be best understood from its central square or main boulevard).

*Units of Built Environment and Scale Levels*

Though in connection with the previously noted concepts we speak primarily about units – which may be ascribed certain attributes and in a certain sense may be treated individually as units – their mutual relations and capability to bind together the individual attributes of the components of the built environment in a comprehensible manner and in a hierarchical succession with precisely ensuing dependencies is – primarily on the higher stages of the scale, i.e. from the neighbourhood upwards – ambiguous (Alexander, 1965). The same principle holds true as well for the mechanism of organising the entire system into a hierarchical arrangement of mutually logically ensuing units. For this reason, the paper deals with these elements more in terms of their scale levels, i.e. stages in which there usually occurs a qualitative change in the method of approaching the components of the environment.

No less important is drawing attention to the relations of the scale level to the size of the unit. In this sense, the scale level is defined in the paper as the level of detail that corresponds to reasonable operation within the framework of the given unit. Hence, the size of the unit generally implicates the size of the smallest area with which it is logical to work on this given level. In common practice, though, this area can be (and often is) much larger. Typically, the scale level of the block represents the detailed work with attributes linked to individual plots. Logically, these could be effectively prepared for a single block, yet it is more common that these details are addressed in coordination for a territory over the size of several blocks.

For the requirements of the following text, which addresses the field of urban planning and construction coordination, specific focus is devoted to the units / scale levels between the district and the block, or if necessary the individual plot.

## 3. Components of the Built Environment

Components of the built environment represent the basic thematic lineage for the organisation of environment'sphysical elements. Bearing in mind their direct connection to the actual environment, it is not possible to view them as mutually equivalent independent layers of the plan, even though they do form a suitable analytical reference framework for investigating and practicing urban

planning. They can have a structural or infrastructural character, and their delimitation for the purposes of the present text is derived from the common, conventional descriptions of city organisation in relation to urban planning. In the city (i.e. a primarily built-up area), we can discern specifically:

- public spaces / street network (their delineation and arrangement of the parterre)
- built mass (as a spatial structure, including open spaces that contain both spatial and functional parameters)
- transportation and technical infrastructure
- civic and commercial infrastructure
- landscape infrastructure

From the nature of the system, it ensues that the individual components overlap, which means that systematic individual elements of the environment will repeat in differing contexts – e.g. a school represents both civic infrastructure as well as part of the built mass with spatial parameters.

*Methods of description / prescription*

From the standpoint of planning, the components of the environment and their individual elements become the subjects of regulation. The urban plan treats the differing subjects of regulation on various levels of scale in different ways. In this respect, the key factors are both the character of the subject of regulation as well as the level of abstraction and of detail with which the given subject and the given parameter are affected. Similar tools to those used for the regulation of elements of the environment and its parameters ("inscription") can be used as an analytical instrument for registering the qualities of the elements of the environment in the given site ('reading") – i.e., both in a descriptive as well as prescriptive sense.

Included in the determination of the elements is the definition (registering/setting) of their existence, their localisation within the given territory and the stating of their parameters (scope and qualities). In this respect, it is possible to divide the principles for the determination methods as follows:

- prescriptions that define the existence of a certain element of the environment but do not assign it a concrete spatial form; these can determine the position either in direct localisation/routing (e.g. stating the position of a height landmark or routing the axis of a transit route) or in relation to another element/surface (e.g.: prescribing the connection of a network of public spaces through urban blocks in specified points, but without setting a direct route, or prescribing the realisation of a park within a set part of the territory)
- delimitations that determine not only the positioning of elements in a specific place, but also their spatial extent; the delimitation could be determined as the precise boundary of a space by a solid element, or by setting a maximum boundary (e.g.: limiting the areas of the park or the built-up section of urban blocks)
- restrictions / regulations that organise space through the assignment of parameters, either through their qualities (e.g. determining the functional composition) or limits (e.g. regulating the share of paved areas)

The basic principles described above do, of course, overlap to a certain extent in various situations (e.g. selected parameters are often assigned to independently determined areas, while prescribing a concrete element it is also possible to limit the parameters of its size, etc.), yet nonetheless in their differentiation it is possible to note a basic division of the level of abstraction and the method of its determination.

### 3. Description of the Built Environment and Its Scale Levels

For expressing the relation between individual subjects of regulation and scale levels in the environment, as well as outlining the possible methods of their description, a verification study was performed within the research project in selected localities (fig. 01).

Fig. 01Selected localities for verification study: Prague, Dejvice / Prague, Novodvorská / Amsterdam, Ijburg / Štětí, Chcebuz; pictures showing three scale levels: district level / neighbourhood level and block level

Towards the aim of capturing a wider scale of elements of the environment and tools for their description, different areas were selected that represent varied types of urban patterns derived from the historic changes in the character as well as the size of the planned and administered units. The structure of a traditional city is represented by a section of the Prague neighbourhood of Dejvice; for confrontation of the examined tools with modernistic localities, the Prague housing estate of Novodvorská was selected and, bearing in mind the absence of a contemporary approach to planning to the necessary extent in Czech urban setting, the typology of a contemporary compact city is represented by the Amsterdam district of Ijburg. For verifying the selected principles on a different scale of settlements and in a landscape setting, these urban localities were matched

against one village – Chcebuz, located in the administrative authority of the town of Štětí in the Ústí nad Labem region in North Bohemia.

In the matrix grounded in this theoretical basis, the key connections between the components of the environment and the scale levels were identified. These connections were described in a system that assigned decisions concerning concrete elements of built environment to the scale range of district-neighbourhood-block (fig. 02). As has already been noted, the individual scale levels represent not only units of the environment with their definite attributes, but equally transitions between the qualitative transformation of components of the environment or their mutual relations. This change usually expresses not only the extent of greater precision of the given component through greater detail, but often represents an independently describable and unambiguously specifiable theme that directly corresponds to the given scale level.

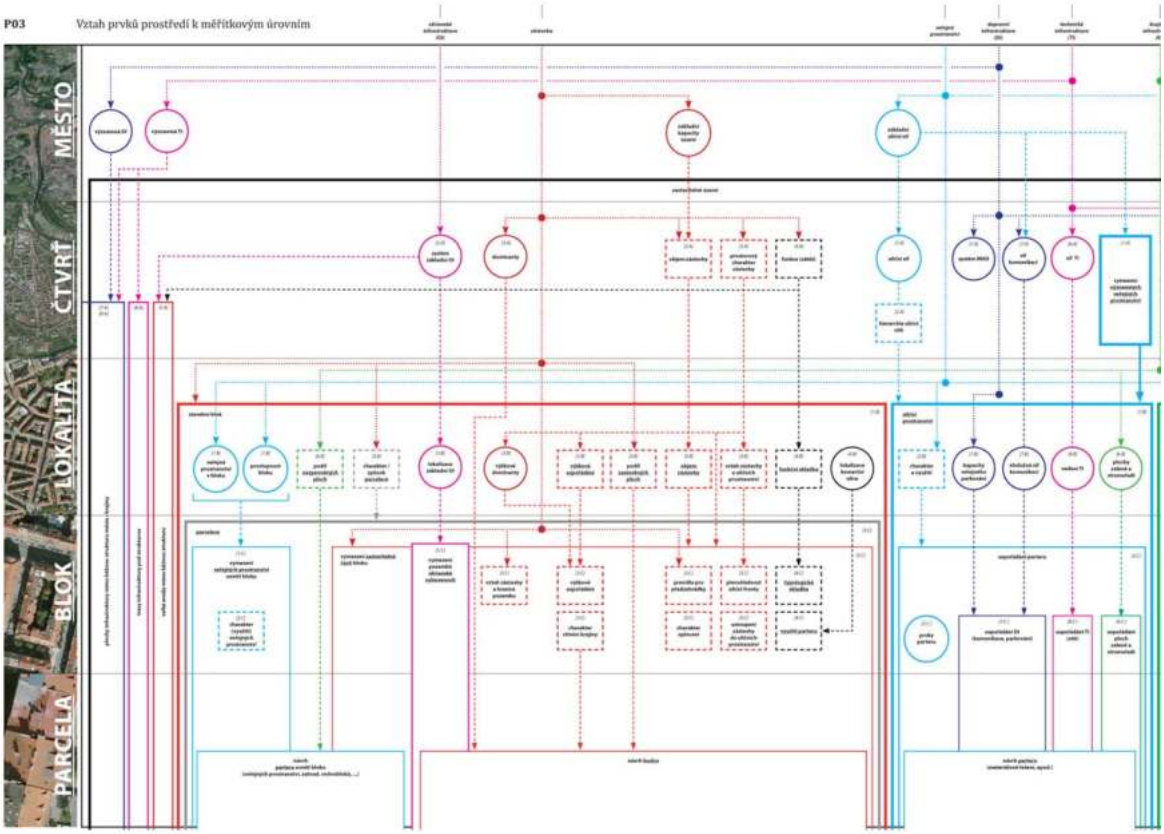


Fig. 02 Decision-making analysis through scale levels (system maquett)

The themes of the scale levels and changes in the description of each component of built environment can be described as follows:

*Scale level: district*

The scale level of the district is usually the last effective planning level for larger cities in planning these settlements as a whole. Typically, this is the level at which the more detailed relationships of city-wide systems are addressed (transportation, technical or landscape infrastructure) in relation to each other as well as to the basic organisation of the settlement on lower scale levels (i.e. the system of articulation into blocks, distribution of capacities and the ensuing possible basic typologies, organisation of transport on the lowest level etc.).

- Public spaces (fig. 03): The basic organisation of their network is formed (delimitation of places and axes of main public spaces, and directions or connections of secondary public spaces) and their connection to the superior systems of a city-wide character.

- Built mass (fig. 04): The basic capacities and land-use limits are distributed as well the basic spatial character including the composition of major landmarks is decided.

- Transport and technical infrastructure (fig. 05): On the scale level of the neighbourhood, what is usually addressed is the connection of local systems of transport and technical infrastructure to city-wide systems. At the same time, decisions are also made on the basic system of transport service in the area, the connection of separate transport systems (mass and individual transit) and cycle and pedestrian transport. On this level the detailed localisation of the main connection points of utility networks of city-wide systems of technical infrastructure is being distributed (transformation stations, sewage treatment plants, waterworks, etc.).

- Civic and commercial infrastructure (fig. 06): Elements of public facilities of medium size (primary and nursery schools, medical facilities or sports areas of local importance) are regularly assigned on this level – the capacities are known, but the concrete delimitations of the basic street network and built-up blocks are not. At the same time, also a basic organisation of the small scale services is decided, primarily by setting the place for their main concentration (main commercial boulevards).

*Scale level: neighbourhood*

In terms of planning, this level involves relatively concrete assignments and goals (usually the given capacity, the required spatial character of built mass etc.). Through the delimitation of the streets, the local character is to a significant extent stabilised, and a basic network of public spaces is formed. Thanks to the delineations of the streets, there occurs a basic distribution of capacities, outlining of urban blocks and localisation of main elements of civic facilities.

- Public spaces (fig. 03): Street space is delimitated by the street lines, i.e. the basic network of public spaces is stabilized (setting the street lines and basic characteristics of the street profiles, prescribing the permeability of individual blocks).

- Built mass (fig. 04): For built mass, this involves the final delimitation of urban blocks (setting the street lines). On this level, the character of built mass is generally regulated by specific parameters and to a large extent prescribed (simultaneously it is possible to guarantee it effectively from this scale level on). In addition from here onwards, it is possible to perform the effective setting of the basic elements of spatial regulation.

- Transport and technical infrastructure (fig. 05): Connected to the delimitation of the street pattern a more detailed specification of transport and technical infrastructure becomes possible.

- Civic and commercial infrastructure (fig. 06): Elements of civic facilities are delimited on this scale level in specific urban blocks. Likewise, there is also a more detailed organisation of the lowest level of commercial services (creation of a living ground level along public spaces etc.), which is related to the character of the street profile.

*Scale level: block*

On the scale level of the block projects of individual private and public builders are coordinated. In terms of the systematic organisation of the built environment, the block is also the basic compositional unit of the settlement. This statement holds true in spite of all heterogeneities of size and form of the block, as well as the fact that in certain types of construction (housing estates, large complexes etc.) its delimitation is somewhat difficult. At the same time, it is true that only very few other boundaries inside a settlement are usually so clear, and at the same time containing so many levels of meaning (private/public, accessible/inaccessible, formal/informal, mass/space etc.) as the boundaries of the blocks and streets. Nevertheless, it is important not to lose sight of how the block, as a scale level of settlement planning, contains in itself as well the adjoining street spaces, i.e. usually streets or squares.

- Public spaces (fig. 03): The network of street spaces is already delimited, and arrives at this scale level as the basic specification. On the level of the block (street), the organisation of the parterre of the public space is determined, largely through the setting of the street profile As a result, here it is possible to adjust in greater detail the basic relationship between public and private (primarily outdoor) space. A localisation of the permeability of urban blocks (walkways, arcades, covered passages etc.) takes place.

- Built mass (fig. 04): In terms of built mass, we encounter the delimitation of individual construction projects, usually through the form of parcelling of the land. There can also be a delimitation of the space inside the blocks, i.e. the organisation of the space as semi-private or as semi-public. Construction is formed by the already concretised volumes, thus usually occurring in the form of determining their positioning and height (delimitation of parcels, building alignments, heights of cornices and rooftops, number of floors, eventually with other concrete parameters ensuing from the nature of the location).

- Transport and technical infrastructure (fig. 05): On the scale level of the block, it is possible (keeping in mind the determination of the street profile) to set in more detail the organisation of transport service of the area (e.g. one-way or two-way traffic, ways of parking in public spaces etc.). Simultaneously, it is possible to effect a more detailed organisation of transport service for the block as a whole, primarily the system for parking.

- Civic and commercial infrastructure (fig. 06): Elements of civic facilities can be delimited here at the very lowest level of the public (nursery schools, children's playgrounds or sports fields occupying a semi-private inner-block area etc.).

Fig. 03 Description of Public spaces through different scale levels: Prague, Dejvice / Prague, Novodvorská / Amsterdam, Ijburg / Štětí, Chcebuz; pictures showing three scale levels: district level / neighbourhood level and block level

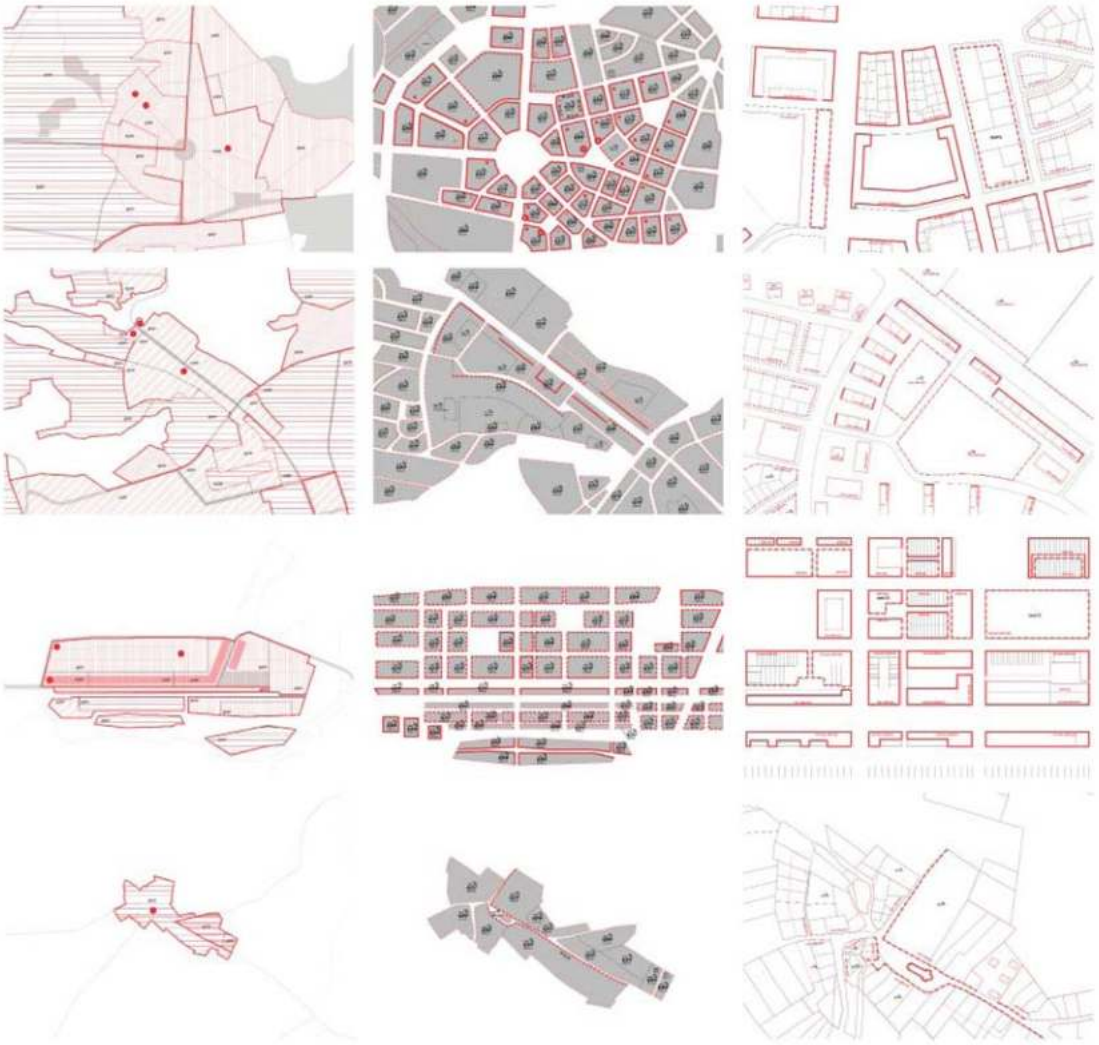

Fig. 04 Description of Built mass through different scale levels: Prague, Dejvice / Prague, Novodvorská / Amsterdam, Ijburg / Štětí, Chcebuz; pictures showing three scale levels: district level / neighbourhood level and block level

Fig. 05 Description of Transport infrastructure through different scale levels: Prague, Dejvice / Prague, Novodvorská / Amsterdam, Ijburg / Štětí, Chcebuz; pictures showing three scale levels: district level / neighbourhood level and block level

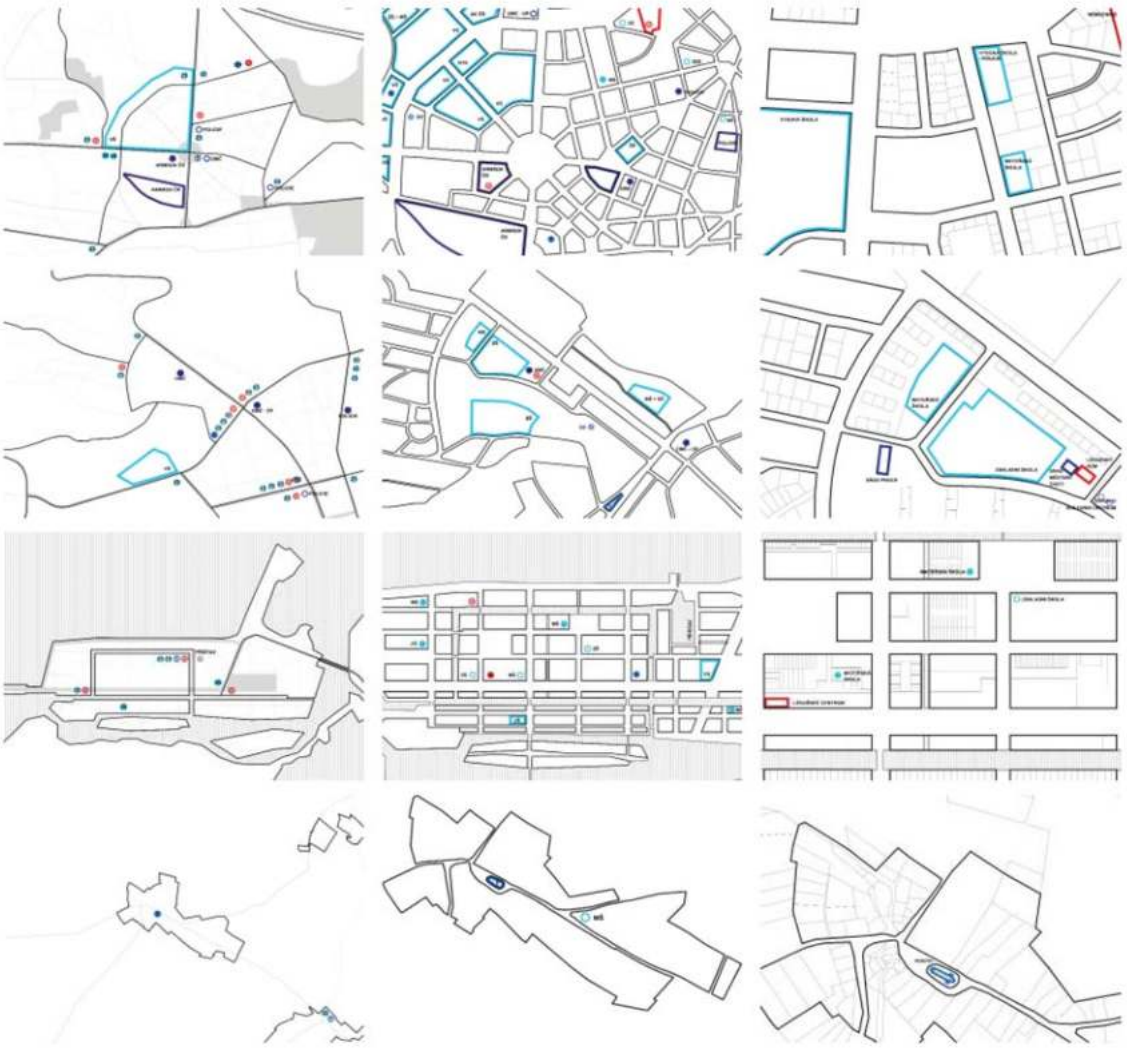

Fig. 06 Description of Civic infrastructure through different scale levels: Prague, Dejvice / Prague, Novodvorská / Amsterdam, Ijburg / Štětí, Chcebuz; pictures showing three scale levels: district level / neighbourhood level and block level

## 4. Scale Levels of the Built Environment and the System of Urban Planning

As described previously in the introduction, the purpose of this analysis is primarily the description of the built environment on the basis of its implicit parameters and qualities, without regard to the distribution of responsibilities in a specific urban planning system. Nevertheless, for understanding the use of the results of this research and the adequate formulation of conclusions, it is necessary to give a suitable outline of the principal relationship between the described scale levels and the system of plans. The planning system is generally compiled from the scale of plans in varying degrees of detail, which form a more or less hierarchical system of planning levels. Here as well, scale is unquestionably a basic systematic parameter for articulation on the level of the plan. If we extend the systematics of planning levels to the basic framework of this text, in terms of scale the key question is in what detail (scale of detail) the plan operates, and at the same time to what units it is applied.

It is necessary to stress that the levels of the plan may well not cover the complete described scale range. The gamute will, out of principle, always be richer than the utilitarian quantity of planning levels. What is key here is the extent of detail in the description (organisation) of the space within which the relevant planning level operates. The consensus on organisation of built environment on a lower scale implicitly contains within itself the decisions that are necessary to implement on a higher scale. The hierarchy of these interrelations manifests itself in the process of preparation (creating, processing) of the plan, without it being necessary to formalise decisions in the higher scale level through an independent planning level. On the other hand, it is also true that various scales can function for a number of spatial areas on a single planning level – even with the use of descriptions and regulations with a varying amount of abstraction and detail corresponding to the differing scale levels.

Within the framework of the research, the relation of planning levels in individually investigated international planning systems towards the scale levels of the actual built environment was observed (fig. 07). The primary object for observation was the level of the local plan, and its relation to the higher level of urban-planning documentation. The majority of investigated systems have at their disposal planning levels corresponding in detail to the scale of the block, which aggregates within itself decisions on the scale level of the neighbourhood, possibly even the district. Supplementing this is the “city-wide” planning level, which ranges in its level of detail from the city to the district, in a few cases even to the neighbourhood. This planning level usually operates with greater flexibility in its level of detail.

## 5. Conclusions

On the basis of the performed analyses and verification studies, we can draw attention to selected essential findings concerning not only the importance of the components of the built environment in relation to scale levels, but also the changes in the method of their description.

The research verified that the components of the built environment and their individual elements permeate throughout all of the observed scale levels. The majority of elements find a relevant description on the scale of the district, neighbourhood and block. A change in the scale of the built environment causes not only a refinement of the description of the area, but also a change in the significance of the aspects of its individual elements. For instance, for determining public spaces the key on the scale of the district is the network relations of the system; on the scale of the neighbourhood the more important factors are its spatial dimensions and proportions. The use and character of the public space is, in turn, on the scale of the neigbourhood represented specifically by hierarchies of importance, yet on the level of the block through the organisation of the parterre.

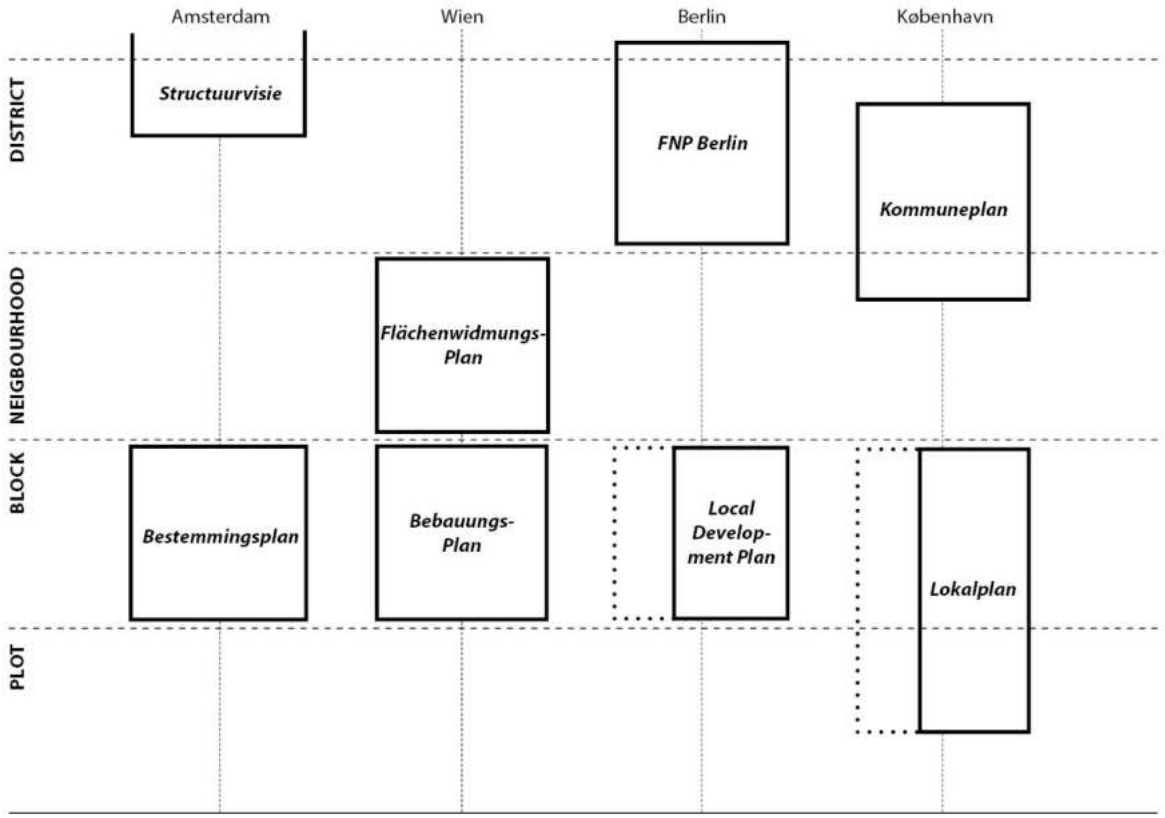


Fig. 07 The relation of planning levels to scale levels of built environment: Amsterdam, Vienna, Berlin, Copenhagen. The diagram likewise displays the amount of coverage of the area of the given urban-planning level (dotted lines represent partial coverage)

Nonetheless, it is also possible on the individual scale levels to identify key aspects of planning and its goals, or in other words to follow the gradual change in the sense of planning across the scale levels. Though each level understandably fulfils to a certain extent all of the aims of urban planning, it is possible to assign to each scale level a certain characteristic meaning:

- Scale level of the district – organisation (of public systems): The scale level of the district is usually utilised for operations on the boundary between city-wide and local systems. Here, the basic system of organisation is created, the city-wide public space is stabilised, as well as the infrastructural systems. The scale level of the neighbourhood thus represents primarily the record of public aims in space.

- Scale level of the neighbourhood – guarantee (of the character of the environment): On the scale level of the neighbourhood, we find the stabilisation of the basic physical attributes of the built environment. Here lies the determination of the street spaces and blocks as the key systematic delimitation within the framework of urban planning. The basic character of built mass is translated into parameters on this level. Hence, it is only at this scale level that there appears the possibility of its more precise definition in relation to the specific limitable space (block) and thus its effective assurance. The scale level of the neighbourhood, therefore, represents the basic framework for reaching agreement on the character of the built environment and the extend of its change.

- Scale level of the block – coordination (of individual intentions): The block is the scale level at which we find the main mutual coordination of the projects of individual builders

(private and public). The parameters of individual components of the built environment are translated into specific spatial arrangements, on the basis of which it becomes possible to speak of the determination of the planning typology of individual structures. The scale level of the block, therefore, primarily influences the quality and effectiveness of individual intentions in relation to their surroundings.

*Legibility of the Built Environment*

For all scale levels, it holds true that the system of public spaces can be regarded as the basic reference level for all other physical elements of the built environment. Without knowledge of their routing or (at lower scales) their delimitations, it becomes considerably difficult to prescribe the parameters for other elements of this environment. In essence, this principle holds true across all scales, though the surface delineation of street areas and blocks on the scale of the neighbourhood can, in this respect, be viewed as most essential.

As a result, it can be possible to refer back to the introductory analysis of the compositional and unitary sides of the built environment, in which an adequate hierarchy of units and 'connecting elements" leads to the legibility of the built environment. Legibility here does not refer solely to the comprehensibility of the urban structure for the ordinary user, but more significantly to the determination of the framework for its administration, management and the conditioning of the possibilities of its change across time, which frames both, top-down as well as bottom-up processes.

An open system of hierarchically ranked elements means that it is possible to a large extent to exchange individual elements of the whole – primarily those at lower levels – according to need, without in any way significantly harming the character or identity of elements at a higher stage in the hierarchy. Respect for basic relationships and ties, their gradual adaptation to the given circumstances of the place and the era, allows an urban structure its natural development while retaining its characteristic traits and basic identity.

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# Urban transformation for resilient cities

# - Renaissance of comprehensive planning systems?

**Keywords:** *Resilient City – Climate Planning – Climate Governance*

**Abstract**

*In the last decades of neoliberal politics, urban planning had almost lost its requirement to deal with comprehensive development plans and regulated planning systems. In the face of climate change, mitigation and adaptation strategies are forcing the cities to deal with strategic climate concepts, which have a huge impact on the urban structure and urban planning policy. Meteorologists are acting as new "reformers", demanding for a new understanding of a regulated society to control the climate change. If climate concepts would be combined with strategic urban planning concepts, the comprehensive planning system could find a renaissance, together with new models of urban planning. Although a lot of mitigation strategies are already implemented, there is the need to deal especially with the consequences of climate change. Adaptation measures have a radical impact on the urban structure. This can change the understanding of a flexible planning system of the last decades. In Germany the federal building code ("Baugesetzbuch") gives a legal basis for a better integration of climate concepts into the regulated planning system. The "German Adaptation Strategy" focuses on comprehensive planning strategies, on integration of different stakeholders and on resilient urban structures to avoid conflicts between mitigation and adaptation. In the research project "Adaptation Strategies for Stuttgart Region" new adaptation plans and governance structures for two case studies will be developed, and how to implement them in planning instruments like land use plan and local development plan.*

## 1. Introduction

Climate change is accelerating, the change concerns every country worldwide. In Germany the average annual temperature has risen by 0,9°C between the years 1901 – 2006, this leads to more hot days with temperatures of more than 30 °C (Bundesregierung, 2008, pp. 9; Reuter u. Kapp, 2012, pp. 64; Henninger, 2011, pp. 176). Less rain in the summers and more rain in the late winters are expected. This affects more floods in spring and drought in the summers, in general there will be more extreme weather conditions (Umweltbundesamt, 2013, pp. 37-38; IPCC, 2007, pp. 32). Climate projections show that the changes will further continue (e.g. IPCC, 2007). Due to climate change, cities have to protect against the consequences and have to adapt to the climate changes, which are actually occurred. Cities need climate action plans to reduce their vulnerability and to be more resilient – as part of a comprehensive strategy and not only the result of project-oriented measures. However these new climate action plans are often without a comprehensible method and are seldom connected with other issues of urban development, which can have an indirect impact on climate policy. As Germany has a comprehensive planning system of Zoning Planning ("Bauleitplanung") for cities, the new climate action plans could be systematically and methodically connected with urban development strategies and a new urban governance, also as part of the general "Urban Development Policy" formulated in the Leipzig Charter of European Union 2007.

## 2. Regulative German planning system and governance

Although the "European Cities" have a similar tradition of urbanism and urban design, and a common context of European Union, the planning systems are very different. In West-Europe five different approaches can be differentiated (Duehr, S.; Colomb, C.; Nadin, V. 2010):

- „Urbanistic": Focus on urban design and building design regulations (South Europe like Italy).
- "Public-Private-Partnership": Negotiated masterplans for projects (Great Britain).
- "State planning": Centralistic planning, state infrastructure, controlled planning (France).
- "Social welfare": Social cohesion, state planning, balances of public interests (Scandinavia).
- "Zoning plans": Regulation through plans, controlled development (Germany).

In comparison to other European countries Germany has a high-regulated planning system, connected with strong planning governance in the municipalities – they have the authority to decide about almost all of their planning tasks. The Federal Building Code (Baugesetzbuch) gives a formal framework for zoning plans on the level of the city and the quarter (land use plan = Flaechennutzungsplan and local development plan = Bebauungsplan), so that in every city the same system and layout of plans have to be implemented. But also informal plans like urban development plans or framework plans have a strong impact on the order of the cities. Planning departments in the cities of Germany can regulate the zoning, the density and the design of all spatial and sectoral aspects of their city in their own responsibility. The German planning system has also aspects of negotiations and public-private partnerships, but all based on the strict regulated planning rules.

In the 1970s planning was seen as a comprehensive urban development approach, which covers all sectors and all spatial levels of a city, connected with strong governance in a cross-sectoral planning department. In the following decades this approach lost its power, because it was difficult to deal with too much complexity in such a planning demand. Also in the 1980s the interest in strategic planning decreased – neoliberal politics were supporting more project-oriented and investment-friendly urban planning. According to demands of sustainability and reurbanisation, development planning became more important again – as a strategic plan with a clear orientation on implementation and with participation (Albers, Wékel 1996). In the "Leipzig Charter" of European Union 2007 cities are requested to create strategic urban development plans – based on the experiences in Germany especially in cities like Berlin, Hamburg or Leipzig (European Union, 2007).

These different planning approaches are also reflected in the governance structure for planning. As in the 1970s the planning department was directly connected with the Lord Mayor or had a powerful, interdisciplinary department, it lost also its power in the 1980s and became a "normal" sectoral department like others. In the last decade again some new cross-sectorial departments for planning or sustainability had been established, as the case studies will show.

The question is, if challenges like climate change, but also demographical change and social cohesion will support a renaissance of urban development plans. Since the last decade, almost every city has launched a climate plan, mostly focused on mitigation and energy. These climate plans are not only a guideline to improve green energy. They also have to be implemented as objectives and measures into the zoning plans – the planning regulations had been expanded to climate aspects in the last years. As climate adaptation is a new approach, there are questions how to connect this with the existing planning system. Not only as task for landscape planning, but also as a general planning approach dealing with density and vulnerability. Anther question is, how to deal with target conflicts between adaptation and general objectives like Compact City

## 3. Integration of climate adaptation strategies into urban development

To reduce climate risks, a lot of mitigation concepts had been created and mitigation measures had been implemented. But climate change and its impacts will keep up, even if anthropogenic emissions of greenhouse gases are inhibited (IPCC, 2014, pp. 17). Adaptation strategies become increasingly important, they contain efforts to reduce the vulnerability to climate change impacts (Birkmann et al., 2012, pp. 1f). Adaptation is often seen as an antithesis of mitigation, but it must be more perceived as a dual strategy (Birkmann et al., 2012, pp. 1f; Stock, Walkenhorst, 2006), adaptation and mitigation are additional strategies (IPCC, 2014, pp. 17, BMVBS/BBSR, 2009b, pp. 7ff). For this reason the German federal government published the "German Adaptation Strategy" (Deutsche Anpassungsstrategie DAS), the main goal is to create a framework for dealing with the challenges of climate change. In this context risks and also the requirement for actions should be identified, goals for dealing with the climate change should be set and adaptation measures should be developed (Bundesregierung, 2008, pp. 4). The strategy also focuses on comprehensive planning strategies, on integration of different stakeholders and on resilient urban structures to avoid conflicts between mitigation and adaptation (Bundesregierung, 2008, pp. 7, 42).

It is important to combine mitigation and adaptation strategies, but also to realize the target conflicts. With mitigation we try to reduce the human effects on climate change. Without leaving this objective, adaptation is necessary to be prepared for expected changes. Both mitigation and adaptation strategies should be part of strategic climate concepts, which have a huge impact on the urban planning policy. But these strategies can be in conflict with each other: For example adaptation measures like flood protection, extending green belts or reducing urban density have a radical effect on the urban structure – on the other side most of the mitigation plans are following a city model of more density, functional mixture and small traffic according to the Leipzig Charta (BMVBS/BBSR, 2009a, pp. 32). Anyway also synergies between mitigation and adaptation should be defined (Barker et al., 2007, pp. 748 ff).

Most of German municipalities have a formulated planning model, which sets an overall urban development strategy. Existing planning models are "Compact City" or "Sustainable City" from Leipzig Charter. The question is, if the cities are already prepared for the challenges of climate change or if they need new models like "Resilient City", which can deal with uncertainties of consequences. Though the term "Resilience" is controversial because of varied definitions in different disciplines and fuzzy boundaries between them (Kaltenbrunner, 2013, pp. 290). Nevertheless some researches already examined different planning models regarding to climate change, founded on the concept of resilience. The term of resilience gives a basis for dealing with climate change at the city level (BMVBS/BBSR, 2009a, pp. 9ff; Knieling et al., 2012, pp. 14). The word describes resistance, robustness and adaptation capacity (Knieling et al., 2014, pp. 14). The existing planning models had been verified on their capability for climate adaptation with different criteria. The result was that no planning model was completely appropriate for climate change adaptation (BMVBS/BBSR, 2009a, pp. 17-18; Knieling et al., 2014, pp. 58ff) – but "Compact City" had the highest ranking before models like "Edge City", "In-between-city", "Decentralization"," New Urbanism" and "Net City".

Today municipalities mostly pursue the model "Compact City". This model has to deal with target conflicts concerning adaptation and mitigation. The main conflict is between density, which is positive for the energy efficiency and with creating wide green areas, which is positive for a comfortable climate. To find a balance between these target conflicts it is important to take in account specific initial situation (BMVBS/BBSR, 2009a, pp. 32). A planning model fixing a framework for climate-optimized development could be a first approach in a comprehensive climate strategy. If climate concepts would be combined with strategic urban planning concepts and also with the formal instruments, the comprehensive planning system could be strengthened, together with new models of urban planning.

In Germany the building code with its climate adaptation amendments of 2011 already gives a legal basis for a better integration of climate aspects into the regulated planning system (Umweltbundesamt, 2012, pp. 25ff). In particular, the amendments are forming a legal framework to the municipalities; there are new tools to support the preparation and implementation of climate change adaptation measures. Mitigation and adaptation are now planning guiding principles (§§1 para. 5 sentence 2, §1a para. 5). Thereby both mitigation as well as adaptation are getting more and more an important task of formal planning. Informal plans, also sectoral plans like climate concepts can be developed, which are then incorporated as outcome-related basis in the planning process. On this basis a city-wide strategy of "Climate Zoning Plans" can be achieved, which bundles all aspects of climate mitigation, adaptation and resilience. Climate reports (Fachgutachten), climate analysis and climate adaptation concepts can be implemented into different scale levels (Figure 1: HFT Stuttgart IAF).

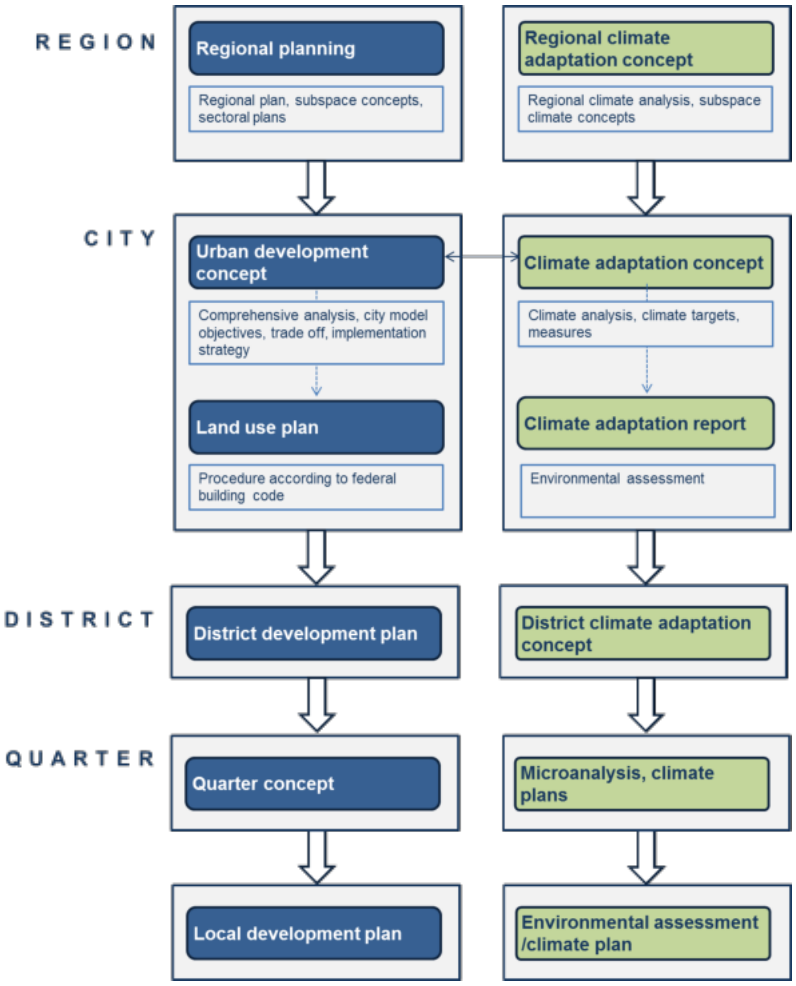


*Figure 1. Climate Zoning Plan*

## 4. Adaptation strategies of the cities of Esslingen and Ludwigsburg

The growing region of Stuttgart is located in the center of Baden-Wurttemberg. A valley and hillsides characterize the city structure. Because of this specific location, the climate and the building development the regular air exchange is restricted (Verband Region Stuttgart, 2008). In 2008 the Verband Region Stuttgart (VRS) has already launched a "Climate Atlas" for the whole region of Stuttgart (Regionaler Klimaatlas). Heat waves, floods, low water levels, drought, heavy storms and thunderstorms are expected impacts of the climate change in the region (Verband Region Stuttgart, 2008). These informations have already been incorporated into the regional plan; green belts and green corridors have been determined. The two case studies Ludwigsburg and Esslingen am Neckar are located next to Stuttgart, but both cities have different topographic situations. While Ludwigsburg is nearly flat, Esslingen has a valley and hillsides. The climate situation of the cities is described in the Climate Atlas. In 2011 as part of a research project a vulnerability analysis was created (Weis et al., 2011): One problem in both cities is the number of hot days, this has a high impact on the human health (Weis et al., 2011, pp. 87 ff; Verband Region Stuttgart, 2008, pp. 131ff). To encounter this problem, different measures are necessary. On this basis the two cities pursue model approaches in collaborative projects.

To face the climate change the joint project of the Verband Region Stuttgart, University of Applied Sciences Stuttgart, the cities Esslingen am Neckar and Ludwigsburg and the Energetikom - energy competence and ecodesign e.V. Ludwigsburg was initiated (Figure 2: HFT Stuttgart). The German Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety supports the research project, which has a focus on adapting to the impacts of climate change.

*Figure 2. Stakeholders and project structure*

The aim of the joint project "Climate Change Adaptation Region Stuttgart" (KARS) is to connect climate adaptation strategies with the urban and regional planning system, and to link them with energy concepts. In this framework, target conflicts between adaptation, mitigation and urban development will be examined. Also the existing city models will be analyzed if they are fitting to adaptation needs. In the next step a new suggested city model will be implemented on different planning levels and instruments, the climate zoning plan will be expanded with aspects of climate adaptation. Furthermore informal planning approaches such as inter-municipal cooperation, urban development concepts or climate concepts are examined and linked with the formal planning. As a result of the research project, a planning guideline is developed, which evaluates in the practice of urban and regional planning. We are also looking for new adaptation plans for the two case studies and how to implement them in planning instruments (BMUB, 2014). The approaches of the two case studies differ a lot in dealing with planning instruments.

**Case study Esslingen am Neckar**

The city of Esslingen goes the classical way based on the formal planning process. On the basis of a comprehensive urban development strategy and a participation process, the city is currently designing a new land use plan as a formal planning instrument. This process is part of the whole urban development strategy, which runs since 2007 combined with a comprehensive participation strategy for discussing about the future development of the city. Besides the elaboration of the new land use plan a new city model was discussed and will be implemented. The land use plan should be the instrument to fix the urban planning until 2030 (Esslingen am Neckar, 2014, pp. 4).

Esslingen has also a classical governance structure, with a strong urban planning section, which also includes climate topics. The planning section is responsible for both urban development plan and land use plan, and also for climate adaption and mitigation plans. The planners are responsible for the comprehensive approach, but they are only one section in a bigger department (Dezernat) (Figure 3: HFT Stuttgart).

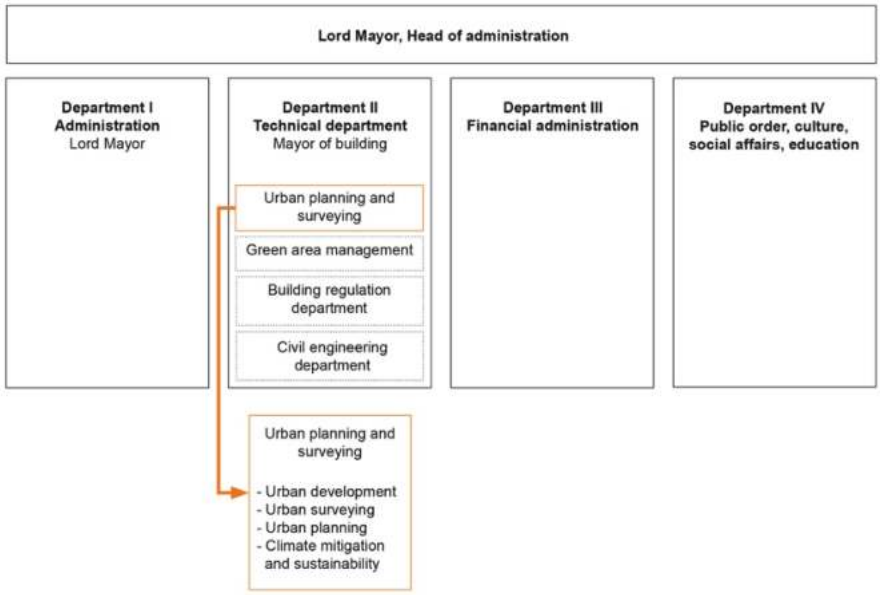


*Figure 3. Planning governance in city of Esslingen*

The city has already an integrated climate mitigation concept together with an energy use plan (Energienutzungsplan). These concepts are now going to be expanded on the integration of adaptation aspects. Esslingen am Neckar integrates measures to adapt to climate change at an early stage. The city council works on an innovative approach by extending the land use plan with climate aspects. Based on the planning regulation symbols (Planzeichenverordnung, PlanZV) the land use plan regulates different areas concerning the function. After a comprehensive analysis of the climate in Esslingen and suggestions from the residents, which came out of a wide participation process, more than 20 spatial structure plans were created. The plans deal with various sectoral topics, like industry, living, energy, use of energy, mobility, landscape, green areas, image and also climate (Figure 4: Esslingen am Neckar, 2012a). The most important content of the spatial structure plans for climate are fresh air corridors, which should be protected from the hillside into the valley (Esslingen am Neckar, 2012a).

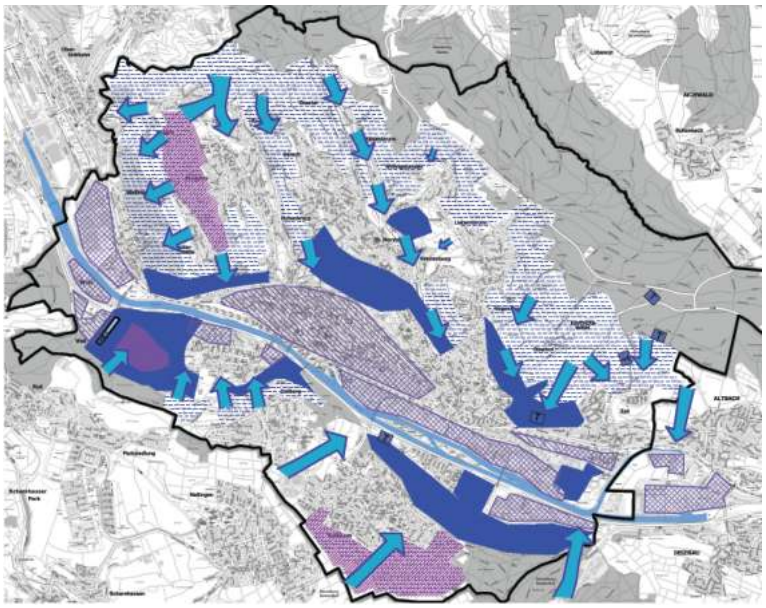

*Figure 4. Spatial structure plans for the climate in Esslingen (arrow symbolizes fresh air corridors)*

The main issues of the climate plan will be introduced to the land use plan with new planning regulation symbols (Planzeichen) (Figure 5: Esslingen am Neckar, 2012b). The symbols will show areas for protecting fresh air corridors and de-densification (Entdichtung), areas for expanding greenspaces especially in residential areas, areas where a densification is possible and areas where the inner development should be strengthened (Esslingen am Neckar, 2012b).

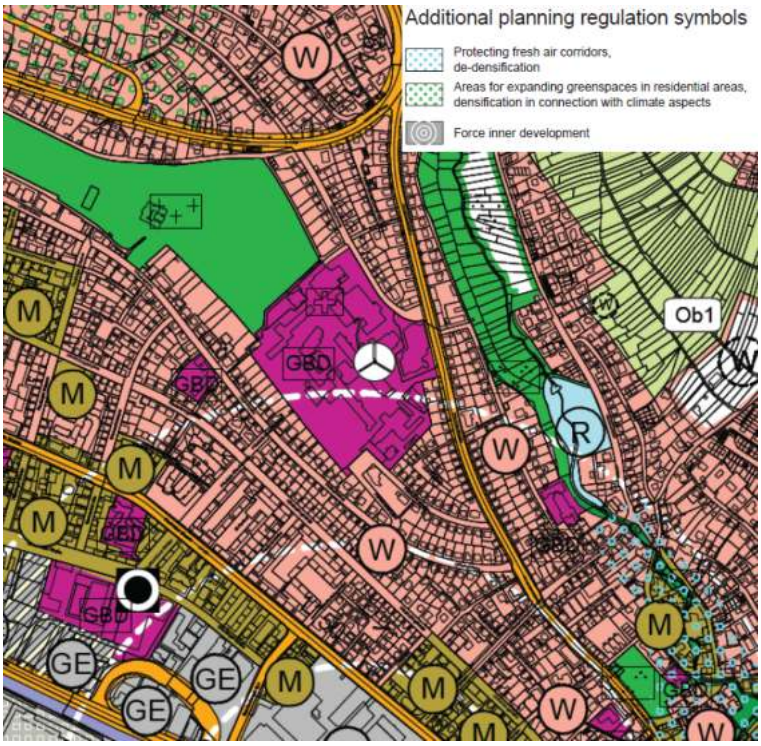


*Figure 5. Preliminary draft (Vorentwurf) of the land use plan, section of the plan Esslingen*

In the participation process it became clear that the questions of density and protecting fresh air corridors are crucial. Until now only a preliminary draft (Vorentwurf) exists for the land use plan, which has no legal binding yet. In 2015 an intense dialogue process has started for the future urban development, where all previous plans will be reconsidered (BMUB, 2014; Esslingen am Neckar, 2014).

**Case study Ludwigsburg**

The city of Ludwigsburg has a main focus on informal concepts. It operates since ten years a very intense urban development process with integrated sectoral concepts and a strong urban development department, but with less spatial concepts. However the formal land use plan is now about 30 years old. The whole urban development of the last years refers more to the informal urban development concept.

The urban development concept considers different sectoral plans, focusing various issues like cultural live, industry and employment, inner city, green in the city, mobility, energy, education, care etc. The concept also focuses district development concepts for the whole city. The whole process was accompanied by a participation strategy (Ludwigsburg, 2012). Every three years there is a big future conference (Zukunftskonferenz) open to the citizens, where the development strategy for the future is reviewed and further developed.

The governance structure of Ludwigsburg also changed following the comprehensive urban development strategy. In 2008 the new division of "Sustainable Development" (Referat Nachhaltige Stadtentwicklung) had been founded and is directly under control of the lord mayor. This division combines all cross-sectoral tasks like urban development, urban renewal, climate planning and economic promotion (Figure 6: HFT Stuttgart). As a consequence the comprehensive strategy is also part of the Governance structure, as all main measures of the city have to fit to the objectives of the urban development plan, monitored by the division. In difference to Esslingen the planning department is only responsible for the land use plan and the zoning plans, but not for the comprehensive urban development.

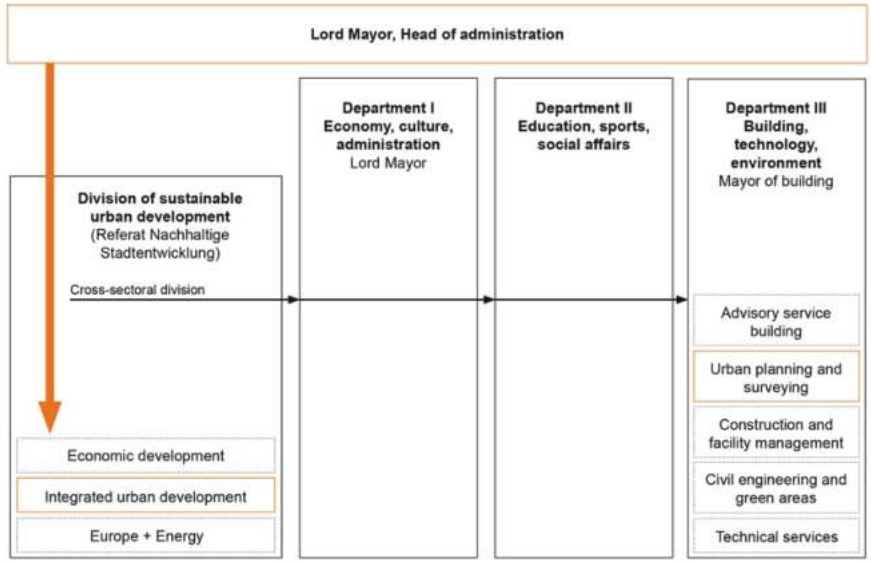


*Figure 6. Planning governance in city of Ludwigsburg*

In the research project Ludwigsburg is focusing on development and adapting plans at the district level for the Oststadt. A brownfield close to the stadium shall be transformed to a new housing area. On district conferences the residents had the chance to participate on the future targets. Also a design competition has been implemented in 2014 (Figure 7: Mess GbR, Urbane Gestalt, SHP Ingenieure).

*Figure 7. Result of the urban design competition in the development area East of Ludwigsburg*

As part of the competition a climate adaptation analysis was accomplished. Climate aspects - in form of a checklist - have already been mentioned in the examination (Vorpruefung) of the competition. To consider the climate more precise in the urban design and the height of the buildings, a microclimate analysis is implemented. At the end this should lead to a climate optimized plan for the future buildings. As an example a public space will be simulated and transformed into a climate-adapted space. Although plantings, floor covering, outdoor urban furniture and the whole design must be taken in account (BMUB, 2014).

## 5. Conclusions

Climate change forces the cities to develop comprehensive climate concepts for mitigation and adaptation. They have a huge impact on the city structure and the planning policy. Especially climate adaptation will get more important in the future. If climate concepts will be systematically integrated into the planning system like a climate zoning plan, the comprehensive planning approach will get a renaissance. Adaptation concepts also have to be also adjusted with mitigation strategies, because of synergies and target conflicts.

Adaptation as part of urban development also needs new governance structures, which are integrating experts of different disciplines like meteorology, urban climatology, urban planning, landscape planning and others. Departments responsible for climate planning should be close to the Lord Mayor and have a cross-sectorial approach.

Both cities are following different approaches in implementing adaptation strategies into the planning system and also in the governance structure in their councils (Figure 8: HFT Stuttgart). Both cities worked on comprehensive participation strategies, and they developed self-standing climate concepts. But Esslingen developed more formal planning instruments and integrated climate aspects (mitigation and adaptation) into the land use plan– connected with a strong planning section. In contrast Ludwigsburg worked with informal urban development plans, which are detailed in sectoral and district plans – they became powerful connected with a big division for sustainable development close to the Lord Mayor, which can implement and control main projects cross-sectorial.

The innovative approaches in dealing with climate adaptation could be a model for other cities. It is important to connect informal instruments with a formal planning strategy. If climate concepts stay informal like in Ludwigsburg, they cannot really be implemented if there are crucial conflicts on the level on a project or it can lead to a lot of approvals for exceptions. Esslingen is also starting with informal plans, but implementing them in the city land use plan, with new symbols and structural plans. This approach is more consistent, new objectives like air corridors will have a long-lasting effect.

Adaption strategies will be a main task for urban planning in the future. There are still a lot of open questions about the methods, the range and the effect on urban structure. But they will influence strongly our land use plans and our objectives of landscape planning and urban renewal. And it is still an open question, which city model considers best the climate change and strengthens the resilience, without loosing objectives of mitigation and sustainability.

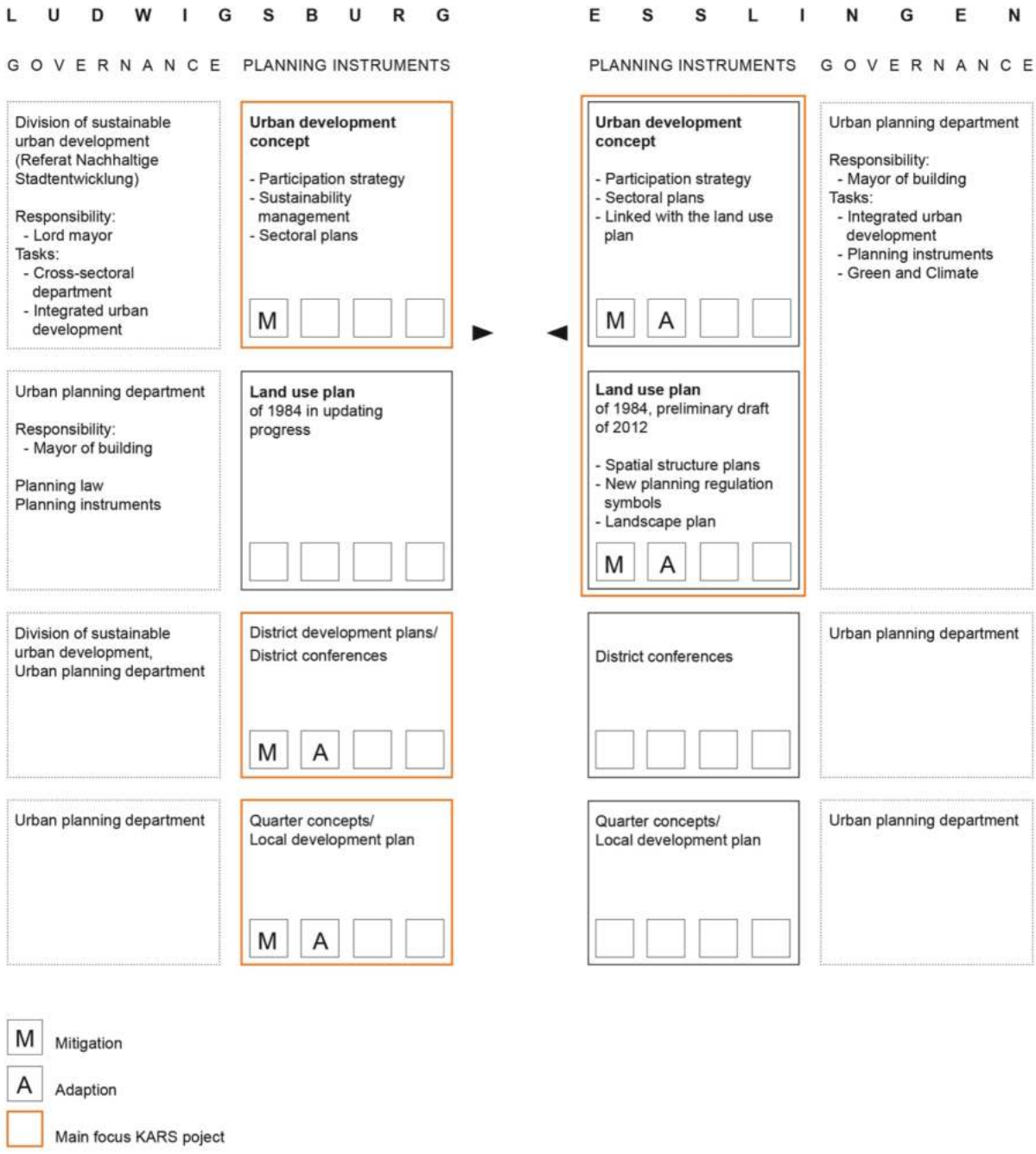


*Figure 8. Case study comparison: Integration of climate adaptation measures in the urban development and governance structure*

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# NEW LEGISLATION ABOUT ILLEGAL CONSTRUCTION IN GREECE. THE EFFECT OF ECONOMIC CRISIS.

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## Introduction

This presentation is the most recent one from a series of presentations and papers of this author, about illegal construction in Europe, and particularly in Greece. Every new piece of related work in the last 15 years dealt with new developments in relative legislation, policies, and implementations. This particular one is of special importance, since it deals with this issue but under exceptional circumstances –the severe economic crisis, which affected priorities and objectives of legislation.

Illegal construction seems to be an inherent element of Greek urban history. It has definitely affected the shape and function of Greek cities from the past to the present. Urban and rural areas throughout the country have been suffering by the old and widespread phenomenon of illegal constructions. This has been the main and most visible factor of leading to environmental degradation. Some 93,000 legal and 31,000 illegal houses and apartments were constructed each year in Greece between 1991 and 2001. Most of them were in Attica and along the coastline (Technical Chamber of Greece, 2004).

Since early 1980s, efforts have been made to face the problem of illegal construction, through the production of a series of laws and decrees. Usually, a much elaborated –but also complex and often rigid- legal framework had been synthesized, implemented, and replaced by a new one, and most of the times without any evaluation of the up to then implementation. In the meantime, research on the subject proved that the phenomenon of illegal construction continued exhibiting the same intensity, with periodic subsidence and peaks -after the inaction of a new law, and respectively, when the implementation of it faded because of bureaucratic procedures and political interventions.

Our hypothesis is that illegal construction cannot be tackled only by the production of continuously newer legislation, usually increasingly complex and with an alarmingly increasing pace of succession. Illegal construction will further increase if law enforcement is not subsequent and combined to policies. The proposed paper will describe the succession of related legislation in Greece, it will examine the structure of the various legal instruments currently in effect, and it will analyze the problems concerning their (in) effectiveness, accruing from their increasing complexity.

## Definitions

Illegal constructions are considered the ones:
without building permit or
with excess of the building permit or
with a building permit which was retracted or
in violation of the existing building regulations or
with change of its use without issuing a permit for it.
(L.1577/85 – L.2831/00: General Construction Code, art. 22)

## Historical Phases

First peak of illegal construction was in mid '20s, after the disaster of Asia Minor at 1922. It was mostly in the fringes of the cities, where 50% of the 1,5 million refugees resided.

The second wave was around 50s and 60s, as an effect of the internal migration from rural areas to the cities (mainly Athens, Thessaloniki). In 1951, 8% of constructions in the area of the capital were illegal, while in the period 1951 – 1961 there was a further 13,7% increase of the number of illegal buildings.

In the '80s and '90s the nature of illegal construction changed. It was not because of urgent needs for shelter any more, but for holiday houses. This was in accordance to the rise of living standards in Greek society. In order to realize the magnitude and endurance of the phenomenon, one has to consider that at the period 1985-1995, 20%-25% of constructions in Greece were partly or totally illegal, while at 1997, from a total of residence buildings of 4.643.379, 1.000.000 were partly or totally illegal. In this period, a network for exploiting rural land was developed, which lasts until today.

The process of exploiting rural land for creating illegal constructions, includes the following stages: 1. Illegal occupation of (usually) public and (seldom) private land. 2. Division of land in small parcels and sale of them. 3. Illegal constructions on parcels. 4. Political pressure for including the area in the expansions of city plans.

**Usual Causes for illegal construction**

The most frequently recorded reasons for illegal construction are: 1. Urgent housing needs, 2. Economic incentives and profiteering, 3. Lack of housing policies, lack of land cadaster, complex and controversial legislation, no regional planning*, 4. Political clientelism, gradual legitimization of areas of illegal houses due to political pressure, 5. Lack of effective system of detecting illegal constructions (no clearly defined city limits, uncontrolled urban sprawl, outdated technical methods of inspection). 6. Lack of cooperation among the involved departments, corruption. 7. The small size of the majority of properties in land.

* Currently only 3% of the housing production comes from organized housing programmes. Illegal housing was a solution for needs for cheap houses.

**Historic succession of laws related to illegal construction**

The first legislation concerning exclusively illegal construction was P.D. of 18/3/1926 "concerning illegal constructions and prosecution …". It was based on L.D. 17/7/1923, which was the basis of planning legislation for the 20th century Greece. According to it, illegal constructions were to be demolished by the police. There was minimal implementation of this law, and this signified the beginning of a tradition of impunity and indirect encouragement of informal building.

The two pieces of legislation which succeeded P.D. of 18/3/1926 were L. 410/68 "concerning illegal buildings" and R.D. 758/68 "estimation of fines...". The main difference which they introduced was that while illegal buildings before 1968 were exempted from demolition by paying a fine (3% or 10% of the value of the construction), according to them, owners of illegal buildings were to be prosecuted.

Despite the above, illegal construction was alarmingly increasing, so, in mid '70s there was another effort to restrict it by introducing a number of new legislative tools:

General Building Regulation (L.D. 8/73), L.D. 349/74 "concerning demolition of illegal constructions…", L. 651/77 "abolition of L. 410/68, regulations concerning illegal constructions…", etc. According to them, illegal buildings (new constructions) were to be demolished if they were violating significant planning regulations. Fines were imposed, equal to the value of the construction, which were multiplied by five in case of rebuilding the illegal

construction. Penalties also included imprisonment for the owners, as well as for the construction workers, the developers, and the engineers, and the machinery used, had to be confiscated. Illegal buildings were prohibited of being connected to networks of electricity, hydro etc. Complimentary measures were also introduced, such as prohibition of parcellation of rural land in pieces smaller than 4000 m2, etc. At the same time, though, another law, L. 720/77 "exemption from demolition of illegal constructions…", was working at the opposite direction from the above since, according to it, all illegal constructions are exempted from demolition, by the exception of the ones built in public spaces and protected areas, by paying a fine. This law was nullified three years later, after the reaction of the Council of State which characterized it as being unconstitutional (decisions 257, 1687/1980).

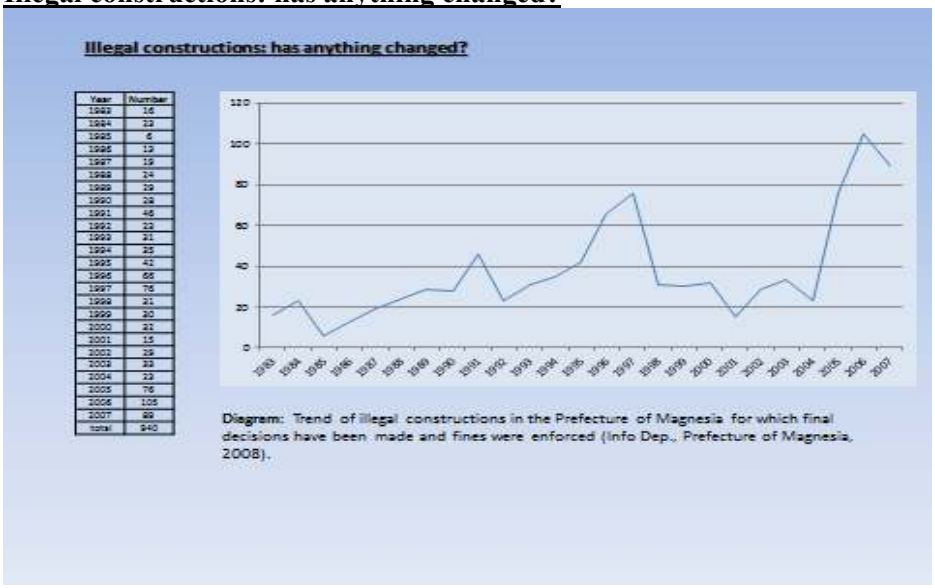
The basis for the various laws concerning illegal constructions was Law 1337/1983, which was also the basis for the contemporary urban planning legislation in Greece. It provided for a process of legalization of illegal constructions by paying fines. Constructions were exempted from being legalized when built in public and/or protected areas, if they were of low quality and dangerous, if their use or their aesthetics were not compatible to the surrounding environment. It also clearly stated that illegal structures made after 1983 should be demolished. This was also embodied to the 1985 revision of the Constitution. Since then, though, various related laws were introduced, setting stricter penalties, describing procedures for paying fines, but also describing various cases in which demolition would not take place. These were L. 1512/85 "modifications of planning regulations..", Ministerial Decision 23186/3626/15-31.4.85, L. 2052/92, L. 2242/94 "urban planning of areas of holiday residences…", P.D. 267/98 "procedure of characterization and demolition of illegal constructions…" and L. 3212/03 "Building license, and other planning regulations……."
.

Legal diversions from legal requirements at that period could also be considered:

- M.D. Γ.4//1983 Re-estimation of non-paid fines
- M.D. 31//1985 (ΥΑ 23186/3626 ΦΕΚ Β 172 1985): exemptions from demolition and connection to electricity and hydro networks for social reasons
- M.D. 231//1985 (ΥΑ 23188/3628 ΦΕΚ Β 172 1985): changing annual fines for exemption from demolition to once paid fines
- M.D. 381//1989: Connection of illegal constructions to electricity and hydro networks
- D. Circ.//1998: Special conditions of implementing legal acts (selling, inheriting etc.) for illegal constructions after the 31st.1.1983
- M.D. 110//1999: connection of illegal constructions to electricity networks
- L 2831/2000: exemptions from demolition
- M.D. 1208/2004: Procedure and documents for temporary connection of illegal constructions to hydro and electricity networks
- M.D. 109//2005 (ΥΑ 1090652/6799/Β0010 ΦΕΚ Β 1393 2005): special conditions of demolishing illegal construction on the coastline
- M.D. 2587/2005: Extension of the period of applications for purchasing illegally occupied land
- M.D. 348//2008 (ΥΑ 348849 ΦΕΚ Β 1 2008): Special conditions of exemptions of demolishing illegal constructions related to stock farming.

This ambivalent way of treating illegal construction did not only fail to discourage it, but proved to be an effective fertilizer for its growth and spreading all over the country.

**Illegal constructions: has anything changed?**




In 2009 pressure for legalization was mounting. Legalization seen as a source of fresh money in the National Treasury, as well as an "electoral weapon". The Ministry of Planning, Public Works and the Environment expressed intentions to prepare a bill for legalization, based on a drastic reduction of fines, which would encourage flat owners to declare the illegal closing of semi hypethral spaces, the illegal use of the basements as main residences etc.

Debates and heated reactions erupted among political parties, public bodies, NGOs, associations and unions, being for, or against such a prospect. Opposition to the bill was expressed by political parties from the centre and centre – left , the Technical Chamber of Greece, the Association of Notary Publics, unions of lawyers, environmental associations etc., on environmental, legal, and ethical grounds. Support for the planned bill was expressed by the Union of Developers and the Union of Owners of Immobile Property, who were claiming to express the desire of citizens for more residential space, and the desire of the government to gain more money.

With the change of government after national elections, the new Ministry of Planning and the environment suspended the "regularization" part of the implementation of Law 3375/2009, until May 2010. The rest of the measures concerning semi hypethral spaces remained. Furthermore, the Council of the State ruled that "regularization" is unconstitutional and all illegal constructions made after 1983 should have been demolished. L. 3375/2009 was replaced by L. 4014/2011.

The legislation which is in effect at the present in Greece, is Law 4178/2013. It is worth mentioning that L. 4178/2013 was introduced in haste, since in April 2013, the Council of the State ruled that the previous law (Law 4014/2011) was unconstitutional in specific articles and in its whole, and thus, it had to be replaced. L. 4014/2011 kept on using "regularization" in a way that many categories of illegal constructions could be allowed to be used as legal for the next 30 years, provided that a penalty was deposited for this purpose. In fact, the objectives of Law 4014/2011 –given the economic crisis in Greece- were directed towards fine collections, rather than dealing decisively with illegal construction. And this is also obvious to the objectives of the new legislation, although the very striking elements of the previous law were omitted.

According to its provisions, acts of law directly or indirectly granting property rights on immobile property containing or consisting of illegal constructions, are forbidden or –if

conducted- automatically nullified. The law also describes cases for which, there are exceptions to the above rule. Types of illegal constructions –characterized as "arbitrary"- excluded from the exceptions are the following:

- Illegal buildings or structures built on public property, and on open/public spaces.
- Illegal buildings or structures in preexisting adits/galleries.
- Illegal buildings that have been built on or too close to roads or streets and therefore pose a safety hazard to transport.
- Illegal buildings or structures on forestry land, seashores, beaches, or too close to coastlines, or riverbeds.
- Illegal buildings in other protected areas i.e. archaeological sites, historical sites, traditional UNESCO villages, NATURA areas, national parks etc.

Penalties and punishments are described, in the forms of fines, imprisonment, and expulsion from professional bodies, for the owner of the illegal structure but also for the engineers involved in their study and/or construction, the workers working in them, and the notary publics issuing legal acts granting property rights. Also, regarding the Environmental Authorization of works and activities, this Law proceeds in the formation of the Central Council of Environmental Terms and Conditions, aiming to consult on the outcome of Environmental Impact Assessments studies on specific cases.

**Concluding remarks**

Two main conclusions can be extracted from the above: a. illegal construction has been inherent to the development of Greek cities and villages. It is aimed to tackle it through a strict system of penalties, fines etc., the implementation of which, though, has been proved almost impossible. b. political initiatives up to now, were dealing with this phenomenon by having as main goal the maximization of economic and political profit, contrary to the principles of the wellbeing of citizens, the protection of the urban and rural environment, and sustainability in general.

Economic crisis made the above even more intense and the accruing contradictions even more obvious. New legislation seems to have as main objective the collection of money and not the discouragement of illegal construction. The indirect effects in fact, seem to let this phenomenon untouched and uninhibited, since it is a source of channeling more –badly needed- money to fill the government's dept. And the arising questions concern the sustainability principles put in gradually greater risk, and the fate of future generations being a matter of irresponsible gamble.

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# Introduction of Land Readjustment in the Netherlands: reflections from Germany and Spain

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## Abstract

*Many say that Land Readjustment (LR) can potentially resolve the stagnation of development that accrues from scattered ownership and improve the financing of public infrastructure in private land development. Under this enthusiasm for LR lay the arguments that it avoids the need of expropriating land, empowers landowners to develop their land and provides the necessary public infrastructure at a lower or even no cost for the public budget. This enthusiasm has enticed the Dutch government, who asked an expert committee to submit a draft proposal for a LR-regulation and since the summer of 2014 is working towards a draft LR act. However, LR not always resolves the mentioned problems and in some countries it is even a 'dead word' in legislation. Unfortunately, no much literature analyse which aspects of LR-regulations might be critical in practice. Supporting on the experience with the German and Spanish LR this paper offers a framework of analysis to evaluate whether a Dutch LR-regulation might work or not in practice.*

**Key words:** land readjustment, financing public infrastructure, public value capture.

## 1. Introduction

Land Readjustment (LR) is experiencing a revival in academic literature (e.g. Hong & Needham, 2007; Van Der Krabben and Needham, 2012) and becoming popular among international development organizations like UN-HABITAT (e.g. 2012), the World Bank (e.g. 2014) and the Lincoln Institute of Land Policy (e.g. Hong and Brain, 2012). The instrument is advocated as being one important land management tool in developing countries, where a rapid urban growth is making thee need of large investments in public infrastructure more evident. It is also advocated that developed economies could profit from it too because it is as an alternative to the traditional two ways of assembling land: voluntary exchange or public expropriation[1]. E.g. Great Britain and the USA, where since the 2000's the use of public expropriation to transfer private property from one group of owners to another for private development is becoming more controversial and its enforcement more costly (Hong and Needham, 2007: xv-xix; Hong, 2007: 10-12). This enthusiasm is not new; it previously enticed at the end of the 1970's and in the 1980's many international organizations, scholars and practitioners (e.g. Doebele, 1982). They found LR, inspired by its successful application in the post-war reconstruction of Japan and South Korea, a useful tool to improve the quality of urbanization not only in developing countries but also in Western countries like the US. Land readjustment for large-scale urban development remained however largely untested outside Asia, Germany, Spain and Israel due apparently to the lack of an objective and trusted body of professionals in developing countries and due to the resistance of existing real estate interests (Doebele, 2007).

[1] *Expropriation* is equivalent to *eminent domain* and *compulsory purchase* or *acquisition*.

Similarly to those times also nowadays some voices are critical about the practical possibilities of LR. The instrument seems not always to be an effective and self-financing method of urban development, which is why it has sometimes been named a 'sleeping beauty', potentially interesting but rarely useful in practice (Alterman, 2012: 765). Unfortunately not much literature analyse with aspects of LR might be critical in practice. This paper thus seeks to contribute to literature aiming a more systematic analysis of the effectiveness of LR-regulations (e.g. Turk, 2008; Yilmaz et al, 2015). To do so it critically reflects on the recently announced plan of the Dutch government to introduce a LR-regulation in the Netherlands. The reflection supports on the experiences with two LR-regulations: the German *Umlegung* and the Spanish *Reparcelación*. Both regulations are being extensively applied for decades now, so cumulatively they contain many potential lessons from which other countries may learn. Based on this experience, this paper evaluates the current proposal for a LR-regulation in the Netherlands. As there is an almost dramatic lack of English spoken scholarly publications about the Spanish LR, this paper will also contribute to filling this gap in the international literature.

Germany introduced LR (*umlegung*) already in the 19th Century, and nowadays the regulation is applied with regularity, especially in small and medium sized urban green-field developments, but there are also cases of *Umlegung* in urban regeneration areas (interviews with Mueller-Joekel, 2014). Spain introduced LR (*reparcelación*) for the first time in 1956 and the regulation was modified in the 1970's and beginning of the 1990s. Until the 1980s the regulation was not applied properly. In the 1990's, following a reordering of competences in urban planning among the central and the regional public administrations, each of the 17 Spanish regions developed its own variant of LR. Of these variants this paper will focus on the one of the region of Valencia[2] because it introduced some novelties that extended to most other regions. After the 1980's the instrument has been extensively used in almost all urban development in the country. Since that time almost the entire urban development in Spain, except strategic developments (e.d. large industrial sites, some complexes of public facilities and social housing and other singular cases) and main infrastructure (highways, railways, airports, seaports, etc), has been developed through LR (Muñoz Gielen, 2010 and 2014). This paper will refer to the LR-regulation that was in force until the 1980's as 'traditional LR', the LR-regulation since then as 'Spanish LR' and the LR-regulation introduced in the 1990's in the region of Valencia as 'Valencian LR'.

Section 2 introduces the proposed new LR-regulation in the Netherlands. Sections 3 to 7, based on the experience with the German and Spanish LR, reflect on separate aspects of LR: section 3 analyses which party is empowered to implement LR, section 4 the enforceability of readjustment on opposing landowners, section 5 how much costs can be charged on landowners, section 6 whether LR guarantees the construction of public infrastructure and section 7 the transparency and accountability of the LR procedure. Finally, section 8 draws general conclusions.

## 2. The Dutch proposal of LR

The Netherlands already dispose since 1924 of a LR-regulation meant for reassembling agricultural land that has succeeded in reordering a large part of the total agricultural surface into more efficient plots. In 2013 the Dutch Ministry of Infrastructure and Environment assigned to a special committee (from now on: 'LR Committee') the task of drafting a draft proposal of LR-regulations meant for urban development. In previous years the problems with the stagnation of urban development created among professionals, academics and stakeholders (e.g. the Dutch Federation of Municipalities and the Dutch Federation of Urban Developers) support for a LR-regulation for urban areas. On the 1st of July of 2014 the Dutch

[2] 1994 *Ley de Regulación de la Actividad Urbanística de la Comunidad Valenciana*.

Parliament (second chamber) expressed its support to the introduction in the short term of a LR-regulation, and nine days later the LR Committee offered his conclusions to the Ministry (Commissie Stedelijke Herverkaveling, 2014). In its rapport, the LR Committee made a draft proposal of LR-regulation (from now on: 'Proposed LR'). The Ministry is at this moment organizing an open consultation among stakeholders and experts and working towards a draft law (from now on: 'Draft LR-act'), which will probably be published at the end of 2015. If finally approved, the act is supposed to become in force in 2018, together with a major revision of urban and environment legislation. This paper will thus reflect on the Proposed LR and, as far as some of its contents are known, on the Draft LR-act.

The Proposed LR regulates first the reallocation and realignment of all the rights in rem[3] regarding real estate (from now on: 'properties') within a development area (*blok* following the terminology of the LR Committee). Second, the Proposed LR regulates the construction of the necessary infrastructure. Within current civil Dutch legislation the owners of the rights in rem of real estate (from now on: 'owners') can agree land readjustment without any intervention of the public administration. However, in case there is a minority of owners opposing, the Proposed LR gives to the municipality, provided that a majority of owners supports it and the intended plan is economically feasible[4], the powers to force the readjustment of the properties of the minority. This compulsory readjustment is meant to be carefully regulated and foreseen with the necessary legal guarantees, the municipality remains responsible for all decision-making and an independent committee should supervise the procedure. Regarding these compulsory powers, the Ministry has recently announced that it will not include it in the Draft LR-act, leaving only the possibility of a voluntary readjustment that will require agreement among all the owners.

The procedure in the Proposed LR follows the following steps: after anybody undertakes the initiative, and provided that a majority of owners support it, the municipality makes a public notice of the draft Readjustment Plan (*Ruilplan*), which will be available to the public. A Readjustment Plan consists of two sets of documents: a List of Owners (*Lijst van Rechthebbenden*) and a Distribution Plan (*Plan van Toedeling*). These documents prescribe the physical transformation of the development area to the new uses and functions and the reassignment and reallocation of properties. In case these new uses and functions do not fit within the existing Land Use Plan, this plan will have to be modified[5].

Before the Land Use Plan is modified and before the draft Readjustment Plan is approved, municipalities must check whether all the necessary development costs are secured[6]. This means that the implementing party (the one who leads the process, see section 3) has to sign a development agreement (a private law contract) in which he commits to bear all the

[3] De most relevant 'rights in rem' regarding real estate are: property right (*eigendomsrecht*), building lease (*recht van opstal*), flat ownership or condominium (*appartementsrecht*), usufruct (*recht van vruchtgebruik*), leasehold or enphyteusis (*recht van erfpacht*), use right (*erfdienstbaarheid*) and mortgage (*hypotheek*).

[4] I.e. provided that the economic value of the land increases thanks to the transformation from the previous to the new uses.

[5] This paper focuses on LR-plans that involve such a modification of existing functions and uses that there is always need of modification of the Land Use Plan. With a modification of the Land Use Plan I mean any land-use regulation decision of any kind (rezoning, additional development rights, relaxation of existing land-use regulations, etc) that allow more economically profitable functions and uses.

[6] Costs are 'secured' when there is certainty that there is, or will be, financial means available to pay them. This certainty can be created in different ways: *i)* When there is a development agreement or any other form of private law contract that commits any party to pay; *ii)* When any public body commits itself to subsidy the costs; *iii)* When the municipality has the land and has calculated that the profits of selling the land will cover the costs (thus, in case of public active land policy, which is excluded from the situations described in this paper).

development costs (in kind or, in case that the municipality has to invest in the infrastructure, in money). The development costs that must be secured by the implementing party include the necessary infrastructure located inside the development area (the *blok*). See section 5 for a definition of infrastructure inside and outside the development area. In case the implementing party refuses to secure the development costs located inside the development area, the municipality has the power to refuse the approval of both the Readjustment Plan and the modification of the Land Use Plan. Regarding the costs of infrastructure outside the development area, the implementing party and the municipality can negotiate to include them in the development agreement too, but this is strictly voluntary. If the implementing party refuses, the municipality has not the statutory powers to refuse the approval of the Readjustment and Land Use plans. So in case there is no agreement about these costs, the municipality must try to recover them through section 6.4 of the 2008 Physical Planning Act (*Wet ruimtelijke ordening*). So one important feature of the Proposed LR is that it prescribes how to recover only part of the costs and partially supports on section 6.4 to recover the rest (see Frame 1). We will see later in section…. why this might be a problem.

**Frame 1: Section 6.4 of the 2008 Physical Planning Act**

Section 6.4 gives to municipalities the power to compulsorily charge infrastructure costs on landowners through a Development Contributions Plan (*Exploitatieplan*). When a land use plan has to be modified to allow a building plan, and municipalities do not manage to agree voluntarily with the landowner about his contributions for the infrastructure, they can approve this plan together with the modification of the land use plan. In the Development Contributions Plan municipalities calculate the costs that landowners will have to contribute. Once the municipality approves this plan together with the new land use plan, she can make granting the building permit conditional on this contribution. If the landowner does not secure this contribution the building permit becomes nullified. In this sense, municipalities can compulsorily charge these costs on landowners: if landowners do not pay, they cannot build.

There are many drawbacks of this way of charging landowners through the Development Contributions Plan. First, the 2008 Act and the 2008 Physical Planning Decree (*Besluit ruimtelijke ordening*) regulate in detail the costs that can be included in a Development Contributions Plan and charged to the landowners: mostly local, site-specific, on-site public infrastructure. Large public infrastructure, especially that one located off-site, largely cannot (partially or totally) be charged to the landowners. There have been examples of municipalities charging these costs to landowners through a Development Contributions Plan, but judicial scrutiny is limiting this practice (Buitelaar et al., 2012: 63-65). Second, specially in urban regeneration areas, the evaluation methods of land prescribed in the 2008 Act and Decree often diminish further the amount of costs that be charged to landowners. Third, the approval of this plan involves an active and direct involvement of municipalities, who bear responsibility on the implementation of the infrastructure and might suffer losses if finally the costs are higher than initially calculated.

Due to these drawbacks municipalities do preferably agree a development agreement with the landowner in which he commits to bear the costs, instead of approving a Development Contributions Plan. Indeed, Development Contributions Plans are not used frequently: up to July 2010 municipalities used it in only 3% of the building plans (Buitelaar et al., 2012: 62). However, municipalities are not free to force a development agreement and landowners must agree voluntarily. The lawmaker presupposes that in case there is not agreement, municipalities are able to recover the costs through a Development Contributions Plan, so following jurisprudence municipalities cannot easily refuse the plan. Recent jurisprudence is punishing those municipalities who refuse plans just with the argument that the landowners did not agree a development agreement (Fokkema, 2014; BVH Ruimte i.s.m. Vreman Advies, 2014: 19-20). Municipalities must prove that with a Development Contributions Plan the municipality will finally end up subsidizing the costs. Only then municipalities can refuse the

initiative without the risk of loosing the case at the Courts. This implies that municipalities have to do a draft Development Contributions Plan beforehand to prove the need of subsidization, which implies a direct organizational input that not all municipalities can afford.

Together with the draft Readjustment Plan, the municipality also makes a public notice of a draft List of Pecuniary Regulations (*Lijst van Geldelijke Regelingen*), which will also be available to at least the owners. A List of Pecuniary Regulations transposes the Readjustment Plan into its financial consequences: it includes a land exploitation calculation[7], the 'initial value' of all properties included in the development (*inbrengwaarde*) and the 'end value' of the resulting serviced building plots (*uitneemwaarde*)[8], a calculation of the balance for each owner, a calculation of the compensation for those owners that cannot receive a serviced building plot[9] and of other costs as for example compensation for the removal of existing buildings or users.

After the public consultation, and after the implementing party signs a development agreement in which he secures at least the development costs located inside the development area, the Municipality approves the Readjustment Plan (but not yet the List of Pecuniary Regulations). Previously or after this, the municipality modifies the Land Use Plan[10]. Once the Readjustment Plan is irrevocable[11] the Property Register (*Kadaster*) reassigns and reallocates the properties, i.e. issues new titles to returning property owners. Now the financial processing starts: the implementing party works out the List of Pecuniary Regulations, the municipality approves it, the implementing party constructs the infrastructure or pays the municipality for doing so and finally the serviced building plots are delivered to the owners and the public infrastructure to the Municipality.

## 3. Who is the implementing party?

One important feature of a successful LR might be whether it offers or not the possibility to different parties of becoming the implementing party[12]. The implementing party is the one who:

a) Prepares the necessary documents (the Land Use Plan, the Readjustment Plan and the List of Pecuniary Regulations in the Proposed LR for the Netherlands), creates enough

[7] A 'land exploitation calculation' includes a calculation of all costs and incomes made in the development of the land, i.e. the process that starts with the initial physical situation and ends with the delivery of serviced building parcels ready for building. The costs and incomes are translated to their present or future value and incremented or diminished with the expected indexes.

[8] The 'initial value' is the market value of the properties under the presumption that the Land Use Plan is not going to be modified, the properties are not going to be readjusted and the area is not going to be developed. It excludes thus the expectations of future value increase due to the development of the area. The 'end value' is the market value of the resulting serviced building plots, i.e. after the modification of the Land Use Plan, the readjustment of the properties and the construction of the infrastructure.

[9] Because for example their initial property was too small to account for a full serviced building plot.

[10] Provided such modification is needed. As said, this paper focuses on those cases that involve such a modification of existing functions and uses that there is always need of modification of the Land Use Plan.

[11] A Readjustment Plan is irrevocable after the legal possibilities of challenging it at the Courts have passed, or in case of appeals, after the Courts confirm the municipal approval.

[12] The 'implementing party' receives different names in literature, e.g. a 'self-governing agency for redevelopment' or 'land assembler' (Hong and Needham, 2007: xv-xix), a 'land readjustment agency' (Hong, 2007: 20), ….

political and social support for the plans and submits them to the public administration in charge (the Municipality in the Dutch case);
b) Actually provides the public infrastructure and delivers serviced building plots (and in case he has to advance investments, the one who also bear financial risks, see later).

It is relevant whether not only public bodies, but for example also property developers and associations and cooperatives of owners have the possibility of becoming the implementing party. This is relevant because public bodies are not always powerful enough (organizationally and financially) to lead LR. For example public bodies might lack the necessary technical and managerial skills, and if other parties can also lead the readjustment the chances are larger for an effective implementation of LR (Yilmaz, 2015: 159, 162).

*Who is the implementing party in Germany and Spain?*
In both Germany and Spain, the same as in the Dutch Proposed LR, it is the Municipality who keeps all the competences of approving the plans and of organizing all necessary administrative procedures, included all public consultation. But the implementing party does most of the work (a and b). Who is the implementing party in Germany and Spain?

- In Germany the implementing party is a public development company, most of the times belonging to the Municipality;
- In Spain there are different possibilities, the Municipality (or sometimes another public body) can point out as implementing party:
    - In both the Spanish and the Valencian LR: a public development company;
    - In the traditional LR: besides a public development company, municipalities can also point out the landowners of at least 60% of the surface of the development area as the implementing party;
    - In the Valencian LR: besides a public development company, municipalities can point out in a public selection not only the landowners, but also any other party (not necessarily owning land, although most of the times it is a property developer who owns part of the land). So there is not anymore the threshold of 60%.

*Who is the implementing party in the Proposed LR for the Netherlands?*
In the Proposed LR the implementing party is the majority of owners and, if the Draft LR-act finally excludes compulsory readjustment, a 100% majority. It is possible for the owners to agree with for example commercial developers to implement LR together, but the support of the majority is *conditio sine qua non*. So, the same as the German LR, the Proposed LR in the Netherlands reduces the universe of parties that can implement LR: in Germany only a public municipal development company can implement LR, in the Netherlands only the majority of owners or those parties that have an agreement with the majority of owners. Leading LR in Germany relies thus on strong municipalities, and in the Netherlands on an agreement with a majority of owners.

In the traditional Spanish LR, where both a majority of landowners and a public development company could implement LR, there were often many landowners opposing the plans. In theory municipalities could overcome resistance through compulsory LR or through expropriation: In Spain, besides the compulsory land readjustment, there is also the possibility, rarely used, of expropriating the land. However, municipalities were not strong enough, and/or they did lack the necessary political will or financial resources to intervene, so opposition of landowners often delayed LR and/or forced municipalities to lower the amount of public infrastructure and other requirements. This lead in the 1960s, 1970s and 1980s to badly provided developed areas. In the 1990s the region of Valencia gave to municipalities the statutory powers to point out private parties not necessarily owning land as implementing parties, and gave them the powers to enforce readjustment. This was already introduced in the 1970s in the traditional Spanish LR, but the Valencian LR gave to the selected parties enough certainty about their risks so that they actually dared to assume the responsibilities of

becoming implementing party (section 6 reflects further on these certainties and risks). This novelty reduced the need for commercial developers to acquire land beforehand and thus reduced their financial risks, this leading to a sharp increase of private implementation of LR, which coexisted alongside those LR-plans implemented by public bodies. The Valencian LR contributed in this way to increase the effectiveness of LR in terms of a sharp increase of areas developed with LR and a clear improvement of the quality and quantity of the public infrastructure in the developed areas. This novelty extended to almost all Spanish regions (Muñoz Gielen & Kortals Altes, 2007). Whether LR in the Netherlands could benefit with such a measure is difficult to answer, but it seems that at least the requirement of supporting on a majority of owners will exclude many areas to become developed with LR.

## 4. Voluntary or compulsory LR?

*Voluntary and compulsory LR in Germany and Spain*
In both Germany and Spain there is the possibility of both a voluntary and a compulsory LR. In the voluntary LR the implementing party agrees with all the owners the terms of the readjustment, i.e. the detailed infrastructure provision projects (quality, quantity, costs), when will he provide the infrastructure, how much and when will the owners pay their share of the costs, which serviced building plot will receive each owner, etc. Voluntary LR can only be done if all owners agree to the terms of the readjustment. That's why voluntary LR is also called 'private' LR. With an increasing number of owners the chance to get this agreement from all participants decreases, so the experience in both countries show that there is need of a compulsory LR.

In the compulsory LR the implementing party can impose the readjustment terms upon the owners (usually just a minority of them opposing the development) and force the readjustment. This means that the implementing party, after the public administration approves the LR-plan, inscribes in the property registers the new property boundaries (new serviced building parcels for the owners and the public infrastructure for the municipality). All owners, whether they agreed or not with the LR-plan, receive a new serviced building parcel, so there is no expropriation, i.e. the property of owners who do not agree just becomes readjusted without the need to expropriate it. This serviced building parcel uses to have different dimensions than the former property (smaller, as there was some land needed for the public infrastructure), and might be located in a different place, but it is more worth in economic terms than the former property. Compulsory LR is not always applied in Germany and Spain, but the mere possibility of it has been central in the effectiveness of the regulation. This conclusion for Germany and Spain is also said to apply for any LR-regulation that wants to become effective (e.g. Hong, 2007: 17-21).

*Voluntary or compulsory LR in the Netherlands*
The LR Committee proposed to the Ministry the possibility of forcing LR on a minority of owners provided that a majority supported it. In the Proposed LR it is the local council (local legislative body) the one who should decide whether there is sufficient support among owners, and the LR Committee suggested a minimum percentage of 80% of the total surface of the plan area, of the number of owners or of the market value of the land. Here the Proposed Dutch LR is more conservative than the German or the Spanish LR, where no minimum support among owners is needed. Based on the experience in Germany and Spain this can lead to delay and stagnation of LR in the Netherlands. As recently the Dutch government announced to introduce only a voluntary LR, this shortcoming will be worst, and LR might become a 'dead letter' in legislation. As far many stakeholders manifested their disconformity with this decision and there seems to be also resistance in the Parliament, so this will be one important discussion in the next months.

## 5. How much do owners pay?

LR is often priced as being a self-funding way of paying all the externalities of urban development. In theory, the economic value increase that accrues from the development should pay for all necessary development costs. The value of land increases thanks to (1) modifying the land use plan towards more profitable uses, (2) readjusting the properties to adapt to the new uses and (3) providing the infrastructure[13]. The development costs to be paid with the value increase potentially include the construction of public infrastructure directly needed for the development and also those external negative impacts in the wider physical or social realm (off-side infrastructure, 'soft' social infrastructure, affordable and social housing, sustainable measures, etc). There are for owners two possible ways to contribute: ceding land for free or very cheap (meant for public infrastructure or as payment in kind for the costs of constructing the public infrastructure) and paying monetary contributions (*cfr.* Yilmaz, 2015: 160). A distinction should be made between costs that can be compulsorily charged to the landowners, and additional contributions that can be agreed voluntarily.

*How much do the German owners pay?*
In Germany landowners can be compulsorily charged through LR with the following costs:

- The area designated for local public infrastructure in the legally binding land use plan (the 'hard' local infrastructure like roads, sewerage, etc, which occupies from about 20% to 40% of the total development area[14]) must be ceded for free provided that the value increase due to LR (the second value increase step of the three mentioned above) is large enough to compensate owners for this, see under. This means that in areas with high land values municipalities usually can obtain this land for free, but in areas with low land values municipalities will have to compensate landowners or just designate less land for local public uses;
- German municipalities can also, after providing the local public infrastructure, charge a Recoupment Charge on landowners (*Beitragsbescheid*) to pay at most 90% of the costs of constructing this infrastructure[15]. This contribution (formally not a tax) is based on the *Erschließungsbeitragsrecht* of the Federal Building Code (Hobma et al., 2014: 33-39).

So in principle German municipalities will not recover all the costs made. Regarding the costs of constructing the local infrastructure, the Recoupment Charges covers a maximum of 90% of these costs. Regarding the land needed for this local infrastructure, municipalities have to support on a second charge, the 'Readjustment Charge'. After the readjustment of the properties municipalities can charge landowners the economic value increase of their land that accrues from the readjustment (i.e. the fulfilment of the LR-procedure and the reshaping of property boundaries in the property registers, this is the second value increase step of the three mentioned above). The economic value increase that accrues from the modification of the land use plan (first value increase step) belongs in Germany to the landowners and cannot be charged. Landowners usually pay by ceding for free the land that is needed for the local public infrastructure (the mentioned 20 to about 40% of the total development area). In case this land is not enough to pay the value increase due to readjustment, landowners have to pay an additional amount in money, or they can also pay with extra land. These extra payments in money or land can be enough to pay all the costs (land and construction costs) of the local infrastructure, and sometimes also to cover part of the costs of supra-local public

[13] For example a former deteriorated industrial area or an agricultural area has to be rezoned to residential before land readjustment can proceed. Only the fact that the administration rezones the land does automatically increases the market prices of the land. After the land has been readjusted, the price of land also increases again, and once the infrastructure has been constructed, the price might increase too.

[14] The local public infrastructure that can be compulsorily charged excludes 'soft' social facilities usually serving wider areas, e.g. schools.

[15] This regards only the costs of constructing the local infrastructure, and excludes the needed land and of course the costs of 'soft' social facilities.

infrastructure (contributions for infrastructure that serves a wider area and are located in, near by or far away from the development area) and of 'soft' infrastructure (like schools, sport facilities, health-related buildings, retirement homes for the elderly, affordable/social housing).

Summarizing, both the Recoupment and the Readjustment charges together sometimes cover all the costs of the local public infrastructure, and sometimes less, depending on the land values and market circumstances in the specific area. If taking into account the supra-local public infrastructure and other 'soft' infrastructure, neither the Readjustment and the Recoupment charges are usually enough to pay all the costs, so there is a need of public subsidization[16].

This might be the reason that many German municipalities try to avoid the formal compulsory procedure and prefer to agree LR voluntarily with the owners. In case of voluntarily land readjustment, municipalities can negotiate with landowners to contribute more. They do so sealing a development contract, referred to as 'administrative contract' because it is regulated in public law (Section 11 of Federal Building Code –BauGB). Any party and the Municipality can seal different sorts of administrative contracts: *Erschließungsvertrag* and *Folgekostenvertrag* (Hobma et al., 2014: 28-30, 32). It is also possible to seal a 'private' law contract (ruled in Civil Law). These contracts can include additional contributions for supra-local and soft infrastructure (Hobma et al, 2014: 35). For example in Stuttgart these contracts are used to provide up to 50% of the land for public infrastructure or to provide free/cheap land for affordable/social housing; in Munich they are used to charge part of the economic value increase that accrues from modifying the land use plan. However, both landowners and Municipalities must agree voluntarily on this. If there is no agreement the Municipality cannot charge more than the above-mentioned Recoupment and Readjustment charges.

*How much do the Spanish owners pay?*
In the Spanish LR landowners are compulsorily charged with the following costs:

- Landowners must cede for free all the land designated for local, supra-local and soft public infrastructure in the land use plan. This is an average between 60% and 80% of the development area. Depending on the regional LR-variant, this might include important amount of land ceded for free or for a cheap price meant for affordable and social housing[17];
- Important contributions in land for supra-local public infrastructure located outside the development area;
- All the costs of constructing the local public infrastructure (but not the supra-local and soft infrastructure);

[16] For example, in good areas (Frankfurt) the value of agricultural land can be about € 8/m2, once rezoned about € 200/m2 and once readjusted about € 400/m2 (this latter value is an estimation of the value of the final building plots, provided with local public infrastructure, minus the cost of constructing this local public infrastructure). In this example the landowners have to cede for free up to 50% of the total surface of their original parcels (they receive 50% of their former property as serviced building plots, which is as worth as the value of 100% of their property before readjustment). If there is need of less local public infrastructure, landowners will have to pay the remaining in money or with land.

[17] For example, in the Bask country regional legislation prescribes that 20-40% of the development area in regeneration sites (20% from 1994 to 2006, and 40% onwards), and 65-75% in green-field sites (65% from 1994 and 75% from 2006) must be ceded partly for free and partly offered for a cheap price (between € 100 and € 200/m2 of building area). This land is to be used for social and affordable housing. In the Bask city of Vitoria-Gasteiz this led to a share of 70% of affordable and social housing in all new residential areas during the period 1994-2005 (Burón Cuadrado, 2006 and 2012).

The same as in Germany, landowners must finally receive serviced building plots that are economically speaking more worth than the initial value of their land. The difference with Germany however is that landowners in Spain can be charged up to almost the full value increase of land (the value increase that accrues from all three steps mentioned before). Landowners have by law the right to keep part of the value increase, which means that the resulting readjusted serviced building plots are more worth than the initial value plus the costs of public infrastructure that they have to pay, this allowing a reasonable profit. But still Spanish municipalities generally force land landowners to cede more land and pay more contributions than in Germany. In addition, the same as in Germany, Spanish municipalities can negotiate additional voluntary charges, for example the building of public buildings or monetary contributions towards it, the building of social/affordable housing, or money payments to the general municipal budget. An important difference with Germany however is that in Spain LR is the obligatory, statutory land development tool, and municipalities cannot refuse to proceed if, for example, implementing parties do not agree voluntarily on additional contributions. Agreed additional contributions are frequent in Spain, but not omnipresent.

*How much must the Dutch landowners pay following the Proposed LR?*
The Proposed LR is not very clear in this. It differentiates between infrastructure located inside and outside the development area (*blok* in the LR Committee's terminology). It seems that the LR Commission means that costs inside the development area are those that can be compulsorily charged to landowners through section 6.4 of the 2008 Physical Planning Act (see frame 1 above).

The Draft LR-act will need to clarify the link that the Proposed LR establishes with section 6.4: for example following section 6.4 infrastructure located inside the development area that serves areas outside it cannot be fully charged to the landowners, while the Proposed LR seems to suggest that these costs can be fully charged. The ambiguity is due partly to semantic ambiguity[18] that should be clarified. But this in not the only aspect where the link with Section 6.4 will create problems.

The Proposed LR prescribes that the implementing party must secure in a development agreement the costs and the needed land of the infrastructure located inside the development area or *blok*. If not, the municipality can refuse to approve the Readjustment Plan and modify the Land Use Plan. So this development agreement is partly voluntary (the implementing party is not obliged to sign it) and partly compulsory (if he doesn't development goes not further). It is possible also to negotiate contributions for infrastructure outside the *blok*, but this is voluntary, i.e. the municipality is not allowed to refuse to approve the Readjustment Plan or modify the Land Use Plan in case the implementing party does not agree. Legislation and jurisprudence presuppose that municipalities can recover the costs via a Development Contributions Plan. This has two main problems:

- If there is a minority of landowners that do not agree to secure any costs (of infrastructure inside and outside the *blok*) in the development agreement, the municipality has statutory powers to refuse the initiative. If the implementing party wants to go further he will need to sign the development agreement and advance the share of the minority. It is unclear whether he will be able to recover this share from the minority, see in frame 1 the limits of cost recovery through the Development Contributions Plan. This problem can be resolved if, similar to the Spanish LR, the implementing party receive or sell part of the serviced building plots of the opposing minority to pay the contribution they refuse to pay. Another way of resolving it could be, at least partially, the German Recoupment and Readjustment charges, to be levied on the landowners after delivery of the serviced

[18] The Commission LR uses the term *noodzakelijk* (necessary) as something different from the legal term *toerekenbaar* (attributable), while they mean (as far as it is used to remark which costs can or cannot be compulsorily charged to landowners) the same.

building plots. If the value of land increases enough due to the readjustment, these charges can recover most or all the costs of the local public infrastructure.

- Anyway, if landowners refuse to secure the costs outside the *blok*, the municipality can formally speaking not refuse the initiative and will have to advance these costs and try to recover them through Section 6.4 (so most probably will end up having to subsidize). This problem can be resolved if, similar to the Spanish LR, the municipality is allowed to refuse the approval of the Readjustment Plan and the modification of the Land Use Plan in case the implementing party refuses to secure in the development agreement the costs outside the *blok*. With other words, the Proposed LR should not support on Section 6.4 and prescribe it's own way of charging all the costs through the development agreement.

The same as in Germany and Spain, the Proposed Dutch LR includes the provision that the economic value of the resulting serviced building plots must be higher than the value of the former properties. This guarantees that landowners will profit economically from LR. The Proposed Dutch LR is more similar to the Spanish LR because landowners can be charged up to almost the full value increase of land due to all three value increase steps mentioned above (modification of Land Use Plan, readjustment of properties and infrastructure provision), which bears the potentiality of recovering all costs of infrastructure located inside the development area. However, while in Spain also the costs of infrastructure outside the development area can be charged compulsorily, in the Dutch Proposed LR these costs can mostly no be compulsorily charged because here the Proposed LR supports on Section 6.4 and this regulation does not guarantee a full cost recovery.

## 6. LR should guarantee the construction of the infrastructure

One important feature of LR is whether it succeeds or not in providing the necessary public infrastructure and facilities and avoids the situation that land has been readjusted but the infrastructure never is constructed, or too late, e.g. because there are not sufficient means for paying it (Yilmaz e.a., 2015: 158). Here LR needs to create two sorts of certainty.

*Certainty that the implementing party will construct the public infrastructure*
LR is effective if it creates certainty that the implementing party will construct the necessary infrastructure. How this certainty is created differs in the Spanish and German LR. In the Spanish *Reparcelación* the certainty is created in a developer agreement between the municipality and the implementing party in which this party commits to construct the infrastructure or to pay to the municipality for it. Generally speaking market parties are reluctant to commit because they have to deal with many uncertainties about the feasibility and the profitability of the project. During several decades the traditional Spanish LR did not include the obligation of sealing a development agreement, which resulted in delays and badly provided development areas. In the 1990's the Valencian LR (and later on this novelty became extended to almost all other regions) prescribed an obligatory development agreement: after an implementing party submits a readjustment plan municipalities organize the public decision making process (which includes a public selection among this and other possibly submitted readjustment plans) and modify provisionally the land use plan. However, this land use plan is approved definitively only after the development agreement has been signed. So in the Spanish LR implementing parties must sign a development agreement in which they guarantee the construction of the infrastructure. If they don't the land use plan does not become ratified, building permits cannot be issued and landowners can thus not profit from the new building possibilities. With other words, profiting from enhanced development possibilities is conditioned to a contractual commitment to bear all related costs.

In the German LR, formally speaking, municipalities are not allowed to condition the modification of the land use plan to any party signing any contract. However, the system

creates certainty because municipalities are the implementing party and commit to construct the infrastructure, if necessary subsidizing part of it.

*Certainty that the implementing party will obtain enough financial resources to construct the infrastructure*
In order to commit the implementing party to the construction of the infrastructure, both the Spanish and in the German LR they need on their turn certainty about how they will obtain the necessary financial resources. In Spain these resources fully come from the landowners, and in Germany there is often, besides the landowners' contributions, a public contribution too. In Spain the implementing party (a public company, a developer or the landowners) has certainty about the contributions of landowners because he has certainty that the municipality will use her statutory powers to force the readjustment of the properties and, in case landowners refuse to pay their share of the costs, also to charge part of their serviced building plots as paymend in kind. In Germany the implementing party (a municipal development company) has certainty about the contributions of landowners because the Municipality can charge both a Recoupment and a Readjustment charge. However, in case these do not cover all the costs, municipalities have to issue a subsidy.

Besides whether landowners cover all the costs or not, it is also relevant when do they contribute. In Spain landowners pay in instalments, just before the implementing party constructs the public infrastructure. And, as mentioned before, landowners pay all the costs. This implies that most of the times the implementing party only has to advance a minimal part of the investments (the costs of preparing the necessary documents previous to the selection as implementing party), and thus does not need to advance almost any investment. In Germany landowners pay afterwards, once the Municipality has readjusted the properties and provided the public infrastructure. This implies that the municipal development company has to advance the investments and the possible subsidy. It is however possible to charge part of the costs of infrastructure while completing part of the public infrastructure, which diminishes the need of previous investments.

Concluding, in Spain the implementing party has certainty about the legal possibilities of recouping all the costs, so he can commit in a development agreement to provide the infrastructure, which is a legal obligation. In Germany the municipality has also certainty about the legal possibilities of recouping an important part of the costs, so if she disposes of supplementary subsidies there is certainty that the public infrastructure will finally be constructed.

*Certainties in the Proposed Dutch LR*
In the Proposed LR Dutch municipalities, the same as in Spain, can condition the approval of the Readjustment Pland and the modification of the Land Use Plan to the majority of landowners signing a development agreement in which they secure the costs of the public infrastructure located inside the development area. Thanks to the flexibility of development agreements, municipalities can also require the landowner to pay before the infrastructure construction, or to pay in instalments, which reduces the need for municipalities of previous investments.

There are however two aspects in which the Proposed Dutch LR could learn from the German and Spanish experience. Regarding the local infrastructure, in both countries there are legal possibilities of compulsorily charging the costs to all landowners, also to an opposing minority. In the Netherlands however the only statutory way of compulsorily charging costs to a minority of opposing landowners is applying Section 6.4, which implies the possibility of not recovering all these costs, or recovering them with delay. This means that implementing parties have to advance the share of the minority of landowners and do not have certainty about recovering this investment, and when. Regarding the supra-local, off-site and 'soft' infrastructure, in the Proposed Dutch LR municipalities cannot require from the implementing

party to commit contractually to pay these costs, so municipalities can only try to obtain them through Section 6.4, which implies most probably having to end up subsidizing them.

The perspective of not being able to recover all the costs will discourage Dutch municipalities to undertake formal steps in the LR procedure before obtaining certainty from the implementing party. Dutch municipalities, the same as they already do with normal building initiatives on private land, will encourage also in LR informal ways of negotiation and condition any formal step (i.e. organizing a public decision making process about the Readjustment and the Land Use plans) to the implementing party previously agreeing in a development agreement to pay all the costs. This increases the uncertainties for the implementing party: while municipalities ask him to sign a development agreement there is no certainty about the future building possibilities and thus about the potential profits. The formal public decision making about the Readjustment and Land Use plans will start only after the signing of the contract, so before there is for the implementing party no certainty about whether the Local Council will finally agree, and under which circumstances and requirements. This uncertainty can also undermine the agreement between the implementin party and the landowners, as one of the basic parameters for their business case (how much will increase the value of their land) is uncertain. Specially not professional, somehow reluctant landowners will not be seduced to join a project with uncertain profits and will prefer free-riders strategies as for example forcing the Municipality to rely on Section 6.4, which implies lower costs for the landowners. Clear estimations of the expected profits are central in any LR-regulation (Hong, 2007: 16).

In short, the Proposed LR creates too much uncertainties for implementing parties, who will be reluctant to secure the costs of public infrastructure in a development agreement. As a reaction, municipalities will not be willing to undertake any formal step, this leading to a vicious circle: municipalities do not dare to give the certainty that the implementing party needs because they are afraid of ending up having to support on Section 6.4 and thus having to subsidize part of the costs. On their turn, implementing parties cannot afford giving certainty about the construction of public infrastructure.

**7. Transparancy and accountability**

This negotiation strategy does not constribute to an open, transparent and accountable decision making. Negotiations will namely be secret and decisions be made before the Local Council and the public will be consulted. The risk is also that the secrecy of negotiations will favour the best positioned stakeholers and harm an equitable distribution of costs and profits among all owners, which in general is one important prerrequisite of an effective LR (Yilmaz et al, 2015: 161). LR is presented in literature as a transparent alternative to other land development tools, one that allows more support among landowners and other stakeholders, but the Proposed LR for the Netherlands might end up not fulfilling this expectation.

At this point the Spanish LR offers an interesting experience. Spanish municipalities do not hesitate to approve the new land use plan and a draft of the readjustment plan before the signing of the development agreeing because they have the statutory powers to reverse these plans if finally the implementing party does not secure the costs in a development agreement. This gives to implementing parties enough certainty about the future building possibilities. It is important however to remark that this certainty is not only created through the provisional approval of the plans. Also, there is certainty about the costs of infrastructure thanks to three other ways: 1) municipalities also prescribe together with the provisional approval of the plans which infrastructure is required; 2) specific regional legislation prescribes minimal urban standards and percentages of minimum required social and affordable housing[19]. The negotiations, which must end in a development agreement, take thus place after a first open

[19] For example the previously mentioned Bask regional legislation on minimum percentages of social and affordable housing.

and public decision making proces and on the basis of openly prescribed requirements. The final results of the negotiations must be reverted back to the local council, who must ratify the plans. If there is no agreement, the provisionally approved modification of the land use plan is not enforceable (building permits cannot be issuded). A similar negotiation process takes place in England when local administrations negotiate planning gains and obligations ex Section 106 (Muñoz & Tasan-Kok, 2010).

## 7. Conclusions

The Dutch Proposed LR includes the possibility of charging compulsorily almost the full value increase of land due all three possible value increase steps (modification of Land Use Plan, readjustment of properties and infrastructure provision) to recover the costs of infrastructure located inside the development area. In this the Dutch proposal improves the German LR, where only the value increase due to the readjustment of the properties and the construction of infrastructure can be charged, this excluding the value increase that accrues from modifying the land use plan and often leading to the need of public subsidies. So the Dutch LR might be able to a full recovery of the costs of infrastructure located inside the development area. However, in order to recover the costs of a minority of landowners opposing to the plans, and in order to recover the costs of infrastructure located outside the development area and of 'soft' infrastructure, the Proposed LR supports on Section 6.4 of the 2008 Physical Planning Act, which in practice does not help much. The relation of LR with other land management tools (specially cost recovery and land acquisition tools) is mentioned as important for any effective regulation (Yilmaz, 2015: 159). The upcoming Dutch Draft LR-act should better fit within the existing Dutch legislation and avoid actors circumventing LR through Section 6.4.

As a consequence of this mismatch, municipalities have not the certainy a full cost recovery of all necessary public infrastructure. The perspective of ending up having to subsidize will discourage Dutch municipalities to undertake formal steps (i.e. modify the Land Use Plan and approve the Readjustment Plan) in the LR procedure before the implementing party securing all the costs in a development agreement. Implementing parties will be required to sing an agreeement without certainty about the building possibilities and about whether they will be able to recover the costs from the minority of opposing landowners, so they will be reluctant to secure the costs. This vicious circle will delay the process and rise the costs, for example financial costs (higher risks lead to banks asking higher loan interests and shareholders requiring higher profit margins for their investment) and other transaction costs related to making the plans, consultations, negotiations, etc. These costs are already very high in the Netherlands in 'normal' urban development on private land, i.e. with just one or few professional landowners-developers (Muñoz Gielen, 2014: 73-75). LR, that is supposed to deal with a multitude of not always professional landowners, might therefore suffer from high transaction costs.

The Proposed LR will subsequently revert into informal and untransparent negotiations, leading to a lack of accountability and the risk of a not equitable distribution of costs and profits. A transparent and equal distribution of costs and profits is one important prerrequisite of any effective LR (Yilmaz et al, 2015: 161).

Finally, the Proposed LR limits the amount of parties that can implement LR to those having the support of a majority of landowners, and excludes thus other agencies and parties. If the Draft LR-act finally prescribes the requirement of a 100% support among owners, as recently announ ced by the Dutch government, the regulation will encounter difficulties to be tested in practice.

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# Evaluation of Urban Open Spaces Sustainability

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## Abstract

*Urban open spaces have been gaining in significance in an unprecedented fashion in recent years. Their character, quality, state, and variability directly affect the development or, conversely, the decline of the urban environment, thereby directly impacting quality of life and the willingness of urban populations to identify with their surroundings. Open spaces also play an essential role in the sustainable development of cities.*

*Following the condition of open spaces and continuing to support their development in areas which are found to be stagnating are imperative. These areas of potential worth and unique merit can be characterized and quantified. In the process, it becomes possible to continuously monitor the influence and effectiveness of planning measures on the quality of real spaces inside cities from the standpoint of sustainable development.*

*Using a wide selection of sites, we will establish locally and universally applicable characteristics of urban open spaces, related to their historical, economic, ecological, and social potential. We will also attempt to demonstrate their immediate effect on sustainable urban development and quality of life. The results will contribute to the development of the theory of sustainable urban development and urban open spaces.*

## 1. Introduction

The protracted worldwide financial crisis, which began with the stock market plunges, bank bailouts, and high unemployment of 2007 – 2009, has had a significant impact on the importance and development of urban open spaces. In any number of European and American cities, socioeconomic and environmental changes have become the driving force behind a series of visionary projects aimed at regenerating and improving the surroundings of urban inhabitants with the goal of reversing the negative impact of an unfavorable economic climate. Urban planners, architects, economists, sociologists and ecologists are working together to capture the imagination of urban dwellers and encourage them to invest their energies and capabilities in establishing healthy, society-friendly, and environmentally friendly urban development.

## 2. Research background

Urban open spaces form an urban ecosystem, which is open to a wide array of users and is held together by an intricate web of social and economic relationships. At the same time, these spaces represent important centers of sustainable urban development. When examined from this vantage

point, the character, quality, and condition of open spaces have a direct impact on the development (or, conversely, the degradation) of the urban environment and on whether communities tend toward homogenization or diversification. These factors, in turn, directly affect the well-being of the local residents and their willingness to become active participants in the transformation and development of their surroundings. Open spaces, therefore, play an irreplaceable role in the sustainable development of cities.

Yet another role which open spaces play in the urban environment is that of nodes in the network of urban greenery. The results of research conducted in the year 2006 on a sampling of fifty-five cities in the United States (Nowak, Crane, & Stevens, 2006) have proven the efficacy of urban greenery in removing pollutants from the air. Urban open spaces with 100 percent greening are responsible for a two percent improvement in air quality during the course of the day (when the trees are in leaf) as they remove airborne particles such as ozone and sulfur dioxide from the air. Retention of rainwater, reduction of noise pollution, and regulation of air temperature are other functions of urban greenery which improve quality of life in the area.

Research conducted over the last fifteen years in Belgium (Van Herzele & Wiedemann, 2003) has shown that when quality open spaces are lacking, as was the case with the city of Leuven and its dearth of playgrounds and parks, families (especially those with young children) prefer to move to quiet, natural locations on the outskirts of cities to build their homes, thus contributing to higher levels of suburbanization.

In terms of social sustainability, other research (Wolch, Byrne, & Newell, 2014) shows the need to ensure free access to open spaces across the widest possible spectrum of the population. Access is crucial not only during the periods of recovery and implementation but for the long term as well.

Post-industrial spaces have also benefitted from the use of greening as a tool for renewal. Greening is currently being employed in the urban planning strategy of New York City, for example. A developmental plan called VISION 2020: New York City Comprehensive Waterfront Plan (Bloomberg, 2011) was created in response to a lack of open spaces. The goal of the plan is that the majority of New Yorkers will live within ten minutes of an accessible waterfront recreation area. Strategies for achieving this goal include renewal of parks, open areas, and plazas, greening of streets, planting of trees by volunteers, and renewal of the waterfront. In the year 2014 alone, forty-four hectares of new park lands came into being through the renewal of wetlands and river banks.

Another example of renewal in a post-industrial area in Brooklyn demonstrates a consciously creative approach to the development of sustainable urban open space. Middle-class inhabitants of the Greenpoint neighborhood formed the Newton Creek Alliance, named after one of the most polluted industrial sites in the US. Their goal was to improve the quality of open spaces without destroying the industrial spirit of the neighborhood. Using a “just green enough” strategy, the Alliance was able to make a stand against developers and prevent another case of environmental gentrification (Curran & Hamilton, 2012).

Yet another example in which significant investment in greening has played a major role in the gradual renewal of a post-industrial open space is that of the New York High Line. A campaign initiated by two local men, J. David and R. Hammond, successfully blocked the intended demolition of the defunct railway construction and led to the creation of a dynamic public park with a decidedly industrial flavor. However, in this case developers took over, and with the

construction of luxury high-rise buildings in the immediate vicinity, middle- and lower-income residents have been steadily pushed out of the area.

## 3. Hypotheses

Our research derives from the hypothesis that urban open spaces can be perceived as areas of potential capital and unique worth. As such, these spaces can be characterized, and their influence on sustainable urban development can be quantified by means of various indicators. By analyzing trends and observed values, we will be able to create models of development, which can be used to positively impact the quality of real spaces in cities from the standpoint of sustainable development. We likewise expect the results of our research to contribute to the development of workable theories of sustainable development of cities and their open spaces.

## 4. Methodology

Our research is based on a diverse sampling of locations for which we will determine locally and universally applicable characteristics, related to their historical, economic, ecological and social potential. We also aim to demonstrate the immediate effect of these characteristics on sustainable urban development and quality of life. The transformative projects, both at home and abroad, which will become the focus of our study, will provide us with an inspirational image of the metamorphosis of urban areas while allowing us to draw conclusions generally applicable to other cities facing similar challenges.

This paper opens with a description of the focus of our research as it pertains to open spaces with the aim of identifying the significant characteristics that influence quality of life as well as sustainable urban development. The foundational step of our research has been to define the very concept of open space. In the next chapter we describe the general characteristics of open space, defined with respect to the three pillars of sustainable development. Selected characteristics are then applied to case studies in housing estates in Brno, Czech Republic. Subsequently, we outline the next phase of our research and present a selection of case studies in the cities of Graz, Austria, and New York City, USA. In the final section, we provide a working list of anticipated indicators, the specifications and interrelations of which we will explore in subsequent years, along with the evaluation of their impact on urban development.

## 5. Urban Open Space

For the purposes of our research, we have broadly defined Open Space as outdoor areas, originally of natural character, which are located between or among buildings due to subsequent urbanization of the area. As part of the urban landscape, such spaces have a significant impact on the quality of life of urban inhabitants.

We have further narrowed the scope of our research to those spaces which occur in residential areas of large Central European cities, including cities in the Czech Republic. Our research also includes selected examples of open spaces situated in the center of metropolitan New York, the most densely populated urban agglomeration in the world. This is where demands on quality of life are the highest, directly touching the greatest number of inhabitants.

Concerning the emergence of open spaces, our research focuses on residential areas that have come into existence in the last twenty-five years. The research methodology we have defined within the scope of this project will also be used (for comparative purposes) on older housing estates,

specifically prefab high-rise apartment complexes, constructed between the years 1962 and 1989, in the city of Brno, Czech Republic.

For the purposes of our research, we have also defined Open Space as occurring within a built-up urban area, situated among primarily residential buildings or in their immediate vicinity, with a maximum built-up area of ten percent within the boundaries of the space itself. A meadow, a park, or similar green spaces may also constitute an Open Space. Our definition also includes areas in the transitional zone between residential buildings and the area in their immediate vicinity (the so-called soft boundary line) made up of small front lawns, gardens, and courtyards, as well as green areas utilized for informal markets, recreational activities, and night life (Alexander et al., 1977; Gehl, 2013). The flexibility of such spaces allows them to function as urban catalysts (Oswalt, Overmeyer, & Misselwitz, 2013). They are places of innovative cultural production, tempting to the eye, with a wealth of detail. At the same time, open spaces can be public, semi-private, or private in character, both from the perspective of ownership and that of accessibility.

With the exception of Palavske Square (Brno – Vinohrady, Site 1) spaces which are primarily associated with transportation (streets, squares, and parking lots) have been excluded from our research.

## 6. Characteristics which impact quality of life and sustainable development

For the purposes of our research, we have distinguished between three sizes of cities: large cities with more than one million inhabitants (New York 8,491,079 and Prague 1,243,201), mid-sized cities with between one hundred thousand and one million inhabitants (Graz 269,997, Bratislava 491,061, and Brno 385,913) and small cities with fewer than one hundred thousand inhabitants.
Each open space in the study is then assigned a territorial index to which observed characteristics and measured or detected indicators and their values refer.

Territorial indices:
A – area of the assessed open space
B – a block or open area, including neighboring buildings
C – locality, neighboring area with comparable characteristics
D – neighborhood, district, town

In order to locate the assessed space within the city structure we distinguish between: city center, city proper and periphery. Individual characteristics of the open spaces are then applied to the social, economic, and environmental pillars of sustainable development.

### *6.1 Characteristics of Open Space in terms of social sustainability*

In its broadest sense, social sustainability can be explained in relation to the number of visitors to a particular place whether from different demographic groups or the predominant population. Where visitors are lacking, decline is inevitable. In a narrower sense, social sustainability can be more diverse as it includes gender, age, income, and ethnicity. With increasing diversity, however, comes the potential for conflict. Conflict leads to security issues making personal security another important indicator of sustainability. Additional characteristics relating an area A to neighboring buildings (areas B and C) are ownership, spaciousness, and condition of facilities. These factors especially influence how public spaces are used by providing space for activities for which the surrounding dwellings are not suitably equipped.

### *6.2 Characteristics of Open Space in terms of economic sustainability*

Case studies in New York City (specifically the High Line and Bryant Park) will provide the foundation for studying the various manifestations of economic sustainability, especially as it relates to a rise in property values, which is often connected with the recovery of public spaces. Also of interest is the question of funds for the continued maintenance of regenerated areas.

Economic sustainability is basically a matter of achieving balance. It involves using available resources in a way that allows a system to continue to operate effectively over a period of time. The vast majority of renewal projects begin with the idea of improving an existing area for the benefit of the people who live there. Occasionally a particular project, for its uniqueness or innovative approach to a problem, attracts the attention and capital of "outsiders" (developers and investors, for example). At first this may seem like a positive development; however, the weight of the outside investment gradually changes the economic balance of the area, eventually leading to gentrification sometimes called ecological gentrification. In such cases, the regeneration process has not led to economic sustainability of the original community.

Economic sustainability is relevant not only in the initial stages of regeneration but also in relation to maintenance or upkeep of the regenerated area. An interesting example is Bryant Park. Much of the park's history has comprised cycles of decline and subsequent regeneration. For this reason the current management (Bryant Part Corporation, a non profit private management company) has chosen to find ways to generate revenue for continued upkeep from the park's cultural offerings in an effort to maintain economic sustainability.

### *6.3 Characteristics of Open Space in terms of ecological sustainability*

Urban open spaces provide adequate green areas for physical activity and so contribute to the health of the urban population. As part of the urban ecosystem, they also make a significant contribution to safeguarding biodiversity. A number of cities are initiating programs to support the creation of parks with the aim of rejuvenating neighborhoods burdened by brownfields and unused transportation infrastructure. When greening leads to gentrification, as we mentioned earlier, the very people who were meant to benefit are instead forced out of the area. It is therefore imperative that urban planners, architects, and ecologists continue to search for new strategies which will establish a balance between ecological and social sustainability (Wolch et al., 2014).

Cities are actively seeking balance and harmony between the natural and the urban areas of which they are made. A number of locations have had positive experiences with grassroots movements, which seek to improve public spaces using strategies such as community gardens and volunteer tree planting. Where community support is missing, public spaces often fall into neglect.

### *6.4 Internal and external characteristics of Open Space*

Individual characteristics can be grouped into two sets of parameters: external, in relation to area B (respectively C or D as well), and internal, in relation to area A.

The following are included in the set of external parameters: location (with respect to population, with respect to residence), description of the city (urban structure, average building height, architectural quality, condition of buildings), and functional context (interactions, precedence of personal vehicles, public transportation connections).

Internal parameters include: space (size, boundaries, shape, and condition) and facilities (proportion of vegetation, number of trees, area covered by water, proportion of parking spaces, services for personal vehicles, play areas, public facilities, lighting, small buildings and artwork, advertising).

Internal parameters influence factors such as appearance of the surroundings and the environmental quality, ease of orientation, visibility, security, and social controls. They also influence the utilization of open spaces and their subsequent maintenance.

## 7. Case studies, Brno, Czech Republic, Vinohrady and Lesna

Work on the case studies outlined in the following text will commence in September 2015 and will be completed in June 2016. The following are examples of mid-rise, prefab apartment complexes, located on the outskirts of the city of Brno in the Czech Republic. Of the five sites, four are located in Brno – Vinohrady and one in Brno – Lesna.

The housing estate Brno – Vinohrady (authors: J. Dolezal, M. Dufek, A. Janecek and P. Plsek, project leader: J. Dolezal, chief project engineer: V. Vanek) was built between 1981 and 1989, commercial facilities were in place by 1992 (Doležal, 1980). Vinohrady was one of the last housing estates to be built in Brno and is distinguished by its purely rational orthogonal urban structure with regularly recurring types of buildings. This area also has the highest population density in Brno.

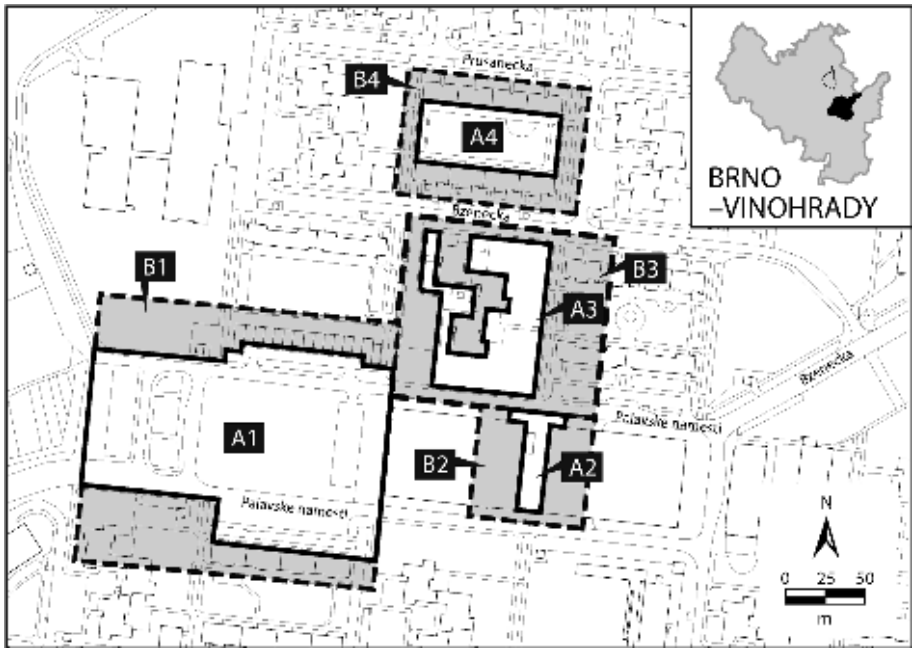


Figure 1. Location of case study areas in Brno–Vinohrady. Source: cartography and GIS by authors, based on MMB cadastral map.

Brno – Lesna (authors: F. Zounek, V. Rudis, M. Dufek and L. Volak) built between 1962 and 1970, was the first major housing estate in Brno. At the time of its inception, the settlement was subject to both criticism and admiration. Along with the Brno Exhibition Grounds, it was the largest and most radical structural intervention since the demolition of the city walls in the mid-19th

century. It is considered one of the most successful implementations of the concept of the garden city (free modernistic buildings surrounded by greenery) in the Czech Republic. The center of Lesna is broken by a large wooded area, crisscrossed with walking trails, called Certova Valley, and there are large parks between individual buildings. The arrangement of prefabricated apartment houses is based on the morphology of the terrain and does not form a regular grid. The main road circles the perimeter of the neighborhood with short branch roads providing access to the surrounding buildings. The majority of the buildings and services are located within the traffic circle.

Figure 2. Brno–Vinohrady, Case Study 4, 2015. Photo: S.Kubinova.

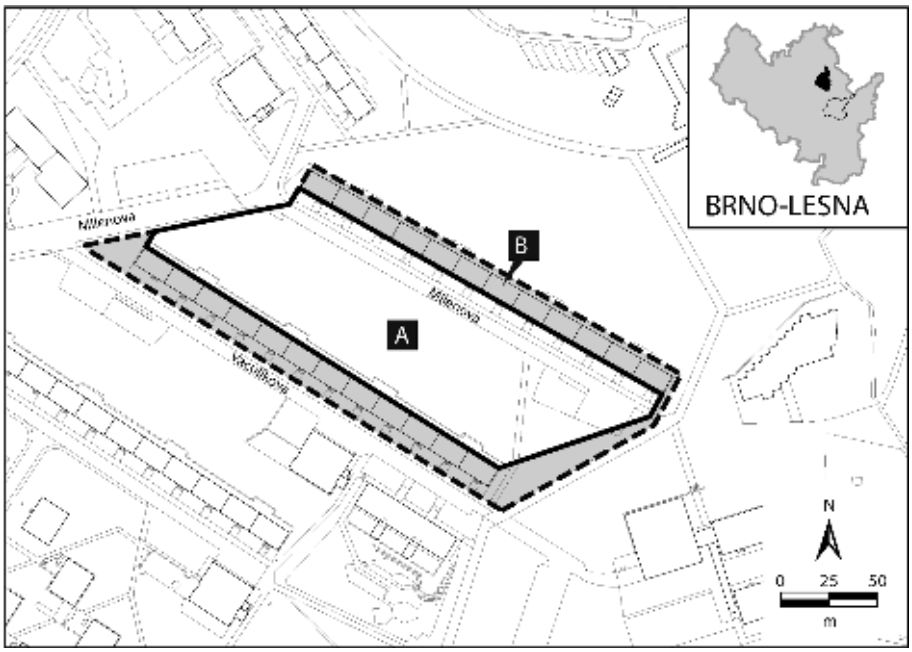


Figure 3. Location of case study area in Brno–Lesna. Source: author's presentation based on MMB cadastral map.

Figure 4. Brno–Lesna, Case Study 5, 2016. Photo: J.Palacky.

## 8. Case studies, Graz, Austria, Mariatrost, Tannhof I and II

The following are examples of residential complexes, located on the outskirts of the city of Graz in Austria. The two sites, Tannhof I and Tannhof II (author: German architect Hubert Ries), were built in the Mariatrost neighborhood between 1989 and 1990 (Szyszkowitz & Ilsinger, 2003).

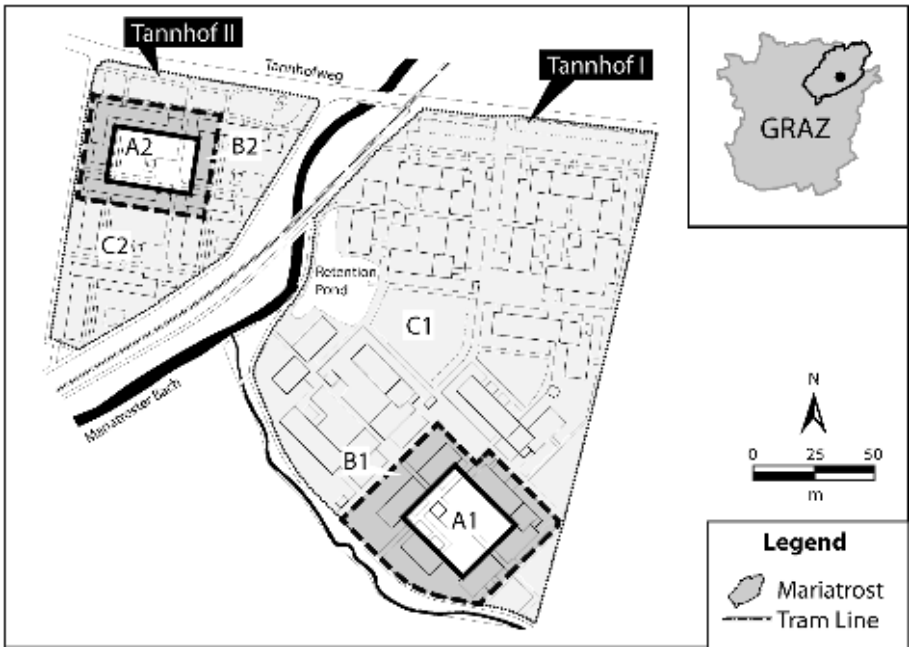


Figure 5. Location of case study areas in Graz–Mariatrost. Source: author's presentation based on OpenStreetMap.

Tannhof I consists of five residential blocks, which are symmetrically arranged around a large meadow with a playground and a retention pond. Each of the five blocks has a small, central

clubhouse, containing, among other things, mailboxes for all of the apartments. Each block consists of one to three-story apartment houses. Apartments on the higher floors are accessible by the characteristic external covered staircases. There are between eighteen and twenty-two apartments in each of the block, totaling one hundred units in the entire complex.

Apartments on the ground floor feature front gardens which are bordered by a hedge on both sides of the houses. These gardens connect to a common area in the center of the apartment block on one side as well as to open space on the outside of the apartment block on the other side. The outside area is accessible only to residents of the complex.

Figure 6. Graz–Tannhof I, 2005. Photo: L. Frantisak.

A tram stop, located right next to a pond, can be found between the two residential complexes. The tram lines, as well as a path for pedestrians and cyclists, follow the path of a creek as it leads toward the city. Tannhofweg Street provides motor vehicles access to the complex. There are parking spaces both under pergolas and in an underground parking garage, including spaces for motorcycles and bicycles. Each apartment also has a small wooden shelter for bicycles and garden tools.

Located on the right bank of the creek is Tannhof II, two years younger than its sister complex. Tannhof II also consists of five residential blocks composing an L-shape; however the newer complex is more spatially efficient. It combines two- and three-story row houses and apartment houses, five blocks in total, which share three community centers, clubhouses with bicycle booths, and children's playgrounds. The community also shares an underground parking garage, central heating, and an area for recycling and disposing of garden waste. Common and private space is delineated by hedges, while at the same time the areas of the complex are connected by sidewalks. Access staircases for apartments on the second and third floors are supported by concrete columns. Motor vehicle access as well as access to the tramline and bike path are the same as for Tannhof I.

Figure 7. Graz–Tannhof II, 2005. Photo: L. Frantisak.

## 9. Case studies, New York City, USA, Manhattan, the High Line and Bryant Park

The following are examples of city parks that emerged from the regeneration of previously neglected areas. The High Line and Bryant Park are both located in the Midtown Manhattan neighborhood of New York City, USA.

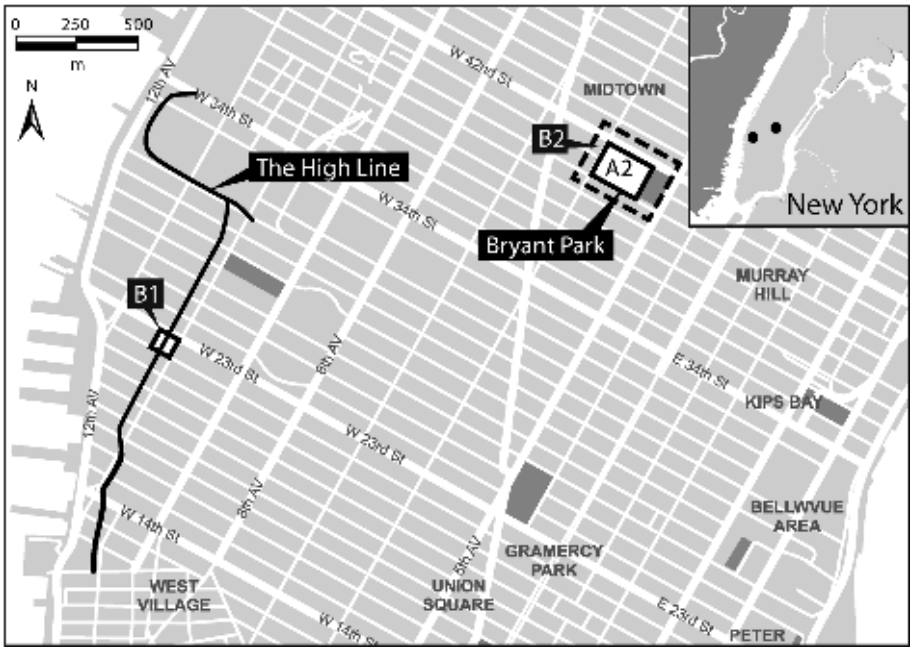


Figure 8. Location of case study areas in New York City, Midtown Manhattan. Source: author's presentation based on New York Map by dikobraziy/Shutterstock.

### *9.1 The High Line*

The High Line is a former elevated freight railway from 1934 that supplied the industrial area of Manhattan's West Side. The closing of the structure in 1980 marked the start of a period of decline and plans for its removal. It was saved from demolition by an ambitious economic plan on the part of local residents J. David and R. Hammond (founders of the non-profit organization Friends of the High Line). The plan proposed that the defunct railway be transformed into a new open public space in the form of a linear park. Reconstruction of the 2.4 km structure was carried out in three stages, from 2006 to 2014, according to the winning design proposal, submitted by James Corner Field Operations (project lead), E. Diller, R. Scofidio, Ch. Renfro (designers) and P. Oudolf (planting designer). The realization of the project was overseen by the New York City Economic Development Corporation, in cooperation with the NYC Dept. of Parks and Recreation, the NYC Dept. of City Planning, the Office of the Mayor, and Friends of the High Line (David & Hammond, n.d.). The organization Friends of the High Line annually raises funds which support more than seventy percent of the park's operating costs.

Figure 9. The High Line, W19th St. view of Hell's Kitchen, June 2011. Photo: J. Palacky.

Today the High Line is an attractive park/promenade, providing spaces for spontaneous theater presentations, secluded meeting places, exhibits, and social activities year round. Like the Charles Bridge in Prague, it entices visitors from all over the world to enjoy its unique atmosphere again and again. Owing to the preservation of the original railway construction and costly investments in its renewal, the High Line has also attracted intense attention from investors, who have entrusted the realization of cultural institutes, luxury high-rise hotels and apartment houses into the hands of prestigious architects. The latest example is the New Whitney Museum of American Art (between 10th Ave and the High Line) by Renzo Piano. It will open in May of 2015. Some of the luxury apartment buildings in close proximity to the High Line erected in the course of the last few years include The Standard High Line Hotel (Meatpacking District), the High Line 23 by Neil-Denari (Chelsea Arts District), the 505 West 19$^{th}$ Street by Juul-Hansen, the 520 West 28th Street by Zaha

Hadid, the 551 West 21st Street by Norman Foster, and the 515 Soori High Line by Soo Chan (Budin, 2014).

This rapid development has wrought changes in the quality of the space itself, which had been characterized as providing pedestrians with peaceful, bird's-eye views of Manhattan and the Hudson River. As property values and population have risen, the image, character, and social structure of the area are gradually changing and a new, distinctive identity is evolving. All this has led to gradual, inevitable environmental gentrification (Patrick & Kowalski, 2011).

It is not only the magic of the High Line but also the innovative and community-driven approach that has inspired a growing number of similar projects in other areas of the United States. These derivative projects have also managed to successfully implement the public-private financing partnerships, but what is more, they have re-created the strong involvement of community supporters. Among the most interesting are the Bloomingdale Trail in Chicago (recently renamed The 606), a former 4.5 km regenerated railway; the Atlanta Beltline, a 35 km regenerated railway which circles the downtown area (McMillan, n.d.); and the Jersey Embankment, a 1 km public park overlooking the Hudson River waterfront, situated on a historic structure that was once part of the Pennsylvania Railroad Freight Way.

Figure 10. Bryant Park, June 2011. Photo: Andrew F. Kazmierski / Shutterstock.com.

### *9.2 Bryant Park*

Bryant Park, named in memory of poet William Cullen Bryant, was built in 1842 on Reservoir Square near the western wall of the former water reservoir, which is now the New York Public Library. The New York Crystal Palace was installed there in the years 1853-1858 to house the World Industrial Exhibition.

The park was partly closed as a result of construction of the subway line at 42$^{nd}$ Street and fell into decline during the 1920s due to negligence. A park regeneration competition in 1934 led to the park's being rejuvenated, grassed, fenced off and equipped with a fountain. In this state it was occasionally used as an open-air reading room for the adjacent library until the advent of the Second World War when the park again went into decline. In the 1960s and 70s it was a favorite gathering place for New York City's drug dealers. In 1980, the Rockefeller brothers initiated another restoration by founding the Bryant Park Restoration Corporation (BPRC).

D. Biederman, innovator and president of the Bryan Park Management Corporation (BPMC), initiated an experiment with the aim of bringing visitors back to the park and generating revenue for continued park management. The park was closed for renovation from 1998 to 1992. When it re-opened, it had become a beautiful and vibrant public space which could offer visitors a variety of activities year round. In 1996, the park was awarded the Urban Land Institute Excellence Award for Public Projects (Biederman, n.d.). Bryant Park now boasts a public outdoor cinema, a venue for concerts, concession kiosks, and restaurants, and in winter an ice rink and a winter village. The park is equipped with moveable chairs that allow visitors a sense of control over their recreational experience. Even the open-air reading room has been resurrected. All this has led to a 92% reduction in crime, and the number of visitors per year has doubled.

This successful implementation of the arrangement of the park and the creation of an open urban public space was met with an overwhelmingly positive response from the local community. As in other areas it has brought about ever- increasing property values (Morris, 2015).

## 10. List of characteristics to be monitored and expected indicators with impact on sustainable development

The list of sites examined in the case studies:

1 Brno – Vinohrady, Palavske Square
2 Brno – Vinohrady, area in front of commercial facilities
3 Brno – Vinohrady, open area between high-rise buildings
4 Brno – Vinohrady, open area – inner courtyard
5 Brno – Lesna, open space between two prefab high-rise apartment houses
6 Graz, Tannhof I
7 Graz, Tannhof II
8 New York, residential segment of the High Line
9 New York, Bryant Park

Urban open space is significantly affected by its functional context. For prefab housing estates, the dominant urban function is residential. Localities 1 and 2 in Brno – Vinohrady are a minor exception. Palavske Square (Locality 1) attempts to fulfill the function of a public space – act as a meeting place, a place for recreation and various other activities. While localized services and supplementary commercial facilities do exist, detailed examination is not necessary to determine that the square has failed to fill its primary function. Aside from the problematic appearance of the space itself, there is also the negative influence of an unfortunate transportation solution. The entire square functions as a traffic circle. This both complicates access and makes the square an uncomfortable place to linger. Locality 2, though smaller, does a better job of acting as a public space. It is situated at the crossroads of important pedestrian traffic routes (connecting the public transportation stops with the housing estate) and near the entrance to commercial facilities, which are used by the entire housing estate (a grocery store, a drug store, a flower shop and a bank). This area hosts a number of activities throughout the year, various kinds of open-air markets, wine festivals, and so on.

Localities 3–5 are purely residential in character. The parterre of the apartment buildings is practically cut off from public spaces and serves merely as a point of entry to individual buildings. This basic, common characteristic is labeled “interaction,” and in this case it is possible to define it as “small.”

Localities 6 through 9 will be examined in detail in the period from September 2015 to June 2016.

After a complete list of sustainability indicators has been formulated, we will be able to evaluate their respective impact for each of the cases studied. This influence will then be analyzed and confirmed by means of observations of open spaces within a specific period of time. Next, data measurements taken from the open spaces under consideration will be reviewed and relevant comparisons of data will be made. Finally, influence will be evaluated through questionnaires to be completed by residents/users of the adjacent buildings. Using the results that have been obtained, it will then be possible to identify those characteristics of open space that affect sustainability indicators and thereby enhance or degrade the potential for sustainable urban development.

Examples of expected indicators and additional parameters are listed below (Table 1).

Table 1. Expected indicators of sustainable development of open spaces

| Framework indicators and additional parameters | Lead variables |
|---|---|
| **Social Indicators**<br>To be obtained by observation and from statistical data | Intensity of attendance, predominant use of space, demographic diversity, problems,<br>In the Czech and Slovak Republics, data from census of houses and apartments, abroad data obtained from registers |
| **Economic Indicators**<br>To be obtained from statistical data | Obtained from the cadastre, by findings and observations, average price of property, average rental rates, type of ownership, operation costs |
| **Environmental Indicators**<br>To be obtained from passports, aerial photographs, measurements, and observations | Ecological value (increase of ecological stability, occurrence of problematic plants, increased retention of rainwater), well-being of citizens (reduction in summer temperature peaks, increased air humidity, reduced sunstroke in summer, limited insolation apart from summer, wind reduction, control of dust and chemical pollutants, natural fragrance, limited noise pollution, pleasant natural sounds, optical isolation from street activity, attractiveness, security risks), bodies of water |

## 11. Conclusion

Both identical characteristics and differences are already apparent from the analysis of the urban characteristics of the two prefab housing estates and their sub-sites in Brno. One of the crucial differences would seem to be the unique urban concept of the site Brno – Lesna, which is assumed to provide considerable potential for the development of the environmental pillar of sustainable development. The support for the other two pillars will evidently be similarly unbalanced and questionable, as in the case of the site Brno – Vinohrady. These are all assumptions, however, which will have to be confirmed by further research. Relevant conclusions will be drawn after a

thorough analysis of data gathered at target sites (during the period from September 2015 to June 2016) has been completed.

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# LAW AND DISORDER: PERMITTED DEVELOPMENT RIGHTS AND THE LOSS OF PROPORTIONATE CONTROL

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## Abstract

The Conservative led coalition government in the UK identified regulation management as a key priority and intended to simplify and address the complexity in the system. From the perspective of Development Management a paradox has emerged however; the more the Government attempts to simplify the decision making system and facilitate development, the more complex the system has become. This can be clearly seen in the manner in which the Permitted Development rights planning permission arrangements have been revised and the application of decision making mechanisms extended.

This paper will explore how new Permitted Development rights have been created, existing rights extended (some permanently some temporarily), the prior approval process has increased in prominence and usage, and the use of Local Development Orders extended. The paper will present the impact of these changes, including the unintended consequences and potential to undermine the effective management of the built and natural environment,

Issues of regulation density and complexity will be highlighted, together with how some of these changes are potentially disrupting the fundamental principle of proportionality and justified local planning authority intervention in the public interest.

## 1. Introduction

The idea of regulatory control of the built and natural environment is not a new one. Although planning legislation requiring the creation of plans to guide development in a given area is relatively new, the use of legal controls to manage the built and natural environment can trace its origins in the UK back to medieval times. Although evidence suggests even earlier controls existed in London, an Assize of Nuisance in 1275 can certainly be highlighted as one of the earliest forms of control over buildings. This introduced various controls that are akin to basic building regulations and arguably all modern systems of control over the built environment, from planning through building regulations to environmental health legislation can trace its history back to this point (Booth, P. 2002).

From the Assize of Nuisance we can see the evolution of control, with further mechanisms introduced to regulate construction standards, layouts, fire prevention, public health and neighbour nuisance. This was not just a case of strengthening control though, some important changes took place to which planning today owes much. For example, Elizabeth I introduced systems to manage the growth of London, while James I and Charles I both created controls that influenced design and appearance. To the origins we can perhaps draw parallels to modern planning and policies to prevent over development and encourage high quality design (Booth, P. 2002).

The greatest change, however, took place in the early 1900s. From this point forward, various public health acts were passed in response to the challenges associated by the massive growth and change seen during the industrial revolution and soon legislation required the preparation and approval of plans for new housing growth, and strict standards in construction, design and layout. The

culmination of this period of development effectively occurred immediately after the Second World War (Booth, P. 2002).

During World War Two, even while the bombs were still falling on London, research was being undertaken into how the UK would emerge from the war. Evidence highlighted the need for large scale reconstruction, but also a change in the way spaces and places were managed to respond to the social and economic changes occurring across the country. In 1947 a Town and Country Planning Act was published and the system we have today still works in the same basic way. From this point forward control of land was nationalised (not ownership), plans were required to manage town and country, and permission was required to undertake new development.

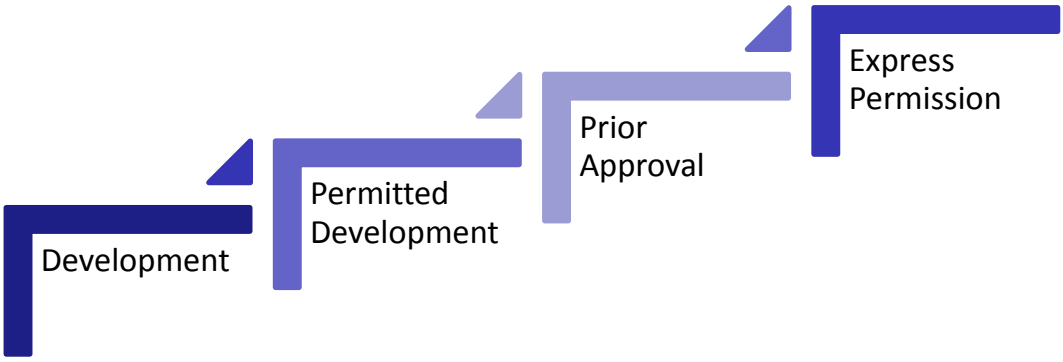
A planning system represents, from a first principles perspective, state intervention into a market. The story presented above is underpinned by a key phenomenon; necessity. The evolution of state intervention, and the broad acceptance of the justification for state intervention, was driven by the necessity of responding to events and circumstances that required address and that private arrangements either could not, or would not, respond to adequately alone (Gilg, A. 2005). From the earliest legislation concerning the prevention of fire, the state has intervened in the public interest and with some degree of a social justice motivation. Ultimately, as a result of the rapid development witnessed during the industrial revolution and the failure of previous health and planning legislation, land *rights* were nationalised and the modern planning system of the United Kingdom was born. As noted by Cullingworth, B and Nadin, V et al (2015), the urban growth witnessed during the later 19$^{th}$ and early 20$^{th}$ Century and the associated environmental, health and social challenges that resulted ultimately led to an appreciation and wide acceptance of the necessity of the state interfering into the market and private property rights in the public interest and with regard to social justice.

## 2. The proportionality hierarchy

Across the European Union, two key principles exist; subsidiarity and proportionality. These principles also underpin in some respects the recent liberal conservative government in the United Kingdom; from the perspective of planning the Government proceeded with a presented parallel objective of a more proportionate approach to intervention by reducing state control and procedural burdens, and 'Localism', which theoretically involved the further application of the subsidiary agenda through the development of the neighbourhood scale of planning (DCLG, 2011). It is beyond the scope of this paper to consider the reality of the Localism agenda as realised.

Returning to first principles, the manner in which proportionality is realised in the United Kingdom from the perspective of control over development is via a hierarchy modeled on the basis of increased state involvement set against the likelihood of impact/harm. This is delivered in the context of a discretionary, as opposed to codified, model of decision making and development management.

Figure 1: The proportionality hierarchy




(Sheppard, A. 2015)

Figure 1 above demonstrates the basic steps of intervention. In the first instance the question must be asked as to whether the activity occurring. As stated in Section 57 of the Town and Country Planning Act 1990:

> '…planning permission is required for the carrying out of any development of land. '

The definition of development is therefore an important first question. Development is defined as the carrying out of building, engineering, mining, or other operations in, on, over or under the land, or the making of any material change in the use of any building or other land (S.55, T&CPA 1990). A 'building' in this context is any structure or erection, the ultimate decision being based upon professional judgement informed by case law; matters such as size, permanence, physical attachment to the land have all be held as key in this respect. By defining 'development' a basic parameter is created with the identification of matters which fall under the control of the planning system, and those that do not. On the bottom step of the hierarchy we have effectively established a legitimacy in potential intervention, but it is the impact based approach of the hierarchy which gives the system its sophistication.

Permitted Development, with which Prior Approval is also based, resents the key tool of proportionality within the UK planning system. Permitted Development Rights are effectively identified forms of development that can be undertaken without the requirement for an express application to the Local Planning Authority for permission; effectively, they are forms of development that national government has pre-granted planning permission for, subject to adherence to the conditions prescribed. The Permitted Development system utilises a tool called a Development Order; this is the mechanism employed by national government to effectively grant permission for prescribed works on a national level. Currently it is under the Town and Country Planning Act (General Permitted Development) Order 2015 that national Permitted Development rights are prescribed. Local Development Orders (LDO) can also be used at the local level by Local Planning Authorities (LPA) to vary Permitted Development rights within an identified geographical space. The counter-tool against both LDOs and the nationally set Permitted Development rights are Article 4 Directions (under the Town and Country Planning Act (General Permitted Development) Order 2015).

Prior Approval is effective a 'catch' on certain Permitted Development rights; usually more significant forms of minor development. The Permitted Development rights exist within the Prior Approval model, but intention to undertake development requires a Prior Approval notification to the LPA. The LPA are then able to review the proposal against specified and limited criteria and determine whether to approve the scheme or refuse it. The Prior Approval scheme is therefore something of a middle ground between Permitted Development rights, where the LPA have no ability to influence subject to adherence to the requirements and condition, and express permission, where LPA effectively have full discretion over the decision against a formal planning application.

The planning system in the UK is a discretionary model, meaning that where express permission is required from the local planning authority the decision is made in accordance with the provisions of the legally recognised Development Plan, unless 'other material considerations' indicate that another outcome is merited. Interestingly there, Permitted Development rights effectively represent a codified model of decision making embedded within a discretionary one.

## 3. Proportionality in context

The hierarchy presented above is modelled firmly on the basis of proportionality; where impact upon amenities may occur state intervention is justified in the public interest. The transition from recognition of 'development' through Permitted Development and prior approval up to the full express planning permission process is the realisation of this proportionate response in practice.

The system in place is not solely based around the amenity driver, there is also the parallel need to ensure that the system is able to operate effectively and efficiently; ensuring that the system is response, manageable, and does not represent an administrative burden is therefore also highlighted.

The above two drivers can be seen to be operating in conflict to one another in some respects; the state intervenes in the public interest but in doing so impacts upon the functioning of the market, in doing so implementation and delivery of change are influenced. The presentation of planning as a 'barrier' to implementation and delivery and as a 'burden' has become particularly commonplace since the 2010 General Election; from the earliest days of the new government it was made clear that planning would be a key focus of reform in an attempt to deliver economic growth. In the 'Plan for Growth' it was stated that:

'One of the most significant burdens highlighted consistently during the Growth Review has been the UK's overly slow and bureaucratic planning system'
(HM Treasury, 2011, pg. 21)

## 4. Barriers and implementation

"We're determined to cut through the bureaucracy that holds us back. That starts with getting the planners off our backs, getting behind the businesses that have the ambition to expand and meeting the aspirations of families that want to buy or improve a home." (Rt Hon. David Cameron MP, 2012)

The reliance upon the private sector for delivery is greater now than ever before with the retraction of the state as an actor since the latter part of the twentieth century. In the immediate post-war period, the state was a more active actor.

Gilg (2005) discusses the role of the state in the immediate post-war period and notes how a key feature of the newly emerged system system was a presumption that the local authorities would be the developers, building a majority of the residences, employment opportunities and social infrastructure.

The move to a model of development almost completely reliant upon the private sector arguably makes question of delivery more pressing from the perspective of the market dynamics and the importance of the state facilitating an effective regulative and legislative implementation environment.

Barriers of implementation concerning delivery of policy objectives are discussed from a theoretical perspective by Peter Dorey (2005). Dorey builds upon the work of Hood (1976) to present a series of barriers to 'perfect' implementation. Dorey recognised the impossibility of creating a perfect implementation scenario but the barriers are presented to enable understanding and an ability to minimise impact. The theory also draws upon the work of Pressman and Wildavsky (1973) in relation to the concept of 'street level bureaucrats'; those who administer and apply public policy. Public sector planning professionals are an example of such 'street level bureaucrats'. The barriers to implementation as presented by Dorey are summarised below:

Table 1: The barriers to Implementation

| | |
|---|---|
| 1 | External agencies or events impose major constraints – policies / remit of other organisations get in the way, or events, such as the performance of the economy. |
| 2 | There are too many dependency relationships – to administer the policy as intended requires the agreement or cooperation of others. This can lead to communication problems or different organisations / individuals pursuing their own particular goals. |
| 3 | There are too many decision points – once a policy is adopted there are too many stages in the delivery chain. The policy can change at each stage due to the involvement of street level bureaucrats at each stage of the process |
| 4 | Resources are inadequate:<br>• There is insufficient time – to achieve the aims / objectives of the policy.<br>• There are inadequate human resources – lack of staff or lack of suitably qualified personnel.<br>• There are inadequate financial resources – lack of finance or funding. |
| 5 | The policy is based on an invalid theory of cause and effect – most policy is a response to a problem / situation, but are the policy makers' assumptions about the underlying causes of a particular problem correct? |
| 6 | The objectives are unclear, incoherent and inconsistent – if there are too many objectives, inconsistencies will become apparent at the implementation stage, or unforeseen or unintended consequences can arise. |
| 7 | The objectives are not understood or accepted by street level bureaucrats – those who implement the policy may not fully understand the intent of the policy makers, or they may have different |

| | |
|---|---|
| | values or organisational goals. |
| 8 | Those to whom a policy is applied or targeted do not respond in the anticipated manner – will the majority of people accept the measures concerned and act accordingly? |

(Dorey, P. 2005)

The planning system, and indeed planners (as 'street level bureaucrats'), can be related to the barriers presented by Dorey, including from the perspective of the planning decision making process. The express planning permission routeway is challenged in relation to the dependency relationships, the number of decision points, the resource demands, and the behaviour of 'street level bureaucrats' for example.

Given the challenges facing any form of state intervention into a market it is to be expected that issues will exist with the effectiveness of any created 'system'. It is therefore unsurprising that the government moved to address the presented planning barriers; the Plan for Growth (2011, pg. 23) stated an intention 'To reform the planning system radically and fundamentally…' including an intention to 'bring forward proposals to extend Permitted Development rights…' (ibid).

## 5. A flawed justification and approach?

The extension of Permitted Development rights is presented as solution to planning as a barrier because it is a way to remove some developments from requiring an express planning permission, instead allowing them to proceed subject to adherence to the stated conditions and parameters. This intention presumes that the extant balance of necessity of state intervention is incorrect and inappropriate.

In 2011, in response to the pressure facing the planning system, the Royal Town Planning Institute presented a paper entitled 'The Top Five Planning Myths' which considered in part the planning application process that reforms have sought to address as a suggested barrier to implementation and economic growth. The contents of this paper are summarised below:

Table 2: The Top Five Planning Myths

| **'Myth'** | **Response** |
|---|---|
| The Default Response to a Planning Application is "No" | Over 80% of planning applications have been granted – higher (around 90%) for major commercial applications.<br><br>Communities need the power to say 'no' to prevent harmful development and drive up built environment quality.<br><br>Businesses want councils to say 'no' to inappropriate development that would harm their investments. |

| | |
|---|---|
| Planning is Slow | Councils as a whole meet or exceed the 8 or 13 week targets set for them.<br>Only 0.7% of planning applications take longer than 12 months to reach a decision.<br><br>The development industry often conflates planning with other consent regimes, such as licensing or environmental permits.<br><br>The overall development process in England is among the quickest in western Europe |
| Planning is Costly | Planning creates wealth by promoting regeneration, securing funding for infrastructure and mitigating the negative effects of development. |
| Planning is a Drag on Economic Growth | "Planning is core to achieving a wide range of objectives for business and society, and for achieving sustainable development." (CBI)<br><br>In 2003, the then ODPM Select Committee Inquiry into Planning and Competitiveness, said "Claims that planning damages the nation's competitiveness seem to have been made without evidence. The evidence that we have received suggests that businesses generally support the planning system and seek a number of changes in implementation, which do not necessarily require legislation." |
| Planning Forces House Prices Up | House price inflation is not solely the result of a lack of housebuilding: the Barker Review found that the effect was marginal taking into account the other determinants of supply and price, i.e. the availability of finance and demand.<br>The private sector has only ever been able to contribute around 150-200,000 new homes a year across Great Britain. Until the government ended mass council housing in the 1980s, the public sector helped to almost double this. If public sector housing had continued there might be at least 2 million more homes now.<br><br>The current slump in housebuilding is the result of a lack of finance, both for homebuyers and housebuilders, prevalent since the "credit crunch". The slow-down in planning permissions is the result of a lack of planning applications.<br><br>There is not a lack of homes, premises to convert or sites to build on. In England, there are around |

| | |
|---|---|
| | 750,000 empty homes, nearly half of which have been empty for over 6 months, and developers have permission for around 300,000 homes they are not building. |

(RTPI (2011) 'Top Five Planning Myths')

In the first instance we must therefore consider the possibility that the very basis for the steps taken to increase the use and scope of Permitted Development are based upon a flawed assumption that it is the necessary and appropriate step for many of the reasons presented by government.

A fundamental issue exists here; the suggested driver for change pertained in part to the presented concerns associated with the planning application process and the implications of these upon the ability of the planning system to support implementation and delivery. The system was seen as a barrier to the delivery of economic growth. The response was not to consider further possible adjustments to the planning application system; rather it was to remove developments altogether from the requirement for express planning permission. Permitted Development rights were the focus of attention, with this mechanism seen as a way to provide an easy route through the planning 'maze', enabling a barrier free system to support implementation and delivery.

In accordance with the previously presented hierarchy, the behavior of the state was modeled on the basis of increased state involvement for justifiable public interest and social justice reasoning set against the likelihood of impact/harm, historic revisions to Permitted Development rights were undertaken based upon the desirability of removing unnecessary burdens associated with the planning system whilst preserving protections for amenities etc. This was the case with the revisions pursued in 2008 relating to householder extensions where is was made clear that the intention was to remove some forms of development from requiring express planning permission, but only in circumstances in which amenities are preserved (CLG. 2008). Revisions post 2010 have, it is suggested here, been approached differently, with economic growth the driver and scant consideration given to the wider implications.

## 6. Permitted Disorder

Within the contested space, change did occur. Change did not take place in a single measured step, instead a series of amendments were introduced in 2010, 2011, 2012, 2013, 2014 and 2015. It is beyond the scope of this paper to detail all of these revisions, but in each case the revisions each had the effect of extending the Permitted Development allowances in some way.

Through the attempts to extend Permitted Development rights and remove developments from the requirement for express planning permission it is suggested that a paradox has emerged however; the more the Government attempts to simplify the decision making system and facilitate development, the more complex and flawed the system has become (Sheppard, A. 2014).

The changes introduced have led to new Permitted Development rights being created, existing rights extended (some permanently some temporarily), the prior approval process becoming increasingly prominent and used, and Local Development Orders have been presented as a potential solution to the planning 'barriers' associated with everything from minor work to comprehensive brownfield land redevelopment. The nature and intentions of the changes are not in themselves necessarily all problematic, but the continuous and piecemeal manner in which these changes are being introduced is making for a very cumbersome, complex and confusing system which, conceptually, needs to be none of these things. As a result, it is suggested that we now find ourselves in an environment where regulation density and complexity is a real issue to the extent that the system is becoming

dysfunctional. It is also argued that in some cases the changes have failed to consider the important question of the necessity of state intervention and the system emerging does not necessarily represent a proportionate model based upon impact and controls existing where justified on the basis of social justice and the public interest. Some recent adjustments concerning, for example, changes of use, limit the potential for state intervention to manage impact and spatial planning where this is potentially very important (Sheppard, A. 2014).

## 7. Case Study: Office to Residential change of use

*Introduction*

On the 30th May 2013 the Town and Country Planning (General Permitted Development) (Amendment) (England) Order 2013 came into force. Included in this amendment was the right for a period of three years to change the use of a building from an office use to dwellings. This effectively allowed existing office buildings to be converted into dwellings without the requirement for express planning permission. This was a new step; previously such a change would have required the express permission of the Local Planning Authority. The intended effect of these amendments was to support an increase in housing supply, encourage regeneration of offices and bring empty properties into productive use.

Local Planning Authorities were given the opportunity to exempt themselves from this new arrangement where concern existed that such rights would lead to either the loss of a nationally significant area of economic activity or substantial adverse economic consequences at the local authority level not offset by the positive benefits the new right would bring. It was also a requirement that the office building was vacant prior to the point of the new amendment being introduced to ensure that buildings with a viable use were not inappropriately lost. The amendment also does not apply to protected heritage assets (Listed Buildings and Scheduled Monuments).

Although the amendment removes a change of use from office to residential from requiring an express planning permission, it was not completely without oversight. The system employs the 'Prior Approval' model whereby it is necessary apply to the local planning authority for a determination as to whether the prior approval of the authority will be required in relation to the acceptability of the proposal upon:

(a) transport and highways impacts
(b) contamination risks on the site;
(c) flooding risks on the site.

The requirements associated with the prior approval process are not extensive though; applications only need to be accompanied by a written description of the proposed development; a plan indicating the site and showing the proposed development; contact details and any fee payable. Consultation with the necessary bodies is also required where significant traffic impacts are involved and/or when the development is within an area at risk of flooding.

*Delivering change*

The intention of the changes introduced were to increase housing supply and in parallel address weaknesses in the office supply market concerning both the amount of space available and its quality.

Research undertaken by planning consultancy GVA suggests that nationally over 11m sq ft of office space has left the market for alternative use (Morris, M. 2015). In 2014 some 6.8m sq ft of office space left the market and it is suggested that 17,500 homes could ultimately be provided through the policy (ibid). These changes can be seen as positive in some respects; surplus office space supply does exist in some areas, a surplus of lower grade office space does exist in some areas, and there is a national housing shortage. A report from planning consultancy Nathaniel Lichfield and Partners

(NLP) in May 2015 noted that the change had led to some positive effects in some areas, noting in particular that some poor quality office space has been removed and replaced with much needed residential accommodation and also that removing office space from the market has driven up rental values to the extent that new office development that was otherwise stalled where becoming viable again (NLP, 2015).

*The cost of change*

The introduction of the allowances for office to residential conversions has seen a mixed response however, and it has been controversial in some respects due to the impacts that appear to be resulting.

In some cases the arrangements are placing undesirable pressure on the office market. In London, Westminster City Council is seeking to protect its declining office supply because they have estimated 1.8million sq ft of space has been lost driving undersupply and higher rents (Estates Gazette, 2015). The NLP report highlights that the conversion of offices to homes since the right was introduced has caused problems in areas with a housing shortage because this is placing significant pressure upon vacant office space to the extent that the fasted decline in the availability of office space was being witnessed since 1998 and that this could lead to a potential supply crunch and unsustainable rising rental levels (NLP, 2015).

Conversions of office buildings to residential use that utilise the Permitted Development arrangements are not normally required to make planning gain contributions. Whereas a conversion pursued through the traditional planning application process could be required to make financial contributions towards infrastructure delivery and provide affordable housing, this is not the case through Permitted Development rights. The provision of affordable housing in the UK is dependent upon planning gain to a significant extent.

In addition to the affordable housing issue, the absence of planning gain means important resources are not provided to the local planning authority to support physical and social infrastructure provisions. Thus, not only is the change of use less open to scrutiny in the first instance from the perspective of the fundamentally suitability of the location for the introduction of new residential accommodation, it also lacks planning gain resources to mitigate against the resulting impacts. Changes of use can therefore take place in less desirable locations from a social infrastructure perspective and further contribute to the challenges being faced in the area. This issue becomes magnified when development is possible in areas where social and physical infrastructure is inadequate to accommodate further residential development; a scenario entirely possible through the current arrangements. It is essentially only through arguments relating to transport and highways issues that less desirable locations can be resisted in the context of the sustainability of a given location; a more limited basis that would be the case where full permission was required.

Research undertaken in Bristol suggests that schemes that are coming forward in this City are broadly occurring in locations with good access to adequate infrastructure (Frost, A. 2015), but it remains the case that the legislative mechanism now in play does not provide an opportunity to prevent change from taking place with this not the case except in respect of a few very specific situations, the market is once more effectively the determinant of where these forms of changes of use occur, a situation which is suggested as being a regression to the pre-1947 Act environment of inadequate controls and where it must be remembered intervention became necessary because of the failure of the market to always deliver acceptable change (Gilg, A. 2005).

Finally, the resource question must be considered. The planning fee for a Prior Approval application £80. In contrast, the fee for a change of use full planning application can be significant:

Table 3: Planning Fees Extract

| **Change of Use** of a building to use as one or more separate dwellinghouses, or other cases | | |
|---|---|---|
| Number of dwellings | Not more than 50 dwellings | £385 for each |
| Number of dwellings | More than 50 dwellings | £19,049 + £115 for each in excess of 50 up to a maximum of £250,000 |
| **Other Changes of Use** of a building or land | | £385 |

(The Town and Country Planning (Fees for Applications, Deemed Applications, Requests and Site Visits) (England) Regulations 2012 – correct at April 2015)

A Prior Approval application has resource implications; the application still requires administration, consideration and investigation by the local planning authority team. The income is associated with an application is insignificant however, meaning a significant cost is borne by financially stretched local planning authorities.

Most significantly perhaps, the Permitted Development allowances remove the ability of the local planning authority to strategically manage office and residential supply, nor can they influence the spatial distribution of new developments.

*Summary*

The office to residential allowances provided through the 2013 Permitted Development rights amendments were essentially introduced to increase housing supply and on the basis that some buildings that were previously in use as offices are now residential there is some success to be recognised. However, the cost of this is suggested as being significant; strategic management of office supply has been lost in areas without protection in place and importantly the Permitted Development regime does not allow local authorities to prevent/influence inappropriate development taking place in less appropriate locations without appropriate access to services and amenities except in more limited circumstances.

In parallel, planning gain is not supported, further undermining the ability of the local planning authority to act effectively in the management of the built and natural environment and their ability to support the delivery of required physical and social infrastructure. The fee model approach further impacts upon resources, making the system flawed from the local planning authority perspective in relation to process/system viability.

## 8. Conclusions

As noted at the beginning of this paper, the evolution of state intervention, and the broad acceptance of the justification for state intervention, was driven by the necessity of responding to events and circumstances that required address and that private arrangements either could not, or would not, respond to adequately alone. The hierarchy of intervention, employing the development, Permitted Development, prior approval and express permission steps supports proportionality conceptually, and historically change was predicated on an impact based approach with balanced consideration of costs and benefits (CLG, 2008).

The recent changes to Permitted Development rights in England, including the office to residential example provided, arguably renege on these principles. The economic growth motivation has primacy and inadequate consideration has been given to the implications of the changes pursued from the

perspective of the ability of local planning authorities to strategically and spatial manage change in the built and natural environment. It is suggested that the emerging system is flawed and potentially dangerous; in the case of the example presented local planning authorities lose effective control of strategic office floorspace management and residential dwelling distribution. In parallel, planning gain is absent and fee income is minimal making local planning authorities resource changed and potentially unable to effectively mitigate impact and provide adequate social and physical and social infrastructure.

Effective proportionate control is at risk and although the system is only emerging, evidence is presenting itself already to suggest that effective planning is being lost in the drive to facilitate economic growth.

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# INFORMAL SETTLEMENT'S ACT: WHAT WENT RIGHT IN THE PORTUGUESE CASE?

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***Abstract:***
*Informal settlements rose in the developed world for some decades, affecting, in the European context, mainly the southern countries. Many have been the models to react to this dynamic, namely through legal action. In todays' world this is still affecting a significant part of the population, according to main world institutions (UN Habitat, OECD, World Bank). It is estimated that in Europe there are still around 50 million people live under these conditions.*
*In the past, Portugal was one of the countries most affected by informal settlements. In the 1980's over one tenth of Lisbon's population was living in slums and in illegal urban areas. What started by being a critical issue in territorial terms is today almost an inexistent problem. This paper will focus on the way planning institutions were able to design a responsive legal framework, addressing informal settlements and creating a setting favourable to regenerate those areas.*
*The paper will discuss the role of planning institutions, as well as the role of informal settlement in the law making process and in the law improvement process, a process that started in 1995 and lasts until nowadays. Beyond the formal procedures there were some key factors which warranted the success of this tools: several decades of experimentation, short links and a constant interaction between agents will be presented.*

## 1. Introduction

Informal settlements is a broader expression that is used to describe a wide range of illegal urban occupations. They are in general (1) associated with a mismatch with planning and architectural rules and (2) are in some cases the result of the occupation of land not belonging to the settler (OECD, 1998). They rose in the developed world for some decades, affecting in the European context mainly the southern countries. Many have been the models to react to this dynamic, namely through legal action. In todays' world this is still affecting a significant part of the population, according to main world institutions (UN-Habitat, 2003, OECD, 1997). It is estimated that in Europe there are still around 50 million people live under these conditions (UNECE, 2010), namely in the eastern region.

This wave of informal settlements is not new. It affected central European countries like France in the decades of recovery after the Second World War – adopting mainly the shape of slums formed by precarious constructions in someone else's land - and in southern Europe countries like Italy. Later during the 1970's and 1980's the three then young democracies of southern Europe – Portugal, Spain and Greece – were also affected. Due to the effort put on some of these experiences and to the need of models to intervene in new cases – still emerging in the Balkans, institutions as UN consider that lessons should be extracted from well succeeded cases. The need of new models is perceived as crucial in terms of governance, of bottom up solutions and on legislation (UNECE, 2010).

In this paper, the Portuguese experience in dealing with informal settlements will be focused. When 48 years of dictatorship ended in 1974 the housing situation in the country was dramatic. Underneath a peaceful middle class atmosphere created by the previous corporative state, there was an explosive housing situation involving derelict buildings in city centres on one hand; shacks build in empty spaces close to the inner city (in public but also in private land) on other hand; and

the occupation of rural areas in the peripheries. They corresponded to different groups in the Portuguese society. The ones living closer to the city centre, either in old building or in slums had less resources – the places didn't belong to them, they had less income and they were older – while the third group had different characteristics – they owned the land, were younger and possessed a stable job and an income. While the state tried to mitigate the two first situations by institutionalized solutions such as the construction of social housing, the third type of precarious housing continued to grow (Silva, Farrall, 2014). This was the result of the consolidation of a new middle class, of the return of financial revenues of Portuguese emigrated mainly in central European countries and the needs of housing from civil servants returned from the African ex-colonies.

The focus of this paper in on the way planning institutions dealt with informal settlements in the peripheries of main Portuguese cities, based on an informal market of rural land, illegally divided in order to stimulate urban sprawl at low prices. They started to be known as *"bairros clandestinos"*, in the bureaucratic jargon of the 1970's, the same way they were called *"marginales"* (sp.) or *"abusivi"* (it.) in other idioms. The line was drawn: even if not much was made to deal with them, they were placed beyond legality. When a more responsive law was launched in Portugal in 1995 they adopted a new name, AUGI. The acronym meant that they were urban areas of illegal origin. This was the beginning of a process which will be addressed in this paper.

The reason for this is the fact that were these kind of informal settlements which had a stronger impact in the Portuguese urban system. This occurred to such an extent that planning institutions were under pressure to find legal alternatives to deal with informal settlements.

In the past, Portugal was one of the countries most affected by informal settlements. In the 1980's over one tenth of Lisbon's population was living in slums and in illegal urban areas. What started by being a critical issue in territorial terms is today almost an inexistent problem. This paper will focus on the way planning institutions were able to design a responsive legal framework, addressing informal settlements and creating a setting favourable to regenerate those areas.

The paper will discuss the role of planning institutions, as well as the role of informal settlements both in the law making and in the law improvement processes, which started in 1974 and lasts until nowadays. Beyond the formal procedures there were some key factors which warranted the success of these tools: several decades of experimentation, short links and a constant interaction between agents will be presented.

Much has been researched in terms of informal settlements in Portugal. In the early years after 1974 a relevant number of publications were produced in order to discuss the causes and effects of informal settlements. Main authors were practitioners who reflected on their professional practice in planning meetings (most of them promoted by local authorities) and in academic research (Portas, 1988). As the territorial impact was stabilized – this started to happen in the 1990's – this wave of research slowed down significantly. A decade later, when the results of the application of the AUGI act started to have some physical impact in the urban system a set of new works started to be produced, focusing on the impact of ex-informal settlements in the urban system (Silva, 1996, 2010).

One of the main conclusions of some of these post-AUGI act researches relate with the special status that informal settlements acquired in the Portuguese planning system. Less has been said about the lessons that can be extracted from the making, implementing and monitoring of the management model behind the legal frame. Considering the AUGI act more than legal action to deal with informal settlements, it is possible to find a rich process in terms of testing, of sharing knowledge, of networking, of brokerage, on monitoring and feed backing, which can be useful to informal settlements in other contexts and to the regular urban management models in general.

It is the aim of this paper to shed light on the process behind the AUGI act, identifying their main actors, the problems related with informal settlements at different levels – governance of the process itself, financial resources and bureaucratic procedures – and the main answers to respond to them. This has as final goal he replicative role of this legal frame in regard to other urban management contexts.

## 2. Legal, illegal and legitimate: what shapes legal frames for informal settlements?

### *2.1 Legal, illegal and legitimate*

Informal settlements are the expression of a conflict between two parts. On one hand, the landowners, who bought rural pieces of land without any planning permit to urbanize or build and transformed these places in very precarious urban settlements – where infrastructures, collective facilities, accessibilities were missing. On the other hand, there are planning institutions, defining rules to that informal settlements don't match as urban settlements. They were not planned to exist in the urban system, therefore they lack all the basic conditions needed for an urban settlement – infrastructures, collective facilities and accessibilities, among others.

Legal frameworks play a crucial role in this set and in the way each side perceives its own rights. They establish what is legal. Urban formality and informality are addressed in regard to legal frames. It is in regard to a set of rules established by law that property rights are recognized. But laws are itself interpreted in a systemic way. In abstract, and according to the law, occupation might be considered illegal due to the mismatch with legal frames. But in concrete if the same occupation is related with the fulfilment of a housing need, although it continues to be illegal, that same occupation might be considered legitimate, as for instance housing is considered a social right. Under this context, legality and legitimacy play an important role when it comes to discuss informal settlements.

At the same time law draws the line between legal and illegal. On one hand, in the case of informal settlements a legal tool designed to control them, is perceived as a limitation of a property right, when seen from the landowners' point of view. On the other hand, when a legal tool is not just controlling but it is contributing to a balanced solution in order to allow some planned occupation this is seen by planning institutions as a concession to informal settlements.

### *2.2 Portuguese informal settlements milestones*

The emergence of informal settlements is well documented, to start with, by the fact that was a territorial dynamics which affected mostly – in terms of surface, but also in terms of number of residents – the Lisbon Metropolitan Area, shaping the suburbia of the capital. It is a process which consistently started 50 years ago, when the Portuguese capital experienced some prosperity as the result of the opening of the economy to the exterior. Informal settlements' emergence reflect this starting point and evolved according to some main key dates: 1960´s - the decade of a strong migratory movement towards Lisbon, from all the country regions (Fonseca …); housing shortages occur, leading to the development of an informal division of rural land, later occupied by illegal constructions; 1966 - the year of the construction of the first bridge in Lisbon over the Tagus river which opens the door to the speculation with rural land in the south bank of the river; 1968 – water floods in Lisbon's region put in evidence housing conditions; hundreds of people died most of them due to the precarious conditions of informal settlements in the north bank; 1974 – the revolution stands for the establishment of a democratic regime with a new constitution (approved in 1976) in which housing and association are recognized as constitutional rights; first attempts to plan informal settlements produce the first urban layouts soon after the revolution; 1976 - central and local governments are elected; the cooperation between municipalities and informal settlements is established; 1986 – The entrance of Portugal to the European Union adds a new meaning to the problem of informal settlements; they are not anymore only a matter of housing scarcity, due to the scale that in the meantime they achieved, they became an environmental and

planning problem; 1995 – After two decades of "try and fail" (in fact not much progress was apparently done in this period) in order to deal with informal settlements the AUGI act is approved by the Portuguese parliament after a surprisingly short period of months of discussion.

In order to understand this process, two milestones associated with trigger events have two be underlined. The first one is the revolution of 1974 which will change politically, ideologically and socially the country. The second one was the entrance to the European union, which had less impact in the short term, but which transformed the country in the long-term in terms of environmental and planning standards (and of the financial means to achieve them). It is in this sequence of these trigger events that the AUGI act, not without before other attempts being made.

*2.3 How Portuguese planning institutions tried to deal with informal settlements for almost 30 years*

Until the 1960's, urbanization in Portugal was an activity exclusively carried on by the central public administration. However after the first years of that decade, it became impossible to planning institutions to ignore the rise of informal settlements around the city of Lisbon, even where they were just starting, like in the south bank of the metropolitan area (Silva, 1996). Therefore, the first legal initiative to control informal settlements was to open to the private initiative the possibility to urbanize. The expected results from this legal initiative was to increase the offer of urbanized soil and by that way to reduce the attractiveness of informal settlements in the real estate market. However, this did not happen: the needs of housing were so large by then that private entrepreneurs explored the high density market while at the same time other sector of society continued to invest in informal settlements. Acknowledging the failure of this policy and not wanting to openly recognize that informal settlements were emerging out of the control of the authoritarian regime, it was only in the early 1970's that some legal initiatives were carried out, with very limited effects. The attempt to control the existent informal settlements was not doing any harm to the emergence of new ones. Data from the 1970's showed how this was a flourishing industry in Portugal, answering to housing needs (Ferreira, 1984).

With the 1974 revolution informal settlements assumed a political and ideological meaning. On one hand informal settlements were seen as an answer to housing needs; on the other hand, not all the informal settlements were related with housing scarcity. In some cases landowners were buying several plots of land, due to their low price; others were buy plots of land in coastal areas in order to build secondary houses. Different actors' agendas generated a new perception of informal settlements: there were the "good" ones, corresponding to a legitimate aim to a home and there were the "bad" ones related with speculation and with less legitimate aims – like, at the time, to have a secondary house. From 1974 on legal documents will reflect this ideological setting with an institutional discourse emphasizing that there was not only one but two kinds of informal settlements.

Some other factors were: (1) different political parties with opposite agendas involved in plan-making at the central government, at the local government and at the landowners associations' levels; (2) the use of similar legal procedures for informal settlements and for legal settlements, despite of the fact that they had very different characteristics; (3) diversity of informal settlements, from small but heavily occupied to very large but weekly occupied areas; (4) different impact at national level, with informal settlements mostly concentrated in the Lisbon metropolitan area and in the coastal areas of Algarve, in the south; (5) different spatial planning approaches and tools with different characteristics, scales and levels of detail; (6) The need to cater to spatial planning indicators and to make a correspondence of those indicators and an uneven distribution of land by landowners.

These factors on one hand, turned the process of dealing with informal settlements more complicated; but on the other hand it allowed to explore most of the sides of the problem, which turned out to be two decades of experimentation. Some of these experiences had similar protagonists: politicians re-elected for different terms (in Portugal until recently there was no limit

of terms for local elections); practitioners who specialized in dealing with informal settlements; and landowners who embraced the legalization of the informal settlements almost as a full time job. Also as time passed landowners settled in and became residents, gaining political weight. This set of conditions played a key role on the way the AUGI act was produced and approved in 1995.

*2.4 The AUGI act*

Law-making are usually long, are based on the intervention of many actors, are highly hierarchical processes and tend to become very static bodies. We find this pattern in most of the spatial planning laws produced in Portugal. The AUGI act process, before and after its approval contradicts this pattern in many ways. As opposed to other legal frames, the AUGI act was discussed by a parliamentary commission and approved by the national parliament in few months. During the process a much reduced number of entities was consulted, but those who intervened were highly representative of main parts – municipalities, which were in charge of spatial planning; and informal settlements' landowners associations. As opposed to other cases the production of the AUGI act missed the intermediate levels of the hierarchical planning institutions pyramid; instead the main actors on the production of the law were the parliament, on the top of the hierarchy and representatives of the municipalities on the opposite side. And finally, this legal body became highly dynamic, with several revisions in the last twenty years.

The process of law-making showed a great consensus among the four largest political parties in Portugal. The extension of the problem of informal settlements became so large in the 1980's and early 1990's that all the political parties realized that had more gains than losses in dealing with informal settlements. The left wing parties had a traditional linkage with informal settlements at the local level and the centre-right wing parties had a significant part of their electorate living in informal settlements, namely in Lisbon suburbia; in addition, they aimed to dispute also left wing parties' local influence. For these reasons, when the law was produced and about to be approved they all wanted to be part of solution and not of the problem.

Among all the technical details included in the AUGI act, the priority was to solve those aspects that in the past affected planning institutions responsiveness. The first of this was the fact that prevalent rules obliged the total amount of landowners to agree on decision-making. This became an almost impossible task, regarding the fact that in many cases informal settlements had hundreds or even thousands of landowners. To even reach them was sometimes very difficult; in addition any decision had to be taken with the agreement of all. Due to this, an equivalent body to the old landowners' associations was established – and called management commissions. According to the AUGI act, the majority of their members are entitled to decide in general assemblies by the whole of the landowners. This possibility became very important to allow processes to move on medium and large size informal settlements. But on the other hand, it could imply a heavy burden for small informal settlements. Aware of that, the AUGI act introduced a rule in which small informal settlements could be exempted of management commissions, if they wanted.

Law-making was influenced by the fact that the majority of informal settlements were concentrated in Lisbon metropolitan area. Over 10 % of the population was living in informal settlements by the 1980's. The major practical contributions to the law came from those municipalities most affected. On the north bank, one municipality's territory (Loures) was particularly occupied by informal settlements, mainly of small size but highly occupied by housing and small activities as well. On the south bank, another municipality (Seixal) had its territory largely occupied by large scale informal scales, although still with a comparatively small population by then.

Diversity of planning tools used in the past was one of the exploratory qualities of previous experiences. Aware of that diversity, the AUGI act not just accept it but also promoted it, leaving the option to the management commissions and to the municipalities, according to each case. From then on, they were free to choose which kind of tool to use in order to legalize the settlement, either an urban or a detailed plan or, for simpler cases, only a parcelling out project.

Finally, the ability to match planning needs in terms of collective spaces was another critical issue addressed by the AUGI act. In order to meet this need different mechanisms were established: municipalities together with management commissions could decide to include extra areas to the future settlement in order to meet the urban needs; they could establish a balanced distribution among the different landowners; or even decide to compensate financially the municipality when it was impossible to find spaces in connection with the informal settlement.

**3. Analysis and discussion of results / findings;**

Flexibility was apparently the secret to meet under the same set of rules such diversity of circumstances involving informal settlements. In less experimental contexts what could have happen instead? Probably a highly hierarchical planning institutional structure would establish a legal frame which, as it happened before, (1) would have been contested; or (2) ignored. Apparently the AUGI act was published too late for an informal settlement's process started in the early 1960's. However this "delay" seems to have been crucial to explain some of this legal tool's characteristics.

*3.1 Pressures to legislation and planning innovation*

Experimentation went through various phases and although it is clear that 1974 revolution was a milestone in this process. It is however necessary to admit that all the initiatives taken before and after the revolution were part of a learning process which culminated in the AUGI act. From this perspective, all the previous legislation initiatives, although bad-succeeded were part of a learning process – the public administration machine and a large set of practitioners guaranteed the continuity between dictator and democratic regimes. Legislation actions taken before and after 1974 were ineffective due to the fact that it was an exhausted state - politically talking, before the revolution and financially talking after that – who knew that very few alternatives to informal settlements could be offered. Also the state as a unified entity is something that disappears after the revolution, since municipalities started to be democratically elected. Their closeness to residents in informal settlements and to the rest of landowners very soon created conditions stretch ties, proved soon after to be stronger in some cases than institutional solidarity.

In terms of planning instruments that shift between central and local governments before and after the revolution was even more evident. While planning instruments before the revolution ignored the emergence of informal settlements and municipalities had not a say in terms of planning, after the revolution both levels of government engage into planning in order to deal with the explosive situation of informal settlements. In general, centralized planning initiatives were less accepted by landowners while local planning initiatives turn to be the beginning of an experimental phase of twenty years. The length of the processes and the perception of the landowners – of losing construction and property rights, although they never had them according to the law – was one of the main reasons for the failure of these processes. In addition to the growing pressure to legalize and the lack of responsiveness of plans, a growing environmental awareness regarding urban sprawl entered into the Portuguese scene with the entrance of the country to the European Union in 1986.

Also in 1986, an exception is open in order to deal with the largest informal settlement in Portugal, covering an area of over 400 hectares (Quinta do Conde). In order to register the plot of land under the name of the new landowners an exceptional authorization was established by the central government in articulation with the municipality (Sesimbra) – since it showed to be a successful mechanism, nine years later that exception was included in the AUGI act as a rule. And the experimentation effect continued. Since it worked successfully to the informal settlements the application of the rule was later extended to every other urban developments in order to ease the land registration process.

*3.2 Governance concerns*

In many aspects the AUGI act met governance goals considering the kind of rules created. But this was not something achieved at once. In the initial version of the act, all the mechanisms are set mainly around two structures – the municipalities and the management commissions. A remarkable flexibility of the law allowed that for each case there were three open options – legalization managed (1) only by landowners (through management commissions), (2) only by the municipality; or (3) by both entities. Again, this was a way to create the options to cater the needs of each specific informal settlement. In some cases their pro-activity would allow them to move on their own; in other cases, due to short resources or lack of technical expertise they could make the management together with municipalities; and eventually if they would not accept o move on at all, municipalities could take the lead on their own.

In many situations along the AUGI act making a pattern was set: experimentation was an opportunity to acknowledge the diversity of situations to be addressed; the setting of rules translated that diversity. That was not only an initial pre-disposition; along the years of implementation, from 1995 until today efforts have been put in terms of keeping a constant improvement. Reflecting this, the first major revision of the AUGI act was made in 1999. Among several changes, we underline two of them.

The first one is concentrated on redistributing the power in relation with the decision-making process. According to the 1995 version, the management commissions were the only entity representing the landowners. In 1999 the act is changed in order to allow individuals to be more vocal in the decision-making. Parliamentary reports refer the fact that this was the result of the disappointment of some landowners in regard to the management commissions. The same reports refer that this information was send to the parliament through the Ombudsman. In fact in the 1998 Ombudsman yearly report we found references to landowners' complaints about the lack of responsiveness of management commissions.

The second one refers to the role of the original landowner – the one that illegally divided the land and sold the parcels to others, but most of the times was still owing part of it. The initial version of the AUGI act, excluded them from any kind of decision-making process. In a way, this was a "moral" statement, to move away any decision from the sphere of action of the agent responsible for the process. However, when management commissions and municipalities started to apply the law, they realized that in some cases most of the needed spaces for collective facilities and public spaces for instance. In one of the law's revision, this was one of the changes introduced. Despite of the "moral" statement behind the initial version of the law, a more pragmatic perspective realized the need to include the original landowner also in the process.

This work of monitoring and improving the law has been based on a set of long-term relations between agents, and on "institutional by-passes", or short chains, between the parliament (who is responsible by operating the changes), the municipalities most affected by informal settlements (who deals with the planning process) and the management commissions (who tests on the field the rules). Some protagonists – landowners' representatives, law-makers, parliamentary commission's members – are in the process for decades, carrying information, sometimes staying in the same job and other times moving from one context to another. Some parliamentary deputies have been councillors in municipalities where informal settlements took place; in some cases, a landowner started by being a management commission member, then became elected for the local parliament and later was hired as municipality's advisor for informal settlements, being one of the representatives in parliamentary auditions; law-makers started by working to residents' associations, carried that experience for the law-making process of the AUGI act, continued to work in the successive law-changes and eventually that accumulated experience to adapt other spatial planning legal frames.

This context established a dilemma in Portuguese planning institutions. On one hand, there was the awareness of the need to prevent urban sprawl; on the other hand, there was a public recognition of housing needs and a more discrete assumption that informal settlements would be in part the answer to those housing needs. Both sides of this dilemma were part of the experimentation phase which shaped the 20 years before the AUGI act was approved. The failed appliance of punitive decree-laws showed that that was not the way at the legal level. But the initiatives to frame informal settlements through planning seemed to be also unfruitful. Plan-processes were too long and their approval was too difficult. Traditional ways of planning, implying a full agreement between all the landowners, were in many cases very difficult or almost impossible to achieve.

**4. Final ideas: the outcomes of a law-making process**

We started this paper by enhancing the impact of informal settlements in the developed world in the past as well as in the developing world in the present. However, looking closer to the Europe this is a not so irrelevant issue, when considering still southern and eastern parts of it. The need for solution in many various contexts is necessary and yet the lessons to be taken should be put in perspective in order to be effective to other contexts. From many models tested, legal aspects are always present, since solutions for informal settlements have necessarily a legal impact on property rights, which can be seen from different angles. From those who are landowners, the process of legalizing informal settlements can be seen as putting in risk, if not legal, at least legitimate property rights. For those who are on the other side – public administration, planners, politicians – to legalize informal settlements tends to be seen as the achievements of those rights that for landowners were already acquired.

In face of this evident conflict of different informal settlements' perceptions, the following lines will conclude about the way a legal frame, in a country heavily fustigated by informal settlements processes during several decades, managed to establish a consensual set of rules for both parts. In this section, as opposed to previous attempts to control informal settlements, the process based on experimentation, the key-issues addressed, he dynamics of the law itself and the impact on other legal frameworks will be underlined.

What made this law to have such an effect on dealing with informal settlements and later with other kinds of urban settlements? As referred previously, if there is a lesson to be extracted from the AUGI act process of law-making is the one of the importance of experimentation, long-term relations and short chains. Experimentation was useful to test traditional models – using pre-established planning procedures – to the limit in which planning institutions recognize their failure. Testing and failing brought out the search for new solutions. And if they were not in plans nor in planners, than they should be "above" them, in the legal frameworks. The trial and fail process, long of two decades brought with it another outcome – the establishment of long-term relations. These long-term relations between politicians, planners and landowners were crucial to create trust among them, one of the key-conditions for governance settings. Actors involved in the law-making and in the law-evaluation processes interacted at different levels sometimes already for three decades. But in order to permit a fluid flux of information, on the top of long-term relations, short chains were required. The brokerage role of some actors was crucial to establish links between informal settlements and the planning institutions responsible by the law-making, in this case the national parliament.

In this paper it has been discussed a rather successful case of establishing a legal frame in order to deal with informal settlements. The impact of this process can be multiple. On one hand, the way experimentation was present is very evident. Twenty years (1974-1995) of dealing with informal settlements was the process that lead to the establishment of a new legal frame. What seems obvious today, only happened due to a learning process of two decades. Much work can be done in further researches in order to understand his shift happened only after such long period. Maybe one of the reasons is related with the fact that for many years and even after the revolution, informal settlements were seen like something to be punished and repressed at the legal level while at the plan level some attempts were made in order to legalize with strict urban criteria those who had conditions to be integrated in the urban system.

What the AUGI act also reveals is an awareness that informal settlements were not only a matter of city planning, neither of property rights, but also a matter of governance. Much of the changes imposed by this act are related with the quality of the decision – based on the majority of the elements of the management commissions but also with its effectiveness. Decisions are based on consensus-building but they are as well associated with the need to move on. This act shows a clear concern with exempting the decision making process from "grey zones", in which the planning process could get stuck. Due to the complicatedness of the traditional administrative land registration process, new rules are set in order to allow individuals to register their plots of land without depending from the other co-owners. For a conservative public administration based on the same rules for decades something of this kind would have unthinkable some decades before.

Another relevant conclusion of this paper in regard on the AUGI act is related with its dynamics. This law, approved 20 years ago was subjected to a significant number of changes until our days. The stunning and unusual pace of changes might lead to a first suspicion of a badly done law. But analysing the number and the content of those changes it is possible to observe the consistency and the coherence of the adaptation of this law to the contexts in which it was applied. It reveals a close evaluation of the impacts of the law in the contexts in which it was applied – a diversity of informal settlements in terms of size, number of agents and uses.

And finally, the replicative effect of this law must be underlined. This legal tool was effective to deal with a specific dynamics, the one of informal settlements. But from this experience lessons were extracted to other spatial planning legal tools. The assumption that property rights were associate with property obligations, was firstly set within the context of informal settlements. Only later this was assumed for every type of urban settlements, being legal or illegal. The experimental context had to be "accepted" by planning institutions in order to deal with an exceptional problem. This exception was later adopted as a rule in order to deal with urban settlements in general.

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# Resolving Urban Land Disputes: Lessons from the Portland, Oregon Region

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Keywords
Regional planning, Planning Law, Growth Management

## Abstract

*The Portland Metro area is the largest urban area in Oregon. The Metro planning agency makes binding planning decisions for the region, including establishing an urban growth boundary (UGB) to provide sufficient urban lands for 20 years. After successful challenges to additions to urban lands, the Oregon legislature established new rules for "urban reserves" for 20-50 years. Urban reserves are presumptively the next additions to the UGB. To maximize discretion, the legislature authorized Metro to balance certain unweighted "factors" (instead of fixed criteria) in designating urban reserves.*

*The paper recounts the controversy that revolved around the attempt by Washington County to add substantial farmland to urban reserves to accommodate employment growth. Resource land preservation is a high value in Oregon's planning system. Opponents suggested that adding a large amount of resource lands could not be justified by the findings purportedly "balancing" these factors. The urban reserves process failed when the Oregon Court of Appeals held that the use of the factors did not obviate justification of addition of resource lands to urban reserves. The legislature intervened, setting the urban growth boundary and most reserve areas by statute.*

*The paper provides an assessment of this regional urban reserve process – factors in lieu of criteria, temptation to solve UGB problems at the legislature, the need for more predictable "safe harbors" for future urban designations, and accountability through uniform and transparent growth projections. While deference may be given regional planning decisions, those decisions must be coherent and justified by an adequate factual basis.*

## I. Introduction

Over time, coordinated planning for urban areas has been recognized and encouraged. The federal government has required such planning with regard to transportation and housing funding,[2] and the once-dominant model that planning and land use regulation may be done by public bodies independent of each other[3] has been superseded by a model in which regional impacts must be considered and resolved.[4] Conflict resolution is necessary because of the diverse and strongly held views of citizens, interest groups and public agencies. The resolution of conflicts, given these diverse views over the pace, direction and extent of urban growth, are the subject of this article, which focuses on the recent controversy over urban growth in the Portland, Oregon metropolitan region. It is highly likely that similar conflicts will also arise in other regions; thus this article will deal with the lessons learned from that controversy.

To put the matter into context, a brief description of the legal aspects of the Oregon planning system will be presented, followed by a description of the urban growth management law that applies specifically to the Portland region. The article will then provide a brief history of previous urban growth conflicts between 1979 and 2005 and the legislative response to these conflicts in the enactment of new rules to

deal with perceived shortcomings in the process. Those new rules, as applied to the current controversy (2010-14), will then be examined, followed by a discussion of lessons learned and applicable to similar resolutions of conflicts over urban growth.

## A. The Oregon Planning System and Urban Growth Boundaries

Space limitations prohibit a fuller description of the Oregon planning system;[5] however, for purposes of this article, a synopsis, as relevant, will be given. In 1973, the Oregon legislature enacted SB 100, which provided for a new state agency, the Land Conservation and Development Commission (LCDC) to adopt binding standards ("goals") for local plans (which in turn would be binding on local land use regulations and actions).[6] Eventually, there were 19 statewide planning goals addressing a number of planning issues and falling into five categories: Process (Goals 1 and 2), resource lands protection (Goals 3-5), human interaction with the environment (Goals 6-8 and 13), public facilities and urbanization (Goals 9-12 and 14) and specific areas of state interest (Goals 15-19).[7] Local governments were obliged to have their plans formally certified or "acknowledged" by LCDC as complying with the goals by incorporating the goals in their plans, so that state policy, as embodied in the goals, was implemented.

The most familiar component of the Oregon planning system is the urban growth boundary (UGB) that separates "rural" from "urban" land, so as to assure that almost all urban development occurs on urban lands. Whether land is located on one side of the boundary or the other is significant.

In the same session that enacted SB 100, the legislature also recognized the need for regional planning for the Portland metropolitan area that presently includes portions of three counties, 25 cities, and services approximately 1.5 million people. As a result, the legislature delegated to a predecessor agency the powers to:

* Coordinate all planning activities of member cities and counties, special districts and state agencies.
* Review all comprehensive plans to determine conformity with statewide planning goals.
* Adopt regional goals and objectives.
* Prepare a plan for the region in accordance with statewide and regional planning goals.
* Designate areas and activities having significant impact on the region and establish rules and regulations for them.
* Review plans adopted by its member governments and recommend or require changes to assure the plans conform to the regional goals and objectives.[8]

The current structure of regional government evolved from a legislative determination to reassign regional planning duties and provide for a different regional planning agency (Metro). Following enactment of a state constitutional amendment,[9] an elected regional government with powers to deal with matters of regional concern evolved.[10] Among the powers Metro possessed was that of enacting and amending a regional UGB.[11] For purposes of this article, many of the other powers granted Metro, including those of regional coordination,[12] adopting a Regional Framework Plan[13] and requiring local governments to "substantially comply" with that plan[14] are generally not discussed further; rather, this article focuses on Metro's UGB amendment process.

Under this legislative delegation, Metro establishes and maintains the UGB for the 25 cities and the urban portions of three counties in the region.[15] Thus, unlike most other areas of the state, those cities and counties in the Metro region do not establish their own UGBs; rather, the regional government, which has its own procedures and obligations in addition to those applicable to other local governments, undertakes that task.

The task of establishing, and changing, the UGB is both controversial and complicated. Because plans are dispositive as to how land may be used in Oregon, it makes a great difference to the use, and thus the value, of land. Some farmers desire to continue agricultural operations on good soils on flat lands near the boundary subject to preferential tax rates, while some businesses and industries, as well as cities, view the development potential of that same land in a different way. Conflicts over future urban growth are inevitable. The complicated aspect of the establishment and change of UGBs lie in the multiple factors and criteria involved.

The factors involved in the establishment or change of a UGB are twofold – one set of factors deals with the need for urban land, while the other set deals with the location of the boundary, given that need. Currently, the need factors require showings of:

> (1) Demonstrated need to accommodate long range urban population, consistent with a 20-year population forecast coordinated with affected local governments; and
>
> (2) Demonstrated need for housing, employment opportunities, livability or uses such as public facilities, streets and roads, schools, parks or open space, or any combination of the need categories in this subsection (2).[16]

Significantly however, the need factors must also promote the efficient use of land:

> Prior to expanding an urban growth boundary, local governments shall demonstrate that needs cannot reasonably be accommodated on land already inside the urban growth boundary.

Assuming that the need for the UGB change can be shown, there are additional "locational" factors that apply, namely:

> (1) Efficient accommodation of identified land needs;
>
> (2) Orderly and economic provision of public facilities and services;
>
> (3) Comparative environmental, energy, economic and social consequences; and
>
> (4) Compatibility of the proposed urban uses with nearby agricultural and forest activities occurring on farm and forest land outside the UGB.[17]

In addition to these more flexible factors contained in Goal 14, there are also statutory criteria that apply to the location of a UGB under OR. REV. STAT. sec. 197.298(1), which provides in relevant part:

> In addition to any requirements established by rule addressing urbanization, land may not be included within an urban growth boundary except under the following priorities:
>
> (a) First priority is land that is designated urban reserve land under ORS 195.145, rule or metropolitan service district action plan.
>
> (b) If land under paragraph (a) of this subsection is inadequate to accommodate the amount of land needed, second priority is land adjacent to an urban growth boundary that is identified in an acknowledged comprehensive plan as an exception area or nonresource land. Second priority may include resource land that is completely surrounded by exception areas unless such resource land is high-value farmland as described in ORS 215.710.
>
> (c) If land under paragraphs (a) and (b) of this subsection is inadequate to accommodate the amount of land needed, third priority is land designated as marginal land pursuant to ORS 197.247 (1991 Edition).
>
> (d) If land under paragraphs (a) to (c) of this subsection is inadequate to accommodate the amount of land needed, fourth priority is land designated in an acknowledged comprehensive plan for agriculture or forestry, or both.

These statutory priorities require some explanation. The first priority is given to "urban reserve land," which is land the city or region desires to be first in line for an expanded UGB and has been vetted through the urban reserve process, described below. The second priority relates to lands which are usually committed to urban development, or which have urban uses on them[18] or are lands that have soils with less agricultural or forestry resource value.[19] The third priority also focuses upon soils of lesser resource value within an overall agricultural land use designation.[20] The final category relates to lands that have resource value, but (with some exceptions) are to be included in the UGB if and only if lands of higher priority for inclusion are not available.[21]

Both the Goal 14 factors and statutory priorities for establishment and change of UGBs require a local government to bear the burden of proof to show the need for any additional urban land, and that the location of additional urban lands is done in such a manner so as to promote urban efficiency and avoid unnecessary impacts on resource lands. While flat lands with good soils for farm and forest production may be included within the UGB, the factors and criteria discussed above tend to discourage their consideration. The always-controversial inclusion of those lands in the Portland region now also utilizes an urban reserve process enacted by the 2007 Oregon legislature[22], discussed in more detail below.

## B. Portland Regional Planning Obligations and Urban and Rural Reserves

Metro has certain obligations that directly relate to its UGB management duties, as it is obligated to undertake a "legislative review" of its current UGB at least every six years to demonstrate that its regional plan "provides sufficient buildable lands" within the UGB "to accommodate estimated housing needs for the next 20 years."[23] The legislature provides extensive direction over the nature and scope of this review[24] and sets out the consequences of a determination that there is insufficient capacity to meet housing needs for that 20-year period.[25] One of the alternatives to meet a lack of capacity is to expand the

UGB.[26] Metro is also under a specific obligation to accommodate one-half of a buildable lands shortfall within a year of completing its analysis and must either amend its UGB within one year or increase densities within the existing UGB not later than two years after such completion.[27] Finally, Metro is subject to a reporting obligation to LCDC regarding performance measures including housing, conversion of vacant to improved land, and job creation.[28] If Metro determines it does not have a sufficient buildable land supply or housing densities to meet is 20-year housing needs, it is then obligated to adopt and implement a "corrective plan" to assure those ends are met.[29]

Metro is thus under a rigorous regime of reporting and responding to housing needs, and the two-year turnaround on housing capacity analysis results in the amendment of the regional UGB being a continuing point of controversy within the region.

The priority of urban reserve lands as the first resort for meeting residential land needs results in increased attention to the inventory of those lands and their sufficiency in responding to urban land shortfalls. Since 2007, the Oregon legislature has required Metro to adopt urban reserves as well as "rural reserves" simultaneously. Lands lawfully classified as urban reserve jump to the head of the queue and avoid other statutory priority considerations for UGB amendments, so that prime agricultural or forest lands within an urban reserve may more easily come within a UGB, once need is established.[30] "Rural reserves" on the other hand place certain resource lands off-limits for inclusion in the Metro UGB for up to 50 years.[31] This political tradeoff was designed to satisfy both development and conservation communities.

Urban reserve lands are defined lands outside an urban growth boundary that will provide for:

(a) Future expansion over a long-term period; and

(b) The cost-effective provision of public facilities and services within the area when the lands are included within the urban growth boundary."[32]

Under the statutory scheme applicable to the Portland region, Metro was required to enter into an intergovernmental agreement with any or all of the three counties in the region that had land use authority over candidate lands for urban reserves,[33] so that both Metro and local approval of specific urban reserves were required.

Designating urban reserves is governed by certain "factors," including whether those lands:

(a) Can be developed at urban densities in a way that makes efficient use of existing and future public infrastructure investments;

(b) Includes sufficient development capacity to support a healthy urban economy;

(c) Can be served by public schools and other urban-level public facilities and services efficiently and cost-effectively by appropriate and financially capable service providers;

(d) Can be designed to be walkable and served by a well-connected system of streets by appropriate service providers;

(e) Can be designed to preserve and enhance natural ecological systems; and

(f) Includes sufficient land suitable for a range of housing types.[34]

The factors are unweighted and appear to give wide discretion to Metro and the three urban counties to designate urban reserves so that certain lands may be included within the regional UGB relatively easily, so long as the needs for inclusion were established and the individual county agreed. Given the flexibility of the factors, participants in the urban reserve process turned to the persuasion of local governments and Metro to lobby their own causes. It appeared to onlookers that sufficient findings in the application of the urban reserve factors to justify particular outcomes could easily be attained.

## II. Urban Reserves Before 2010

The original UGB for the Portland region was acknowledged in 1986.[35] Since then, Metro has amended that UGB on many occasions.[36] Those amendment actions are outside the scope of this article. It was not until 1999 when under a previous statutory scheme Metro undertook a significant effort to designate 18,579 acres as urban reserves, an effort that was struck down in *D. S. Parklane, Dev., Inc. v. Metro*.[37] While Metro's determination of land need was upheld, Metro's use of decisional criteria outside those contained in applicable state statutes and administrative rules resulted in remand of that decision.[38] That decision led to legislative changes in 2007, resulting in the current reserves scheme, described above.

There were no further cases over reserve decisions until the *Barkers Five* case discussed below. In *D. S. Parklane*, as well as in the UGB amendment cases, the judicial focus was largely over the justification of the decision to amend the UGB in terms of findings. *Barkers Five* would be no different.

## III. The *Barkers Five* Urban Reserve Decision

Using the 2007 revisions to the reserves enabling legislation, Metro, along with Clackamas, Washington, and Multnomah Counties concurrently adopted urban and rural reserves in 2010-11, designating respectively lands available for future UGB expansion and lands to be retained as farm and forest land at least until 2060.[39] The result was designation of 28,256 acres of urban reserve lands and 266,628 acres of rural reserves.[40] Under the 2007 legislation establishing the Metro reserves process, the concurrent decisions of these four governmental agencies were submitted to LCDC for acknowledgment.[41] LCDC duly acknowledged the urban reserves jointly submitted in August 2012 and various participants sought review in the Oregon Court of Appeals[42] in *Barkers Five, LLC v. LCDC*.[43]

In an opinion that spanned more than 100 pages and took more than a year to decide, the Court of Appeals remanded LCDC's acknowledgment order on several grounds. The Court upheld LCDC's overall approach to the acknowledgment, as well as deferring to the Commission's interpretation of the urban reserve statutes and rules.[44] Deferral could be justified on both separation of powers and practical political considerations.[45]

However, the Court remanded the acknowledgment, finding some lands in each of the three counties incorrectly justified:

- A 62 acre area designated as "rural reserve" by Multnomah County.[46]
- 
- A 7,300 acre area designated "urban reserve" in Clackamas County to which a challenge was made to findings that transportation facilities were adequate.[47]
- 
- A 171,000 acre area designated "urban reserve" by Washington County by using additional factors not provided by law.[48]

The impact of the court's decision was immediate and electrifying. The prospect was that the reserves decision would take many more years and be made by elected officials with different views and priorities than those officials who passed on the original designations. Landowners and local governments were concerned over not being able to plan sufficiently for the future and Metro worried over the credibility of its planning process. Enter the Oregon Legislature.

## IV. Planning by Fiat

The decision in *Barkers Five* was handed down in January 2014, while the Oregon Legislature was in session. To alleviate the concerns of multiple parties to the litigation, the Legislature adopted a "Grand Bargain," that resolved only the Washington County disputes, leaving the issues in the remaining counties (along with those of the parties who articulated these and other concerns) to an LCDC remand to Metro and the two other counties for resolution.[49]

The Washington County urban reserves were adjusted so that much of the land that had been designated urban reserve and contested went instead to a rural reserve and, at the same time, the urban growth boundary was enlarged to take in other urban reserve designated lands.[50]

This agreement may have settled the Portland metro urban growth disputes but it emboldened other local governments to seek legislative intervention. The legislative session following the one that adopted the "Grand Bargain" for the Portland region was asked to act on a bill to validate the Woodburn UGB[51] that had been remanded twice from the courts.[52] Other 2015 bills sought to include a portion of Clackamas County as an acknowledged urban reserve,[53] another corrected the 2014 legislative designations,[54] while a third demanded a report on the status of the Bend UGB, possibly with a view of intimidating LCDC.[55]

The point is that having the legislature plan by fiat instead of providing a deliberative, though sometimes wrong, planning process is intoxicating to legislators and interest groups wishing to forgo the pleasure of lengthy hearings and appeals. The precedent that such "quick-fix" efforts generate threatens to undermine the planning process instead of addressing the planning issues in a thoughtful manner.

## V. Lessons Learned from the Portland Metro Urban Reserves Process

In addition to the dangers of quick-fix solutions, other lessons may be gleaned from the experience of the recent controversy over the nature and extent of the Portland regional UGB.

- There is a downside to centralization of planning administration. A sufficiently motivated interest group need only to bring influence to bear on that authority to achieve an objective, thus avoiding the need to convince numerous regional or local planning officers and agencies.

In any case, it is easier to do "one stop shopping" by lobbying through a centralized process.

- Similarly, it is easier to influence the regional planning process if the bigger or more motivated players in that process are won over, or worn down, sometimes to the detriment of the smaller players and the process itself. For example, there was some concern by Clackamas County that the region deferred too much to Washington County and that county's focus on expanding the "silicon forest," which had promised (and delivered) a significant boost to the region's employment gains over the previous 20 years. Whether wisely or not, the Oregon statutes relating to urban reserves require an agreement among Metro and each of the three counties in which Metro has urban planning authority.[56] The need for an agreement gives each of those counties an opportunity to exert significant influence over the process.

- In addition to the intoxication of power, the opportunities for grandstanding and the appearance of the legislature "riding to the rescue" to save certain areas, because of their size or economic contributions, also has a detrimental effect on planning by truncating the process and giving non-planning factors a larger influence.

- The necessarily complex decision-making involved in considering multiple factors creates a priestly class of planners, lawyers, and administrators to deal with decisions that appear to be made in a "black box," thus reducing the legitimacy of the regional planning process.

- A further consequence of this complex decision-making is the need for detailed findings, which runs the risk of failing at one or more points or failing to evaluate the multiple factors involved in a complex decision and raising the value of the priestly class over planning issues. While it is true that the Oregon legislature has striven mightily to reduce complexity, the presence of multiple and often competing criteria make this job complex.

- Just how much deference should be given to the regional authority is also a troubling question. The question of how much land is needed can be dealt with by the use of a consistent and established methodology. However, much of the recent litigation over UGB changes has to do with where to expand the UGB, rather than by how much. The urban reserves legislation implicitly recognizes the political nature of UGB changes by its use of "factors," as well as criteria in that process. However, the Oregon courts also note that those factors must be weighed and balanced and the findings must set forth the reasons for the location of the boundary, especially when there are competing sites. It is arguable that the use of factors has made the process more, rather than less, difficult by requiring articulation of the reasons why one site was chosen over another.

Oregon plans for urban growth. Other regions may find it necessary to devise a similar process to accommodate urban growth, a process that must have political legitimacy and provide for the consideration of the needs of citizens at all levels of government in the region. It is also likely that many of the same difficulties seen in the Portland Regional Urban Reserves process will be experienced in other regions and may be helpful in the construction of a regional planning process elsewhere.

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[2] Federal Aid Highway Act, 23 U.S.C. sec. 134. *See also* Economic Development Grants by the Economic Development Administration under the Planning and Local Technical Assistance Program under 42 U.S.C. § 3121–3231 (2004).

In addition, there are other federal programs that have advanced regionalism as a planning tool:

- The US Department of HUD has made recent efforts to focus housing planning at the regional level (See HUD Sustainable Communities Regional Planning Grant web page: http://portal.hud.gov/hudportal/HUD?src=/program_offices/economic_resilience/sustainable_communities_regional_planning_grants).

However, Congressional opposition has left those programs without new funding since FY 2011.

- HUD has also encouraged regional fair housing planning from grant recipients in their Affirmatively Furthering Fair Housing planning process; that effort includes a website tracking the implementation of related administrative rules and assessment tools: http://www.huduser.org/portal/affht_pt.html

- HUD has also pioneered with the U.S. Department of Transportation to develop a combination housing and transportation cost estimator [Location Affordability Portal] that provides both highly local and regional housing and transportation cost estimates. http://www.locationaffordability.info/

[3] Village of Euclid, Ohio v. Ambler Realty Co., 272 U. S. 365 (1926).

[4] Southern Burlington County, NAACP v. Township of Mount Laurel, 456 A.2d 390 (N. J., 1983); Berenson v. Town of New Castle, 341 N.E.2d 236 (N.Y. 1975).

[5] For a more complete description of the Oregon land use system, *see generally* Edward J. Sullivan, *The Quiet Revolution Goes West: The Oregon Planning Program* 1961-2011, 45 J. MARSHALL L. REV. 357, 372–74 (2012).

[6] OR. REV. STAT. § 197.175(2) (1999).

[7] The goals may be found at OR. ADMIN. R. 660-015-0000 (2008).

MICHAEL HUSTON, THE COLUMBIA REGION ASSOCIATION OF GOVERNMENTS ii (Larry Rice ed., 1977), available at http://rim.metro-region.org/WEBDRAWER/webdrawer.dll/webdrawer/rec/158159/view/.

[9] OR. CONST., art. XI, § 14.

[10] In 1992, the voters of the region adopted a charter that provided for the structure under which the various powers granted to the regional government by the state constitution and statutory law were administered.

[11] OR. REV. STAT. § 268.390(3) (2009).

[12] OR. REV. STAT. § 268.385 (1977).

[13] OR. REV. STAT. §§ 195.020–.025, .060–.085 (1993).

[14] OR. REV. STAT. § 268.390(4)–(5) (2009).

[15] OR. REV. STAT. § 268.380–.390 (2009).

[16] OR. ADMIN. R. 660-015-0000(14) (2008). The current need factor also provides:

In determining need, local government may specify characteristics, such as parcel size, topography or proximity, necessary for land to be suitable for an identified need.

Both the need and locational factors have been revised over time. Only the current versions are provided here.

[17] *Id.* The locational factors further provides that the boundary shall also be determined by evaluating alternative boundary locations consistent with OR. REV. STAT. 197.298, as well as the locational factors. OR. REV. STAT. 197.298 contains additional criteria for locating the UGB and is discussed below. A slightly different version of this statute becomes effective on January 1, 2016, but does not change the analysis.

[18] OR. REV. STAT. § 197.732(2)(a)–(b) (2011).

[19] OR. REV. STAT. § 197.247 (repealed 1993); *see also* OR. REV. STAT. § 197.298(1)(c) (1999).
[20] OR. REV. STAT. § 197.298(1) (1999).
[21] Subsection (3) of the statute, the priority system has a "safety valve" to prevent an overly rigid application:

> Land of lower priority under subsection (1) of this section may be included in an urban growth boundary if land of higher priority is found to be inadequate to accommodate the amount of land estimated in subsection (1) of this section for one or more of the following reasons:
>
> (a) Specific types of identified land needs cannot be reasonably accommodated on higher priority lands;
> (b) Future urban services could not reasonably be provided to the higher priority lands due to topographical or other physical constraints; or
> (c) Maximum efficiency of land uses within a proposed urban growth boundary requires inclusion of lower priority lands in order to include or to provide services to higher priority lands.

[22] 2007 Or. Laws Ch. 723. This current version of urban reserves follows previous LCDC efforts at rulemaking in 1992 and legislative direction in 1993 and 1995. *See* Sullivan, *Urban Growth Management in Portland, Oregon*, 93 OR. L. REV. 455, 475-76 (2014).
[23] OR. REV. STAT. § 197.296(2), .299 (2014).
[24] OR. REV. STAT. § 197.296, .299–.302 (2014).
[25] OR. REV. STAT. § 197.296(6)–(8) (2003); *See also* OR. REV. STAT. § 197.299 (2014).
[26] OR. REV. STAT. § 197.296(6)(a) (2003). The other alternatives are increasing density within the existing UGB or a combination of a UGB amendment and increasing density. OR. REV. STAT. § 197.296(6)(a)–(c) (2003). Despite Metro's legal powers to increase density among its constituent jurisdictions, there are political limitations on that power.
[27] OR. REV. STAT. § 197.299(2) (2014).
[28] OR. REV. STAT. § 197.301 (1997).
[29] OR. REV. STAT. § 197.302 (2001).
[30] The current version of the urban and rural reserves system was established in 2007 through 2007 Or. Laws ch. 723 and implementing administrative rules adopted by LCDC in 2008. OR. ADMIN. R. 660, Div. 27 (2008). These efforts responded to earlier, unsuccessful attempts at implementing an urban reserves system struck down in *D. S. Parklane, Dev., Inc. v. Metro*, described below. The current system was designed to allow a more simplified process for the designation of reserves.
[31] OR. REV. STAT. 195.143 (2007). These reserves are designed for the long-term protection of valued farmland and Metro is required to consider, among other factors, whether the land:

> (a) Is situated in an area that is otherwise potentially subject to urbanization during the period described in subsection (2)(b) of this section [i.e., 30-50 years], as indicated by proximity to the urban growth boundary and to properties with fair market values that significantly exceed agricultural values;
>
> (b) Is capable of sustaining long-term agricultural operations;
>
> (c) Has suitable soils and available water where needed to sustain long-term agricultural operations; and
>
> (d) Is suitable to sustain long-term agricultural operations, taking into account:
>
> (A) The existence of a large block of agricultural or other resource land with a concentration or cluster of farms;
>
> (B) The adjacent land use pattern, including its location in relation to adjacent nonfarm uses and the existence of buffers between agricultural operations and nonfarm uses;

(C) The agricultural land use pattern, including parcelization, tenure and ownership patterns; and

(D) The sufficiency of agricultural infrastructure in the area.

Under OR. REV. STAT. § 195.141(4), LCDC was instructed to adopt administrative rules for rural reserve designation, upon consultation with the Oregon Department of Agriculture. There is no further discussion here of the application of the rural reserves, which would have excluded natural resource lands from consideration of inclusion in the regional UGB.

[32] OR. REV. STAT. § 195.137(2) (2007).
[33] OR. REV. STAT. § 195.143 (2007).
[34] OR. REV. STAT. § 195.145(5)(a) (2011); *See also* OR. ADMIN. R. 660, Div., 27, LCDC's administrative rules for the process and application of these factors in the Portland region.
[35] Urban Growth Boundary: Periodic Review Workplan, Metro. Serv. Dist. Planning & Dev. Dep't, Council Res. 88–1021, at 1–5 (1988).
[36] For a more complete review of cases involving amendment of the UGB before the *Barkers Five* decision, *see* Sullivan, *Urban Growth Management in Portland, Oregon*, 93 OR. L. REV. 455 479-91 (2014).
[37] 35 Or LUBA 516 (1999) *aff'd as modified* 994 P.2d 1205, 1211 (Or. Ct. App. 2000).
[38] D.S. Parklane Dev., Inc. v. Metro, 35 Or LUBA 516 (1999) *aff'd as modified* 994 P.2d 1205, 1211 (Or. Ct. App. 2000).
[39] Metro Ordinance No. 10-1238A as revised in 2011 by Metro Ordinance No. 11-1255. The current version of that order may be viewed at oregonmetro.gov/sites/default/files/regionalreserves041714.pdf.
[40] *See* Metro area's 50-year growth plan wins state approval; designates urban and rural 'reserves' at http://www.oregonlive.com/environment/index.ssf/2011/08/metro_areas_50-year_growth_pla.html. Washington County, which had some of the best farmland, but was also a regional growth leader, had much land in both categories. *See* http://www.oregonmetro.gov/urban-and-rural-reserves.
[41] OR. REV. STAT. § 197.626(1)(c), (f) (2014).
[42] OR. REV. STAT. § 197.650 (2011).
[43] Barkers Five LLC v. LCDC, 323 P.3d 368 (Or. Ct. App. 2014).
[44] *Id.* at 395. Regarding deference, the court said "We will defer to LCDC's "plausible interpretation of its own rule[s], including an interpretation made in the course of applying the rule, if that interpretation is not inconsistent with the wording of the rule, its context, or any other source of law."
[45] In similar contexts, the Oregon legislature and courts have taken a deferential approach to public agency interpretions of its own plans and land use regulations. OR. REV. STAT. § 197.829 (1995); Siporen v. City of Medford, 243 P.3d 776 (Or. 2010).
[46] *Barkers Five,* 323 P.3d at 419.
[47] *Id.* at 423-28.
[48] *Id.* at 428-29. The court termed these additional justifications as "pseudo-factors."
[49] That remand may be found at www.oregon.gov/lcd/docs/murr/MURR_Order_14-ACK-001861_remand_final.pdf.
[50] 2015 Or. Laws Ch. 92.
[51] HB 2649, 2015 Oregon Legislative Session.
[52] 1000 Friends v. LCDC (Woodburn), 12 P.3d 272 (2010) and 317 P.3d 927 (2014).
[53] HB 3313, 2015 Oregon Legislative Session.
[54] HB 2047, 2015 Oregon Legislative Session.
[55] SB 851, 2015 Oregon Legislative Session.
[56] OR. REV. STAT. 195.141, .143 (2007).

# PLANNING LAW AND SUSTAINABILITY IN AUSTRALIA: ACHIEVEMENTS AND CHALLENGES

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## Abstract

*In 1992 the Australian Government published its National Strategy for Ecologically Sustainable Development, a policy document representing Australia's response to the World Commission on Environment and Development 1987 report Our Common Future (the Brundtland Report). Through the auspices of Australia's federal system of government, it was envisaged that the sustainability principles in this national policy document would progressively be implemented, through both policy and law, at the national, state and local levels of government. Beginning with a description of the Australian concept of 'ecologically sustainable development' (ESD), this paper first examines the implementation of ESD through both policy and legislation at the Commonwealth level. The State of New South Wales (NSW) is then selected for more detailed assessment, with, examples of key State government legislation and court decisions considered. Equal emphasis is placed on both the achievements in ESD policy development and implementation through legislation, statutory planning procedures and litigation, as well as the challenges that have confronted the pursuit of ESD in NSW. Noteworthy amongst these challenges has been a failed recent attempt by the NSW Government to introduce new planning legislation which sought to replace ESD with the arguably weaker concept of 'sustainable development' as one of its objectives. Apparent from this episode is strong community and institutional support for robust sustainability provisions within the State's statutory planning system.*

## 1. Introduction

In 1992 the Australian Government published its *National Strategy for Ecologically Sustainable Development* (Commonwealth of Australia, 1992), a policy document representing Australia's response to the Brundtland Report, *Our Common Future* (United Nations World Commission on Environment and Development, 1987). Arguably Australia has pursued a fundamentally different model for the interpretation and implementation of sustainable development which involved a modification of that used in the Brundtland Report. The divergence stems from the adoption of *ecologically* sustainable development, and the changes in conceptual focus which consequently emerged from this model.

In accordance with Australia's federal system of government, it was envisaged that the concept of 'ecologically sustainable development' (ESD), would progressively be implemented, through both policy and law, at the national, state and local levels of government. This paper first examines the implementation of the 'principles and programs' of ESD through both policy and legislation at the national (Commonwealth) level. Second it traces the adoption of ESD at state level, using the State of New South Wales (NSW) as a case study. Third, it considers an attempt to retreat from ESD as part of recent statutory planning system reform in NSW, which culminated in the formulation of a Planning Bill in 2013 to replace existing planning legislation.

Replacing the uniquely Australian statutory and policy formulation of ESD, the Planning Bill 2013 adopted the broader concept of sustainable development. With the entrenched institutionalisation of ESD and its active implementation in NSW forming a contextual backdrop, this paper examines the potential implications of the Planning Bill's proposed conceptual change from ESD to sustainable

development. The paper thus examines how ESD has been implemented and interpreted in NSW, and what changes may occur under a new Planning Act.

## 2. Conceptual framework, hypothesis and methodology

From a conceptual perspective, this paper examines the statutory expression of sustainable development in the NSW Planning Bill, and argues that it represents a significant departure from the 'traditional' the Australian ESD framework for environmental policy. Broadly, this change of focus can be attributed to a general neoliberal reform process confronting planning systems (including NSW). In particular, it is contended that the proposed planning legislation alters – indeed removes – ESD to ensure that any express reference to an integrated approach for the purpose of achieving sustainable development is deleted. As such, this new conceptual framework ignores the necessary integration of economic, environmental and social considerations in decision-making so as to facilitate development that is sustainable.

Pertinently, considerable criticism was directed in stakeholder submissions on the planning reforms toward the significant change in emphasis or approach by the NSW government in its adoption of sustainable development. Specifically, the problem statement examined here is the argument that, as a consequence of this envisaged change, the depth of environmental analysis of the impact of planning proposals and projects in NSW will be diminished and economic considerations enhanced, under the proposed new planning legislation. To this end, the methodology adopted here is to: first examine the Australian concept of ESD; second consider its application and interpretation in NSW through legislation and case law; and then to analyse the proposed change of approach to sustainable development through a consideration of relevant provisions of the Planning Bill 2013 and submissions made by interest groups as part of the planning reform consultation process.

In considering ESD at both national and NSW levels, particular emphasis is placed on the precautionary principle, as arguably this has been perceived as the most problematic aspect of ESD. Concern over the operation of the precautionary principle appears to have been a major 'cause' of the move to replace ESD with sustainable development.

## 3. The Australian concept of sustainability – ecologically sustainable development

Perhaps somewhat harshly, it has been argued that sustainable development contains little merit as a framework for contemporary environmental policy-making, and should be replaced by a more 'workable paradigm' (Owens and Cowell, 2011, p.43). In the Australian context, the word 'ecologically' has been added as a prefix to 'sustainable development' to form the title to the current ESD process. The interpretation of ESD appears broadly synonymous with the Brundtland concept, but emphasises our particular concern with the ecology and the protection of the ecology including the protection of biodiversity in Australia. To elaborate, the Australian Government states that the prefix 'ecologically' was added to the normal international usage of sustainable development 'in recognition of the very great importance of protecting ecosystems in the context of a continent in which many unique ecosystems were under threat' (Commonwealth of Australia, 2002, p.5).

Significantly therefore, at the domestic level of Australian environmental policy-making, the interpretation of sustainable development has assumed the unique form of ecologically sustainable development. Both government and academics have recognised that the insertion of the adjective 'ecologically' into the formula of sustainable development introduced a qualifying term that imports a peculiar emphasis on the integration of the environment into development discourse (see for example, Commonwealth of Australia, 2002; Harding, 2006; Bates, 2010; and Farrier and Stein 2011). Farrier and Stein for example state that ESD gives 'the concept of sustainable development greater precision and … make it a more useful tool in legal contexts (2011, p. 8). Further, they content that ESD requires the integration of economic, environmental, social and equitable considerations, over both the short and long term (Farrier and Stein, 2011).

The sustainability process in Australia began in June 1990 with the release of a Commonwealth government Discussion Paper on ESD (Commonwealth of Australia, 1990). Here the term ESD was broadly interpreted as:

> Ecologically sustainable development means using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.
>
> (Commonwealth of Australia, 1990, p.3)

In 1992, the Commonwealth government finalised a *National Strategy for Ecologically Sustainable Development* (NSESD) (Commonwealth of Australia, 1992), which was endorsed by the Council of Australian Governments (that is, the Commonwealth, state and territory governments) on 7 December of that year. While the NSESD stated that there was no universally accepted definition of ESD, the strategy had as its goal:

> Development that improves the quality of life both now and in the future, in a way that maintains the ecological processes on which life depends.
>
> (Department of the Parliamentary Library, 1994, pp.3-4).

Harding (2006) convincingly argues the status of ESD as a uniquely Australian concept which differs in emphasis from the concept of sustainable development at the international policy level, due to the added importance placed by the former on ecological integrity. Harding writes that ESD,

> … is a peculiarly Australian term and arose in the early stages of a government initiated discussion of sustainable development in Australia in 1990. It seems that the environmental groups, concerned that the sustainable development discussion process would be hijacked by business and industry and interpreted as just *economically* sustainable development, successfully fought for the inclusion of ecologically in the 'official' terminology. This is the term that has been used since then in Australia including in legislation and policy.
>
> (Harding, 2002, p.233).

Harding's analysis draws a clear distinction between the perception of economic prioritisation that could be engendered by the concept of sustainable development (i.e. *sustained* development), and the relevance of the deliberate insertion of the adjective 'ecologically' in the Australian formula of sustainable development.

The significance of ESD in Australia is demonstrated by Bates, who states:

> ESD has become the most important legislated criteria for environmental management, not just as an object of legislation, but as a mandated consideration for environmental decision-making. Statutory requirements to 'have regard to' ESD when making decisions appear not just in environmental legislation, but perhaps more importantly in legislation conferring discretionary powers on a wide range of government agencies to take or approve activities that might impact adversely on the environment and natural resources.
>
> (Bates, 2011, p.208).

Although legal definitions of the concept of ESD differ between Commonwealth and state legislation, most are fundamentally based on the definition of ESD agreed to by Commonwealth, state and local governments and expressed in the NSESD and the *Inter-Governmental Agreement on the Environment,* signed by Commonwealth, state and territory governments and the Australian Local Government Association in May1992 (Bates, 2011). In summary, the term ESD embodied in these documents imports the principles of: a) the precautionary principle; b) inter-generational equity; c) conservation of biological diversity and ecological integrity; and d) improved valuation and pricing of environmental resources.

A significant element of the uniquely Australian emphasis on the ecological aspect of sustainable development is the parallel importance of the precautionary principle as a core principle of ESD. Recognition of scientific uncertainty in relation to the environmental impacts of development has represented an important shift in approaches towards environmental management. In particular, this approach holds that a more anticipatory attitude in relation to the environmental harm created by human activities must operate as a necessary pre-requisite for progress towards sustainability.

Controversy and debate has existed in relation to two different perspectives on the application of the precautionary principle. On the one hand an absolutist interpretation and operationalisation of the precautionary principle has sought a 'zero-risk' outcome, while on the other perceptions of the variable and open-ended articulations of the principle have resulted in a lack of consistency in its application (Harding and Fisher, 1999).

In the context of the debate surrounding the efficacy of the precautionary principle, several national and state policy and legislative documents make specific reference to the relevance of a 'risk-weighted' approach in applying the principle. The insertion of this operative provision in the definition of ESD in s 6(2) of the *Protection of the Environment Administration Act 1991* (NSW), for example, came as a consequence of judicial interpretation of the proper means of applying the precautionary principle. Specifically, in *Greenpeace Australia Ltd v Redbank Power Company Ltd and Singleton Council* (1994) 86 LGERA 146, Chief Justice Pearlman of the Land and Environment Court stated (at p. 154) that 'the application of the precautionary principle dictates that a cautious approach should be adopted in evaluating the various relevant factors in determining whether or not to grant consent; it does not require that the greenhouse issue should outweigh all other issues.' The precautionary approach thus requires the gravity of potential environmental harm to be combined with an assessment of the balance provided by other salient social and economic factors when making a decision in relation to a particular proposal or activity. Through application of this approach, fears of an absolutist implementation of the precautionary principle, were somewhat allayed.

Indeed, in assessing the suggestion that the precautionary principle operates as an absolutist dictum, Nollkaemper concludes that the 'status of the precautionary principle as a principle allows for a balanced approach to risks. It serves the interest of risk-aversion; yet it means that the precautionary principle is not a trump-card that a priori overrides other considerations' (Nollkaemper, 1996, p.73). Harding has likewise identified that from the Australian perspective, 'opposition to the principle will grow unless its application … occurs within the context of application of the full suite of ESD principles' (Harding, 2006, p. 18). However, when applied to the structures of sustainable development in Australia and NSW in particular, the broad policy expression of the precautionary principle contains an in-built mechanism against the absolutist status of precaution through explicitly requiring 'an assessment of the risk-weighted consequences of various options' (Harding, 2006, p.6). To this extent, Harding has correctly identified that absolutist interpretations represent 'an extreme interpretation of the precautionary principle' (2006, p.6) and that a 'risk-weighted' interpretation has been statutorily adopted in Australia.

Thus it is suggested that Australia has pursued a fundamentally different model for the interpretation of sustainable development from that which is utilised in the Brundtland Report. This divergence stems from the adoption of the concept of ESD, and the changes in conceptual focus which consequently emerge from this model. In particular, attention is drawn to the relevance of the precautionary principle as a leading principle of the Australian model of ESD, and its proper application through a risk-weighted approach in environmental decision-making.

## 4. ESD in New South Wales

Two Australian states that adopted ESD as part of their planning laws have recently attempted to retreat from this position. The states of Queensland and New South Wales have, as part of a neoliberal statutory planning reform agenda, sought to displace ESD as an object and purpose of their planning acts, by the broader – and arguably weaker – concept of 'sustainable development'.

Queensland's current planning law, the *Sustainable Planning Act 2009* (Qld), incorporates ESD as the specific purpose of the Act by seeking to achieve 'ecological sustainability', including the application of the precautionary principle and provision for intergenerational equity. However, draft Planning Bills currently being considered in Queensland propose to introduce a new Panning and Development Act which removes entirely the principles of ESD (EDO Qld, 2014), to be replaced with the object of facilitating 'prosperity, including through ecologically sustainable development that balances economic growth, environmental protection and community wellbeing'. Although there was a change in State government in Queensland in January 2015, the new government remains committed to continuing this planning reform process in that state (Department of Infrastructure, Local Government and Planning, 2015).

Nonetheless, NSW has been selected for closer scrutiny as it has incorporated ESD in a range of environmental laws, including the main land use planning law, the *Environmental Planning and Assessment Act 1979*, as well as having, in comparison to other planning jurisdictions in Australia, a body of established case law in this field, due in part to the presence of a specialist tribunal, the NSW Land and Environment Court. Also, as Bates (2010) point out, NSW has quite consciously adhered to the NSESD definition of ESD.

*4.1 ESD in legislation*

The first statutory manifestation of ESD policy in NSW occurred in 1991 when ESD, and its attendant principles, were incorporated into s 6(2) of the *Protection of the Environment Administration Act 1991* ('POEA Act'). The 'principles and programs' of ESD contained in s 6(2) of the POEA Act are:

(a) The precautionary principle – namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:
    (i) Careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
    (ii) An assessment of the risk-weighted consequences of various options,

(b) Inter-generational equity – namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,

(c) Conservation of biological diversity and ecological integrity – namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,

(d) Improved valuation, pricing and incentive mechanisms – namely, that environmental factors should be included in the valuation of assets and services, such as:
    (i) polluter pays – that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
    (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,
    (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

Environmental protection has figured as a key object of the *Environmental Planning and Assessment Act 1979* (EP&A Act) having an expression in three of the ten objects of the Act (s 5(a)(i), (vi) and (vii)). ESD inserted as an object of the EP&A Act in 1997. The definition of ESD adopted by the Act

is the same as that found in s 6 of the POEA Act, which in turn accords with national policy framework of ESD. The principles and programs of ESD found in the NSESD have been incorporated into the objects of several other pieces of NSW legislation, including the *Mining Act1992*, *Coastal Protection Act 1979*, *Local Government Act 1993*, *Water Management Act 2000* and *Native Vegetation Act 2003*, and is adopted as the standard terminology used in over 60 NSW statutes. Notably, the *Environmental Planning and Assessment Regulation 2000*, requires that these principles be incorporated into environmental impact assessment under the EP&A Act.

As a signatory to the *Inter-Governmental Agreement on the Environment* in May 1992, the Australian Local Government Association committed itself to the promotion of the agenda of ESD. Further, s 8 of the *Local Government Act 1993* (NSW) explicitly declares ESD as a constituent element of the Charter for Local Government, which includes the following '… to properly manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible, in a manner that is consistent with and promotes the principles of ecologically sustainable development.'

*4.2 ESD in case law*

The statutory requirement of ESD has further been augmented by a significant body of case law developed in the NSW Land and Environment Court, which has assisted practitioners in the application of ESD to planning and development matters in NSW. In its jurisprudence on questions of law concerning the application of ESD principles to the development assessment process, the Court has recognised that, whilst environmental degradation may be outweighed by the overall benefits of a proposed development project, it is nonetheless crucial that decision-makers take care in considering the existence of appropriate and adequate measures to control and mitigate likely environmental harm (*Leatch v National Parks and Wildlife Service and Shoalhaven City Council* (1993) 81 LGRA 270 at 282).

With regards to the interpretation of ESD and the nature of its proper application in the context of the development assessment process provided for in the EP&A Act (specifically Part 4 – 'Development Assessment'), the Court has adopted an approach safeguarding a strong form of sustainability. Despite the omission of 'ESD' from the mandatory requirements that a consent authority must take into consideration in determining a development application under s 79C of the EP&A Act, the Court has consistently read the requirement of ESD into the 'public interest' factor of that section.[1] As a consequence of this interpretation of s 79C, the Court has acknowledged the NSW Parliament's intention of introducing ESD as an additional object of the Act, and has subsequently explicitly elevated ESD to the status of a legal requirement in the development assessment process.

In the context of interpreting the principle of ESD which endorses conservation of biological diversity and ecological integrity, several judgments of the Land and Environment Court have recognised the check that ESD places on the ostensible 'certainty' of zoning. In particular, in *BGP Properties Pty Ltd v Lake Macquarie City Council* [2004] NSWLEC 399, McClellan CJ took cognisance of the legal relevance of ESD in the EP&A Act to find that a decision-maker should refuse development consent where the proposed project will cause environmental harm, irrespective of the land in question being zoned for development purposes. Thus the Court held that ESD considerations may override the zoning provisions of planning instruments: that is, ESD considerations may render a site undevelopable, displacing the presumption or expectation of gaining approval for a 'suitably' designed proposal, despite it being zoned for development. Implicit also in the judgment was the proposition that development consent, and not zoning, operates as the source of the conferral of the right to develop. In *BGP Properties* ESD was recognised as a relevant legal condition that burdens other,

[1] See for example, *Carstens v Pittwater Council* [1999] NSWLEC 249 at [74]; *BGP Properties Ltd v Lake Macquarie Council* [2004] NSWLEC 399 at [113]; *Telstra Corporation Ltd v Hornsby Shire Council* [2006] NSWLEC 133 at [123]-[124]; *Minister for Planning v Walker* [2008] NSWCA 224 at [43]; *Port Stephens Pearls Pty Ltd v Minister for Infrastructure and Planning* [2005] NSWLEC 426; *Gales Holdings Pty Ltd v Tweed Shire Council* [2006] NSWLEC 85.

legally-created zoning criterion, which would have otherwise facilitated unsustainable and environmentally harmful development. Further, the authoritative nature of this statement as a settled point of law is evident in the status of *BGP Properties* as a precedent that has been applied and followed in numerous succeeding NSW cases.[2]

The case of *Telstra Corporation Ltd v Hornsby Shire Council* [2006] NSWLEC 133, a merits appeal against the respondent local council's decision to refuse an application made by Telstra for the installation of mobile phone towers, involved a comprehensive engagement with ESD principles by Chief Justice Preston. The precautionary principle provided the context of the major issue in the litigation: namely, whether there was a need to apply the precautionary principle in the development assessment process, so as to address the potential public health impacts caused by radiofrequency electromagnetic energy (RF EME) emissions from the proposed facility. A court-appointed expert reiterated the consensus scientific view that the risks caused by RF EME from the proposed towers 'could not conceivably cause any adverse biological or health effect' (at 78-89). The Court accepted the expert's opinion that 'a high standard of environmental and health protection would be maintained if this station is allowed to be constructed as specified in the proposal from Telstra' (at 89). Furthermore, it was estimated that the emissions from the proposed towers would be less than one fortieth of those permitted under the relevant Australian Standard.

In interpreting the precautionary principle, Preston CJ identified its operation as but one component of the package of principles of ESD. Thus, rather than viewing the precautionary principle in isolation, it was reaffirmed that precautionary measures must not only be appropriate having regard to the precautionary principle itself, but also in respect to the other principles of ESD. On the facts of the case before him, Preston CJ held that there was no basis to invoke the precautionary principle, given that the proposal for the mobile phone towers already incorporated measures to ensure the compliance of the level of RF EME emissions with the relevant (precautionary) Australian Standard. As a consequence, 'any harm to the health and safety of people or the environment caused by exposure to such extremely low levels was negligible' (at 184). Importantly, the judgment clarified (at 186) that:

> This conclusion did not mean that there had been an avoidance of a precautionary approach. On the contrary, the conclusion was a direct consequence of the fact that a precautionary approach had already been adopted in the standard setting process, the terms of the relevant Australian standard, the design and location of the proposed base station, the equipment to be provided, the operation of the equipment, the application of the Australian Standard to the RF EME generated from the base station, and the likelihood of actual RF EME being significantly less than predicted.

The authority of *Telstra* in relation to the point of law that deals with the interpretation and application of the precautionary principle has remained undisturbed. Indeed, the absence of a judicial review case in the years since *Telstra* has been supported by the parallel development whereby *Telstra* has been periodically applied in merits review cases heard by commissioners of the Land and Environment Court. This consistent interpretive approach by the Court has made a clear contribution to understanding the weight to be given to the precautionary principle in such areas of practice as development assessment. Also revealed is the preference of the Court for adopting a standard of sustainability that is predicated upon appropriate invocation of precaution.

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[2]See for example, *Chappelow v Sutherland Shire Council* [2005] NSWLEC 56; *BT Goldsmith Planning Services Pty Ltd v Blacktown City Council* [2005] NSWLEC 210; *Joye v Valuer-General* [2006] NSWLEC 341; *Wei v Holroyd City Council* [2007] NSWLEC 163; *Martin & Sporke Pty Ltd v Wingecarribee Shire Council* [2007] NSWLEC 598; *Telstra Corp Ltd v Blacktown City Council* [2008] NSWLEC 1261; *Addenbrooke Pty Ltd v Woollahra Municipal Council* [2008] NSWLEC 190; *Wygiren Pty Ltd v Kiama Municipal Council* [2008] NSWLEC 1233; *Motorplex v Port Stephens Council (No 3)* [2008] NSWLEC 1280; *Drazdon Pty Ltd v Ku-ring-gai Council* [2009] NSWLEC 1147; *Qur'anic Society 'Dar Tahfez El-Quran' Inc v Camden Council* [2009] NSWLEC 1171*; Homemaker Hub Pty Ltd v Strathfield Council* [2009] NSWLEC 1265; *Southern Cross Community Housing Ltd v Shoalhaven City Council* [2010] NSWLEC 1306; *Urban Link Pty Ltd v Lane Cove Council* [2011] NSWLEC 1279; *Landmark Group Pty Ltd v Lane Cove Council* [2011] NSWLEC 1303.

The matter of *Walker v Minister for Planning* [2007] NSWLEC 741, concerned a concept plan approval by the respondent under (the now repealed) Part 3A of the EP&A Act, for a proposed residential subdivision and retirement development on a flood constrained coastal plain near Wollongong, south of Sydney. In a lengthy judgment which navigated the policy and legislative history and context of ESD, as well as the body of jurisprudence that has developed around it, Justice Biscoe of the Land and Environment Court found in favour of the applicant, invalidating the approval of the concept plan on the ground of the respondent's failure to take into account principles of ESD as a mandatory relevant consideration. ESD considerations were held to be relevant to the concept plan assessment process as a consequence of the increased flood risk which was identified as a major constraint to development, and the added fact that this impact was enlarged due to the compounding effect of climate change.

A notable feature of the judgment in *Walker* by Biscoe J was his Honour's comprehensive analysis of the international, national and NSW policy frameworks for ESD, as well as a survey of the Court's body of case law concerning ESD, so as to reinforce the relevance of the extensive incorporation of the principles of ESD in both Commonwealth and NSW environmental legislation. Biscoe J maintained that a crucial consequence of the widespread adoption of ESD in law and policy was its intended operation as a requirement with sufficient legal weight to ensure that it was taken seriously by decision-makers when executing environmental management functions such as determining development proposals. The judgment by Biscoe J was subsequently appealed by the NSW Minister for Planning and, in a decision which at face value might appear to undermine the case of 'strong' sustainability, was overturned by the NSW Court of Appeal (*Minister for Planning v Walker* [2008] NSWCA 224). The NSW Court of Appeal held that as a matter of statutory construction of Part 3A of the EP&A Act, it was not mandatory to have regard to one or more of the principles of ESD due to the extremely broad discretion available to the Minister under that part of the Act. The Court of Appeal emphasised however, that it *was* mandatory to have regard to ESD under other parts of the Act. Significantly, the deeply unpopular Part 3A of the EP&A Act was repealed in 2011, leaving ESD as a mandatory relevant consideration in the current project assessment provisions in the EP&A Act.

The more recent judgment of the Land and Environment Court in *Bulga Milbrodale Progress Association Inc v Minister for Planning and Infrastructure and Warkworth Mining Ltd* [2013] NSWLEC 48 has reaffirmed the application of ESD principles in the NSW planning system. Here the Court upheld a third party appeal for merit review of a decision in 2010 by the Minister for Planning to approve an extension of an open cut mine under Part 3A of the EP&A Act. While significant for several reasons (for example it provided an exhaustive review and assessment of the merit issues of the case), the decision was particularly illuminating because reference was made to the relevant principles of ESD throughout the judgment to assist the Court in its merits review task. The judgment can be distinguished from that by the Court of Appeal in *Walker* because, although both related to development approvals under Part 3A of the Act, *Walker* considered whether ESD was a mandatory consideration as a discrete planning issue, whereas in *Bulga* the Land and Environment Court considered a variety of relevant planning impacts through the context of ESD. Significantly, the Land and Environment Court's judgment in *Bulga* was subsequently upheld on appeal by the NSW Court of Appeal (*Warkworth Mining Limited v Bulga Milbrodale Progress Association Inc* [2014] NSWCA 105).

In *Bulga*, Warkworth's project application was refused by the Land and Environment Court due to, *inter alia*, it's likely significant adverse impacts on biological diversity, including on four types of endangered ecological communities listed under the *Threatened Species Conservation Act 1995*. Specifically, the Court held that the project would have unacceptable impacts on biological diversity which, despite proposed biodiversity offsets and other compensatory measures, were not able to be adequately avoided, mitigated or compensated. In the course of considering this case, the Chief Justice's deliberations were infused with acknowledgment of ESD principles. It is sobering to note that, with the abandonment of ESD as proposed by the Planning Bill 2013, it is unlikely that the grounds and reasons relied on in *Bulga* would be available in future litigation in the Court.

## 5. The move to sustainable development in NSW

Broadly, planning systems (including in Australia) have been impacted upon by governments' neo-liberal requirements as to the fast-tracking of the planning process, the privatization of many public industries and services, and the reduction in public spending. The neo-liberal paradigm has been harnessed to explain much of the rationale of planning system reform in recent years (Blowers, 2000; Gleeson and Low, 2000a; 2000b). In NSW planning reform had become a major policy concern and, following its electoral success in March 2011, the incoming State government announced a review of the existing EP&A Act with the intention of replacing it with a new Planning Act.

A period of extensive consultation commenced in July 2011 with the establishment of an independent panel to review the planning system which published two issues papers in December 2011 and May 2012 (NSW Government 2011; 2012a). This was followed by the release of a Green Paper (NSW Government 2012b), and finally a White Paper and Exposure Draft Planning Bill 2013 (NSW Government 2013a). While the report of the independent panel recommended the retention of ESD as an object of a new Planning Act, both the 2013 White Paper *A New Planning System for NSW*, and the subsequent Planning Bill 2013, omitted any reference to ESD. In its place, the term 'sustainable development' was adopted. While the NSW government justified this change on the basis of the adoption of the term utilised in the Brundtland Report, this omission of ESD was crucial as the highly significant principles and programs of ESD found in the EP&A Act would be displaced.

To examine some of the substantive implications of the operationalisation of sustainable development in the Planning Bill, this section considers its legislative definitions and objects. It is submitted that sustainable development contains a clear comprehension which reflects the NSW government's preference for economic growth as the overriding philosophical core of the regulatory planning system created by the Planning Bill. Specifically, this argument maintains that the adoption of sustainable development is not merely a minor issue of semantics, but rather a calculated removal of the integrated approach to decision-making provided through the framework of ESD, which includes the joint consideration of economic, social, equitable and environmental factors.

In analysing the relevance of the proposed change from ESD to sustainable development, it is important to acknowledge the deliberate position taken by the NSW government in the debate concerning the relative weight to be assigned to economic, social and environmental factors in planning decision-making. When read in concert, the nine objectives of the Planning Bill reinforce a strong growth focus. For example, the eighth objective promotes 'efficient and timely development assessment proportionate to the likely impacts of the proposed development.' Some submissions in relation to the Exposure Planning Bill identified a fundamental philosophical shift in the objects of the current and proposed Acts; namely, from one which focused on the outcomes of planning decision-making to another which 'is directed more at the process of plan-making and development assessment' (Local Government NSW, 2013, p.14). As a consequence of this interpretation, the Property Council of Australia has succinctly surmised in its submissions that the Planning Bill would be the 'primary land use and economic growth legislation for NSW' (Property Council of Australia, 2013). One may accordingly observe that the by-product of the process-oriented focus of the Planning Bill was a clear encouragement of expediency in the development assessment process – a focus which significantly alters the outcome-driven emphasis of ESD, and lends support to an interpretation of growth on the basis of sustained development.

Of the nine equally-weighted objects of the Planning Bill, the first-stated object is that of 'economic growth and environmental and social well-being through sustainable development.' The Planning Bill purports that 'sustainable development is achieved by the integration of economic, environmental and social considerations, having regard to present and future needs, in decision-making about planning and development.' The proposed change to the object of ESD, and its replacement with the new object of sustainable development creates an immediate, fundamental conceptual and definitional divergence. Of great significance for the removal of ESD is the nullification of the principles which

attached to its statutory definition. In particular, the definition of sustainable development is silent on three of the principles and programs of ESD – the precautionary principle; conservation of biological diversity and ecological integrity; and improved valuation, pricing, and incentive mechanisms, including the polluter pays principle. Furthermore, the definition only contains an abridged version of the more detailed principle of inter-generational equity. The result of removing such principles of ESD is the potential for reduced depth of environmental analysis undertaken in the development assessment process.

In the face of this omission of ESD, and legislating to replace it with sustainable development involving a choice between economic growth and environment-social values, it would appear that NSW courts may be jurisdictionally impotent to revive an application of ESD in the operative sections of the Planning Bill. In the context of statutory interpretation, the objects of any regulatory system are the clearest litmus test for the intended manner of its operation (Pearce and Geddes, 2011), and the philosophical foundation of an economic imperative in the Planning Bill's objectives accordingly creates a clear directive for the courts in the determination of conflicting values.

A misconception of ESD as a policy that unduly prioritises environmental factors possibly accounts for the NSW government's decision to abandon ESD in favour of sustainable development. Indeed, this decision is particularly significant when one considers that the retention of ESD was an explicit recommendation made by the Independent Planning Review (NSW Government, 2012a). Further, advocates of the retention of ESD would agree with the broader recommendation of the Independent Planning Review that ESD should be included in the planning reforms as the overarching object.

With regards to the argument of policy misconception, the following observation by the Nature Conservation Council of NSW and the Total Environment Centre clarifies the relevant legal application of ESD:

> It is important to recognise that ecologically sustainable development does not seek to raise environmental matters above other matters. Ecologically sustainable development seeks to integrate environmental, economic and social considerations in decision making.
>
> Properly applied, ESD recognises that ecological integrity and environmental sustainability are fundamental to social and economic wellbeing, particularly when considering the needs of both present and future generations. Despite the challenges presented by the concept of ESD, experts have recognised that there is no other credible candidate for an integrative policy framework.
>
> (Nature Conservation Council of NSW, 2013, p.12).

Recognising the consequences of removing ESD principles and the attendant economic, environmental and social factors to be considered in their application, Local Government NSW, in a submission on behalf of NSW local councils, noted the earlier recommendations to retain ESD. In particular, the submission emphasised the concern of councils 'that the removal of these principles may limit their ability to protect important natural assets which underpin future economic and social viability' (Local Government NSW, 2013, p.14).

The Law Society of NSW supported this argument by expressing concern that 'in the absence of a focus on ecologically sustainable development in the objects, this is likely to have the consequence that inter-generational equity, the precautionary principle and other environmental benefits will be outweighed by perceived public benefit in economic and social terms' (Law Society of NSW, 2013, p.9).

## 6. Conclusions

This paper contends that the NSW government's adoption of sustainable development on the apparent basis of reconciling NSW planning laws with international environmental standards involves the

misconception that sustainable development can only operate in practise through the prioritisation of either economic or environmental concerns. As a consequence of this approach, the legal safeguards that exist when an integrated approach to decision-making is adopted through the 'triple bottom line' focus of ESD on economic, social and environmental factors, are removed.

The argument for the retention of ESD as an object of planning laws has been presented through: its consistent application in national policy documents and inter-governmental agreements; its operationalisation through an exhaustive definition in the POEA Act which captures the national policy framework for ESD and which was also incorporated in the EP&A Act; its adoption as the standard terminology used in over 60 NSW statutes, including the *Mining Act*, *Coastal Protection Act*, *Local Government Act*, *Water Management Act*, and *Native Vegetation Act*; and its well-established basis in planning law jurisprudence, with a body of case law concerning its interpretation and application.

The paper claims that sustainable development represents a somewhat different paradigm which reflects the NSW government's preference for facilitating economic growth as the overriding purpose of a reformed planning system. Specifically, the adoption of sustainable development is not merely a minor issue of semantics. Rather, it suggests that the abandoning of ESD is symptomatic of the NSW government's calculated prioritisation of economic growth values in planning decision-making processes. This contention is supported by an examination of the definition and operationalisation of sustainable development in the Planning Bill, and subsequent assessment of the limited extent to which this concept is competent in achieving the integrated approach to decision-making, as provided through the framework of ESD.

In particular, it is suggested that the envisaged concept of sustainable development fails to achieve the integrated approach of ESD, which includes the joint consideration of the three 'bottom lines' economic, social and environmental factors. Alternatively, insofar as the Planning Bill links the future economic growth of NSW with an active development industry, it erroneously represents the decision-making framework of planning law as requiring a 'false choice' between economic growth on the one hand, and social, equity and environmental values on the other. A crucial corollary of this growth focus of the Planning Bill is the simultaneous erosion of the imperative for environmental protection. This has the consequence of signalling the NSW government's readiness to promote a weak form of sustainability through the reduction of environmental safeguards which place a check on individuals' expectations to development.

Analysis in this paper of the consequences of the definitional divergences which arise from the replacement of ESD with the broader concept of sustainable development, suggests the ascendancy of a pro-developer cause at the expense of guarantees for environmental protection in land use planning and management. Through removing the well-established principles of ESD from key operation areas of the proposed planning system – namely, the legislative objectives, but also strategic planning and development assessment – the NSW government has endorsed a statutory planning system that seeks to produce expedited and short term economic gains at the expense of sustainable outcomes which have influenced environmental management in Australia for over 25 years.

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# TRACK 06

# Urban Design Quality and its Social Dimension

## Track description

Co-chairs: **Ali Madanipour**, **Marion Roberts**

Urban design strongly reflects the values of contemporary society. On the one hand, the desire for social cohesion demands urban spaces that are accessible, open and democratic. On the other hand, society has been stratified and fragmented along the lines of income, age, gender, ethnicity and culture; and spatial and technological barriers have been raised to consolidate these gaps and differences. What should the role of urban design be? Can it rise to the challenge of creating democratic spaces? Can it help make spaces and places safer and overcome issues such as sexual harassment? How differences between are day and night produced and experienced? In what ways can urban design overcome the fragmentary social pressures such as privatisation, withdrawal from public space, and the emergence of virtual and gated spaces, without becoming an instrument of consumerism?

**The Question of Public Space:**

**From Ideology to Real-Urbanism**

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**Abstract**

*Joel Migdal argues that the concept of public space has been idealized by various socio-political philosophers who claim that public space is a space of meeting points that form the basic condition for the creation of 'the public'. Contrarily, Migdal suggests a perception of public space as a space of conflict between forces of inclusion and exclusion in unequal societies. Following Migdal, this article portrays ethnography of struggle in public space in Musrara, a Jerusalem seam line neighborhood. The research is based within the contexts of the neighborhood's history and the concentration of crime events and urban violence along that seam line. The research conducted analyzed the negotiations between the architects who were invited by the Jerusalem Municipality to plan and design the seam line between East and West Jerusalem and Musrara neighborhood residents regarding public space. Two oppositional views were apparent: the architects' perception that public space is a meeting point and therefore encouraged density as a tool of personal security versus the residents' wish to block the neighborhood's wall gates for the creation of defined urban territory. This study offers an understanding of the real-urbanism of Jerusalem's public space as a battlefield between connectivity and separation, exclusion and inclusion.*

## Introduction:

*'I remember the conversation in which I was asked to come and plan the border seam line. ...we wanted to turn it into a connecting area, connecting both parts of the city– our intention was that the institutions will serve the Arab population in the area. But the institutions were only for the Jewish population, places that do not create meeting and sharing.'*

(Interview with the architect who planned Jerusalem's seam line)

*'You see an Arab near your house. You ask him what he's doing here and he says that he's looking for a job. He is lying. He came here to steal. On Elisha St. they steal women's purses. You can't contain these Arabs – they come to you.'*

(Musrara neighborhood resident)

The above two quotes mark and symbolize in a nutshell the two forces at work in Jerusalem's seam line public space. The first is the professional stand of the architect who wishes to enhance strangers encounter in public space thereby enabling Jerusalem's Arab population's access to institutional services, which, in turn, deepens their involvement and participation and strengthens their perception as citizens. The second stand is that of the residents who experience the presence of Arabs in their neighborhood as a tangible threat and wish to create a distinct border that will enable them to impose their game rules in a given territory. This article claims that Jerusalem's public space is not the space that the architect envisioned nor a district of total separation as wished for by the residents. By use of the theoretical concept of real-urbanism, this study portrays public space as an arena determined by the struggle between these two forces. This concept affords focusing research perception on representational space, as termed by Lefebvre[1] or space in use.

The theoretical basis of this study was inspired by Joel Migdal's claims regarding public space and public sphere presented in his article 'The creation of public space: between separation and merge'.[2] Migdal argues that public space dynamics spring from the tension between being simultaneously an inclusive and exclusive space. This tension is not permanent but rather comes as a result of constant struggle. This claim offers an effective toolbox for the analysis of Jerusalem's seam line public space, where the conflict between trends of inclusion and exclusion are both present in differing forms and intensity.

This study documents the conflict between the architects who wished to plan public space as an inclusive space versus the Jewish seam line neighborhood who wished to exclude Arabs from public space in contexts of crime and personal security. Article Structure; Inspired by Migdal's work, the first section of this article presents a critical stand regarding the theory of public sphere and public space followed by a suggestion of an alternative approach to research and analysis of public space. The second section presents a historical-urban review of Musrara seam line neighborhood with significant emphasis on data related to personal security in the seam line area as a whole and Musrara in particular. The central section of the article portrays the ethnography that explains the residents' persistent wish to fence the neighborhood and focuses on the manners by which this perception affected the dialogue with the architects who were summoned to plan Jerusalem's seam line. The summary discussion offers a synthesis of Migdal's suggestion and the central ethnographical insights of this study leading to a new analysis from a real-urbanism perspective.

## Public space as an arena of tension between forces of exclusion and inclusion

Migdal's basic assumption is that the public space is the place in which public *sphere* manifests itself.[3,4,5,6] Migdal argues that the notion of public sphere has been idealized by socio-political philosophers such as Habermas[7] who suggested this concept in 1962. Public sphere is best imagined as

the suite of institutions and activities that mediate the relations between society and the state.[8] What stands at the core of public sphere is interaction and communication between strangers. Public place is perceived as a place where 'public opinion' originates. Charles Taylor sees face-to-face encounter as highly significant[9] an encounter where people are able to create a 'common opinion of themselves'.

Was there any point in history or in space, that this ideal was actualized? In his Constitutive work, Mitchell[10] argues that the presented perceptions of public sphere and public space are norms and ideologies:

'The ideal of a public sphere is normative, Habermas[11] theorizes, because it is in this sphere that all manner of social formations *should* find access to the structures of power within a society'.[12]

Habermas' main critics argue that his theory of public sphere ignores the importance of class differences[13] and his study of public space was solely focused on the bourgeois, without referring to comparative public spaces. [14]

Mitchell too argues that public spaces, from the Greek Agora to the American park, are places of exclusion,[15] yet in his belief 'Public space occupies an important *ideological* position in democratic societies'.[16]

Mitchell illuminates one of the most influential social theories of the 20th century that serves as a Language of ideology: 'This is a normative ideal for public space, more than an empirical description of the ways that public spaces have functioned in 'actuality existing democracies'.[17, 18]

Mitchell adopts this ideology as a theoretical frame for his work. He argues that this ideological construction 'implies a notion of inclusiveness that becomes a rallying point for successive waves of political activities'[19] hence his aspiration for an inclusion-based theory enables him to formulate his famous notion of 'Right to the city'. He suggests an understanding of the ideal as a point of political struggle:

'By calling on the rhetoric of inclusion and interaction that the public sphere and public space are meant to represent, excluded groups have been able to argue for their rights as part of the active public'.[20] Mitchel concludes his work saying that public space is increasingly privatized or otherwise brought under greater control.

This ideology and the understanding derived from its logic became a *professional truth* for planners and architects. In various blogs, websites and conferences many professionals share their common belief that a 'good' public space is one that encourages connectivity between strangers.[21]

This research adheres to an empirical description of the ways in which public spaces function in 'actuality existing democracies' and investigates a study-case where this ideology represented by architects manifested itself in the complex reality of Jerusalem.

Migdal (2008) claims that tension in public spaces results from the continuous conflict between inclusion and exclusion of unequal groups in society and not, as Habermas claims, from tension between the state and society,[22] nor tension between corporations and society, as Mithcell (1993) and others argue. In the case of Jerusalem, the aspiration for order or control not only forms the interest of corporations and the state but also serves as the basis of different groups' claim for their 'right to the city'.

Based on Elias' (1994) work, Migdal argues that what enables the existence of public space are shared codes of daily behavior: where and how does one blow his nose, go to the toilet, enter or exit a cinema – a long list of do/not do rules that endow physical spaces with a sense of security and a means for social identification for groups of middle-high social class, notifying them that they have reached a

civilized, cultured, familiar hence secure space. Yet many times in these spaces, claims Migdal, there are imposing regimes of separation, suppression and deference.

Migdal further argues that by means of daily activity in what consequently becomes an established public space people come to appreciate the joint *manner* by which things are being conducted: emphasis is placed on joint activity which stabilizes the principles of public spirit. Migdal states that there are institutional barriers that prevent containment and sharing yet they can become flexible. It is important for him to suggest a dynamic theory. Thus, claims Migdal, public space in the U.S.A and Israel results from 'the laws of encounters between people' that not only lead to encounters and the creation of a 'public' but also simultaneously unify and **separate**.

Migdal's theoretical suggestion greatly contributes to the discussion within contexts of crime for it enables theoretical space for the concept of class. Although in the case of Jerusalem the cardinality of ethno-national categories and the dramatic manner in which they constitute space is highly apparent,[23] Migdal places great significance on the category of class and the ways in which it affects the formulation of common social codes in public space.

## Musrara –Jerusalem's seam line neighborhood

Musrara was established in 1889 by wealthy Arab Christians of Jerusalem's Palestinian community.[24,25] During the 1948 War, the Palestinian residents were forced to flee and Musrara was subsequently divided between Israel and Jordan. The neighborhood's area that remained in Israel encompassed 163 acres and included 80 abandoned houses. Following the war, approximately 60 families moved into the Israeli part of the neighborhood, most of them Mizrahi Jews who emigrated from Middle Eastern and North African countries.[26]

The living conditions in the Arab houses were dire.[27] Already in a state of decay, the accommodation was divided into 340 housing units[28] and four to eight families shared each house. Only 63% of the apartments had direct access to a shower or bathroom, 28% had neither, and 8% lacked a basic toilet facility. The structure's high ceiling made the heating during the cold Jerusalem winter a considerably difficult task. Another problem was constant dampness that existed in approximately 200 apartments, causing serious health problems for the young and elderly.[29]

In addition to problematic living conditions, Musrara residents also suffered from the fact that a significant part of the neighborhood was in close proximity to the Jordanian border and was a no-man's-land exposed to Jordanian soldiers' sniper fire, resulting in numerous casualties. This situation changed following the 1967 War when Jerusalem was unified under Israeli rule and Musrara ceased to function as a frontier settlement.

Musrara residents' feelings of anger intensified as they witnessed how Israeli society enjoyed improved quality of life while they remained in their moribund condition. In the early 1970's, the neighborhood's unemployment rate was considerably high: approximately 180 men aged over 20 (which made up more than 30% of the families) did not work, and 75% of those that did work were employed in low wage labor.[30]

Only 56% of the children aged 14-17 were in educational frameworks, of which 16% were still in elementary school. Out of 838 adults, 431 lacked a minimal 8 years education and not one person from the neighborhood was registered in any higher education institution.[31]

Numerous scholars and policy makers blamed the residents' ethnic origin as one of the reasons for the neighborhood's harsh socio-economic condition, arguing that they were unaccustomed to modern and Western way of life.[32] However, recent studies depict that because they were Mizrahi Jews the population of Musrara was marginalized and disenfranchised by the misallocation of resources.[33,34]

Nevertheless, the shared ethnic identity of the inhabitants became a solid basis for socialization among the residents themselves,[35] and a fertile ground for political activism. In January 1971, a small group of Musrara's youth who regularly met at one of the neighborhood's youth clubs established a social movement called 'The Black Panthers', directly inspired by the American Black Panther Party.[36]

Musrara's Panthers focused most of their efforts on organizing public demonstrations and publishing a series of pamphlets where they presented their arguments regarding inherent inequalities embedded in Israeli society, linking between their ethnic identity as Mizrahi Jews and their socio-economic status.[37,38] They encountered fierce resistance from the authorities yet attracted wide scope attention from the Israeli public.[39,40]

In 1978, the continuous crisis let to the inclusion of Musrara into the official governmental scheme entitled Project Renewal.[41] This project was designed to provide a multifaceted answer to different problems the neighborhood faced.[42] Beyond the expansion of physical space, the project ostensibly aimed to address the social and educational issues that required serious amendment for the improvement of Musrara's residents' wellbeing.[43]

However, several local residents objected to Project Renewal and were concerned that Musrara will be gentrified and its population will be removed in favor of wealthier occupants.[44,45] Resistance acts included violent demonstrations as well as squatting into renovated apartments.[46] This confrontation and the fact that Musrara's residents were already politically organized prevented the area from undergoing considerable demographic change, and the number of wealthy outsiders who purchased property in the neighborhood was thus limited.[47,48]

By the end of the 1990's, three distinct social groups were evident in the neighborhood. The first were families of Mizrahi Jews who moved into the neighborhood in the 1950's and 1960's. The second were the 'new comers' who managed to buy property in the neighborhood during or prior to Project Renewal. The third group was ultraorthodox Jewish families who relocated into Musrara in considerable numbers from adjacent overcrowded neighborhoods. This recent development was resented by the two aforementioned groups and created a new political reality in the neighborhood.[49]

In order to comprehend the events that occurred in the neighborhood within the context of crime events, the following presents cardinal data related to spatialized crime along the border seam line in general and Musrara in particular. The receipt of this data necessitated the establishment of official relations with Jerusalem Municipality, the Israeli Police and the Emergency & Rescue Services. Following the receipt of necessary permits (which took approx. 2 years), the Police Research & Statistics Dept. provided the necessary data related to reported crime events in Jerusalem.

## Figure 1: A spatialization of crime events in Jerusalem in relation to city boundaries

The research point of departure was the centralization of crime and terror events in Jerusalem along the historical border seam line on a neighborhood scale, using Musrara as a case study. The formulation of the neighborhood's crime map was conducted by use of data files dealing with major and minor violence offenses that provided information regarding the sociological profiles of the offenders. A total of 447 reported violence events occurred in Musrara neighborhood during the years 2003, 2005 and 2010. Interviews with the residents revealed that their central concern regarding the issue of crime was the question of the criminals' ethno-religious origin. The police data files depicted whether the offender was: (1) Jewish (senior Jew or Russian immigrant), (2) Muslim (a resident of the Occupied Territories or an Israeli citizen), (3) 'foreigners' (offenders not included in the first two categories).

## Figure 2: Violence events in Musrara according to religion/origin

The analysis results were normalized and represent the percentage of population responsible for the events that occurred in the neighborhood: the dominant group was Palestinian Israeli citizens (39%), followed by Jews (31% all senior) and Territories residents (25%), i.e., approximately two-thirds of the events were operated by Muslims and a third by Jews.[50]

The data files contained original and primary information as to where architecturally and urbanely the offense took place: in the street/store/elevator/car? Categories were coded as follows: open public space (streets, squares), closed public space (public institutions, stadium), liminal space (parking lots, stairways, elevators), private space (residencies, workshops), private space open to the public (restaurants/shops, motels, hotels).

Most of the offenses occurred in open public space and only 23% occurred in private residencies, an insight that will play a crucial role in the analysis of the findings of the field investigation conducted in the neighborhood.

A correlation between religious-origin and the location of the violence events was found: 39% of the crimes that Jews committed took place in public space vs. 70% of the events committed by Palestinian Israeli citizens and 80% of the events committed by West Bank Palestinian residents. These findings mark the marginality of the two Palestinian groups in the neighborhood: they do not reside there and their actions had no other space to be performed other than the street. These findings also shed light on their exhibitionist activity in space. While Jews committed crimes mostly in the victim's or offender's house and far away from public eye and opinion, Palestinian Israeli citizens as well as West Bank residents committed violence crimes publically.

## Ethnography of struggle on public space:

## Violence at Jerusalem's seam line

The research question that guided the fieldwork conducted in the neighborhood was how do the residents interpret and act, within their complex reality of conflict between different neighborhood groups, with regards to the possibility of closing the neighborhood and their perceptions of the 'other'. Henceforth, the research documented the conflict from the viewpoint of different agents operating in the neighborhood arena, placing special emphasis on the spatial implications of the actions each group performed. Additional information was received from the architects who planned the border seam line and provided the original plans within the context of two extensive interviews where they relayed their professional truth.

The first interview conducted in the neighborhood was held with S., a 50 yr. old man who works at an antiques store. He told us that the historical border line exists not only in the minds of the offenders but also in that of the neighborhood residents. Upon seeing the map which centralized the findings in Jerusalem he nodded his head in approval, came out of the store and pointed with his finger:

*'Here is where the border ran and for me it is still a border, to this day. Up to here it is 'us', from there it is 'them'… here was a defense wall 8 meters high…the war ended, they dismantled the wall and now it's open. When I look at it I see it as it was…as a child I was here a lot. Now it's the 21st century but it's still a border.'*

S. describes how the most effective spatial borders are group borders; the border is where 'they' end and 'we' begin. Even though the international border was dismantled in 1967, the urban border still exists as a sociological apparatus. Moreover, it clearly affects the residents' conduct:

*'I am 58 and unashamed to say that I am afraid to go to the Old City like I used to as a kid with my father… Since the Intifada you don't feel safe that you can go freely and, in fact, you are in*

*danger…that all kinds of extreme people will see someone like me, who wears a skullcap, and want to stab me. So I – the God Almighty says to stay away from any place which is dangerous.'*

Further conversations and interviews confirmed that the international border still exists in the collective consciousness and that in contexts of crime it is forms a nostalgic reminiscence:

*'When there was a border there were no thefts. I used to live with Arabs in the past. There was friendship. They were different people. Now it's all over. Everything is hatred. But you can't blame them. They grew up in nearly 40 years of hatred. In the past we used to live poorly but peacefully. They don't need a bomb. The bomb is walking around here outside, along the seam line. An [international] border is better. To give them everything under the condition that we won't see even one Arab. This whole country is lawless.'* (Community Center employee)

Other interviews with residents were surprising in their attitude towards the separation that existed up to 1967. Even though it was a 'hot' border line lined with mines and subjected to sniper gun shots and thrown stones, still many of the residents expressed a sense of security living next to a border – *'we lived in poverty and serenity'*, said one of the residents. Such sayings reconfirm a phenomenon well-known to Anthropology – a territory identified as 'home' is experienced as more safe for its residents even if it is subjected to violence such as Jordanian snipers' gun shots. One of the senior residents who left the neighborhood following the entry of Orthodox Jews yet remained active there, said*:*

*'After 1967 the border was opened and there was a plague of drugs. I remember. It was very difficult. Even those who weren't into it were forced to. Children.'*

S. reconfirmed the above:

*'Before the war there were no 'Jews' and 'Arabs': there were only [Jewish] residents of the neighborhood that didn't harm one another because everyone was in a difficult state.'*

The above clearly relays that even when 'home' is poor and subject to gun-fire it is perceived as safe because it is separated from neighboring East Jerusalem Arabs. Paradoxically, the dismantlement of the urban line, which was perceived as victory on the national level, turned into a point of insecurity for Musrara neighborhood residents. This issue is fascinating in light of the fact that Musrara was one of the most complex slums in Israel. The fact that in the 60s-70s, some of its Jewish residents participated in criminal activity makes their position towards others –Arab and criminal – quite intriguing.

## Unwilling criminal: the cousins, the criminals and I

Crime is no stranger to the neighborhood: it was forced upon them. Many of the interviewees did not express a distanced attitude towards the criminal as a social type but rather one of understanding and affinity:

*'There was severe hardship here and I'm lucky I didn't go in the ways of crime. But my friends were big criminals, some are still doing time in prison. And you can understand them. They had no choice, it was like a survival movie'* (S. antiques shop salesman).

*'At the time'*, said another resident, *'there were Black Panthers and there was poverty, it was necessary to steal and commit crime'.*

The above quotes suggest that the public attitude of neighborhood residents regarding their past is that of being 'unwilling criminals'. Furthermore, Musrara's struggle against the establishment built mental barricades that caused senior residents to claim *'the establishment abandoned everyone, Arabs and Jews and criminals.'*

The analysis of violence events that occurred in the neighborhood depicts that one third of the criminals was Jewish, coming mostly from the neighborhood or bordering neighborhoods. The public opinion in Musrara relates crime to Arabs alone, and in the event that Jews are also taken into consideration there is little awareness of the fact that they come from within the neighborhood. A careful study of the crimes committed in the neighborhood during the above mention years depicted that Jews who committed crimes in the neighborhood performed them in private houses, restaurants, motels and the street vs. Palestinians who committed most of their crimes in the street. Since Palestinian crimes were more publically visible, it is highly possible that this data explains their perception as a criminal group and the public belief that they form the major crime group that hazards their streets.

The dominant perception in the neighborhood was that the residents significantly improved their status since the 80's due to two processes: their entry into the primary organized labor market which endows social rights (e.g Jerusalem Municipality), and the purchase of the abandoned houses that were owned by governmental housing companies – real estate which doubled and even tripled its value in a short time period. In light of this data, the neighborhood residents concluded that Jews have no reason to commit crimes. To support their claim, the residents described the types of offenses:

*'Today, most of the crime is committed by our 'cousins' [i.e. Muslims]. Be it a car that disappears from the parking lot, anything, pipes, air conditioner dismantled from a house. No Jew would do that. In order to receive 100 Shekels he will go and dismantle an air conditioner and cause a damage of 7-8 thousand? But the 'cousins' are willing to do anything. Even for less.'*

The above quote suggests that residents perceive East Jerusalem Arabs as 'unwilling criminals' also.

The most talked about offense in residents interviews was laundry theft. It was very common in the neighborhood and perceived as a poor man's offense, serving as proof of the offender's identity and the reason for his actions. *'They get up in the morning and steal everything. For instance laundry. For instance a wheelchair. So they came and caught him and the policeman told me that they will release him because he won't come to court.'* (Community Center employee)

According to neighborhood residents, the Separation Wall that separates East Jerusalem from the West Bank is to blame for the social and economic problems in East Jerusalem:

*'Since the Separation Wall, the situation got worse because everything originates from the residents of East Jerusalem. They left them in a state of unemployment, no employment no money… I grew up in such a neighborhood. When the parents of all of the residents here did not have jobs and income, so what choice did their children have, that they can't bring home bread and milk, they stole because they had no choice. Families with 12 children.'*

It is important to note that like in other mixed cities in Israel[51] everyday law obligates conducting discussions without involving politics. Any discussion on positions regarding the Israeli-Palestinian conflict is forbidden in the neighborhood's area, markets or any place where there is a mixture of Jews and Arabs or Jews from diverse social and political groups. One of the central expressions of 'no politics' was the abstention from using the word Arab, an intimidating adjective when used in their space. Most of the interlocutors used the term cousins, smiled or sighed and said, 'You know who I'm talking about.' The choice of such a familial term – cousins – is fascinating and deserves separate cultural-linguistic research.

The neighborhood scale discussion revolved around power relations. From their perspective, they are the victims:

*'The problem moved there but it reaches us because we are their nearest neighbors.'*

This suggests that even though the residents understand and empathize with Muslim offenders, knowing that their conduct springs from a state of poverty and lack, they nonetheless distance and protect themselves from them. The neighborhood residents believe that they have no influence on wider circles such as the Municipality's policy regarding East Jerusalem, arrests and permit policies and certainly not future agreements and arrangements. Hence, their solution is to hide behind walls and separate themselves from them.

## The struggle for the reconstruction of the Wall: open public space is dangerous

It is clear that under the above mentioned conditions, open public space forms a threat.

*'You see an Arab near your house. You ask him what he's doing here and he says that he's looking for a job. He is lying. He came here to steal. On Elisha St. they steal women's purses. You can't contain these Arabs – they come to you'* (Community Center employee).

Under such conditions of ethno-national and social status inequality, border zones become points of contact and friction and not of separation.[52,53] The wider the gaps become, so too the attraction of the weaker side becomes more fierce and demanding (*'you can't contain these Arabs – they come to you'*). This friction occurs in public spaces:

*'They [the Arabs] hang around more in our space than in theirs. **A person gets accustomed to this.** It's been 40 years. You get them used to something so this is what they become. You [as a Jew] can't walk around there. The wheels have turned.'* (Resident)

*'Today, an Arab is allowed to sit in the public garden. The Municipality built benches for the residents. So he comes and sits. You can't say anything to him. I didn't have a problem with this until the number of thefts and robberies became too much. They leave nothing, take everything, they even dismantle copper lines they can sell'* (Antiques shop salesman).

The construction of the Wall is not perceived by Musrara residents as a move of a strong party but rather a solution they are dragged into for two reasons: the first is their incompetence in municipal or geopolitical regional issues – *'what can you do to them? Transfer – you can't. The Supreme Court protects them and you can't act against it. So what else can you do? Build a Wall.'*

*'The Wall is located on the Separation Wall. It's something psychological. If there is a neighborhood they will ask him right away what he is doing in the neighborhood. **You defend yourself so you don't have to be aggressive**. This affects people psychologically. They know that this is the framework, like in America where everything is in a framework.'*

The second reason is even more fascinating:

*'I was here at the time of the Black Panthers. I was 17. I operated terror. We were together. We were family. We struggled because we were in distress. (But) when we had children we were fearful for them and brought them up to be good kids. In our time, an Arab didn't dare to pass here.'*

These resident statements convey a fascinating reversed relation between the condition of the people and that of the neighborhood. The time period when the residents' condition improved and the next generation turned into 'good children' became the last days of the neighborhood, as one of the active residents said:

*'I did a Program in university and wrote an essay about it. The neighborhood will be gone. I predicted it. The children have no power to deal with it.'*

It appears that once the neighborhood rebelled and residents left the neighborhood, those who remained felt abandoned and were in need for a protective wall.

*'I was the Chairman of the [Community] Administration at the time of Teddy Kollek [former mythological Mayor of Jerusalem]. He wanted to construct Road no. 1. The architects presented a 9-meter wall, with a porch facing Nablus Gate, a bridge and a waterfall. They presented it beautifully to Teddy Kollek. They talked about a train, and everything was very beautiful. They wanted to construct gates in every neighborhood to enable crossing. I requested to close the neighborhood and the porch. Teddy Kollek said to do what he [I] said, but to leave the waterfall. Two months later they closed it down because Arabs began to swim there. They wanted it to be beautiful and all they got was a mess. We still have a border because we built the Wall. That's the border. We requested the Wall. 25 years ago, before the 6-Day-War there was a fence. They constructed the Wall on the exact same spot.'* (Former Chairman of the Community Administration)

**Figure 3: The aqua duct in its glorious days**

**Figure 4: The aqua duct today**

The current Chairman of the Community Administration:

*'At the time of Road no. 1's construction, the Wall was two-times higher. They wanted to construct a promenade and a tunnel and there was a conflict regarding the route. They wanted to construct a tunnel to the other side but we were concerned that it would attract junkies and harm. We fought for lowering the Wall – we were sealed off. They wanted [by use of the Wall] to decrease noise pollution. They wanted to construct a passage in the middle of the Wall and we objected, we didn't want people to cross straight into the houses, robbing elders, burglaries etc., and stabbing. They finished the project in the early 90's. The City Engineer said that when they will build the gate they will call it the Gate of Peace. I told him that when there will be peace we will open the gate'.*

**Figure 5: Border seam line area – built environment**

In his interview, the architect who planned the Wall and the entire seam line space relayed his version:

*'I remember the conversation in which I was asked to come and plan the border seam line. I told them that I wanted to study the subject…we wanted to turn it into a connecting area, connecting both parts of the city (we added 3 latitude axes) – our intention was that the institutions will serve the Arab population in the area. But the institutions were only for the Jewish population, places that do not create meeting and sharing. The Triangle was supposed to be the end point of this event'.*

The architect's purpose was to plan and design the border seam line in a new formation: Road no. 1 and both its sides. The architect office's investigation focused on the axis itself. In other words, the first gap between the neighborhood residents and the architect was the angle of perception: while the residents experience their neighborhood as a center from which they observe the seam line as a border which is imprinted in the collective consciousness, the architect's central view point is the axis and the neighborhood as a side-effect of this axis. From the architectural point of view, the neighborhood was the back yard of the road vs. the residents who perceived the road as the back yard of the neighborhood. Moreover, it's location along the historical border line emphasized its role as a tool of separation.

The planning team divided the road into five segments, each of them planned within different infrastructure and landscape contexts. They recommended the pavement of six latitude axes that will connect the Muslim East and the Jewish West, thus enabling a merge of both sides. The architectural agenda was a perception of urbanism that encourages urban intensity and wishes to connect parts of the

city. However, the geopolitical consequences were many and diverse, bearing dramatic significance on the city's unification.

**Figure 6: The plan outline emphasizing the latitude roads that connect the parts of the city, of which only two were constructed.**

Being a main axis of transportation (two lanes on each side of the road) and a significant train route, the architects were certain of the need to construct acoustic walls that will protect the neighborhood from noise pollution. The wall was also supposed to function as a pedestrian promenade. It was designed as a double wall where one wall is high and the other – the one closer to the road – is lower thus enabling pedestrians a view of the Old City. Once again, the architects' point of view considered the road users and the tourists. They, in turn, requested that the wall will be lowered so they could enjoy the view of the Old City and they were acquiesced. The architects planned gates along the wall to enable pedestrian crossings and added a pedestrian bridge that linked the eastern and western parts of the city at the core of the neighborhood.

**Figure 7: Right: the neighborhood wall composed of a double wall and a promenade. Opposite: the bridge. Both were not constructed. From: Border Seam Line Plan: 2007.**

**Figure 8: Nablus Gate area: the Triangle, Road No. 1 and neighborhood outskirts. From: Border Seam Line Plan: 2007.**

The Triangle, which used to be a no-man's-land, was planned as an urban square with an underground parking lot and was destined to function as a meeting point, enabling trade peddling in assembled structures. The eastern side of the Triangle was meant to function as an active commercial front that enlivens the square.

During his interview it was apparent that the architect was trying to anchor his plan and design approach so as not to appear like a naïve architect denying the tough reality of Jerusalem.

*'It is a fact that Nablus Gate was a beautiful place – an open space with watermelon- stands and everything. An appropriate political and social climate is necessary. Personally, we used to go down there and drink Arak, eat watermelons. Those were good times. There were tourists. It ended with the First Intifada.'*

As is frequently the case, there was a huge gap between plans and reality:

*'In reality, the wall was built with a watchtower. This watchtower was meant to mark the start of the promenade – that wasn't built. The entrances in the wall were blocked and the wall runs sequentially. Thus Musrara turned into a closed neighborhood. The pedestrian bridge that was designed to connect to the southern wall of the Triangle was not constructed.'*

**Figure 9: The blocked entrances, a view from within the neighborhood. Photography: Author A**

*'The panoramic promenade along the wall was constructed, but the market that was designed for Hanevi'im St. was transferred to a promenade shaded by a long pergola, eventually becoming a drug station which the Police later decided to evacuate. The market was neglected. As for the Triangle: the train was transferred to the Western Wall and together with the tunnel caused complete separation between Musrara and East Jerusalem that were supposed to become connected at the Triangle. The Triangle became a large parking lot where its eastern side serves as a parking lot for trucks – the whole area became 'transportation biased' instead of one of meeting and activity. It's a sad story.'*

Transportation can be a meeting or separating point. In this case, the transportation routes, double-lane separation walls and parking lots had indeed created a separating transportation biased zone. In a research on the spatial implications of Road no. 1, the authors[54] claim that it plays a major role in the division of Jerusalem and the recreation of the ethno-national order.

Considering the gap between the architect's intentions and reality, he was asked if he felt angry:

*'Of course,' he replied, 'we invested 45 thousand office work hours. That is 10 years of hard work.'*

At the end of the interview he was presented with the findings of this study related to crime events in the area and the residents' struggle to keep the neighborhood closed and clear of meeting points with their neighboring Muslims. His response was: *'It could have been different. It used to be different. When you don't allow encounters in public space, then begins desolation and negligence. It could have been a turning point. But I guess the conditions weren't ripe.'*

His remarks left an open question: does the existence of open space indeed create encounters between Jews and Muslims in Jerusalem? Can a bridge bring peace or only under peace can a bridge be constructed?

In succeeding interviews with two Neighborhood Committee members, the architect's vision and the fact that even during complex times in the past there were encounters and good neighboring relations were mentioned:

A.: *'There were encounters of Jews and Arabs but without constraints. It was open. There were watermelon stands on the road. We used to go down to the Triangle and have a good time – it was a no-man's land. And all along the avenue there were stands. We used to come – see movies together – it wasn't constrained. [The plan] forces us to go back to those days. Constraint doesn't work.'*

M.: *'When you do something of your own free will it's much better and more natural. Things have changed. In the times of the watermelon stands the political awareness of the Palestinians was low. They wanted to make a living. There was no violence. Today there is political awareness and all they do is to fight us.'*

The above quotes once again re-establish the neighborhood residents' position regarding the inter-generation gap among the Palestinian Israeli residents.[55] The neighborhood residents relate to political events (*'Everyone has a cousin or brother which we killed, so we live in hatered,'* said one of the interviewees) and to political-national awareness but, they believe, what's done is done.

## Discussion

The controversy between the Residents Committee and the architect touches core issues: how is it possible to maintain urban intensity between different ethno-national groups under conditions of sharp political and economic inequality? This question sheds new light on the notion of 'public space'.

The architect represents the approach that perceives urban planning and design as a tool for turning the border seam line into a public space. Relying, in different levels of awareness, on the theory of public sphere the architect represents an approach that perceives public place as a place where 'public' formulates.

Migdal's (2008) criticism of such public space perception explicates the residents' position by bringing back the concept of *class* into academic discussion. Migdal claims that in order to study public space it is necessary to study separation regimes that enable participation of a very particular public. His suggestion provides an effective toolbox for understanding the position of people who mocked the decision to construct aqua ducts, a waterfall and a pool at the base of the Triangle near Damascus Gate.

Hence, when the residents said that *'the Arabs will go and swim there and create havoc*,*'* they implied that it is impossible to create common public space under extreme relations of inequality - a pool is not a landscape resource but rather a place of recreation for children to be offered to and regularly available for most of Jerusalem's Jewish population.

It appears that in different contexts, separation is what enables daily existence between conflicting groups in a dense space. This study suggests that from the perception of Real-Urbanism, separation means an organization of space that enables different groups to live in high density. The construction of walls is not a municipal conspiracy but rather the residents' defeated reaction to violence they experience. They are aware that crime is a reaction to state institutional violence and, to a certain degree, also identify with the hardships of living and have no patronizing stand because *'many of my friends are in prison and it's a wonder that I'm not there also*,*'* as one of the residents said. Nevertheless, they feel that they, as simple citizens, are unable to influence or design the state's attitude towards the Palestinian issue in general and East Jerusalem Arabs in particular. Hence, they wish to separate and define a frame for themselves and by doing so they anchor and protect their nativity and legitimate existence in this space. This explanation does not endow legitimacy to the residents' actions but rather serves as a report on the events occurring and offers a new-old principle for understanding the urban situation in these cities – separation. As a research community, our ability to discuss urban dynamics of separation outside the normative language of 'good' and 'bad' depends on our ability to shift from ideological **interpretation** of 'public space' to real-urbanism, thus studying cities and their public spaces without prejudice or judgment.

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[19] T. Mitchell 1993 *Art and the Public Sphere*. (Chicago, University of Chicago Press, 1993), p. 17.
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[21] See for example Congress for New Urbanism http://www.cnu.org or Creating public spaces which encourage strangers to interact http://thisbigcity.net/. In the Israeli case, see the Movement for Israeli Urbanism http://miu.org.il/new/english

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[25] In 1958, Jerusalem's Municipality officially changed the Arabic name of Musrara to Morasha. Nevertheless, the neighborhood is referred to as Musrara by its residents, the press and in official publications.

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[37] T. Lev and Y. Shenav, Israel Black Panthers and the politics of identity in Israel in the 1970s. *Theory and Criticism* (Hebrew), 35, (2009), pp. 141-164.

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[41]Y. Azmon, 'Segregation versus integration of public service communities in Jerusalem. *Public Administration and Development*, 8(3),(1988), p. 366.

[42] G. Yaniv, and J. Farhi, 'Morasha – Kavim Ve Ifyunim Shel Schunut Shikum BeYerushaláyim' (Morasha- patterns and characterization of a renewal neighborhood in Jerusalem), *Tichnun Sevivati,* 28, (1982), p. 26.

[43] G. Yaniv, D. Guggenheim and A. Block, *Morasha – the Image of a Rehabilitated Border Quarter, Jerusalem as a United City.* (Jerusalem, Ariel Publishers, 1986), p. 159.

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[50] The number of **Palestinians in the West Bank** is approximately 2,264,000 and approximately 250,000 more in East Jerusalem (according to the Palestinian Central Bureau of Statistics, as of end of 2007). In Israel, there are approximately 8,107,000 residents, of which approximately 75% are Jewish (approximately 6,040,000 residents) and approximately 21% are Arabs (approximately 1,656,000 residents) (according to the Israeli Central Bureau of Statistics, 2013). This means that Muslims in general, those from the West Bank and Israeli citizens, are excessively represented. There is a significant gap between the two populations: Palestinian Israeli citizens are in excessive representation also in relation to West Bank residents. This explanation relates to a fascinating discussion: currently, most of the West Bank is surrounded by a Wall and under severe permit regime, making entry to Israel extremely difficult.

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Figures

*Figure 1: A specialization of crime events in Jerusalem in relation to city boundaries (Author A: manuscript under review)*

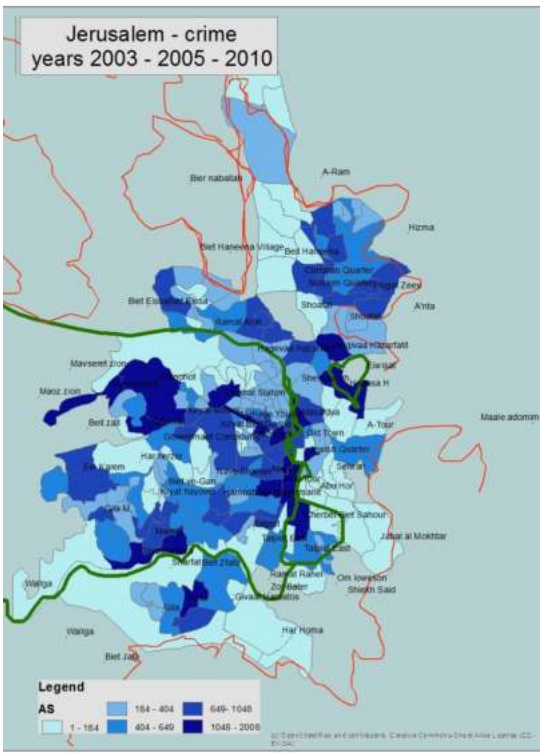


*Figure 2: Violent events in Musrara according to religion/origin*

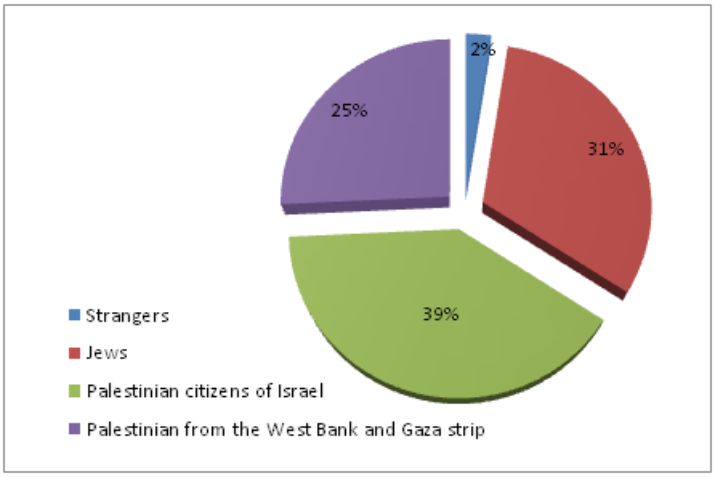


*Figure 3: The aqua duct in its glorious days*

*Figure 4: The aqua duct today*

*Figure 5: Border seam line area– built environment*

*Figure 6: The plan outline emphasizing the latitude roads that connect the parts of the city, of which only two were constructed*

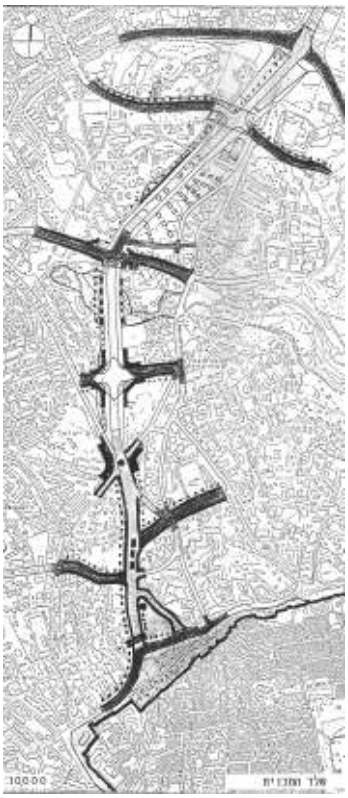

*Figure 7: Right: the neighborhood Wall composed of a double wall and a promenade. Opposite: the bridge. Both were not constructed/executed. From Border Seam Line Plan: 2007.*

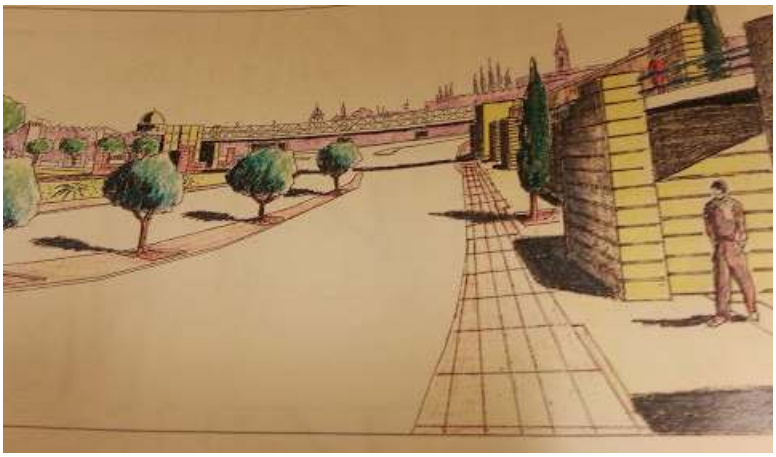

*Figure 8: Nablus Gate area: the Triangle, Road No. 1 and neighborhood outskirts. From Border Seam Line Plan: 2007.*

*Figure 9: The blocked entrances, a view from within the neighborhood. Photography: anonymous*

# VITALITY AND SOCIAL VALUE OF PUBLIC SPACES: A SOCIO-SPATIAL ANALYSIS IN TWO URBAN SQUARES IN LONDON

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Keywords: Public Space; Social Value; Vitality

**Abstract**

This paper aims to investigate the impact of vitality on the social values attached to two public squares in London. Based on an extensive review of the literature and empirical work, this paper will explore the similarities and differences between these two squares in order to deliver a better understanding of the reasons behind urban design vitality and quality in generating social values attached to physical spaces. These two squares are comparable in size, physical setting and geographical and social context providing unique contexts for socio-spatial analysis. This study follows a case study approach with a qualitative method. For both case studies, there are 100 surveys and 33 semi-structured interviews in total conducted with participants at the squares. In addition, many site observations for this study have been taken, in both cases, at different times of the day to track human movement, activities, spatial qualities, social interactions and spatial interrelations. This study demonstrates the complex nature of the generation of vitality in urban spaces.

## 1. Introduction

In densely populated urban areas, urban public spaces work as important physical sets, fulfilling the needs of urban residents by providing social interactions and a considerable part of a city's transaction base (Space, 2003). The life of public space occurs in open public spaces in a complex set of functions and forms(Gemzøe and Gehl, 2006). The attribute of these spaces usually is capable of containing diverse behaviour, activities and use such as walking through, shopping, conversation, using the facilities, relax, people watching or even just passing the time as a daily activities (Ibid, 2006). One of the key aspects that determine the failure or the success of urban space is vitality (Montgomery, 1998, Engwicht, 1999, Carmona et al., 2001). However, the lack of the use of vitality as a tool that can distinguish successful urban spaces from others occurs in many contexts. Urban designers whose task appeared to be aiming toward the healed public spaces among sociologists, geographers and politicians show more interest in the subject of public space. However, focus has been on the requirements of vehicles in the modernist planning rather than pedestrians and their needs and expectations which leads according to Oktay (1996) to negatively affected the quality of everyday life in cities. Consequently, the attention toward social value has been increased as a result of the need for investment in good urban design (Carmona et al., 2001, CABE, 2002, Carmona et al., 2002a, Carmona et al., 2002b, McIndoe et al., 2005, Macmillan, 2006a).

This paper aims to investigate the impact of vitality on the social values attached to two public squares in London. Based on an extensive review of the literature and empirical work, this paper will explore the similarities and differences between these two squares in order to deliver a better understanding of

the reasons behind urban design vitality and quality in generating social values attached to physical spaces. These two squares are comparable in size, physical setting and geographical and social context providing unique contexts for socio-spatial analysis.

## 2. Understanding vitality and social value of public spaces

Lynch (1984) recognizes vitality as one of the performance elements of urban design and defines it as the degree to which the setting of the space support the functions, biological requirements and capabilities of human beings. Sherman et al. (1988) consider vitality as one of the indicators of successful urban places. Vitality can distinguish socially beneficial places from the others. According to Montgomery's definition (1998) vitality 'refers to the numbers of people in and around the street (pedestrian flows) across different times of the day and night, the uptake of facilities, the number of cultural events and celebrations over the year, the presence of an active street life, and generally the extent to which a place feels alive or lively'(p.97). Many of contemporary research findings indicate that vitality is a product of visual quality and the variety of the supported activities to these environments. (Space, 2003, Townshend and Madanipour, 2008, Gehl and Matan, 2009, Nemeth, 2009).

It is recognizable that the good design contributes to human needs and satisfactions. It is essential to meet people's needs and adapt their activities in order to have a proper public space. Maslow (1999) identified a five stages hierarchy of basic human needs starting from physiological needs such as food, warmth and survival toward more complex needs such as social needs that includes safety and belonging needs. Similar to these, the most important social elements in a public space could be accessibility, equity and safety. The viable place has the capability of providing more choices for social activities to take a place in urban public space as well as being the arena for cultural exchanges(Gehl, 2010). These spaces are successful due to the result of the active engagement that peephole seek out (Carr et al., 1992) and due to the process that had been taken when place making for people (Carmona, 2010).

According to Macmillan (2006b) social value has coloration with the encouragement provided to residents by places and buildings to interact in ways that lead to trust, shared understanding, shared values and supportive behaviours. Walmsley (1988) claimed that there is a relationship between the environmental perception of a place with its social behaviours. He also claimed that human behaviours are not only developed by inter-relations within the environment but also urban environment can be the foundation of this development. Social value emerges when people have common interests that can join them with others. (Macmillan, 2006b). Social value usually measured by indicators to identify areas where enhancements are desired. Many attempts have been done to identify the possible indicators that used to measure the social value of urban design (Table 1).

Table 1: Assessing and measuring the social value

| Research | Possible indicators |
|---|---|
| The Value of Urban Design<br>(Carmona et al., 2001) | • Identity/civic pride.<br>• Place vitality<br>• Inclusiveness<br>• Connectivity<br>• Safety<br>• Facilities and amenities |
| The Value of Urban Design<br>(McIndoe et al., 2005) | • The percentage of peoble who are involve in community and cultural activities.<br>• Increased use of public Space. |

| | |
|---|---|
| | • Gives greater sense of personal safety.<br>• Attracts social engagement, pride and commitment to further achievements.<br>• Public art contributes to greater community engagement with public space. |
| The value handbook<br>(Macmillan, 2006b) | • The strong sense of a community.<br>• Being proud of the neighbourhood.<br>• Feeling safe when out at night.<br>• The decrease in the number of people suffering from mental health problems.<br>• The number of people taking regular exercise. |
| Urban Design Toolkit<br>(Environment, 2009) | • The way people live, work, play and interact with each other on a daily basis.<br>• Culture.<br>• Community services and facilities, community character.<br>• Ability to participate in decision-making.<br>• Personal and property rights.<br>• Perceptions about safety or future aspirations for the community. |

The importance of the role of the public realm and associated semi-public spaces is emphasized by Montgomery (1998) which is providing the territory for social interactions and a substantial part of a city's transaction base such as the market square, the shop frontage, the street vendor and the sidewalk café. It is advisable to be linked and connected to the community. Emphasizing relationships and social significance of the site can reflect the physical qualities of it(Carr et al., 1992).

Accessibility is the most fundamental level of the social elements in public space. It has two forms that are visual and physical accessibility. Visual accessibility allows people to see open public spaces and be informed about the activities there while the physical accessibility offers an entry to that space and allow people to use its functions (Carmona, 2014). Open public spaces should stimulate and invite people to come inside and use its amenities. At the same line with the concern of urban design with the formation of physical setting of open public spaces, urban design is concerned with the creation of equitable, open public space as well (Gehl, 2010). One feature of these spaces is democratic spaces due to its availability to all users to use them. They also might be categorized as spaces that increase choice. Thus, they are responsive places. The result of considering equity in the design of the public realm is getting more blended, democratic environment which is accessible for all. Equity provides safe and vibrant public spaces in which different groups of the society from across the social structure can socially interact with each other without conflict (PPS, 2013) .

## 3. Case study approach

A case study approach was chosen as viable tools for gathering qualitative and quantitative data. Moreover, selecting the case studies are an important part of this research. The case studies were selected after an in-depth review of many mixed- use development in central London. The cases adopted for this study meet the following indicators: 1) they are both mainly contain residential blocks in order to seek the impact on the development residents and the local community within the development. 2) The volume of the mixed- use development are large enough to produce a practical impact on the level of the neighbourhood with surrounding community. 3) Both mixed-use developments include a public open space that available for its residents and the surrounding community. 4) Both selected cases reflect the importance of urban design policy and plan after the

Urban Task force's report in 1999. 5) The selected cases have different approaches in term of developing the scheme to enable a meaningful comparative assessment between both cases(Table 2). Even though it is not an easy mission to identify the suitable pair, Empire Square and Bermondsey Square pair were selected to make this study (Figure 1). They are located in London Borough of Southwark (Figure 3).

*3.1 Brief background of the Borough of Southwark*

Southwark is one of the inner London boroughs that face the river Thames. It is home to a wide range of commerce, business and leisure. The Bankside area contains many tourist attractions, such as the Tate Modern and Shakespeare's Globe Theatre; these are located beside large regeneration developments such as the Elephant & Castle, one of the largest redevelopment schemes by borough in London, and the Aylesbury Estate. Southwark gets the benefit of many attractions at its fringes, which offer substantial tourist traffic that is associated with providing many job opportunities (southwarkheads, 2009). In this paper, both case studies will be delivered from the borough council and developers vision to the concept of providing public spaces.

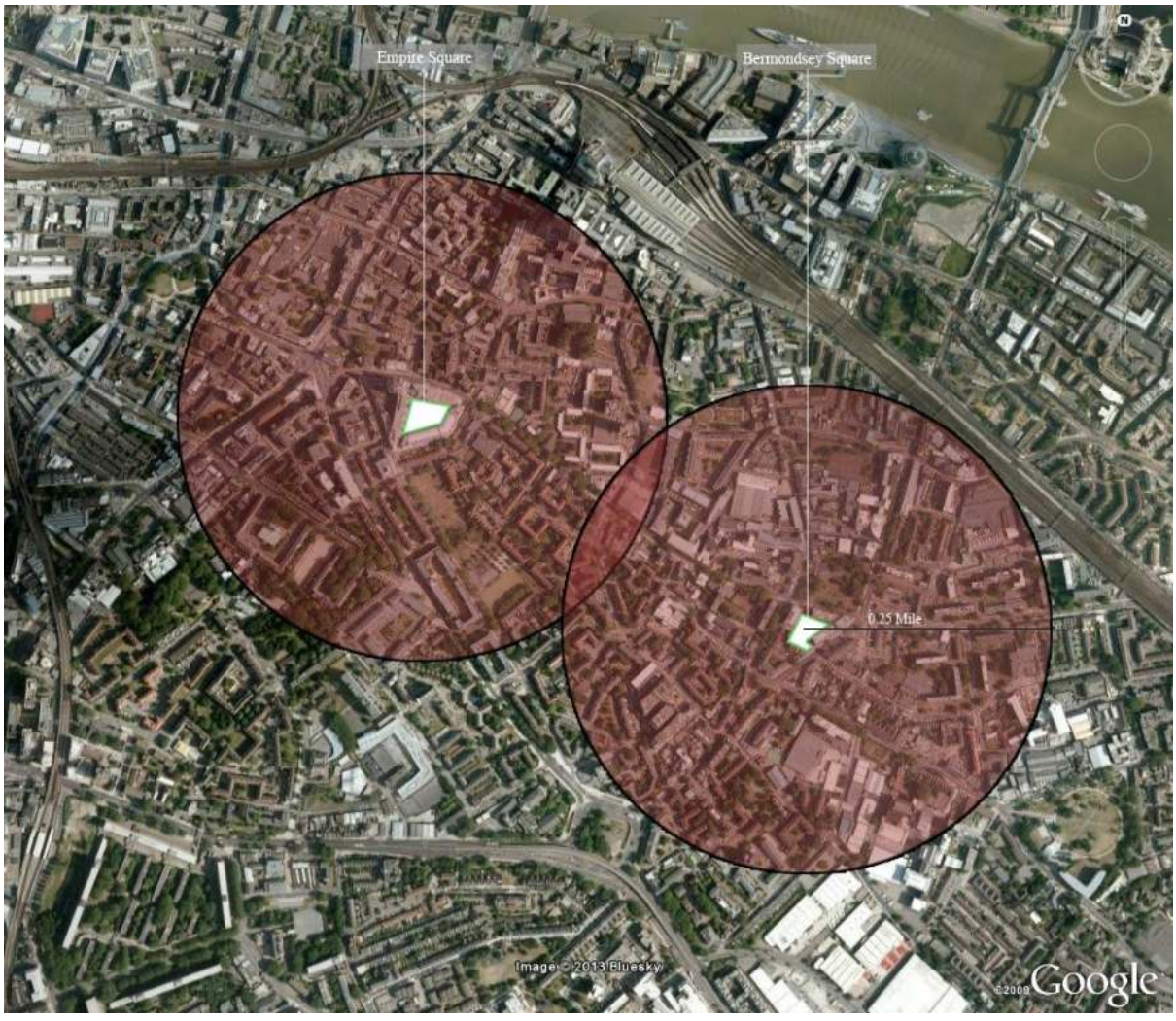
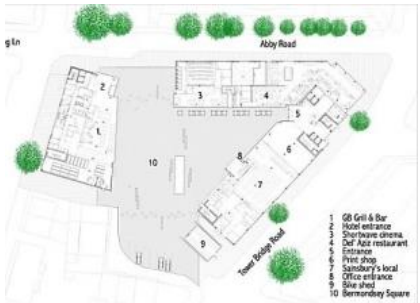



Figure 1. The location of Empire Square and Bermondsey Square (Obtained from Google map)

Figure 2. Bermondsey Square (top), Antique market is taken place on Friday the 24th of April 2015. (Image: the author). Empire Square (bottom), Even though it is sunny noon on Friday the 24th of April 2015, the square appears empty. (Image: the author).

Table 2. The characteristics of the selected case studies

| | Empire Square | Bermondsey Square |
|---|---|---|
| Location | London Borough of Southwark | London Borough of Southwark |
| Usage | Offices, health club, retail units and residential. | Offices, retail units, residential, hotel, bar, restaurant, cinema and café. |
| Developer | Berkeley Homes | Igloo Regeneration |
| Design | Rolf Judd | Munkenbeck + Partners Architects |
| Size | 572 units & commercial retail space | 76 units, a 79-bed boutique hotel & commercial retail space |
| Occupiers | Gym, retails, nursery, NHS facility, grocery store and office uses | Hotel, restaurants, café, bar, cinema, grocery store and office uses |
| Completed | 2007 | 2008 |
| Site Plan | Obtained from www.rolfe-judd.co.uk |  Obtained from Igloo, 2013 |

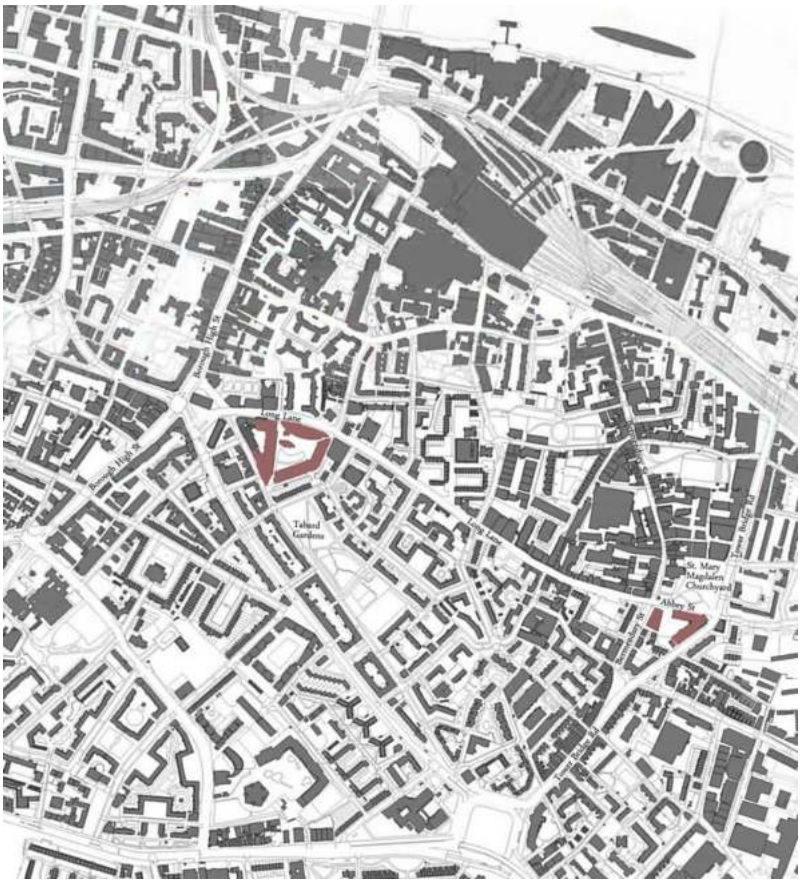


Figure 3. Empire Square & Bermondsey Square - Urban structure and built form. (Obtained from 2012 OS Mastermap)

*3.2 Case 1: Empire Square*

Empire Square is a residentially led development in the historic district of Southwark, located at the end of Borough High Street. The site was used industrially, including as a good's depot, until the London Borough of Southwark saw possibilities for its development. They emphasised high quality, to be addressed in this project. Initial approval was granted for 270 residential units of a gated community development with no public access. However, Berkeley Homes, the developer, sought to increase the density to 576 mixed-tenure units. Thus, they saw the potential of a new public square and affordable units by giving around 33% of the site to public use. The new public square was a price worth paying for the additional units they got (Carmona and Wunderlich, 2012).The project was completed in 2007 and won the Housing Design Awards and CABE Gold award (Keddie, 2010).

*3.3 Case 2: Bermondsey Square*

The Southwark Council and Igloo Regeneration Partnership worked together to redevelop Bermondsey Square as part of an economic, social, environmental and physical intervention. The vision of Bermondsey is set around a new square that hosts the Bermondsey Antique Market. A farmer's market, exhibition, and community-related outdoor events are being scheduled and held at Bermondsey Square to help increase social interaction and enliven the space. The development is at the end of Bermondsey Street and intersects with the less-gentrified Tower Bridge Road, the outer limit of the city centre. The square is intended by the developer and council to be the heart of Bermondsey (Stewart, 2009).

## 4. Methodology

The methodology of this study is employed to demonstrate and evaluate the study outcomes. Moreover, the study will need to undertake the analysis of social-spatial behaviours in relation to the social value of urban design as a mean. There is several different research methods have been developed and used in this study as one comprehensive methodology. Therefore, the knowledge claim for both case studies from all the methods will provide qualitative and quantitative data as well. There are two different trips have been undertaken in order to obtain data for this study. For both case studies, there are 100 surveys and 33 semi-structured interviews in total conducted with participants at the squares. The participants are occupiers, managing agents, residents and everyday users. All 100 participants have been asked to answer face to face survey takes about five to eight minutes to complete, and 33 participants have been asked to spend 10 minutes of face to face interviews. At the first trip, the data gathered from questionnaires in both sites. It has developed supporting knowledge for the social analysis of the study. The findings of each case are demonstrated in various charts and tables to express a valuable range of knowledge to promote the understanding of the outcomes of the observational and socio-spatial analysis work.

The 33 semi-structured interviews are taking place to eliminate the limitation of some data that occur from the questionnaire in the first trip. The way semi-structure interviews are constructed for this second trip of conducting data is to cope with the lack of understanding regards with the complexity of vitality among some participants in the first trip of data collection. Therefore, the questions of the second trip are set the aim of the study, in a way that can encourage the participants to reveal their opinion directly. At the same time, the primary goal of this interview is not to measure the perception of users but rather recognize the social, spatial value and vitality in a relationship to the urban design.

In addition, many site observations for this study have been taken, in both cases, at different times of the day. The unobtrusive observational approach was used to track human movement, activities, spatial qualities, social interactions and spatial interrelations. The pedestrian traffic movement and static activities such as gathering and meeting are recorded on the basis where individuals sit, meet and move. The outcomes of the site observations will give a comprehensive vision of the movement and the use of each square during different times of the day and reflect the vitality and viability of each square.

This research will be analysed in the comparative analysis approach that aims to minimize the deficiency of research work. It also can generate findings that support and benefit the overall outcome of the research. Therefore, a comparative study is considered to be the ideal approach for such a study due to its understanding of the socio-spatial interrelation and social values (Ragin, 1989). The comparative analysis approach will allow the researcher to assess and evaluate the theories and test the outcomes of the study as well. According to CABE and DETR (2001), place vitality is among the possible indicators, which are identity and civic pride, place vitality, inclusiveness, connectivity, safety and security and amenities and facilities, for assessing the success of the social value that added by urban design through the open public spaces within a new mixed-use development to be spread all over the neighbourhood.

## 5. Empire Square analysis and evaluation

The square connects Long Ln. North with Sterry St. south creating a walking path for local people who are going to their work or reaching their homes. People come mostly to Empire Square individually from 6:00 to 22:00. The majority of people in Empire Square, according to the questionnaire, live either within the development or within ¼ mile from it (Figure 4). Many people stated that they use the square because of its proximity to their home. People who live more than two miles away from the square stated that they visit mainly because they study or work nearby.

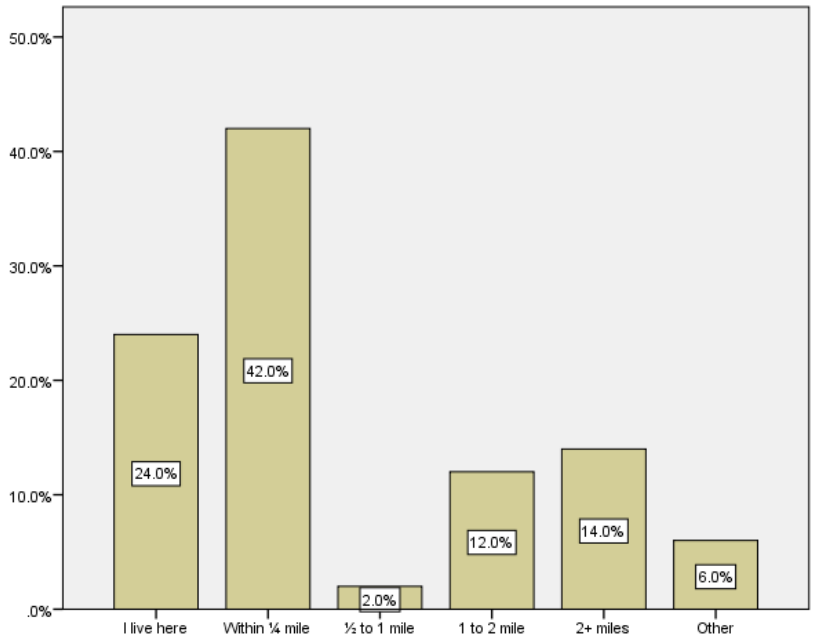



Figure 4. Home Distance from the Square

The majority (46%) of interviewees stated that they were using the Square as a through-route to their destination, while the second most popular purpose was to use the gym (Figure 5). In the winter, people did not come to the square to spend time with friends or relax in the sun; but results indicate that they instead use the square's indoor facilities.

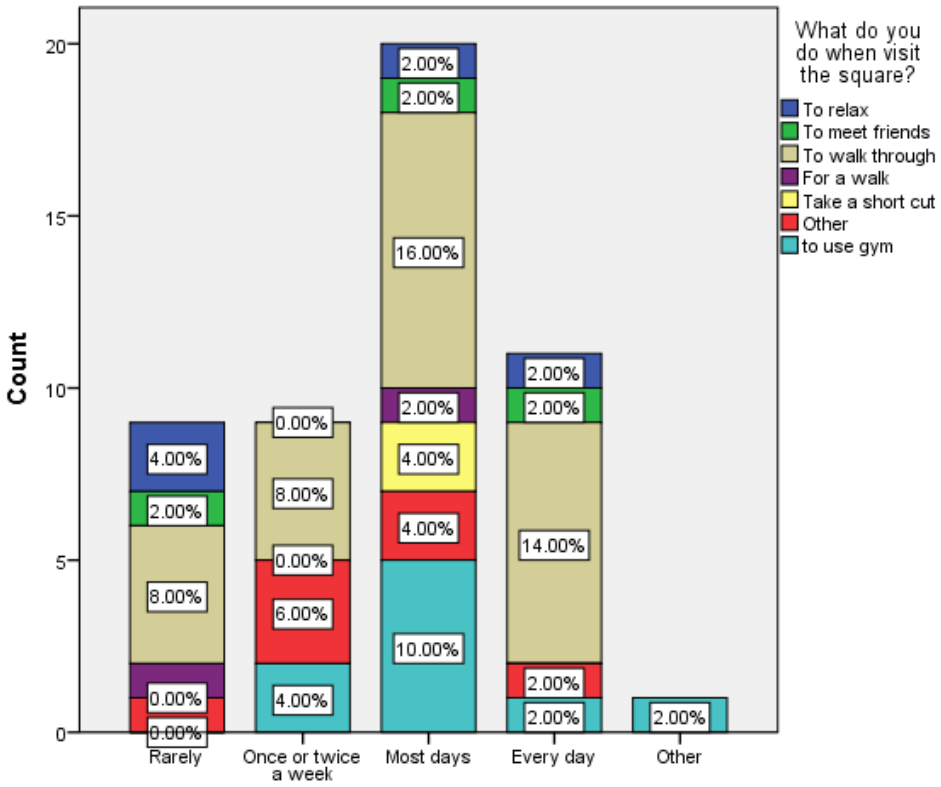



Figure 5. The purpose of visiting the square and how many times

The development itself contains a variety of facilities, including NHS Guy's and St Thomas' Borough Kidney Treatment Centre, CPC Connect Company in the pavilion building in the middle of the square, a small Tesco convenience store, a gym, a nursery, and small commercial offices. With most of these commercial spaces facing onto Long Lane, there are no connections to the square to enliven it. Moreover, the pavilion was originally planned to hold a restaurant, but instead has become an office space (Figure 6). In other words, most of the active use of the development has no relationship with the square.

According to the manager, 'The Square was designed with no public access which was the original intent. However, the council did say I have to have limited public access between the hours of 6:00 to 22:00 and the public can come in and use the area as long as they do it within the confines and rules and regulations of being here.' Most of the interviewees supported this: 'The management of this development try to provide as much privacy as they can, so the square is quiet and empty.'

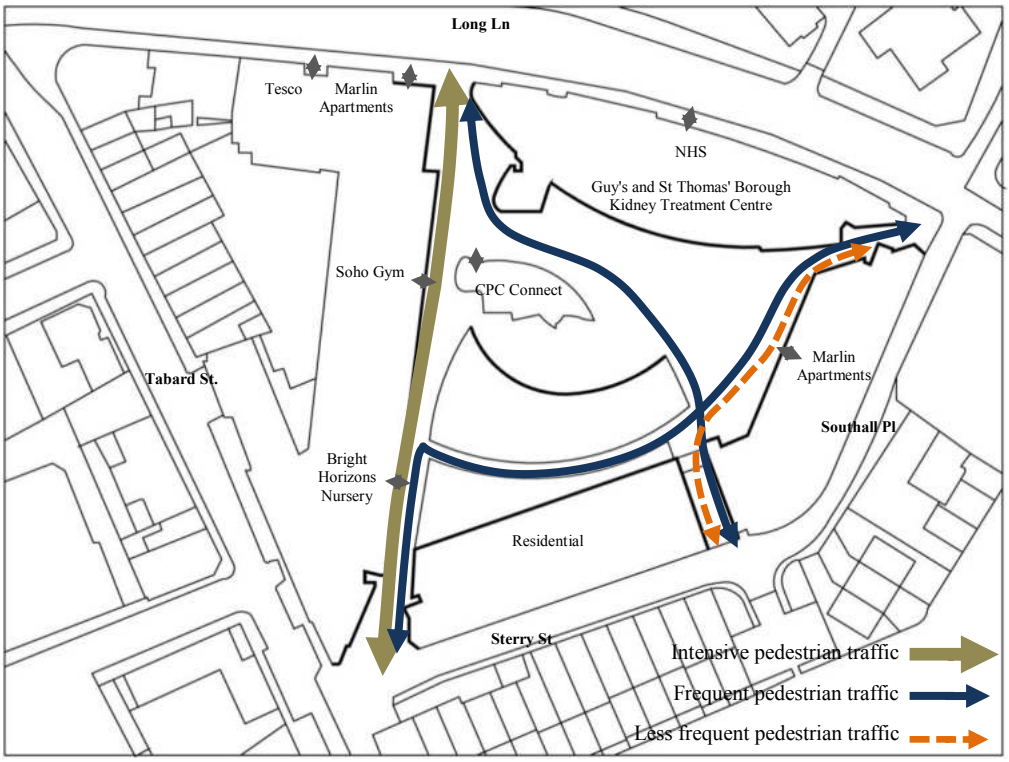



Figure 6. The pedestrian movement of Empire Square

Most of the interviewees pointed to the role of the management in keeping the square quiet for the desire of its inhabitants. A resident stated that 'the management of this development try to provide as much privacy as they can, so the square is quiet and empty'.

Some interviewees commented on the lack of sunlight and high degree of enclosure, while others suggested that the profusion of signs, CCTV, and gates increase safety and security but at the same time limit access by some social groups: 'Seeing sings and CCTV around makes it unwelcome for us [residents]. I think it needs more attractive point for people to come around and stay longer time.' Even though the majority of the development scheme is residential, residents do not constitute a large proportion of square users. This is due to the car park underneath the square and the lack of a playground for children.

There are two aspects of the control of this public space. First, the management needs to keep Empire Square as safe and quiet for residents as possible. The manager of the Marlin Apartment, who is in charge of running this development, said, 'It is a quiet area that non-residents and residents can use. As I said, if we start using any form of noise in there, it is like a gladiator arena. It easily gets noisy, and I start getting complaints. There is no way to expand the grass area.' He also explained, 'the rules are simple rules: no loud noises, no cycling, no litter, and no ball games. It does not say no drinking but if we end up getting large parties sitting on the grass and start getting loud we [as management] would ask them to kindly calm that down because they cannot turn it to loud.' From this point of view, then, limitations prevent local use of Empire Square and reduce its vitality, even though it is clean, well maintained, well lit, safe, accessible, and comfortable to use. According to Nemeth (2009), developers of privately owned, publicly accessible spaces are often financially driven, and this leads to limitations on political, social, and democratic functions of the spaces. In addition, such spaces can directly impact visions of citizenship and representation, which implicates them as new models for urban space provision and management.

The second aspect of control is the for activities from the perspective of a visitor to the square. One participant commented, 'It is a dead area. There is nothing to do here. I do not use this space. It is just a waste of land for us [residents] but for them [developers] it is important to make the development looks fancy.' Empire Square has a substantial basis toward inactive space. As one visitor said, 'The gates seem to be the big issue of this development even for its residents—when they come late at night they have to walk all the way around to get inside.' Therfore, lack of facilities is a main reason people do not visit Empire Square (Figure 7). Although a noisy street runs along one side of the development, the square appears from the outside to be a quiet and isolated place, making people reluctant to visit. People are attracted spontaneously to activities and other people (Gehl, 2010).

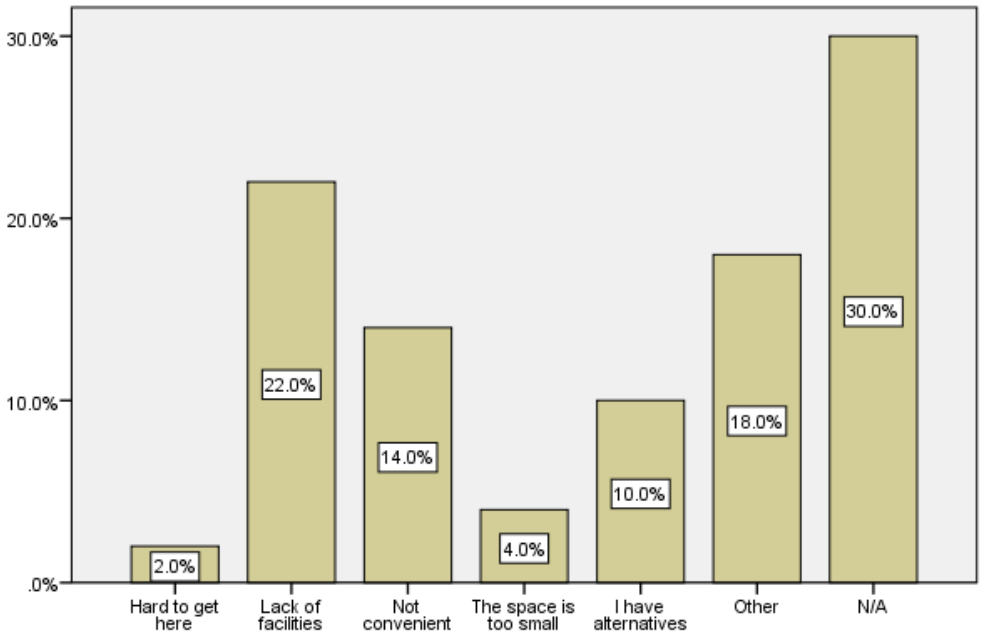



Figure 7. Reasons why people do not visit Empire Square

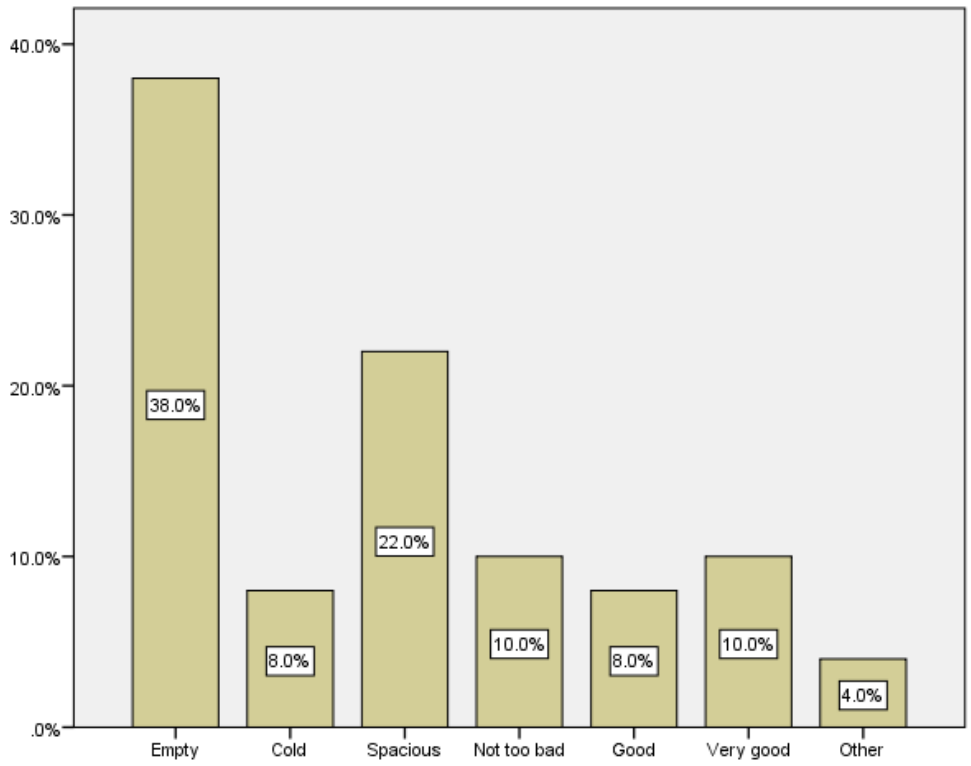



Figure 8. Users' impressions of Empire Square

The predominant impression of Empire Square was that it is empty and spacious (Figure 8). Aside from perhaps a small group of students having lunch or a few workers taking a smoking break, few people linger or walk through. No residents come and go because their flats are accessible from the street or the car park underneath. Attracting people to linger and is not easy; but a lack of activities can make public places seem empty. The square is also underused because its inside edges fail to attract people from the surrounding streets; people tend to be more motivated to walk by a row of shops than a blank wall(PPS, 2013). The land-use of Empire Square therefore has a direct influence on the failure to achieve the desired vision. However, some residents hold the opinion that the square's emptiness is not a bad thing, as it makes for a quieter living area.

## 6. Bermondsey Square analysis and evaluation

Bermondsey Square, the second case study subject, is open to the public both day and night, with major activities taking place during the weekend, such as the Bermondsey Antique Market and a farmer's market. The majority of interviewees live more than 2 miles away from the square (Figure 9), and the most frequent visitors use the square as a throughway to where they work or study .If designed well, however, small urban spaces can be energetic and encourage people to use them (Whyte, 1980).

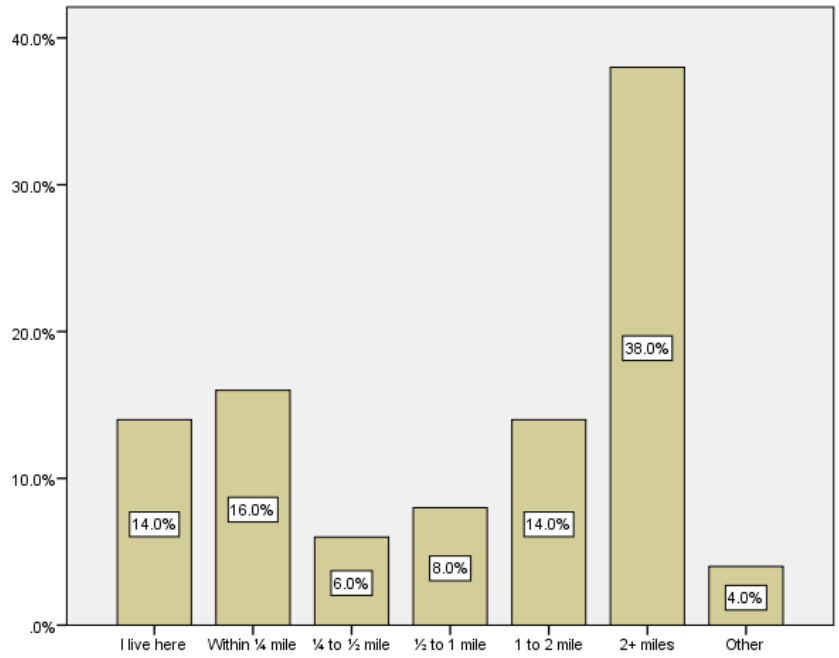



Figure 9. Home distance from Bermondsey Square

The development contains a variety of functions, including a hotel, restaurants, bars, a café, a cinema, markets, and a grocery store. The restaurants and bars attract tourists, while workers prefer the recreational facilities. The restaurant and café add vitality to the square during the week, as their seating areas are often fully occupied in good weather. Most interviewees also pointed to the market and seasonal activities as creating a vibrant atmosphere. According to a seller at the antique market, local patronage is strong: 'I can tell you that 90% of the market costumers are local people. I have worked here in the market for two years, and most of our customers are from these areas around here.' The lack of tourists is possibly due to a large number of nearby attractions that draw them away, such as the Saint Mary Magdalene Churchyard, Tower Bridge, and the Shard. Moreover, many locals see the square's activities as directed toward residents. As one user said, 'The Square with all its amenities serves the residents but local people use it for walking through.' Despite this, the range of offerings was appreciated: 'I think Bermondsey Square is an active place with all the activities and the different atmospheres during the year.' Bermondsey Square has a high degree of openness to the streets, and this can work as a hook to attract people into the square.

From the questionnaire, there are three types of activities that occur in Bermondsey Square. First, there are necessary activities such as walking through and taking short cut using a square for transit that occur mostly on daily basis. Second, there are optional or leisure activities that can take place in the square such as relaxing, going to a restaurant or the cinema. Third, the social activities take place when people meet their friends and interact with each other. The result of these questionnaires indicates that necessary activities do not dominate the use of Bermondsey Square on daily basis. However, leisure activities are the most popular reasons for visiting the square this is especially true at weekends when the antique and farmer's markets occur.

This case study consisted of five elements that structured towards social and perceptual dimensions. These elements are the dominant user type, dominant social group, dominant activities, time of activities and the most vital time of the square during a day. As Bermondsey Square is open to public and is mainly used for relaxation and seating purposes, there are some other activities occur there during a particular time of the year. However, the majority of the space is open to public for the purpose of seating, gathering, and relaxing. The analysis works are undertaken during February,

March and September 2014. From the interviews that had been conducted, many people consider Bermondsey Square to be dependent on activities that occur there and the good weather condition. The availability of seating around the square seems to add significant value to the attachment of the place.

In a very general approach, the sense of vitality of Bermondsey Square depends on the amenities that the square provides for local users as well as the markets that take place during the weekend. One said, 'The Square becomes the centre for the area, and it could be improved but it is definitely the focus of the area. It was being used for various events. In the summer, they have Bermondsey street festival and the Christmas and another time of the year they have evening events.' From the data collected, most interviewees build their understanding of the vitality of the place depending on their previous experiences with activities that happened at the square. The place vitality to most interviewees is related to some conditions that must occur in order to reach the optimum capacity of the space. The dependence of Bermondsey Square on the markets during the weekend increases the vitality of the space and creates an atmosphere that expressed with social values. Not only have the markets at Bermondsey Square emerge as the most significant elements but also it reaches the level of the surrounding context being the core of activities in Bermondsey area. It mentally became the central theme of the image of the place.

The accessibility of Bermondsey Square has an essential basis of vital spaces exists in this place. The degree of openness in Bermondsey Square was designed to provide sight interaction directly with the activities that are taking place in the square itself. This degree of openness to the streets works as a hook that can drag people into the square. Moreover, 86% of interviewees agree that Bermondsey Square is freely accessible, due to its connections to surrounding streets (Figure 10). Bermondsey Square was planned toward increasing social interactions and enlivens the space by providing events and activities for the community in order for the square to be the heart of Bermondsey. A majority (61%) of interviewees thought that the design of the square impacts its vitality

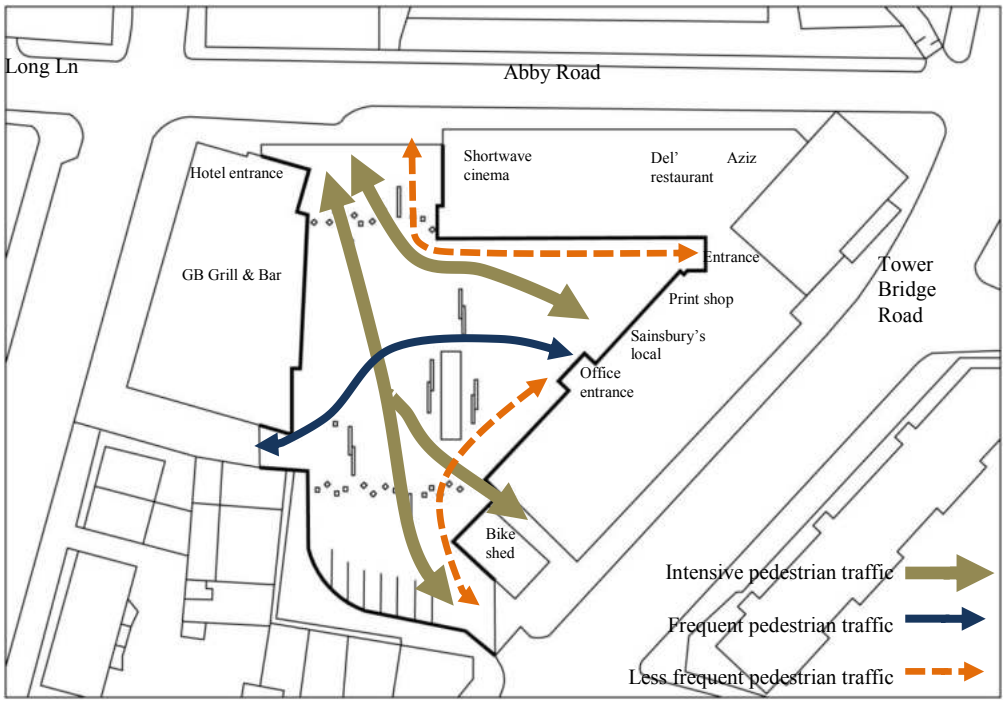



Figure 10. Pedestrian movement study of Bermondsey Square

The amenity as a significant basis of vibrant spaces remains as a key indicator of vitality in this open space. Due to the developer trend and vision of Bermondsey Square, the general quality of space is

sufficient. Moreover, 80% of users agreed that the square improves the supply and quality of amenities in the local context, a key indicator of vitality.

## 7. Discussion

The new creation of space at Bermondsey Square and Empire Square has indicated vitality as a common attribute of both places in particular ways. However, the central question to be asked here is whether they are similarity animated in term of feeling and essence. The comparison of these two sites explains how they work according to the effect of management of both public spaces while considering the current policy directions. The Selection of the two cases is regard to their similarity in term of the region, size, population, climatic and culture context. There is a complex set of elements works towards producing social components in these two spaces. Besides the physical form and environment of Empire Square and Bermondsey Square, there are some other social concerns. The comparison of both Squares was carried out while aiming at the following factors: user types, social groups, activities and social interactions, and the time of activities in the open space.

The most significant difference is the vitality in Empire Square is brought by residents from the surrounding area to the mixed-use development. Meanwhile in the case of Bermondsey Square, residents, office workers and tourists' presence is the main reason of the vitality in this site. The dominant user groups in the case of Empire Square are local people from the surrounding area whereas diverse users include families, and friends groups are noticeable in Bermondsey Square. Users in Empire Square tend not to engage with others in the space daily since they are mostly just walking through to their destinations. In Bermondsey Square, the ordinary way of use and regular engagement of users play a useful role in making the social atmosphere friendly. It is distinguished that users' attention in Bermondsey Square is more towards socialising rather than exploring the surrounding environment. The social interactions are entirely different from that in Empire Square.

The short cut between Steery St. and Long Ln at Empire Square works like a magnet that attracts local users to walk along this path that considered being the main activities in this case. The image of activities in Bermondsey Square mixed with the image of users who are using the seating areas outside the café and restaurants. Sitting at the café and restaurants is more noticeable than shopping from the Sainsbury's store in Bermondsey Square. The time and duration of users' presence and activities are not similar between the two squares. Empire Square is active from early morning about 6:00 in the morning when the gates are open until 20:00 when the gates are closed. The most vital time is from late morning until evening time when most users come to Soho Gym and walk back home coming from work. In Bermondsey Square, the place is alive from early morning especially when the market is taking place at the square until about 23:00 while the bars, restaurants and Sainsbury's store are still open. The most vital times at Bermondsey Square is early morning and evening.

Table 3. The similarities and differences between the two places

| The Factor of comparison | Empire Square | Bermondsey Square |
|---|---|---|
| Dominant user type | Residents | Residents, office workers & tourists |
| Dominant social group | Friends groups | Friends groups & families |
| Dominant activities | Walking through & using the gym | Walking through & shopping |
| Time of activities | From early morning to evening | From early morning to late night |
| The most vital time of the square during a day | Late morning & evening | Early morning & evening |

The social value of urban public spaces is a key factor in the cities due to its close relation to people needs from the very basic level to the complex. Since public spaces can affect people's quality of life, one role of the public spaces is that affording activities. If public spaces fail to provide these activities, parts of the society will be moved out of the public realm. The attention toward social value has been increased as a result of the adverse effects of the visual–artistic trends in urban design and a focus on the requirements of vehicles rather than pedestrians. In this context, a comprehensive review of different tactics and aspects in urban public space was found important to uncover that social value has a deep connection with the encouragement provided to residents. Encouragements are provided by places and buildings to interact in ways that lead to trust, shared understanding, shared values and supportive behaviours among society. Social value emerges when people have common interests that can join them with others. The social value of public space depends on the input that can be provided to people in term of increasing people's attachment to their local life, interacting face to face with others and people's memories of sites. Streets and markets that reflected hard spaces are extremely beneficial to many people as green spaces such as parks(Cattell et al., 2006). Therefore, Social value can be a part the urban identity where these social behaviours are controlled by the design of these public spaces or developed along with it.

The analysis of Empire Square and Bermondsey Square in London indicate how they socially work. Empire Square is vital at certain times due to the presence of local users when using the square as a path to their destination early morning and when coming back from their work, while local users, office workers and tourists are the primary users that make Bermondsey Square dynamic place. Therefore, Bermondsey Square is better than Empire square according to the data gathered due to activities and opportunities that the square provide to its users. People stay and spend much time in Bermondsey Square more than Empire Square. Bermondsey Square provides more opportunities for groups to hold their activities there. Also, it seems more open, and the degree of openness is higher than Empire Square that seems isolated from residential buildings. The greater degree of openness and accessibility in Bermondsey Square is representing more interaction with busy streets around with creating a dynamic space. Bermondsey Square wins the multiple uses of space while Empire Square considered as an attractive design for much of participants in this study. It is important to work toward the use value more than the aesthetic value in order to increase the enjoyment of occupiers and attract more people to a place in order to create a vital place. Most of the participants agree that Bermondsey Square is active and livable place comparing to Empire Square. The design plays a useful role in Bermondsey Square to increase the vitality of it.

## 8. Conclusion

In conclusion, vital spaces do not have the exact reasons or work in similar procedures. Therefore, some public spaces considered to be neat, clean and empty while some other can be vital as a result of different basis that produce different feeling in the space. It is notable that vitality is an essential component for healthier and safer spaces where people tend to interact socially with each other and spend a long period in public. However, empty urban public spaces indicate that something is not right with its design, its management or perhaps both. People attract other people but still planners, and architects seem to find that mysterious. It is easy to realise that busy streets have both users and crowd watchers (Jacobs, 1961). Yet, the presence of people should not be only for the commercialized functions but must be supported by well-designed spaces and facilities that enable them to sit and spend more time in public without necessary purchasing food or drink to have a reason for their presence. The outcomes of this research suggested that vitality add value by increasing the vitality of space and delivering social benefits. The findings of this paper are leading toward future researchs such as exploring the reasons for the mixed- use development residents' absence and the lack of users from the local area in Empire Square. It would help having balanced public space for all different groups of their society. Moreover, this future research should focus on assessment of urban public

spaces in view of both the social and physical dimensions. According to the most recent trend in urban design that is place making, the research can provide responses to the current condition of these spaces as a result of this sequence.

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# TOWARDS GUIDELINES FOR SOUNDSCAPE DESIGN

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*Architects and urban planners request guidelines with regards to soundscape design. In 2013 staff and students at the University of Sheffield, UK, were invited to take part in an electronic survey to investigate what kinds of urban open spaces that they prefer, and how these spaces should be designed with regards to soundscape. Respondents were asked to freely name their favourite outdoor place in Sheffield, and to what extent they found a list of 45 social and recreational activities, as well as a list of 40 sound sources appropriate for this place. A total of 935 individuals completed the questionnaire. A hierarchical cluster analysis of the 45 social and recreational activities revealed three main categories of favourite outdoor places: 'Urban Park', 'City Centre', and 'My Space'. For 'Urban Park' natural sounds were appropriate when clearly audible, sounds of individuals when moderately audible, sounds of crowds when slightly audible, and technological sounds when inaudible. For 'City Centre' sounds of individuals were appropriate when moderately audible, whereas natural sounds, and sounds of crowds were appropriate when slightly audible. Technological sounds were appropriate when inaudible. For 'My Space' natural sounds and sounds of individuals were appropriate when moderately audible, whereas sounds of crowds and technological sounds were appropriate when inaudible. This kinds of profiles may serve as design guidelines for urban outdoor spaces with regards to soundscape, based on their social and recreational purposes.*

Keywords: soundscape, urban design, guidelines

## 1. Introduction

In 2010 I organised the international conference *Designing Soundscape for Sustainable Urban Development* in Stockholm, Sweden (Axelsson, 2011). The purpose was to introduce soundscape to architects and urban planners, and to discuss how soundscape may be implemented in these creative disciplines. A number of internationally renowned architects and planners were invited to present their thoughts on soundscape. Still, in the final panel discussion and in the evaluation of the conference, participants requested further information on how to approach soundscape in practice. To bring this work forward, I organised a special session on soundscape at the annual conference of the Association of European Schools of Planning (AESOP) in Ankara, Turkey, 2012. Also here, participants in the session requested further practical guidance on how to approach soundscape. A specific request concerned soundscape design guidelines. The present paper is an attempt to meet this need.

The environmental planner Lex Brown, Griffith University, Brisbane, Australia, has argued that soundscape quality is a matter of the match between the soundscape and a place, and particularly whether the soundscape enables desired activities (e.g., Brown & Muhar, 2004). This notion was one of my inspirations when I, in collaboration with the Noise Abatement Society, tried to map the soundscape of urban outdoor areas in Brighton & Hove, UK, in 2011, in order to develop an applied soundscape strategy for the city (Lavia, Axelsson & Dixon, 2012). Another source of inspiration was the Sociotope Mapping that the City of Stockholm developed in the early 2000s in order to better understand the human scale of urban outdoor space (Ståhle, 2002, 2003, 2006). Sociotope Mapping involves investigating what social and recreational values the citizens associate with specific places. This knowledge is used to avoid goal conflicts in the planning process.

In order to map the soundscape of urban outdoor areas in Brighton & Hove, I and the Noise Abatement Society developed an on-line questionnaire. It was circulated to local interest groups with support from the Brighton & Hove City Council. Among other things the questionnaire asked the respondents to name their favourite outdoor place in Brighton & Hove, and to assess to what extent a list of 27 social and recreational activities would be appropriate for this place. The respondents were also asked to assess to what extent a list of 29 sound sources would be appropriate in their favourite place (Lavia, Axelsson & Dixon, 2012). This is a similar approach as used when Sociotope Mapping was introduced in Stockholm.

In total, 354 individuals, 15 years or older, completed the soundscape questionnaire in Brighton & Hove. Using hierarchical cluster analysis, 5 categories of favourite outdoor places, as well as 5 categories of soundscapes, were identified. A Chi Square analysis showed that there was a statistically significant and meaningful relationship between the 5 categories of favourite outdoor places and the 5 categories of soundscapes.

A similar approach as used in Brighton & Hove would be useful for creating soundscape design guidelines, by focusing on categories of favourite outdoor places and what sounds would be appropriate there. In the present paper I present a study conducted in Sheffield, UK, in 2013, in which I used an improved version of the questionnaire used in Brighton & Hove.

## 2. Method

### *2.1 Participants*

Staff and students at the University of Sheffield were invited to take part in the study through the established email lists for staff and student volunteers. A total of 1,437 persons began the questionnaire, while 935 (65 %) completed it. Among the 935 persons who completed the questionnaire 598 were females and 337 were males; 529 were aged 15–34 yrs, 389 aged 35–64 yrs, and the remaining 17 were 65 yrs or older. With regards to occupation, 530 were employed or self-employed, 379 were students, the remaining 26 were retired, unemployed, long-term sick, or on leave. Although the participants virtually lived all across Sheffield, areas close to the University of Sheffield were clearly over represented.

### *2.2 Questionnaire*

The online questionnaire was an improved version of the questionnaire used in Brighton & Hove in 2011. It consisted of four sections. Section 1 concerned demographic data, such as the postcode of the area where the respondents lived, gender, age, as well as occupation. To allow respondents the opportunity to register complaints about noise, Section 2 concerned noise annoyance. It was based on the ISO/TS 15666 question with verbal rating scale (ISO, 2003), with the amendment that the response category ‘Not at all’ was divided into the two response categories ‘Not at all (don’t hear it)’ and ‘Not at all (hear it but not bothered by it)’. Section 2 also included a few questions on sensitivity to sound. In Section 3 the respondents were asked to name their favourite outdoor place in Sheffield, and to indicate to what degree a list of 45 social and recreational activities would be suitable in this place (5-point category scale: ‘Not at all/not applicable’, ‘Slightly’, ‘Moderately’, ‘Very’, ‘Perfectly’). In Section 4 the respondents were asked to indicate to what degree a list of 40 sound sources would be appropriate in the favourite place (5-point category scale: ‘Not audible’, ‘Slightly audible’, ‘Moderately audible’, ‘Clearly audible’, ‘Completely dominant’). The two lists of social and recreational activities, and sound sources were extended based on open-ended responses obtained in Brighton & Hove in 2011.

## 3. Results

*3.1 Favourite outdoor places*

The 45 variables of social and recreational activities were subjected to a hierarchical cluster analysis, using Squared Euclidean Distances and the Furthest Neighbour (Complete Linkage) algorithm (SPSS 22 for Windows). The improvement of the agglomeration coefficients suggested that it would be reasonable to select 3, 5 or 7 clusters of favourite outdoor places in Sheffield. Cross Tabulation of the three different cluster solutions against the name of the favourite outdoor places showed that the 3-clusters solution provided enough detailed information.

Cluster 1 was named 'Urban Park'. This is the sort of place where people go to enjoy the surroundings, to hang out with friends and family, go for a walk, let the children play, or to play informal games, like Frisbee or Rounders, or to have a picnic or a barbeque.

Cluster 2 was named 'City Centre'. This is where people go to enjoy active street-life together with their friend. The 5 and 7-clusters solutions suggested that Cluster 2 in the 3-clusters solution could be split into two sub-clusters: one representing areas for outdoor dining, like a sitting out area of a restaurant or a pub, and one representing enjoying active street life and shopping. However, these two potential sub-clusters were only a matter of the degree to which certain city centre activities were given priority. In the first of the two potential sub-clusters, people gave priority to having something to eat or drink together with their friends, whereas in the other people gave priority to experiencing active street life. Thus, Cluster 2 in the 3-clusters solution represents a combination of these two potential sub-clusters.

Table 1. The five sound-source variables most strongly associated with each of the four variamax rotated components.

| **Technological Sounds** | **Natural Sounds** | **Sounds of Individuals** | **Sounds of Crowds** |
|---|---|---|---|
| Construction | Rustling leaves | People talking | Buskers |
| Industry | Insects | People enjoying themselves | Outdoor events |
| Waste collection | Birdsong | People calling out | Non amplified music |
| Sirens/alarms | Wind | Children at paly | Amplified music/ announcements |
| Ventilation | Wildlife | People walking | Sporting events |

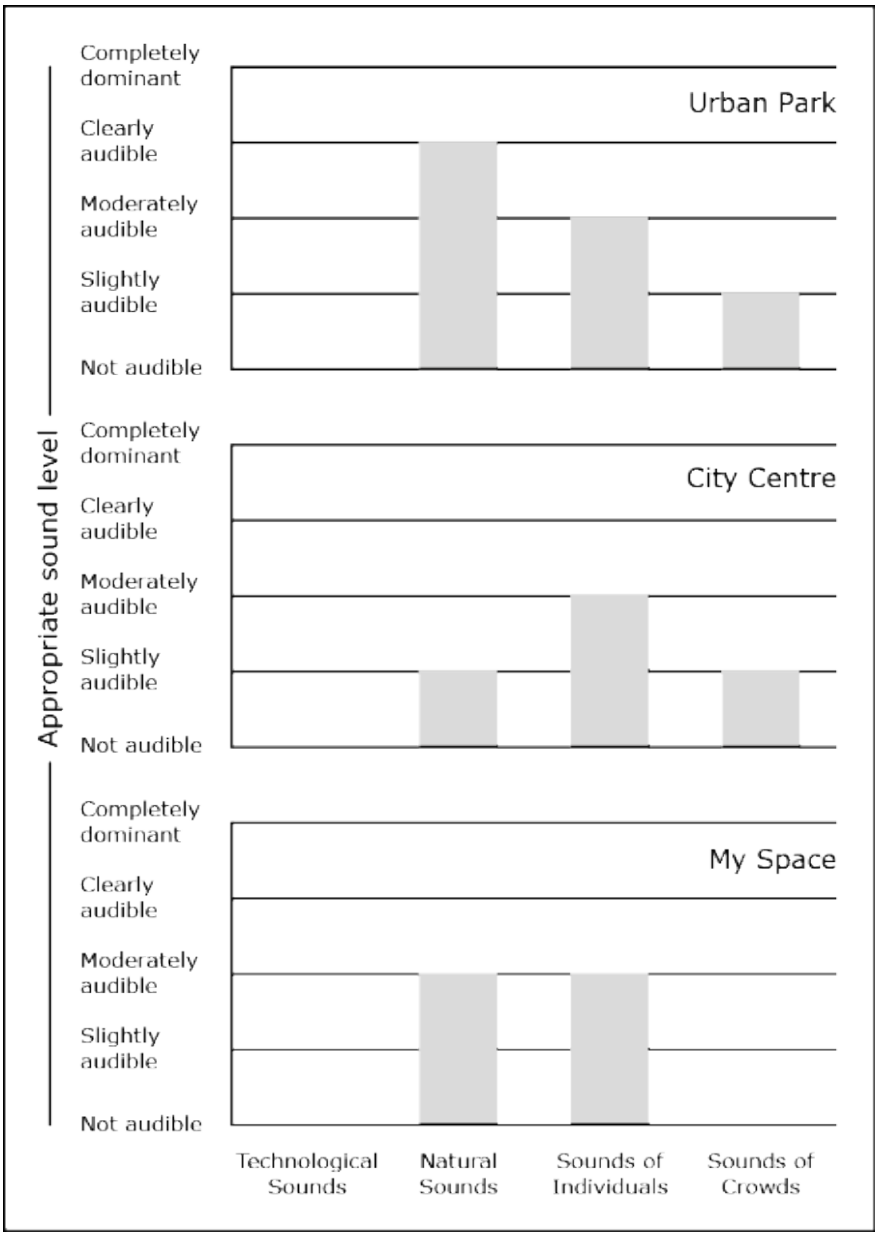


Figure 1. Soundscape profiles of 'Urban Park, 'City Centre' and 'My Space'.

Cluster 3 was named 'My Space'. This is where people go to withdraw from crowded areas and to escape the city stress. A typical place in this category was 'My own garden' or 'My allotment'. In Sheffield 'My Space' could also be found in one of the city's many parks or green areas, or the Peak District National Park.

*3.2 Sound source components*

Because it was impractical to work with 40 variables of sound sources, it was decided to reduce them by the aid of a Principal Components Analysis. Using the matrix of Pearson correlation coefficients, and Eigenvalues larger than 1.0 as criteria, it turned out that there was a small number of deviant

sound-source variables in the set of data, creating a rather indistinct set of principal components. After removing five such sound-source variables, the analysis resulted in four clear varimax rotated components. They explained 26.4, 17.2, 6.2 and 4.1 % of the variance (53.9 % in total). The four varimax rotated component were named 'Technological Sounds', 'Natural Sounds', 'Sounds of Individuals', and 'Sounds of Crowds' (see Table 1).

*3.3 Soundscape profiles*

Soundscape profiles were created for each of the 3 clusters of favourite outdoor places. For the four varimax rotated components of sound sources, the five sound-source variables with the strongest association with each component were selected to form indices, based on their median values. Table 1 presents these five sound-source variables for each of the four variamax rotated components. Figure 1 presents the soundscape profiles for each of the three clusters of favourite outdoor places. The values on the Y-axes are median values calculated across the five sound-source variables for each of the four variamax rotated components, representing appropriate sound levels.

Figure 1 shows that the appropriateness of natural sounds varied with the type of place. For 'Urban Park' natural sounds were appropriate when clearly audible, whereas for 'My Space' they were appropriate when moderately audible, and for 'City Centre' when slightly audible. The sounds of individuals were appropriate at a moderate level in all three sorts of places, while the sounds of crowds were appropriate when slightly audible, except for 'My Space' where the sounds of crowds were unacceptable. Technological sounds were unwelcome in all of the three types of places, also in the city centre of Sheffield.

## 4. Discussion

Architects and urban planners are requesting guidelines to soundscape design. In the present paper I propose an approach involving defining a place based on its social and recreational values, and identifying what sounds are appropriate in the place and to what extent. In the present case I conducted an electronic survey among staff and students at University of Sheffield in the UK, asking them to name their favourite outdoor place in Sheffield. They were also asked to assess to what extent a list of 45 social and recreational activities, as well as a list of 40 sound sources would be appropriate in their favourite place. Through a cluster analysis of the list of 45 social and recreational activities, I identified three types of places, named 'Urban Park', 'City Centre', and 'My Space'. For each of the three types of places I created soundscape profiles based on the list of 40 sound sources.

The three soundscape profiles presented in Figure 1 may serve as soundscape design criteria for these sort of places in Sheffield. For example, the top panel in Figure 1 suggests that if the City of Sheffield would like to create a new urban park, it should aim to create a lush, green space that promotes the sound of nature, including wind in vegetation and singing birds. The park should be located at a safe distance from surrounding roads and industrial areas to avoid technological sounds. The park must allow individual human activities, like walking, jogging, informal games, picnic and barbeque, without forming large crowds of people.

A potential limitation in the present approach to soundscape design is that it is based on human memory and imagination. An alternative would be to invite people to a laboratory where the soundscapes can be reproduced or simulated. The participants could then either assess reproduced soundscapes or create their own ideal soundscapes. Soundscape design guidelines based on such experiments might be more detailed.

In the present study the participants expressed that technological sounds are unacceptable in any place, but what does this actually mean. Would there be a sound level at which, for example, road traffic is acceptable although it may be heard in the background?

In a study in Stockholm it was found that 80 % of the visitors in parks and green areas rated the soundscape as 'Good' or 'Very good' when the sound levels from road traffic was at or below 50 dB(A) (Nilsson, 2007). Probably such a sound level cannot be considered as equal to 'Not audible', but to correspond to 'Slightly audible'. So, perhaps, in reality, people would accept another sound level than what they would imagine. Possibly the appropriate sound levels could be identified more accurately in a laboratory study. On the other hand, it would be laborious and impractical to survey a whole city with this method.

Another potential limitation in the present approach is that it relates to a general and overall scale, giving the impression that all areas under 'Urban Park' should be the same throughout. This is probably not the case. It is more likely that a large urban open space should provide a diversity of social and recreational activities, and corresponding soundscapes. For example, among the 149 participants who mention the Sheffield Botanical Gardens as their favourite place, 76 responses fell in the category 'My Space', 60 in 'Urban Park' and the remaining 13 in 'City Centre'. Thus, the present approach to soundscape design provides us with rules of thumb, not detailed roadmaps to every destination.

A specific limitation with the present study is that it only concerns Sheffield in the UK, and mainly involved staff and students at the University of Sheffield. The results must not be generalised to any other city, not even within the UK. More studies of this kind are needed to learn how this approach to soundscape design may be implemented in practice. In particular it would be interesting to conduct a survey with a representative sample of the population in a city.

## 4. Acknowledgments

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# CAUGHT BETWEEN FAUST AND FAUX: DEVELOPMENT AND CITY DESIGN [*]

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Abstract

This paper considers the challenges of contemporary urban design in the developing world -- China in particular, but "Asia" more generally – in the face of rapid economic growth and explosive urbanization. This extraordinary growth led by the deliberate state policy in collusion with local and global capital has provoked many scholarly ruminations. Editors of a recent book celebrate "the urban dreams, projects, and practices" as a "worlding" phenomenon that eludes the conventional frames of political economy or postcolonialism. But the urban outcome and "dreams" of this rapid development -- "Faustian" in scope -- is neither authentic nor sustainable. The absence of authenticity and sustainability is reflected in what one critic describes as the "original copies" in discussing the rise of simulacrum and simulacrascape in China. This paper argues however that mimesis, not unique to China, is inevitable, in the absence of genuine endogenous response as the exigencies of global capital leaves little time for reflection and deliberation. The paper concludes by making a case for an urban design manifesto for China, and the global south more generally based on considerations of cultural continuity, livability, social justice, and sustainability.

I write this essay from an outsider's perspective on the breathtaking urban growth and transformation that are currently underway in China, and what I consider are the concomitant challenges for urban design.[1] I will begin by discussing what I consider the two major challenges for urban design in China: (1) the momentum of growth and development, which I call the Faustian imperatives for urban transformation; and (2) emergence of the faux, or "Original Copies: Architectural Mimicry in Contemporary China" – as the title of a recent book by Bianca Bosker suggests.[2] I will conclude by suggesting how the Chinese urban designers might address these challenges, and thus making a case for an "urban design manifesto" for China.

[*]AUTHORS' NOTE: An earlier version of this paper was published in Chines. See . Tridib Banerjee "From Faust to Faux: Concomitant Challenges for Urban Design In China" (translated in Chinese by Wan Li and Yang Yuzhen) ***New Architecture.*** 06:126-130.

(1). The Faustian Imperative of Development:

Currently the media is full of stories about China's stunning economic growth –7.8 percent in the third quarter of 2013, and a projected 7.5 percent by the end of the We read stories about China's rise as a "global factory," its voracious appetite for energy, its dominant contribution to global warming, economic impacts of its export on domestic markets and jobs in other countries, its "colonization" of primary resource producing countries in Asia and Africa, its domestic income inequality and rural poverty, a steadily growing consumer economy, the growth of its cities and corresponding investment in infrastructure and architecture, and so on.

While occasionally these stories are critical, more often than not they are adulatory, or at best one of deference and awe both in the media and professional circles. In publications on finance, technology, engineering, architecture and real estate such obsequious stories abound. In architecture trade magazines and glossy coffee table publications homage is paid regularly to China's modern structures and infrastructure, the emerging skylines of its cities, and its growing collection of "signature architecture" produced by world-renowned architects and firms. Today not just China, but also other "emerging markets" – as the recently prospering developing countries are fondly referred to in international finance and business circles – have created a new sandbox for Western architects to play out their aspirations, fantasies, and imaginations under the indulgent auspices of an authoritarian state and global capital. It will be recalled that in the immediate post-colonial years when the craze for new capital and new town development provided opportunities for the frustrated visionaries whose ideas were never fully accepted, indeed ridiculed in the West, to see their megalomaniac fantasies take shape in the desperate and helpless terrains of the decolonized world. The new global economy and the powerful authoritarian states have again created opportunities for such architectural fantasies to be built in the deserts of Saudi Arabia and the Emirates, or in the coastal plains of China. These projects have become the driving images of development today.

In a recent article critiquing contemporary urban development of China, Daniel Abramson aptly invokes the legacies of Hausmann and Corbusier as the defining characteristics of the transformation of the Chinese cities.[3] But the names of neither Hausmann nor Corbusier necessarily symbolize the driving force behind these changes rather it is the Chinese, or earlier, the Saudi state that drives this change. To define the role of an authoritarian state in urban transformation and development in the contemporary project of modernization, it is apropos to consider the work of Marshall Berman. [4]

Although Berman's work predated the fantastic changes in the developing world we are observing today and was mainly retrospective of the nineteenth and twentieth century urbanism of the Western world, his treatise on "the experience of modernity" is still relevant today. In his treatise on the experience of modernity that combines a Marxist vision of modernism with a more humanistic interpretation of modernity drawn from Baudelaire and contemporary literary writings – the Faustian metaphor, especially that of

Goethe's "Faust as a Developer" – is of immediate interest to us. This metaphor remains an important trope in the way Berman subsequently describes the modern transformation of cities and the human consequences of the passage from tradition to modernity.

Of the many versions of the story of Faust told over some 400 years, Berman found Goethe's rendition of Faust most appealing because of the imperative of development intrinsic to this Faust' desire for change. "The vital force that animates Goethe's *Faust,*" writes Berman, "...is an impulse that I will call the desire for *development*." (p. 39) What appeals to Berman about Goethe's interpretation is the "affinity between the cultural ideal of self-development and the real social movement toward *economic* development."(p. 40) In other words the transition to modernity can be achieved only through the parallel development of the individual and the larger society, a very republican idea that is embedded in many of the contemporary development theories.

According to Berman, Faust emerges as "the Developer" with his own imperative for rearranging the world by dismantling the traditional order and creating the modern world. During this phase Faust transforms the impetus for self-development to the development of the entire society and the physical environment. His visions are no longer in the realm of dreams and fantasies, but that of concrete projects and plans. Faust is not just a developer but also a planner. In Berman's (1982) words:

> "He outlines great reclamation projects to harness the sea for human purposes: man-made harbors and canals that can move ships full of goods and men; dams for large-scale irrigation; green fields and forests, pastures and gardens, a vast and intensive agriculture; waterpower to attract and support emerging industries; thriving settlements, new towns and cities to come – and all this to be created out of a barren wasteland where human beings have never dared to live." (p. 62)

But development requires -- in modern terms -- capital, labor, and power. But where and how would Faust obtain such resources? Berman thought that this is an area that necessarily involves politics if not political economic explanation, which Goethe muddled through because of his uneasiness with the unavoidable political implications.

If Goethe's Faust is a developer, and development is an intrinsic experience of modernity, who then is Faust and who is Mephistopheles in the contemporary development experience? The answer may not be immediately obvious. Berman places the "desire for *development*" (p. 39) squarely in the imperatives of capitalism that requires growth, innovation, and change. But there is also an implicit notion of agency here, which Berman defines further when he expresses his own despair and disbelief in the way large scale public works projects – the Cross-Bronx expressway to be specific -- under the leadership of Robert Moses demolished the core of the Borough of Bronx where he grew up. The tableaux of New York in the middle of the last century, according to Berman, have been "an image of modern ruin and devastation" (p.290). Berman does not invoke Faust here, nor does he suggest Robert Moses as the twentieth century proxy for Faust, just as it would have been inappropriate to think of Hausmann as the Faust of the late nineteenth century Paris. Yet the Faustian imperative of change and growth that is manifested in the routine clearance and renewal of urban spaces, it can be argued, is

deeply embedded in the experience of modernity. The principal agencies of change lie in the authority of the state and in the capitalist economies, and some would argue, are intrinsic to the capitalist mode of production. Indeed contemporary theories of the political economy of urban growth have variously characterized the nexus between the state and capital as the "growth machine," [5](Molotch, 1976), the "state apparatus"[6] (Clark and Dear, 1984), and the "urbanization of capital" (Harvey, 1985).[7]

Some of the recent writings on the urban outcomes of globalization are beginning to capture the dynamics of development.[8] Particularly worth noting is William Site's account of the contemporary changes in New York, a sequel to Berman's account some fifty years later.[9] Rather aptly Sites describes the dynamics of redevelopment in midtown and lower Manhattan during the last two decades as "primitive globalization" which he defines as the process where "certain states, neither circumvented by globalization nor resistant to it, instead, actively facilitate globalization through the use of state power in highly destructive or "disintegrative' ways" (p. 2). The concept of "primitive globalization" captures the essence of what I have called the Faustian imperative, and also helps to locate Faust as the symbol of state power, and Mephistopheles – if we want to pursue the metaphor – as the icon of global capital.

We should note that the Faustian metaphor may not fully capture the contemporary drive for development captured by the notion of "primitive globalization." Goethe's rendition of Faust as a developer was not seriously challenged by the notion of a world that was fragmented, differentiated, and specialized in numerous nation states, many of which were controlled by megalomaniac state authorities. Faust's world was a uniform and homogenous plane where the identities of city, country, nation, and beyond were conflated into a seamless space of continuity and tradition to be re-formed by imperatives of modernity and its inherent "desires of development." In this undifferentiated landscape there was no competition between nations, nor any ranking of nation states by power and wealth. But in today's world, nations and cities are in competition with each other, all vying for global capital and "foreign direct investment" (or FDI). Today there may be many Fausts competing for the attention and favor of one Mephistopheles: global capital. A country like China, it seems is in a race with time and itself, to reach the number one ranking as quickly as possible. Indeed a recent forecast by Goldman Sachs reported in *The Economist* (2007) shows China surpassing the United States in GDP by 2025, and just about doubling the US GDP by 2050.[10]

Recent events in China has shown that the provincial and local states of very large cities have taken on a life of their own, in competition with each other, often in defiance of the nation state. The Chinese State has now bred many sub-national state authorities that are all being driven by the same Faustian drive as the nation state. They are all competing with each other building, iconic monuments, exuberantly dominating city hall (to the point that the national government was compelled to put a ban on such extravagant public buildings, as reported in a recent story published in *The Economist*). Examples abound as documented by Tom Campanella in his book entitled "The Concrete Dragon".[11] It is within this frame of reference we examine the Faustian imperatives that are driving the

unprecedented transformation of not only just China, but a number of emerging economies, albeit at lesser pace, and of smaller scope.

(2) Obsession with the Ersatz

In his book Tom Campanella provides a rather rich narrative of the scale and pace of the Faustian development, drawing mainly from the thirty-plus year history of Shenzhen, from a coastal village to a booming metropolis of 15 million, today a ranking member of the Chinese urban hierarchy. Interspersed with the story of China's Faustian development, are the stories of China's obsession with the "faux" or the ersatz landscapes of new development that often, in fact typically, copy in, out of, or miniaturized scale, built forms of the West. These simulacra often include important public buildings to luxury residential palaces of the *nouveau riche*. This may include new luxury housing or new landscapes of mass consumption – amusement parks and shopping malls. Indeed the simulacra are not limited to single buildings or complexes but may comprise large urban districts or even townships. The nine new satellite towns under construction – each on a particular European country theme – are such examples. Bosker refers to them as the "simulacrascape." The following table includes a list of such ersatz or faux elements of the emerging Chinese simulacrascapes described by Campanella and Bosker with illustrations (not included here).l

In exploring the motivation of the faux, the ersatz, and the phantasmagoria it is important to note several points. First, as Campanella's and Bosker's discussion of the broader phenomenon and illustrations suggest, they are not all strictly examples of simulacra or even simulacrascapes. Some of them are inspired by a particular style or period architecture and urban form, usually of Western origin. Second, not all are copies of the Western form, a few are simulacra of native landscape and cityscapes. Third, some are inspirational copies of the ersatz, like Disneyscape, or are examples of what Umberto Eco would call "hyperreality." Finally, this is not a Chinese obsession only, Other countries, not just the developing world, but the developed world also, are also engaged in the production of such ersatz space. It will be incorrect to assume that the obsession with the faux (generically speaking) is cultural trait of the Chinese, or the Indian, or the Indonesian. Americans and Europeans are not above seeking such ersatz experiences in the cityscape. Recall that Umberto Eco's "travels in hyper-reality" was inspired by the faux and kitschy urban outcome of the economy of conspicuous consumption in the United States. If all this are an example of "consumer sovereignty" in urban design,[12] examples abound in the US as in many different parts of the world. Thus Venice, California was an ersatz copy of Venice, Italy. Now there is Venezia in the Las Vegas Strip, a casino hotel of simulacrascape of the original Venice. Then there is Paris, New York New York, the Luxor, and many other such faux environments of consumption and entertainment on the Strip. While Disneyland in California created a simulacrum of a New Orleans town square, and a seven-eighth scale simulacrascape of a generic Main Street to create a subtle "Gulliver effect", its east coast counterpart Disney World created a simulacrascape of the Hollywood of the earlier part of the last century complete with traffic signals, art deco facades, gas stations and drive-ins. Indeed the simulacarscape of

Table 1. Simulacra and Simulacrascapes of China (examples with images discussed by Campanella and Bosker).

| Campanella | Bosker |
|---|---|
| Maisons-Laffitte (outskirts of Beijing, owned by Zhang Yuchen (S) | Chateau Maisons –Laffite (S) |
| Lamp King Tower, City of Guzhen (HR) | Tianducheng, Hangzhou (SS) |
| Old Beijing miniature landscape park (DS) | Venice Water Town, Hangzhou (SS) |
| Continental style villa estate, Nanjing (SS) | Weimer Villas, Anting Town |
| Cambridge Impression gated community (SS) | Holland Village, Shanghai (SS) |
| Southern California style villa (S) | English County development, Kunshan (SS) |
| Grand Epoch City (1/6 scale reproduction of Andingmen gate in Beijing), Xianghe, Hebei Province (SD) | Goya development, Hangzhou (SS) |
| Amrican Dream Park, suburban Shanghai (SS) | New Amsterdam, Shenyang (SS) |
| Lingshan Buddha, Wuxi (HR) | |
| Window of the World, Shenzhen (SS) | Minghang People's Court, Shanghai (S) |
| Mini-U.S. Capitol, Beijing World Park (S) | San Carlos community (SS) |
| South China Mall complex, Dongguan (SS) | Thames Town, Shanghai (SS) |
| Zhongshan Street, Zhongshan (SS) | Palais de Fortune (S) |
| Xintendi style entertainment district, Nanjing (DS) | Luodian Town, Shanghai (SS) |
| Xinghai Castle, Dalian (SS) | British Town, Chengdu (SS) |
| | Forest Manor, Shanghai (SS) |
| | Fontainebleau Villas (SS) |
| | Palm Springs, Shanghai (SS) |

| | |
|---|---|
| | Cathay View, Beijing (DS) |
| | Fifth Garden, Shenzhen (DS) |
| | Mediterranean Villas (SS) |

[Key: HR: hyperreality; S: simulacrum; SS:simulacrascape; DS: Disneyscape]

"invented streets"[13] of the new open air shopping malls are presumably inspired by some referent urban form, if not the urbanism of such places. Thus invented streets in Los Angels like CityWalk in the Universal City (which represents, according to architect Jon Jerde, "the quintessential Los Angeles"), or "The Grove" in the mid-Wilshire district, or "Americana" in Glendale. According to the developer Ric Caruso, consultants from Disney designed some of the details of the street furniture, streetcar and the like. Thus "The Grove" may have been a simulacrum of a simulacrascape.

In Europe there is a record of creating simulacrascape based on architecture of different part of the world. Sans Souci, the eighteenth century summer palace and gardens built by Frederick the Great, King of Prussia, in Potsdam near Berlin is indeed a carefree whimsical exuberance of hyperreality that included a Chinese pavilion presumably designed to look Chinese (See Figure 1). Similarly of King George IV of England built a summer palace in Brighton simulating of the architecture of palaces in India built in the Moghul era. Indeed Europe has a long history of rebuilding cities almost brick by brick exactly the way old city was after major disasters or wars. Rebuilding of London after the 1666 great fire was such an enterprise. The Poles rebuilt parts of Cracow and Warsaw after the World War II. The Germans recently have rebuilt the bomb damaged district of Dresden exactly the way it was. And the plan for the Innenstadt Neue Berlin is based on the principle of rebuilding the street walls of the old city (see Figure 2). Fires and wars not only destroy the built form, but also the social fabric and urbanism of the city. Rebuilding in the images of the old also becomes a simulacrum, just like the recent renovation of the Qianmen district in Beijing. Preservation or reconstruction of the shell of the old historic buildings or districts are complete simulacra because they space they enclose are now used for different purposes, and by different social class. Klaus Kunzmann discusses restoration of the façade and the main edifice of the historic Schloss in Braunschweig by developers who are using it as a front for a giant shopping mall.[14] In Berlin a collective effort is underway to rebuild the Stadtschloss which was heavily damaged by the Allied bombing during the World War II, and then taken down completely by the GDR government who chose to build a modernist structure at the site of the old Stadtschloss to hold the assembly of the socialist government. That legacy of the socialist era is now gone, unceremoniously demolished to make room for the simulacrum of the historic Stadtschloss (see Figure 3). The interiors space will be now used by commercial interest—shopping, offices, and the like.

Returning to the developing world, simulacrascapes are not uncommon in the recent urban expansion of the global south. Thus incongruously in the empty western edge of Yamoussoukro, Ivory Coast, stands the Basilica of Our Lady Peace, an imposing cathedral – a simulacrum of the St. Peters cathedral in Rome, and biggest in the world. In

the outskirts of Bandung, Indonesia, a gated community called Vila Duniya (global village) offers simulacrum houses representing different European cities: Amsterdam, London, Paris, Rome. At the edge of the Jakarta metropolitan area two new planned communities - Kota Wisata and Kota Legenda - built by the same developer are offering weekend homes for Jakarta area prosperous class, but set in multiple simulacra of tableaux from different countries and places, mainly European but a sprinkling of global south as well. Then there is Hiranandini, a new development in the northern fringe of the Mumbai metropolitan area. The design of this complex of high-rise luxury towers, complete with its own shopping center, is designed after the Western classical architecture as would have been norm in the colonial times. What is relatively unique about the project is not the identity of its simulacrascape, but its official name, which is distinctly Indian. Typically such enclaves of modern housing for well-to-do Indians, many NRI's or non-resident Indians, will be called Buckingham Gardens, or Windsor Estates, or Kensington Village, as Anthony King has pointed out previously.[15] ,

(3) Simulacra, Simulacrascape, and the Challenges of Urban Design:

What I have attempted to establish in the previous narrative is that the examples of the faux or ersatz is not peculiarly unique to China; other countries in the global south are also vulnerable to such tendencies. This is apparent especially in the urban additions comprising the higher end, upper class spaces of consumption. When I asked the young developer-architect of Kota Wisata and Kota Legenda about his choices for such ersatz non-indigenous style, his answer seem to imply: "wouldn't you rather have a good copy than a bad original?" This answer also suggests that perhaps the state of professional practice is not advanced enough to respond to the demands of the emerging consumption class in emerging markets. In other words development may have outpaced the state of architectural practice and pedagogy. Hence the tendency for the global south corporate interests (whether government of private) – or in other words, the forces behind the Faustian development – is to (a) hire "starchitects" from the global north, or (b) copy the built form of the global north, hence the preponderance of ersatz simulacra.

To test this assumption I went through *The Phaidon Atlas of Contemporary World Architecture Travel Edition* (2005) and summarized the distribution in Table 2. Of course the choices are that of the publishers, and architectural experts and observers may disagree. I have classified the architects of these chosen projects, mainly by their names, into two groups: Global South and Global North. The table shows that in Africa and Southeast Asia architects from the Global North tend to dominate the production of "world class" architecture." In China, the majority of the chosen projects are of domestic origin, although the Global North architects seem to capture a significant share. But at least the table seems to refute the notion that the local architects are not able to produce "world class" architecture. However, the scope of this analysis does not interrogate whether the world class architecture produced by architects from global south are endogenously grounded as expressions of "indigenous modernity,"[16] or simply influenced by the style and genre popular in the Global North. In other words: Is this the kind of architecture that is popularized by the "parametric design" of Frank Gehry or Zaha

Haddid, or does it reflect styles adopted, modified, and ultimately indigenously grounded? Cases in point are, for example, the architecture of Charles Correa and Balakrishna Doshi, who worked with Le Coubusier during his stint in India, and were profoundly influenced by his style, but were able to develop expressions of modernity that were grounded in the climate, culture, and customs of India.

In any event, I hope this rough analysis proves that copying and mimesis are not unique to the Chinese culture, unlike what Campanella and Bosker had implied, if inadvertently. Examples abound in other cultures, including the West. Indeed as Bosker has indicated that mimesis can be a rhetorical device as in art, often as "imitation of life," and common in the Chinese landscape and garden design tradition. Certainly the Chinese culture has a rich heritage of originality and innovation in its arts and sciences, as history books would testify.

Table 2. Distribution of contemporary world architecture (and their architects) by global regions, from *The Phaidon Atlas of Contemporary Architecture Travel Edition*.

| World Regions | Number of examples | Architects and architectural firms representing (author's best guess) | |
|---|---|---|---|
| | | Global South | Global North |
| Oceania | 64 | 64 | 0 |
| Asia (excluding China and Japan) | 18 | 14 | 4 |
| Asia (China) | 61 | 33 | 28 |
| Asia (Japan) | 69 | 56 | 13 |
| Southeast Asia | 24 | 5 | 19 |
| Europe | | Not considered | |
| Africa | 17 | 6 | 23 |
| North America | | Not considered | |
| South America | 40 | 34 | 6 |

The Chinese problematic, however, is not the mimesis but the quantum of simulacrascape that is emerging in the context of its Faustian development. The question is, who commissions such work? Who funds them? And here, Campanella's excellent and rigorous historical account suggests that it is often the wealthy developers or corporate interests that lead to such simulacrascapes. One wonders which minister or state authority thought of the nine new towns of Shanghai to be built in the images of different European

cities, and why? The answer might be obvious or known to the Chinese professional class, but remains somewhat of a mystery to the outsider.

The challenges for urban design in China, seem to be quite daunting. It is not clear that the Chinese urban designers can ban or control "simulacra" or "simulacrascapes" under some special authority granted by the local or national state. Nor would that be necessarily desirable. After all, simulacrascapes may have some appeal, and generally the public seem to enjoy them.

Elsewhere, I have argued that the practice and pedagogy of urban design has evolved in two very distinct traditions. The older of this tradition was rooted in the the Baroque and the Beaux Arts tradition and Platonic – authoritarian, dogmatic, elitist, and visionary in characteristics. Typically urban design as practiced and seen in architecture follows this trend. The younger tradition, in contrast, can be seen as Aristotlean – deliberative, democratic, organic, and pluralistic in characteristics. Urban design in the planning profession tend to be more of that type, and fits better with the public and participatory context of urban planning.[17] It is this tradition that is much needed in shaping the pace and directions of Chinese urban design. It should involve periodic interrogation, reflection, and dialog in the true Aristotlean tradition reflecting multiple views and demands for urban growth. Sustainability should be an important component of this on-going interrogation. It s possible to imagine that such interrogation would be involve research and expert observations, which then might lead to a "urban design manifesto" for China. This manifesto, in turn, can help structure a system of design guidance,[18] as common in the U.K., as well as design rules, codes, and performance standards that will create livable urban environment, and an urbanism grounded in the culture of China.

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End Notes:

[1] I must begin with the usual disclaimers: My exposure to China is somewhat limited, although I have visited China many times, since 1980, just when China was about to embrace market economy, and start up its growth machine, much vaunted these days. My observations might be ill-informed, and shaped by the Western media coverage of China's urban development. In event I am fully aware that it is audacious, if not presumptuous, to write about a country as ancient, as complex, and as culturally rich as China.

[2] Bianca Bosker, *Original Copies: Architectural Mimicry in Contemporary China.* Honolulu,HI: University of Hawaii Press.
[3] Daniel Abramson, "Urban Planning in China: Continuity and Change," *Journal of the American Planning Association*, 72,2,2006, 197-215.
[4] Marshall Berman, *All That Is Solid Melts Into Air: The Experience of Modernity.* London: Penguin Books, 1988.
[5] Harvey Molotch, "The City as a Growth Machine: Towards a Political Economy of Place," *American Journal of Sociology,* 82(1976), 309-332.
[6] Gordon Clark and Michael Dear, *State Apparatus: Structures and Language of Legitimacy.* New York: Allen & Unwin, 1984.
[7] David Harvey, *The Urbanization of Capital: Studies in the History and Theory of Capitalist Urbanization.* Baltimore: Johns Hopkins University Press, 1985.
[8] Tridib Banerjee, "Urban Outcomes of Globalization: Theory, research, and Practice", *Journal of Urban History*, 34,6, 2008, 1044-1054.
[9] William Site, *Remaking New York: Primitive Globalization and the Politics of Urban Community.* Minneapolis, MN: University of Minnesota Press, 2003.
[10] In 2025, according to this forecast both China and the U.S. will have about $20 trillion in GDP. But in 2050 China will have a GDP over $70 trillion, compared to $40 trillion that of the U.S. In that year India will also catch up with the U.S> and will be poised to exceed the U.S. GDP in the following decades.
[11] Thomas J. Campanella, *The Concrete Dragon: China's Urban Revolution and What It Means for the World.* New York: Princeton Architectural Press, 2008.

[13] See Banerjee, op.cit.
[14] See Klaus Kunzmann, "Spaces of Consumption" in T. Banerjee and A. Loukaitou-Sideris (eds) *Companion to Urban Design.* (London: Routledge, 2011), pp. 391-404.
[15] See Anthony King, *Spaces of Global Culture: Architecture, Urbanism, Identity.* London: Routledge,. 2004.
[16] See Hosagrahar Jyoti, *Indigenous Modernities: Negotiating Architecture and Urbanism.* London:
Routledge, 2005.
[17] See Tridib Banerjee, "Introduction" in *Urban Design: Critical Concepts in Urban Studies (Volume I: The Idea of Urban Design).* London: Routledge, 2014. Pp. 1-24.

[18] Matthew Carmona, "Decoding Design Guidance" in in T. Banerjee and A. Loukaitou-Sideris (eds) *Companion to Urban Design.* (London: Routledge, 2011), pp. 288-303.

# INVESTIGATING THE SPACE RECOGNATION AND SOUNDMARKS IN OPEN SEMI-OPEN AND ENCLOSED SPACES VIA SEMANTIC RATINGS

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Keywords: Soundscape, Sound Recognition, Soundmarks

## Abstract

*The aim of the study is to increase the samples in enclosed soundscape studies and as a public space; metro stations have been aimed to be included into the literature. This study is a subjective approach; examines the relationship between soundmark a space and space recognation within "degree of enclosure" context in order to gain data, sound recordings were taken from site and a listening test applied to investigate if spaces could be recognized/understood just by hearing. For each sound recording, subjects were asked to explain the recorded space (if they are open/semi open/enclosed space), and define the sound sources. Besides, in order to understand sound quality of the selected spaces, subjects were asked to choose from 17 pairs adjectives for each recording, which were selected from the previous studies. Results showed that, all of the subjects determined open spaces correctly, enclosed spaces were determined with 84% while 95% of the subjects have failed to identify the semi open spaces. Only half of the subjects were able to determine the usage of the spaces. As soundmarks, bird, wind, and water sounds were defined in the open space, pay gates and coin sounds were defined in the semi-open space, and the metro itself, as well as its brakes, doors, and announcement system were defined in the enclosed space. For open spaces, subjects tended to choose adjectives as "pleasant", "calming", "natural"; while for enclosed spaces tended to choose "unpleasant", "stressing", "artificial", etc.*

## 1 Introduction

In 2011, Brown, Kang and Gjestland suggested a taxonometric system to use as a "common framework or a checklist" that classifies all sound sources [1]. In their framework, the acoustic environment is divided into two main categories according to place: *indoor acoustic environment* and *outdoor acoustic environment*. Outdoor acoustic environment is then divided into four sub-categories: *urban acoustic environment*, *rural acoustic environment*, *wilderness acoustic environment* and *underwater acoustic environment*, but the framework only classifies sound sources in the urban acoustic environment. For the other environments, sound sources are depicted as "ditto", which means that the classifications for urban acoustic environment should be applied the other acoustic environments.

The authors maintained that the sound sources of the urban acoustic environment were sufficient as a common framework, and all studies of different acoustic environments could refer to those. However, it is known that, every space has its own unique sound environment; soundscapes, the underlying sound sources and the acoustical requirements differs [2,3]. This requirements gets varied and more complex in enclosed spaces, correspondingly, auditory perception will differ because there interferes factors such as building geometries, finishing materials, activities and reverberation (to name only a few); all contribute to the acoustic environment. [4,5]. For these reasons, the classification of sound sources should be elaborated with different case studies that consider all types of acoustic environments. And in addition to outdoor sound quality studies, indoor sound quality in different environments also needs investigation.

Until the 2000s, researchers focused on soundscapes in outdoor urban environments [6, 7, 8, 9]; there was a lack of case study on enclosed spaces. In 2007, Tardieu, Susini and Poisson became prominent

names in soundscape studies for their work in train stations [10]. They indicated that in public spaces such as metro stations, users learn how to use the space and how to understand their location in a space. Researchers then aimed to understand *how* users learn and memorize the soundscapes of such spaces. With their studies of Ankara and Warsaw metro stations, Su and Caliskan drew guidelines for acoustically measuring enclosed soundscapes [11,12]. There is a series of soundscape studies in outdoor environments, mostly investigated by the ISO-led standardization group as well as some case studies on enclosed spaces such as shopping malls and metro stations [13, 14]. However, to the best of our knowledge, there is no research in the literature that compares outdoor and indoor soundscape quality.

This study is designed to determine negative and positive aspects of the indoor acoustic environment in a metro station, and compare the station's outdoor and indoor perceived sound qualities. For this comparison, Akköprü Metro Station and Ankamall Park adjacent to it were chosen as a case study in Ankara, Turkey. The study explored the following research question: "Can users recognize a space just by hearing recordings from a location?" This study hypothesizes that open spaces and enclosed spaces different acoustic environments, and thus "Users will not be able to differentiate between semi-open and enclosed spaces from an audio recording."

## 2 Method

### 2.1 Site Description

The entrance of the Akköprü Metro Station was chosen as a semi-open public space and the platform level of the station was chosen as an indoor environment/enclosed public space. Akköprü Metro Station's attributes of being public, the Ankamall Park adjacent to it and its continuous flow of pedestrians were the main factors for its selection for this study. The station is located in Akköprü, Çankaya, one of the most crowded areas of Ankara, at the intersection of Fatih Sultan Mehmet Boulevard and Mevlana Boulevard. Ankamall Shopping Center, Ankara's municipal transportation department, the 'Turkey's veterinary services department and the Ankara fire department headquarters (Figure 1) are all nearby.

Figure 1: Site view of Akköprü Metro Station

The park sits between Akköprü Metro Station and Ankamall. It contains a small square approximately 50 metres from the station and 20 metres in diameter. The square is connected to a promenade with 18 seating areas on either side it and 11 decorative pools on the middle axis, each five metres in diameter.The square directly faces the shopping mall (Figure 2).

Figure 2. View of the Urban Park and Akköprü Metro Station from Ankamall Shopping Center

Akköprü Metro Station consists of two levels: an entrance level with pay gates and ticket offices, and a platform level. The entrance level, with its large doors that create a great flow of pedestrians and air, works as a transition between the platform level and the outside. The station is 895 meters long and 216 meters wide. The height of the entrance level is 3.19 meters and the height of the platform level is 3.36 meters from the base to under the suspended aluminum ceiling, and 7.33 meters from the metro rails to the top of the metro tunnel. The floor is artificial marble 40 cm x 40 cm. On the entrance level, walls are mostly glass brick and marble as well as columns and stairs are covered with glass brick. On the platform level, the columns are covered with acrylic paint. Ballast stone is used in the rails. There are no sound absorptive material used neither on ceiling or walls to help to control the acoustical environment of the station. (Figure 3).

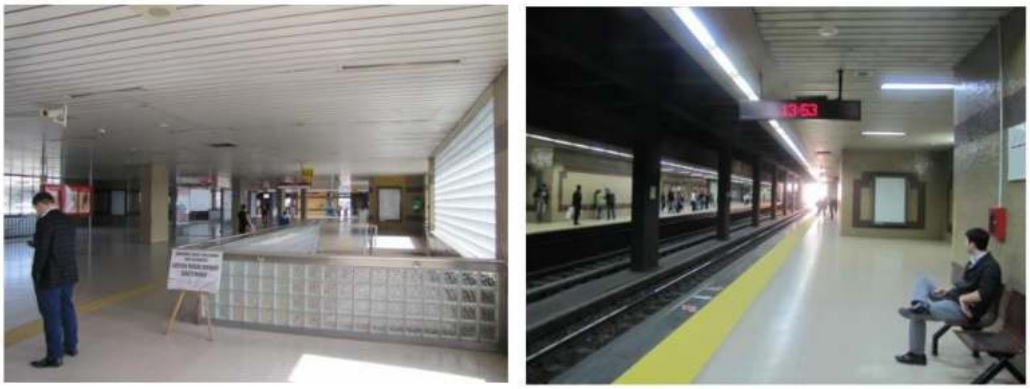

Figure 3: Entrance level (Left) and platform level (Right) of the Akköprü Metro Station

## 2.2 Methodology

### 2.2.1 Space Recognition

Sound recognition refers to a process of understanding what a specific sound is, what its source is and where it is in a specific environment. To understand this process, the relationship between sound and social context must be well understood. In *The Image of the City*, Lynch discusses the relationship among soundmarks, city images and sound and space recognition. Venot and Semidor explained that relationship with these words: "Every sound event can be preserved in a way which enables us to identify it" [15]; the authors maintained that hearing an activity creates a mental image of the sound source, the activity and the environment, which may not be as strong as a visual source but is nonetheless important.

One measurement method for sound recognition is called *soundwalking*, which aims to specify all the sound sources that form the soundscape of an area. The duration of this activity can change according

to certain factors, such as the size of the area, number of people in the group or number of sound sources. After the walking session ends, participants discuss the sound sources and architectural situations. Another way to conduct this method is to record the sound sources of an area for specific durations, then have subjects listen to the recordings and write down the sound sources they hear and whether they recognize the recorded space.

In the current study, a total of 34 sound recordings were taken from selected spaces in eight spots (Figure 4). The duration was kept short to avoid subject distraction. Listening tests were conducted in a semi-anechoic room with noise cancelling headphones.

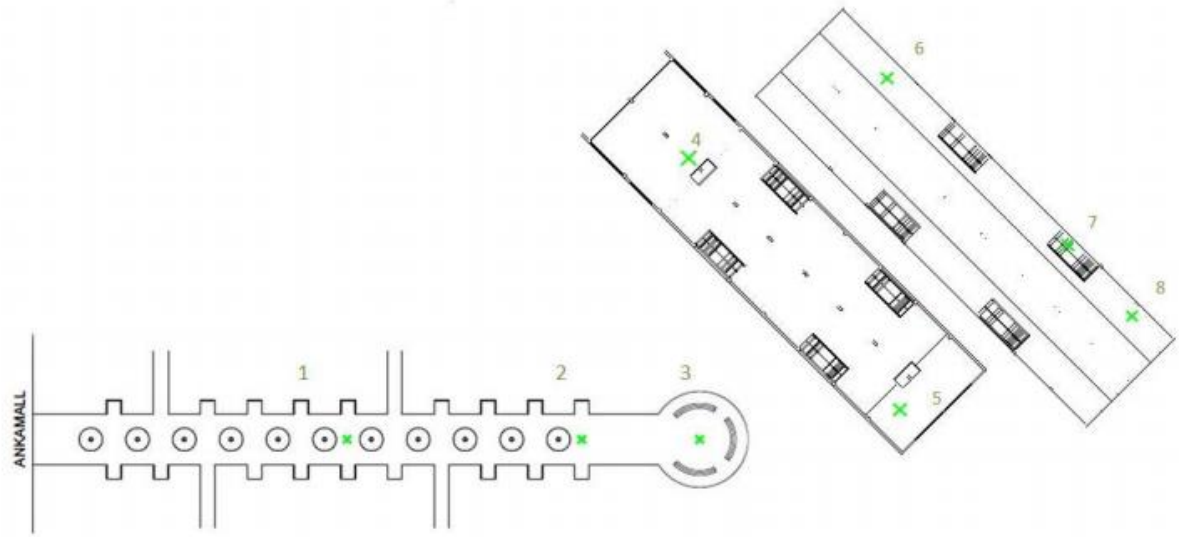


Figure 4. Eight different spots used for objective and subjective measurements (Spots 1-2-3: The park area as open space; Spots 4-5: The entrance level as semi open space; Spots 6-7-8: The platform level as enclosed space)

One recording from each spot was chosen for the listening test. Singly, the 90 uninformed subjects were taken into the semi-anechoic room and attended to the listening test (Figure 5). The participants listened to each recording twice and each session took 30 minutes. The recordings were played randomly to each subject.

Figure 5. Picture of an interviewee from the anechoic room

The questionnaire consisted of nine pages with two parts. In the first part, interviewees were asked close-ended questions about personal information such as gender, age and education level. In the second part, for each sound recording, subjects were asked to explain the purpose of the recorded spaces (usage of the spaces), guess which type of space it was (open/semi-open/enclosed) and define the sound sources.

### 2.2.2 Soundmarks

Through the listening tests and site analysis, sound sources and soundmarks of the spaces were also determined by the participants (Table 2). The order of the sound source lists written by subjects gave indications of how users perceive sounds in an environment [16].

The Overssea City Town (Shenzhen) presents a clear explanation for the diversities in ecological sound environments in big cities; nature soundscape (consists of nature sound barely man-made sound), neutral soundscape (consists of nature and man-made sound), and man-made soundscape (consists of man-made sound barely nature sound) [17].

### 2.2.3 Psychoacoustic Parameters Measured at Akköprü Metro Station/

Psychoacoustics is a scientific field that aims to explain users' psychological and physiological responses to acoustic conditions in an environment. In 1990, Zwicker and Fastl [18] proposed three basic sound metrics: loudness, sharpness and roughness. In 2013, Özçevik and Can [19] analyzed the relationship between Zwicker and Fastl's metrics and various adjective pairs (Table 1).

Table 1. Relationship between sound quality metrics, adjective pairs and soundmarks [19]

| Environmental Sound Assessment | Sound Quality Metrics | Adjective Pairs | Relationship with Soundmarks |
|---|---|---|---|
| General Assessment | Loudness (5%, 50%, 95%) | "loud-quiet" , "unpleasant-pleasant", disturbing-comfortable", "stressing-relaxing", "agitating-calming", "discordant-harmonic", "hard-soft", "crowded-uncrowded", "empty-joyful","exciting-gloomy", "loud-soft", "dark-light", "heavy-light - ", "rough-smooth" | |
| Detailed Assessment | Roughness (%10) | "far away-nearby" | Perception of the soundmarks (distance between soundmarks and the receiver) |
| | Sharpness (%10) | "sharp-not sharp" | Spectral structure of the soundmarks |
| | | "unsteady-steady" | Stability of the soundmarks in time and its effect to the space |
| | | "strange-common" | Familiarity of the soundmarks |

In the current study, Zwicker and Fastl's metrics were used with Özçevik and Can's adjective pairs. In order to understand the sound quality of the selected spaces, the subjects were asked to choose between 17 adjective pairs (see Table 1) for each recording, taking into account the relationship between sound quality metrics and all pairs of adjectives. In this study, the two adjectives were also evaluated via ***semantic differential ratings***. The frequency distributions of the adjective pairs for three different space types according to the scalar listening test results are given in Figure 7.

## 3 Results

***Sound Recognition:***

In terms of sound recognition, the listening test results show that all subjects determined the open spaces correctly and 84% of subjects determined the enclosed spaces correctly, but only 5% of subjects determined the semi-open spaces successfully. Only half the subjects were able to determine the correct usage of the spaces (Figure 6).

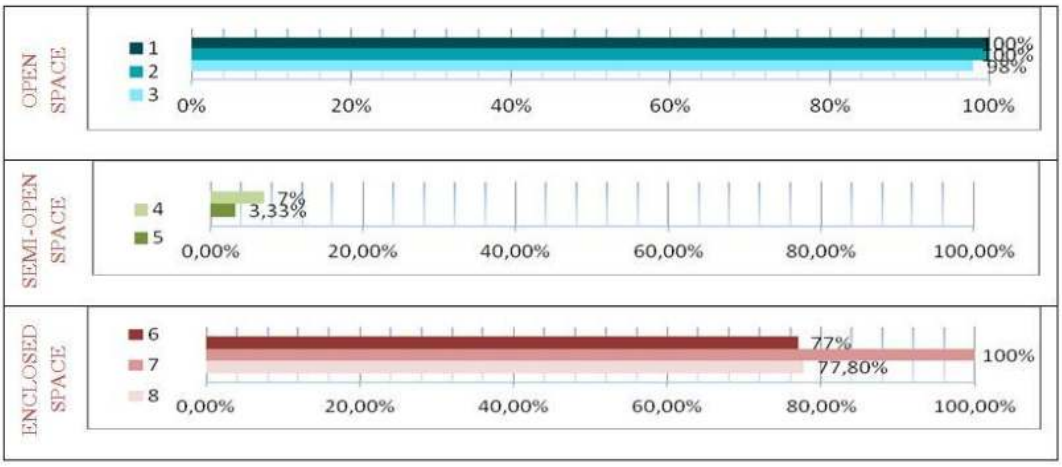


Figure 6. Listening test results - defining space types (as open (spots 1-2-3) /semi open (spots 4-5) /enclosed (spots 6-7-8) see Figure 4 for measurement points )

***Soundmarks:***

In terms of soundmarks, the sounds of marching, speech and children were perceived similarly in all three spaces. Traffic sounds such as horns and sirens were perceived similarly in open and semi-open spaces. Birds, wind and water sounds were defined as soundmarks in the open space; pay gates and coin sounds were defined in the semi-open space and the trains, brakes, doors and sound system were defined in the enclosed space (Table 2).

Results of the field studies showed that sound scape features of both three spaces differs from each other. In station (both in entrance and platform level) sound scape is all man-made; consists of metro sound, loud speaker paging, human speech etc. Sound scape of the park can be considered mostly neutral; man-made sounds such as traffic sound and human speech are as noticeable as the natural sounds such as birds, wind and water elements.

| Spaces | Sound Sources | Soundmarks |
|---|---|---|
| Open Space | Heavy Traffic | Bird Sound |
| | Decorative Pool | Wind Sound |
| | Weather Conditions | Water Sound |
| | Flow of Human | Marching Sound |
| | | Speech and Child Sound |
| | | Traffic Sound; horn and siren |
| Semi-Open Space | Ticket Office | Coin Sound |
| | Pay Gates | Pay Gate Sound |
| | Flow of Human | Marching Sound |
| | Heavy Traffic | Speech and Child Sound |
| | | Traffic Sound; horn and siren |
| Enclosed Space | Metro | Marching Sound |
| | Loudspeaker | Metro Sound; break and door |
| | Flow of Human | Paging |
| | | Speech and Child Sound |

Table 2**:** Listening Test results - Sound sources and soundmarks determined by the listening test and site analysis (see figure 4 for measurement points)

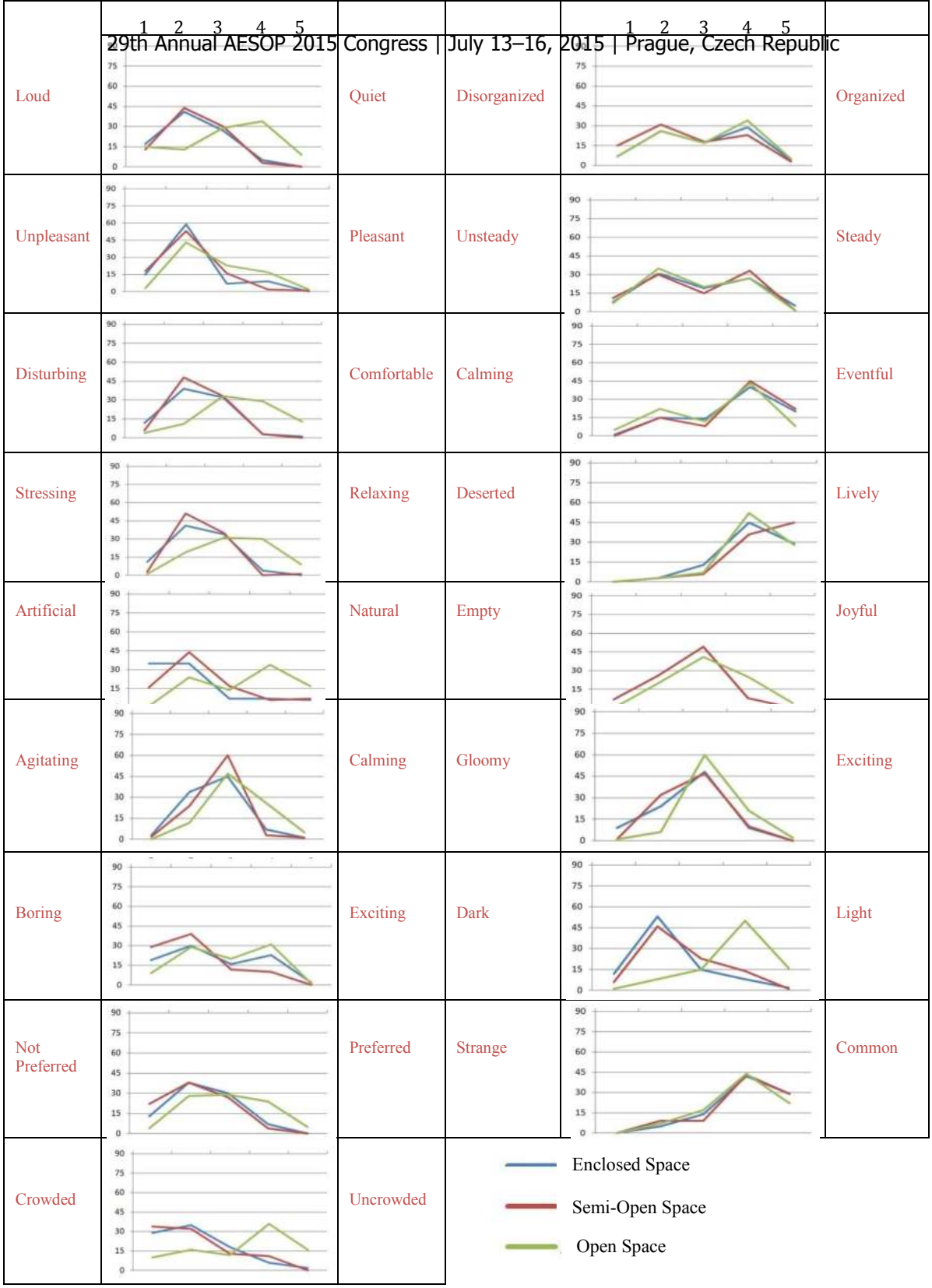


Figure 7: Listening test results- Relationships of adjective pairs / space types

### *Semantic Differential and Sound Quality Metrics*

Özçevik and Can's [18] study on the relationship between sound quality metrics, adjective pairs and soundmarks is well known. Using their pairs, the current study found that Loud-Quiet, Unpleasant-Pleasant, Disturbing-Comfortable, Stressing-Relaxing, Agitating-Calming, Uncrowded-Crowded, Unsteady-Steady, Empty-Joyful, Gloomy-Exciting, Dark-Light and Strange-Common were related with **Loudness** and that Unsteady-Steady and Strange-Common adjective pairs were related with **Sharpness**.

In other words, these adjective pairs can be explained through the related sound quality metrics (Figure 7).

***Semantic Differential and Correlations***

Correlations between the adjective pairs gained from the listening tests were also analyzed. Highly correlated adjective pairs can be seen in Table 3.

Table 3.Highly positive correlated adjective pairs

| Correlations | Loud quiet | Unp. Pleas. | Distur. Comf. | Stress. Relax. | Artific. Natur. | Agitat. Calm. | Boring excit. | Not pr. preferr. | Crowd. Uncr. | Disorg. Org. | Unste. steady | Calm. event. | Disert. lively | Empty joyful | Gloo. excit. | Dark light | Stran. Comm. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Loud - quiet | | ■ | ■ | | | | | | ■ | | | | | | | ■ | |
| Unpleasant - pleasant | | | ■ | | | | | ■ | | | | | | | | ■ | |
| Disturbing-comfortable | | | | | | | ■ | ■ | | | | | | | | ■ | |
| Stressing - relaxing | | | | | | ■ | ■ | | | | | | | | | | |
| Artificial - Natural | | | | | | | | | | | | | | | | | |
| Agitating - calming | | | | | | | | | | | | | | | | | |
| Boring - exciting | | | | | | | | ■ | | ■ | | | | ■ | ■ | | |
| Not preferred- | | | | | | | | | | | | | | | | | |
| Crowded - uncrowded | | | | | | | | | | | | | | | | | |
| Disorganized - | | | | | | | | | | | | | | | | | |
| Unsteady - steady | | | | | | | | | | | | | | | | | |
| Calming - eventful | | | | | | | | | | | | | ■ | | | | |
| Diserted - lively | | | | | | | | | | | | | | | | | |
| joyful | | | | | | | | | | | | | | | ■ | | |
| Gloomy - exciting | | | | | | | | | | | | | | | | ■ | |
| Dark - light | | | | | | | | | | | | | | | | | |
| Strange - common | | | | | | | | | | | | | | | | | |

The correlations suggest that loud environments make users feel unpleasant and disturbed. The users evaluated loud spaces as crowded. They also suggested that they feel very pleasant in comfortable spaces. Agitating environments made users highly stressed and they claimed that they got bored in stressful and disturbing spaces. Comfortable and pleasant spaces were highly preferred to uncomfortable, unpleasant and gloomy spaces. Eventful spaces were labeled as lively and joyful, but eventful, lively and joyful spaces were also labeled as loud and disorganized. Users got bored in empty spaces and found disorganized and gloomy spaces boring. Gloomy spaces were also expressed as empty. Users also found loud, deserted and gloomy spaces as dark. However, empty spaces were preferred more often than joyful spaces. Users found natural spaces gloomy and labeled artificial spaces as exciting. Users became stressed in eventful spaces. Users found eventful spaces crowded, and calming spaces related with more light.

## 4 Conclusion

The study states that, every space has its own unique sound environment and acoustical requirements. This requirements gets varied and more complex in enclosed spaces because there interferes the geometry of the enclosure, nature of the used materials, the activity takes place in etc. Correspondingly, auditory perception will differ. This statement is the most important aspect of the study's hypothesis. The study shows that there are statistically significant relationships between auditory perception and different space types. The findings prove that Brown, Kang and Gjestland's above-discussed

taxonometric system (which suggested that all sound sources can be classified using the same categories as for the urban acoustic environment) is not sufficient.

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# ACCESSIBILITY TO CULTURE AND HERITAGE: DESIGNING FOR ALL

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Keywords: physical accessibility, perceptual accessibility, appropriational accessibility

## Abstract

*This paper is based on the Guide that was elaborated in the context of the European INTERREG IVC programme CHARTS (Culture and Heritage Added Value to Regional Policies for Tourism Sustainability) project by the Laboratory for Tourism Planning, Research and Policy (University of Thessaly).*

*The Guide examines the Accessibility to Heritage for all people by defining three moments: a) physical accessibility: the visitor to / receiver of a cultural good uses his/her body structure and functions in order to move inside the product in its original material manifestation or experience sensorially its tangible or intangible reproductions, b) perceptual accessibility: the moment of understanding culture/heritage and it has to do with the perceptiveness of the receiver and is closely linked to the receiver's educational background, way of living and habitual mode of intellectual operation and finally c) appropriational accessibility: the apex of accessibility is the combination of the two previously acquired moments and it happens when the visitor/receiver may consider culture/heritage as part of himself/herself (familiarization) and use the adopted experience to intertwine his/her own story (narrational production).*

*The Guide supports the idea of a sustainable management of culture, heritage, tourism and it is inspired by the principles of Universal Design: all people should enjoy in the same way same benefits and high quality services offered. The Guide tries to clarify the misunderstandings connected to the notion of accessibility, proposes policies for achieving accessibility to all cultural activity and gives planning principles for the strategic management of accessibility to heritage.*

## 1. Introduction

This paper presents both a theoretical and practical approach to the issue of "Accessibility to Heritage" and it is based on the homonymous Good Practice (GP) Guide written by the scientific team of LA.RE.TOUR (Laboratory of Tourism Planning, Research and Policy) at the University of Thessaly. The GP Guide "Accessibility to Heritage" was prepared within the framework of INTERREG IVC Culture and Heritage Added-value to Regional Policies for Tourism Sustainability Program (CHARTS) and it can be used as a toolkit for achieving accessibility to culture and heritage for all, as well as for exchanging experience amongst the partners on the sustainable management of culture, heritage and landscape through communication and collaboration, keeping in mind the effects of innovation and creating a knowledge base. In addition, always in respect to the basic principles of INTERREG IVC and the objectives of Lisbon and Gothenburg agendas, the areas of support are innovation and the knowledge economy, environment and risk prevention, aiming to contribute to the economic modernization and competitiveness of Europe in cultural matters.

The paper starts with conceptual definitions. Accessibility is invoked in a generic sense as initial prerequisite for anyone to be able to reach and appreciate sites and activities of collective interest; culture as a good, situation and activity imbued with symbolic value; and heritage as the percolation of past cultural elements into epoch defining legacy. Accessibility to culture and heritage thus involves a physical moment of material access to infrastructures and sites, a perceptual moment involving an understanding of the symbolic meanings inherent in cultural products and activities, and a culminant appropriational moment when such meanings are appropriated, consciously accepted or re-presented and re-worked by those in contact with them. Two questions arise: a) how does enhanced accessibility to culture and heritage impact on the breadth, quality and value-added potential of the tourism sector, and b) how does the multiplier effect on the tourism sector become apparent.

Finally, the paper presents referential evidence of the felicitous effects of accessibility to culture and heritage on the tourism sector and lists a number of good practices from across the European Union proving the point. It ends with a set of Do's and Don'ts attempting to guide implementation of accessibility projects in an all-inclusive direction involving all irrespective of physical, intellectual or social specificity.

## 2. Objectives

This paper depicts GP Guide's "Accessibility to Heritage" output and tries to communicate its results to the European scientific audience. In the context of the current text, accessibility is approached according to a broad definition, which includes both the physical and the perceptual accessing of culture and heritage. This is because, although the term 'accessibility' usually tends to be thought of in connection to physical disability, in the particular cases of culture and heritage it also crucially involves the ability to perceive ideas and understand meanings. At a symbolic level, central to all artistic expression, a piece of visual art is much more than paints on canvas or deformed stone shapes.

The objective of this paper is to illustrate the concepts related to the central motif of accessibility, promoting the relevant problematic, examining applied good practices and addressing policy implications. Thus, the paper aims to contribute to the debate concerning the accessibility to culture and heritage. It also aims to investigate the bidirectional relationship between cultural heritage and tourism, further highlighting those issues which can supply good practices. The examination of good, in contrast with less successful, practices is included in the targets so as to highlight transferrable good practices and propose efficient transfer processes. The final aim of this paper is to suggest a series of specific recommendations and suggestions aiming at the amelioration of both physical and perceptual accessibility conditions to culture and heritage for all.

## 3. Theoretical framework

The term 'accessibility' will be defined as a generic concept and interpreted in relation to its dual articulation as physical and perceptual accessibility. In general, accessibility means the ability of everyone to use a service or a product, regardless of specificity (disability, age) or context of use. In other words, accessibility is, by definition, a matter of usability. The point is that anything that is not accessible for a user is not user- friendly. Practically, accessibility is embedded in the broader scientific field of HCI (Human Interaction) with Object/Action Design.

The term 'accessibility', in its strict definition, denotes the state in which any characteristic of the domain at issue can be accessed by anyone without discrimination based on sex, age or other characteristics (physique, strength, perceptive ability etc.), i.e. when anyone can reach and use infrastructure autonomously, safely and comfortably.

However, 'accessibility' does not refer only to infrastructure. Other aspects of accessibility have to do with accessing services, facilities and goods, engaging in activities and partaking in experiences. All

these are interacting and can give a decent degree of autonomy and security to the individual, always in relation to the environment (natural, built or virtual) [Tzanavara, 2013]. Conclusively, accessibility should apply in all fields (e.g. culture, environmental and urban planning, transport, health and welfare, research and technological development, education, labour, health and safety) and at all levels (local, regional, national, European, global) so as to ensure its generic effectiveness (Christofi, 2010).

On the other hand, a comprehensive design (integrated planning), that takes from the outset into account the needs of all citizens, including citizens with disabilities, firstly enables them to participate equally in social activities and secondly increases the level of quality and safety for all. These should exist with consistency in the everyday sense of control, cross assurance and regular maintenance of any applications in order that the uninterrupted and safe operation of access-able chains and networks is insured. Damage to a link is so obvious that devalues the overall architecture.

Actually, the theory of 'Universal Design' describes exactly the complete access of different people to different services and products and that process means 'Design for all'. The goal of universal design is accessibility for all, accessibility to buildings, structures, the classroom, internet. The application of the principles of universal design minimizes the use of assistive technologies and results in the production of products compatible with assistive technology that can be used by many groups of people, not just people with disabilities.

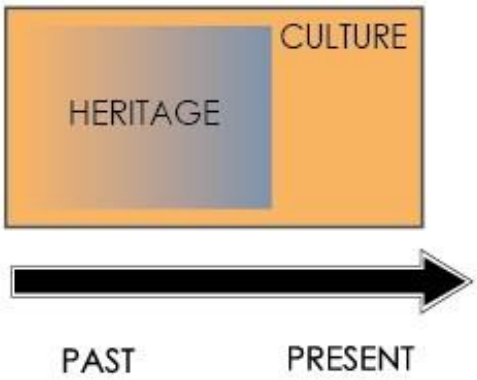
### *3.1 Accessibility to heritage: the phases of accessibility*

The term 'accessibility' is usually presented as physical disability. Nonetheless, the term can refer to very different groups of people that can face insurmountable accessibility problems. The topic is getting even more complicated when speaking about accessibility to culture and heritage. What is culture and what is heritage? How can culture and heritage be accessible? What are the reasons that prevent someone from accessing culture? Is the process of accessing culture and heritage interactive? Does physical access to culture precede mental access or does the opposite apply?

This section will attempt answering such questions by venturing into the elaboration of a theoretical model. The model depicts the phases, or moments, of accessibility to culture and heritage and is setting the background on which these can be detected, studied and addressed by policy makers and regulators aiming at accessibility maximisation.

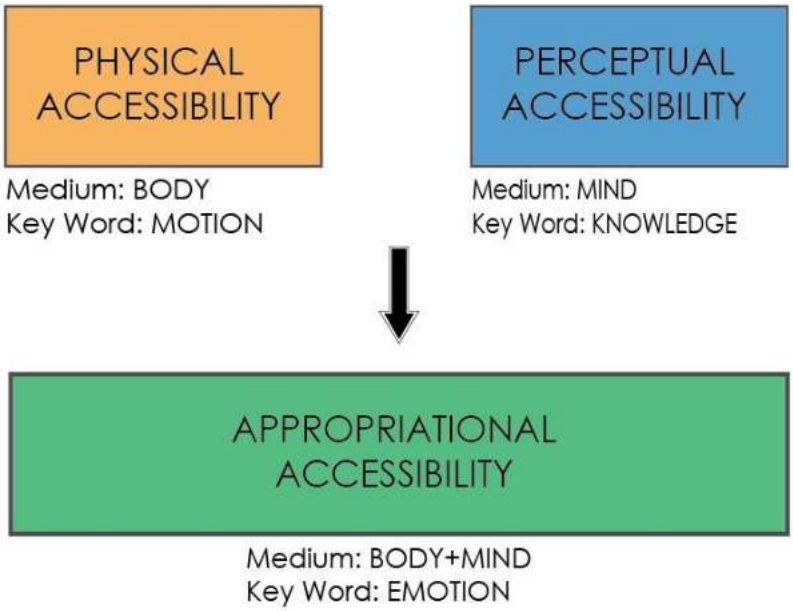
First of all, clear definitions of culture and heritage have to be given. Culture is, in this context, approached as an umbrella term including Heritage. Hence, the term Culture defined as "the arts and other manifestations of human intellectual achievement regarded collectively (through the timespan)" (http://www.oxforddictionaries.com), whereas Heritage stands for "the valued objects and qualities such as historic buildings and cultural traditions that have been passed down from previous generations" (http://www.oxforddictionaries.com). In other words, the difference between Culture and Heritage can be defined as temporal. On the one hand, Culture includes all the intellectual achievements of mankind from its beginnings to today; while, on the other, Heritage refers to non-contemporary intellectual achievements that have percolated through the ages as the past's indubitable legacy (Figure 1). But who can have access to culture and heritage?

Figure 1: Culture and Heritage according to time




As declared at the European Round Table on 'Human Rights and Cultural Policies in Europe', held in Helsinki in 1993, everyone has the right to produce, participate and access cultural life (Fisher et al., 1993). Multiculturalism, pluralism and diversity are the key words that summarize the dominant discourse on accessibility to culture and heritage. No one can be excluded from either producing or accessing culture/heritage. Here, the focus is on the phases, or moments, involved in the process (Figure 2).

Figure 2: The Moments of Accessibility to Culture and Heritage




Thus, there are two main phases of accessibility that may either precede or succeed each other:

a) **Physical Accessibility:** In this phase, the visitor to/ receiver of a cultural good uses his/ her body structure and functions in order to move inside the product in its original material manifestation or experience sensorially its tangible or intangible reproductions. Hence, through the five senses (sight, hearing, taste, smell, touch) and their combination (kinesthesia), s/he can collect either stimuli for

further interference with culture/heritage (impulse) or experiences concerning the already adapted information (integration). A crucial sub-group that is facing effects during that moment of accessibility is physically disabled people. In addition, once we talk about visiting and experiencing culture/heritage with one's body (museums, archeological sites, cultural centers), there is also an exclusion of people from culture/heritage because of economic reasons (the price of tickets).

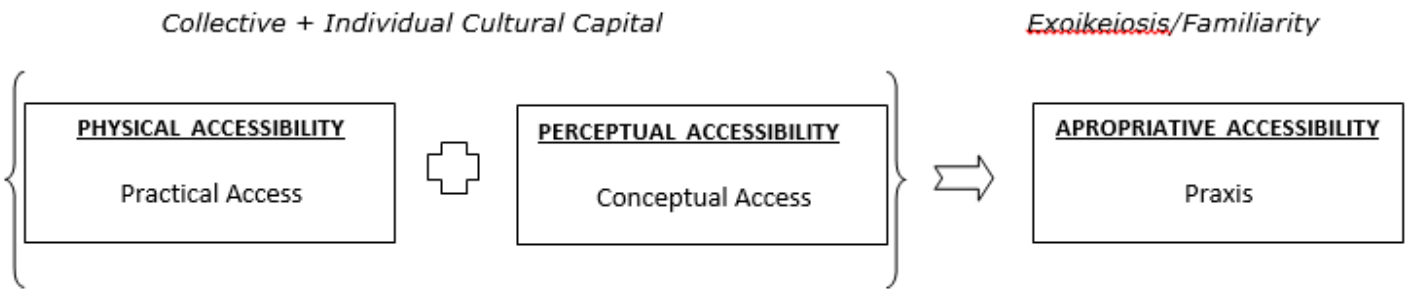
b) **Perceptual Accessibility:** This could be the definition of the phase of understanding culture and heritage and has to do with the perceptiveness of the receiver. The cornerstone is the human mind and its function. The levels of mental accessibility and perceptiveness are closely linked to the receiver's educational background, way of living and habitual mode of intellectual operation. The sub-groups that can possibly be kept out of that phase are people that are indifferent about accessing the types of culture/heritage products being offered and people with mental and learning disabilities.

The theoretical model of the moments of accessibility to culture/heritage is completed by the existence of a third phase referred to as "Appropriational Accessibility".

c) **Appropriational Accessibility:** That phase is the combination of the two previously acquired phases: those of Physical and Mental Accessibility. Firstly, the visitor/receiver may consider culture/heritage as part of himself/herself. S/he may feel emotionally attached and connected to the products of culture/heritage ("exoikeiosis" from the Greek word εξοικείωση meaning familiarization/ emotional investment). At a second level, the body and the mind of the visitor/receiver use the adopted experience and knowledge in order to intertwine his/her own story (narrational production) and, in so doing, reproduce the cultural product in novel, appropriated form. This final moment represents the apex of accessibility, the ultimate goal to be aimed for by policy makers in the field, if accessibility to culture and heritage is perceived generically.

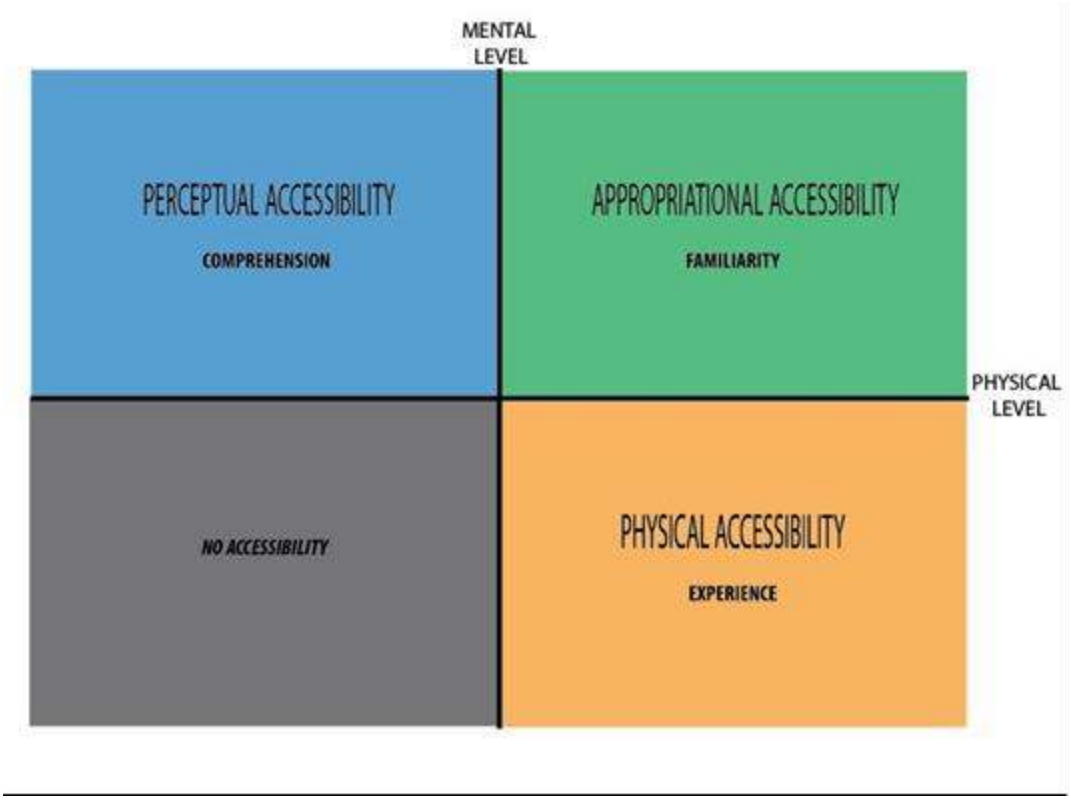
Using Pierre Bourdieu's syllogism, the theoretical model can be seen through the perspective of practice. Physical Accessibility has to do with the collective cultural capital and can be described as a matter of practical access, whereas Mental Accessibility is the individual cultural capital and can be described as a matter of practice theory (Bourdieu, 1972/1977). The third moment of accessibility (Appropriational Accessibility) indicates a continuous interaction between collective and individual cultural capital and offers the background for exercising Praxis (conscious reasonable practice) through the creative combination of practical and conceptual access (Figure 3).

Figure 3: The Moments of Accessibility to Culture and Heritage linked to Bourdieusian Syllogism




Combining the physical and perceptual level of accessibility for tracing the ultimate level of accessibility (Appropriative Accessibility), quadrants for depicting the three phases of accessibility and a fourth state of no accessibility can be used (Figure 4).

Figure 4: The Phases of Accessibility related to their Levels




During the phase of 'Appropriational Accessibility' (Physical Accessibility + Perceptual Accessibility), people get familiar with culture and heritage. They have experienced (Physical Accessibility) and comprehend (Perceptual Accessibility) culture and heritage. This guide aims to stress the importance of 'Appropriational Accessibility' and examines the practices that can promote it.

### *3.2 Accessibility impacts on tourism and key-knowledge for their management*

Tourism is a very common and widespread medium of accessing culture and heritage. Hence, the existing level of accessibility to tourism facilities and activities plays an important role in experiencing (physical accessibility) and comprehending (perceptual accessibility) culture and heritage. A sufficient level of physical and perceptual accessibility to culture and heritage through tourism can lead to the ultimate moment of accessibility (appropriational accessibility).

But what are the positive and negative impacts of accessibility on tourism? Of course, there can be a categorization of positive and negative impacts according to their sphere of influence: economic, social, cultural and environmental impacts. A good level of accessibility leads to positive economic, social, cultural and environmental impacts on tourism, whereas low accessibility levels represent and undeniable impediment to tourism development. Hence, one can observe a pro rata relation between Accessibility and Tourism Impacts.

Table 1: Positive Impacts on Tourism [High/Good Accessibility => Positive Impacts]

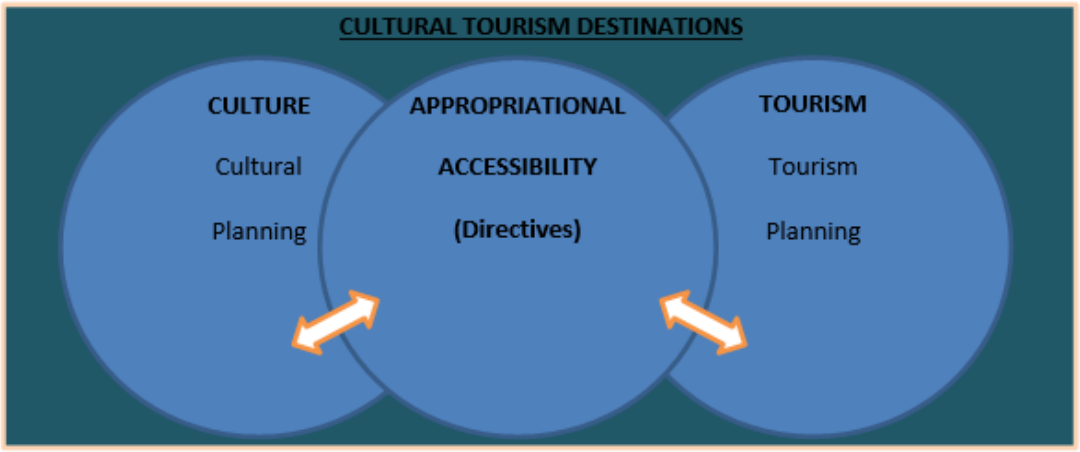
| **+ Economic Impacts** | **+Social Impacts** |
|---|---|
| ✓ Contributes to further tourism development<br>✓ Tones up local economy (zooms at investment and infrastructure development)<br>✓ Improves public utilities andtransport infrastructure<br>✓ Creates new opportunities for employment for all | ✓ Promotes social cohesion<br>✓ Improves quality of life<br>✓ Offers greater tolerance to social differences<br>✓ Reduces the feeling of social exclusion<br>✓ Satisfies psychological needs |
| **+Cultural Impacts** | **+ Environmental Impacts** |
| ✓ Offers the opportunity of gaining experience, knowledge concerning culture and heritage<br>✓ Broadens one's horizons<br>✓ Offers the feeling of being part of the collective cultural capital<br>✓ Increases individual cultural capital<br>✓ Familiarizes people with the notions of culture and heritage | ✓ Proper access for all to spaces of high cultural importance (preservation of natural and built heritage)<br>✓ Visual aesthetic improvement of cultural spaces (archaeological sites,libraries, museums etc)<br>✓ Increases aesthetic awareness of natural environments, of the threats to environmental balances and biodiversity |

Table 2: Negative Impacts on Tourism [Low/No Accessibility => Negative Impacts]

| **- Economic Impacts** | **-Social Impacts** |
|---|---|
| ✓ Fails to capture crucial segments of the tourist market (special needs visitors)<br>✓ The tourism economy fails to develop homogenously and specializes in specific types of service<br>✓ Limited target groups resulting to possible loss of revenues | ✓ Treats people in a different way without supporting social cohesion<br>✓ Stresses social differences<br>✓ Promotes the feeling of social exclusion to certain groups<br>✓ Creates unfulfilled psychological needs |
| **-Cultural Impacts** | **- Environmental Impacts** |
| ✓ Puts barriers to expanding one's individual cultural capital<br>✓ Cannot help oneself feel part of the collective cultural capital<br>✓ Cultivates indifference to cultural matters<br>✓ Drives people away from creativity | ✓ Improper access to spaces of high cultural importance downgrades them aesthetically<br>✓ Limits aesthetic awareness of natural environments<br>✓ Precludes understanding of the environmental and socio-cultural specificities of rural spatial entities<br>✓ Poorly designed accessibility infrastructure can cause accidents |

As it has been shown, there is a profound relation and interaction between accessibility to culture/heritage and accessibility of tourism. These pairs of relations and interactions constitute the core of the issue of Cultural Tourism Destinations and result to the three poles of the relevant key knowledge (Figure 5).

Figure 5: The Three Poles of Cultural Tourism Destinations (Prevention Phase)




The poles of Culture and Tourism can be studied through the concept of sustainability -main and crucial demand concerning Cultural Tourism Destinations- which can be achieved only through Planning (Cultural and Tourism Planning). Furthermore, Planning ought to be elaborated under the spectrum of accessibility and promote the ultimate moment of accessibility (Appropriational Accessibility). This phase of key knowledge can be named as "Prevention Phase".

Table 3: Key-Knowledge for Cultural Tourism Destinations

| **KEY-KNOWLEDGE FOR CULTURAL TOURISM DESTINATIONS** | | |
|---|---|---|
| POLES | CULTURE | TOURIS |
| **PREVENTION PHASE** | Cultural Planning | TourismPlanning |
| Aims | I. Protecting Culture/Heritage<br>II. Organizing Cultural Industries' Services<br>III. Providing Entertainment Choices | I. Defining the Characteristics of the Target Group(Tourists)<br>II. Stressing the ComparativeAdvantage<br>III. Promoting the Tourism Product |
| FILTERPOLE | ACCESSIBILITY TO CULTURE | ACCESSIBILITY TO TOURISM |
| Basic Directives | **UNESCO** Universal Declaration on Cultural Diversity(2001)<br>**Key-Concepts:** Diversity, Pluralism, Creativity | **UNWTO** Declaration on the Facilitation of Tourist Travel<br>**Key-Concepts:** Elimination of Tourist Travel Barriers, Facilitation of Travelling |
| | **Equal Opportunities for People with Disabilities: A European Action Plan (2004-2010)** | |

During that phase, Cultural Planning and Tourism are trying to achieve their goals, while keeping in mind the basic directives concerning accessibility. Those basic directives are declarations and action plans by specialist organizations (UNESCO UNWTO, European Council). Consequently, one can observe that "Prevention Phase" can be considered as effective when it is influenced by the general principals of Universal Design (Design for All).

More specifically, the principles of Universal Design can appear as key-knowledge for accessibility planning to Cultural Tourism Destinations. The key knowledge includes (http://www.ncsu.edu/ncsu/design/cud/pubs_p/docs/poster.pdf):

• **Equitable Use:** The design is useful and marketable to people with diverse abilities.

• **Flexibility in Use:** The design accommodates a wide range of individual preferences and abilities.

• **Simple and Intuitive Use:** Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

• **Perceptible Information:** The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

• **Tolerance for Errors:** The design minimizes hazards and the adverse consequences of accidental or unintended actions.

• **Low Physical Effort:** The design can be used efficiently and comfortably and with a minimum of fatigue.

• **Size and Space for Approach and Use:** Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

## 4. Policy in practice

As theoretical construct, accessibility has been defined in Section 2, to encompass physical, perceptual and appropriational moments, at which visitors and participants gain physical access to sites and activities, perception of official (given) narratives and appropriation of such narratives so that they can rationally accept, reinterpret or amend them according to their own cultural contextuality and aspirations. Yet the pertinence of the concept lies in its practical efficacy, in its application as enabler of cultural consumption, as revealer of the symbolic as productive activity. In this respect, significant progress has been made in the course of history. From the aristocratic culture of the Renaissance, where a painting in a private collection would be seen by as many in a hundred years as one can view it nowadays hanging in a major international museum in the course of a single day, huge strides in accessibility have been made. More recently, the infinite expansion of cyberspace broadens the horizon of both physical and perceptual accessibility, new technologies, and especially ICT, offering new tools, both material and symbolic, for the mass appreciation of culture and heritage. Significantly, over the past decades, increased awareness of difference, of pluralism as interpretative category, and an insistence on the access to culture and heritage as existential imperative, transformed the closed character of culture, broke through the binary divide between a high, elitist culture of the few and a low, deprecated culture of the many. Accessibility to culture thus becoming as essential as culture itself.

Policy, at European as well national level, has adjusted accordingly. It responded to a paradigm shift regarding otherness and the nature of culture, and, in turn, reciprocated upon the transition, legitimating and enhancing it. Some significant case studies involving lobbying efforts and policy applications with respect to cultural accessibility are here presented, the selection has being limited within the borders of Europe and including examples from both physical and cyber space. Some

examples of successful initiatives, promotional techniques (awards, official sites), mechanisms (databases), guides and site-located accessibility practices are listed below:

- **Access City Award:** An innovative competition between European cities which was launched in 2010 to promote accessibility in the urban environment for persons with disabilities and to fulfill the accessibility needs of ALL citizens. The Access City Award is open to all EU cities of over 50 000 inhabitants. In Member States with less than two of such cities, urban areas composed of two or more towns may also participate if their combined population exceeds 50,000 inhabitants. The award recognizes and celebrates cities which proactively support accessibility for persons with disabilities and take exemplary steps to improve accessibility in the urban environment. The 2014 Winner of the Award was Gothenburg (Sweden), Grenoble (France) took the second prize and Poznań (Poland) the third prize.
- **Pantou.org:** a website funded by the European Commission and developed by ENAT and partners. Its aim is the connection, free-of-charge, between suppliers of accessible tourism and Europe-inbound visitors. According to the Pantou directory the goals are: a) to make it easier for tourists with any kind of access needs to find what they are looking for when planning a visit, and b) to promote European accessible tourism suppliers, showing places to go and things to do – in safety and with convenience and comfort. The target groups are Tourism Suppliers (hotels / accommodation, restaurants, transportation services, equipment suppliers) and Tourists (people with different kinds of access needs, e.g. mobility/vision/hearing impairments, people with learning difficulties, people with allergies and families with small children).
- **ACA-Accessible Culture for All:** CA aims to develop a culture which will facilitate social tourism and accessibility for people with disabilities. Appropriate structures will be set up to foster the idea of inclusion. The project will focus on ways to improve the accessibility dimension of the tourism product and the service offer for the benefit of social tourists in Europe. To address the seasonality problem of tourism demand, the intention of the project is to share best practices among the partners and to identify mechanisms which would eventually facilitate exchanges for social tourists during the off-peak season. Eventually, it will lead to exchanges for people with disabilities giving them the opportunity to experience other tourism products. The ACA project involves the following activities: a) setting up of a team within the participating National Authorities that will serve as a working group to promote social tourism and strengthening collaboration between tourism investors, b) enhancing collaboration between project partners, c) implementation of relevant studies that will improve the knowledge base to facilitate low season exchanges for people with disabilities, d) creation of a web portal as a link to the CALYPSO web platform and e) dissemination of information amongst tourists and local citizens who may be interested to travel and who fall under the category of social tourists.
- **T-Guide:** The idea of that initiative is to give Tourist Guides an awareness of the requirements of persons with learning difficulties and intellectual impairments and to equip them with the skills to extend their guiding work to these groups of visitors, thus extending the offer of the tourism sector in Europe to a wider range of customers market. The aim of the project is to produce an EU training model and Manual for training Tourist Guides in guiding people who have learning difficulties or other intellectual impairments. The promotion of integration of people with intellectual and learning difficulties by enabling them to enjoy tourism experiences and the enhancement of the role of the third sector -especially organisations of people with disabilities and their families- in developing learning programmes and tools, in order to enable the delivery of higher quality tourism products is also an crucial expectation.
- **TD-Database for Access to Public:** a database that aims at: a) citizen information and consumer empowerment, b) the stressing of obstacles and impediments of accessibility and c) the explanation/motivation of what measures should be taken for achieving a high level of accessibility. The TD is also providing different stakeholders with valuable information and its

target groups are: people with physical disabilities (vision problems; hearing problems; mobility problems, allergy problems, processing, interpreting and communicating information problems), children, elder people, foreigners and people with special sexual and religious orientation.

- **CadW-Cad Wales:** CadW -a Welsh word meaning 'to keep' or 'to protect'- is the name of the initiative for conserving Wales's heritage, helping people understand and care about history and promoting the distinctive character of Wales. It proceeds by: identifying places of special historic significance, giving advice and guidance to planning authorities as part of the statutory planning process and to other public bodies on environmental assessments and providing grants for conservation and repair to the owners of the very best historic buildings, buildings in designated conservation areas and listed ancient monuments.
- **CLEAR- Cultural Values and Leisure Environments:** an international project that includes public institutions ONGs and research centers from 7 different countries. Twelve different partners are combining knowledge and personal to achieve project aims. The lead partner is Rimini Province from Italy. Its aim is to serve as a kick-start mechanism for generating a better attitude towards Cultural Values (CVs), making them accessible to all. The project wishes to make everyone aware of the possibilities represented by the increase in accessibility for people with disability. CLEAR will provide to different stakeholders (governments, tourist representatives, cultural operators) tools and practical experiences to improve the situation and will show them how to see the obligation of addressing accessibility issues as a new opportunity. CLEAR deals with all types of accessibility: a) physical accessibility to/and in CVs as intended in more than just legal terms, b) accessibility to knowledge and information on CVs, c) economic accessibility in both its dimensions (free services and paying for personalized services), d) psycho-social accessibility, considering all learning need typologies (from learning difficulties to intellectual people requiring specific in-depth info) and e) socio-cultural accessibility, at a personal level anyone can benefit from cultural values- knowledge regardless of cultural, social, religious or ethnic background.
- **Site-Located Practices [Tivoli Gardens and Athens' Metro]:** Tivoli Gardens is an amusement park, located in Copenhagen, which in 2005 received the Accessibility Label. Tivoli Gardens provides ramps for easier access in all of the entrances, disabled parking spaces, wheelchairs without extra charge, charging points for electric wheelchairs, "show consideration" cards for children or adults with mental disabilities and also includes a Family Amenity Centre. However, there is an entrance fee that may be a reason for economic exclusion. In Greece, the Athens Metro Stations and trains are completely PSNs-friendly and they include accessibility infrastructure. There are features which are included in the Stations of Lines 2 and 3 of the Metro network, in order to accommodate Persons with Special Needs (facilities for Semi-Ambulant Users and Wheelchair Users). One of the most important characteristics of the Athens Metro is the public display of ancient artefacts and exhibits in its Stations. These information segments and ancient artifacts are inviting every rushing passenger, either Greek or foreigner, to examine and admire them. In these terms, the Athens Metro is both a physical and a perceptual accessibility practice as well as a structure with daily use that also provides access in ancient heritage.

## 5. Conclusions and recommendations

The conclusions and recommendations are consistent with some basic principles that should be followed and additionally by some common mistakes that arise from the application of these principles. The recommendations are organized in the three moments of accessibility: physical, perceptual and appropriational. The basic principles are referred as the "DO's" that each cultural destination should follow and the common mistakes that they owed to avoid are referred as the "DON'Ts" (Table 4).

Table 4: DO's and DON'Ts concerning the ensuring the Three Moments of Accessibility

| | DO'S | DON'TS |
|---|---|---|
| PHYSICAL | **Ensuring connection to all cultural activity premises with disability friendly public transport networks as well as proper road signage** | **Establishing transport services exclusively for the cultural sites, unconnected to the broader urban network** |
| | **Ensuring full physical access for all to and within every cultural activity and exhibition premises** | **Obtruding aesthetic aspects of spaces and buildings** |
| | **Offering free or price-accessible entry for all** | **Depending the realization of cultural activities on private/sponsorship funds** |
| PERCEPTUAL | **Ensuring diffusion of information regarding cultural sites and activities** | **Providing either meager, out of date information or turgid and user unfriendly material** |
| | **Providing audiovisual information in situ in all relevant languages** | **Undermining the significance of exhibits with off scale information boards** |
| | **Providing different material for different types of audiences/visitors** | **Imposing visitor alienating information overdoses** |
| APPROPRIATIONAL | **Developing interactive comprehensive and user friendly supporting initiatives enabling the user's involvement** | **Developing supporting initiatives imposing dominant or conventional narratives** |

The transfer of good practices can convey fundamental benefits to different kind of target groups. However, the barriers to overcome are numerous and difficult to ignore. An initial assessment of the cultural assets in terms of accessibility may encounter difficulties which have to be fully comprehended by all partners. The reference to accessibility to heritage is connected to quality of life issues such as social inclusion, opportunity issues and knowledge enhancement (Laquirada et al., 2013). Lack of information is usually the cause associated to accessibility problems and actions concerning learning and broadening the horizons becomes necessary. Actions should focus on the transfer of good experience.

Governance structures appear to need reforms that should be introduced in three stages. The first stage should comprise awareness for public as well as understanding of the current situation regarding tourism industry and partnerships. In order to succeed, urban governance in any scale is necessary to understand the real need, as stage two regards the direction towards enhancement of accessibility from city planners applying successful practices and achieve growth with the introduction of guidelines for statutory planning process. The third stage comprises actions for participation and cooperation between authorities, institutions and enterprises; a collaboration that can be achieved through different scale decision makers in heritage accessibility sector such as local and regional authorities, national tourism organisation and every kind of cultural industries (Centre for Strategy and Evaluation Services, 2013).

In addition, heritage and culture are inextricably connected to the tourism sector. Appropriate structures could enable the creation of networks among tourism suppliers such as travel agencies, guides, hotels and restaurants that will transfer each other creative and innovative ideas. Know-how exchange can trigger processes and set mechanisms useful to achieve extension of the tourist period. Steps towards a re-branding of the tourism product, with focus on quality, provided that professional communication tools will be enforced to attract a more targeted audience, will likely increase the possibilities of tourist repeat visits (Shaw and Williams, 2009).

Accessibility in relation to economic availability is another sector in which good practices may have a beneficial effect on. Especially, during the current socio-economic crisis, education and leisure, are witnessing severe cuts. Accessibility concerns population groups characterized by their age, abilities or disabilities, religion, economic power, etc. These people may spark the appearance of new professions that can be brought to particular regions and cultural places (Centre for Strategy and Evaluation Services, 2013).

Another aspect of accessibility enhancement is the use of IT technologies as an instrument of promoting good practices. “Technophobia” may be a constrain of its own to this effort and has to be totally surpassed, as tourism and culture institutions and industries require use of innovative technologies to facilitate processes and expand tourism demand over off-peak season or create new tourism flows.

An environment that permits the transfer of good practices is hard to be sustained, as it needs an intense groundwork to attain the sharing of experiences as a way of resolving accessibility problems. The redesign of accessibility terms at national, trans-national and European level needs a programmed operation that is considered hard enough to be succeeded completely by a single company that acts at the best practices against all measurements (Shaw and Williams, 2009).

Sharing of good practices can be reinforced by efficient and continuous information forwarding, as communication helps to ensure that the goal is set and the needs are known by all stakeholders. IT infrastructure can diminish the distance and time factors that may hamper the sharing process. However, the problem of leadership and policy making constitutes a critical factor. Administration management in different scales has to resolve issues of competence and capacity building and set common goals and objectives.

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# LIMITS OF POPULATION DENSITY FOR EFFICIENT PUBLIC TRANSPORT IN MID-SIZE CITIES

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Keywords: density, public transport, mid-size city

***Abstract***

*This paper deals with the relationship between population density and public transport efficiency. It is focused on mid-size cities with a population of 100 000 inhabitants. The research question is, how strong the relationship is and if increasing residential density can be an effective tool for public transport promotion. The results indicate that increasing residential density could have an effect for public transport use only in neighbourhoods with lower density. Large part of the cities' population lives in prefabricated housing estates with high population density about 100 inhabitants per hectare. However there is no significantly effect, when the density is increasing above ca. 70 inh./ha. The results could be a contribution to the debate, under what conditions increasing residential density is an effective tool for creating sustainable city.*

## 1. Introduction

Increasing population density is one of the most important tools for creating more sustainable city (Duany et al., 2010). On the other hand a compact city can be criticized for its lower liveability – quality of environment and well-being of people is often lower in such city (Neuman, 2005). It is necessary to achieve a balance between sustainability and liveability that is appropriate to a city of a particular size. People's expectations to healthy and pleasant environment will be naturally higher in smaller cities, where are however not so good economic opportunities (Glaeser, 2012). Furthermore it is much more important to protect green spaces and recreational areas in high-density neighbourhoods, where people do not have their own gardens. Thus social responsible planning should consider negative impacts of sustainable city forms to low-income groups of inhabitants, who live very often in high-density neighbourhoods.

This paper focuses on the relationship between public transport efficiency and population density in mid-size cities (about 100 000 inhabitants). This relationship is theoretically analysed on the basis of the concept of TOD (Transit Oriented Development), however it is necessary to adjust this concept to conditions of mid-size cities. We define following research question: How much does residential density affect public transport use in mid-size city? We try to find a threshold of residential density with a positive effect on public transport use. Such limit should be then accepted in practice for balancing demand for sustainable public transportation and demand for better availability of green spaces and recreational areas.

## 2. Literature review and research project

### *2.1Literature review*

During the last few decades we can observe an escalating debate about the urban design trends associated with the movement of New Urbanism, even in the Czech Republic. There is more talk about main themes of New Urbanism, i.e. the concept of compact city, walkable neighbourhoods, reducing car traffic, public spaces restoration etc. (Duany et al., 2010). One of the key themes of the new urbanism movement is the density of the city – population density, density of job places and facilities. Compact city with higher density is promoted as more sustainable urban form (Jenks et al., 2003).

An important group of scholars are concerned with specialized field of New Urbanism movements that focuses on increasing public transport efficiency. This concept is called transit oriented development (TOD). It should lead to more efficient use of public transport and it is based on analysis of the following parameters: Density of city, diversity (mixing use), design of city environment, distance to transit (distance to the nearest stop) and destination accessibility. The authors call these parameters as 5 D's of TOD (Cervero, Ewing, 2010).

Density is considered as important variable for TOD supportive city design. Very comprehensive research from R. Ewing, R. Pendall and D. Chen (2014) analysed 83 U.S. metropolitan areas with population over 500,000 inhabitants and concluded strong relationship between density and transit commute share. The literature review from Cervero, Ferrell and Murphy (2002, pg. 80) states following: "Research consistently shows that density has a significant bearing on transit ridership. In a 1995 Transit Cooperative Research Program (TCRP) study of boardings at 261 light rail stations across 19 U.S. and Canadian cities, an elasticity of nearly 0.60 was found between ridership and population density – controlling for other factors, every 10-percent increase in population density was associated with about a 6-percent increase in boardings at LRT stations."

But there are many sources that do not share the same level of enthusiasm. Even Jenks et al. (2003) in their flagship book regarding the concept of compact city (The Compact City: A Sustainable Urban Form?) critically evaluate the effect of higher density on travel behaviour. Their results indicate only a little effect of the urban form on transit commute share. Positive Cervero and Ewing's results were relativized by their own meta-analysis showing density has one of the weakest effect on transit use: "It is sometimes said that "mass transit needs 'mass'"; however, this is not supported by the low elasticities of transit use with respect to population and job densities…" (Cervero, Ewing, 2010, pg. 276).

Also there is a discussion, what is the residential density threshold for sustainable public transport system. It is talked about at least 7 units per acre (ca. 40 inhabitants/ha) for supporting bus service every 30 minutes and about 30 units per acre (170 inh./ha) for supporting bus service every 10 minutes (Cervero, 1993). R. Ewing (1999) sets lower value of 15 units per acre (85 inh./ha) for premium bus service. P. Hnilička (2012) sets the minimum of population density for economically sustainable bus service in Czech conditions on 50 inh./ha. Walkable city starts on 100 inh./ha.

It is obvious that different values will be relevant in smaller, mid-size cities. Most of researches concerning TOD focus on big cities or metropolitan areas. Jones, Mock and Cearley (2006, pg. 24) define the difference between travel behaviour in bigger and smaller cities as following: "In large metropolitan areas with well-utilized public transit systems, riders are more diverse in regard to socioeconomic status. However, in small to mid-size cities, riders tend to be predominantly poor and live in the innercity."

*2.2 Research project*

Our research analyses relationship between public transport use and the population density in three Czech mid-size cities with a population of 100 000 inhabitants. The purpose of this work is to contribute to the discussion, to what extent it is appropriate to apply the principles of the compact city in mid-size cities conditions. There are not such a good economic and career opportunities in these cities as in big metropolitan areas (Glaeser, 2012). On the other hand people in mid-size cities expect better environment and better access to public greenery. And the critics of compact city point out the "compact city paradox" – city with higher density could be more sustainable, but it is also less liveable (Neuman, 2005). Lot of people is still dreaming about living in more sprawled city, in houses with gardens or with access to free landscape and they are going to migrate to suburbia (Howley, 2009). So it is necessary to increase density only in that way that we would not discourage mid-size cities' inhabitants from living in a core city.

Our previous research has showed that access to free landscape, suitable for short-term recreation, could be in the Czech mid-size cities very unequal (Felcman, Franke, 2013; Felcman, 2014). There are big differences between individual neighbourhoods in their density. Over 3 million from a total 10 million people in Czech Republic live in prefabricated housing estates with high population density and this causes the inequality mentioned above. Implementation of compact city principles should not worsen the conditions of the people living in the housing estates, on the contrary, it should contribute to more social responsible planning of the cities. Identification of the residential density threshold will help to implement compact city principles in the appropriate neighbourhoods.

*2.3 Research method*

We collected data of public transport use from three Czech regional cities: Liberec, Czech Budejovice and Olomouc. The structure of the data was different. In Liberec and Olomouc we processed number of passengers using various public transport stops (number of getting on and off). There was available only occupancy of public transport vehicles between the stops in Czech Budejovice. In both cases we transformed the data in that way, we connected them with demographic data of individual basic administrative units (BAUs). According to their size of built-up area, number of inhabitants and population density we derived data of public transport use among individual BAUs.

Built-up areas of those cities contain contiguous area of settlement including connected settlements of neighbouring municipalities, without fragmented parts of built-up area. We used the method from previous research, where these central polygons were created (Felcman, Franke, 2013). Since we have focused on the housing areas only, we have eliminated those BAUs with less than 100 inhabitants. Also we eliminated those BAUs, which had more than 100 inhabitants, but their built-up area had mostly a non-housing character. According to land use plans those BAUs consist mostly of production areas, recreational areas etc. The population density of these BAUs was misrepresented, because most of their built-up area was not determined for housing. At the end we eliminated central parts of the cities – data of public transport use are misrepresented by high number of changing passengers in central parts, there is high mix of use and it could be expected that many residents do not use public transport and walk in these parts of the city (see fig. 1).

After this elimination we got into analysis 64 BAUs in Liberec, 44 in Olomouc and 36 in Czech Budejovice. We tested the relationship between the population density and public transport use index that is based on the ratio between the population and the use of public transport.

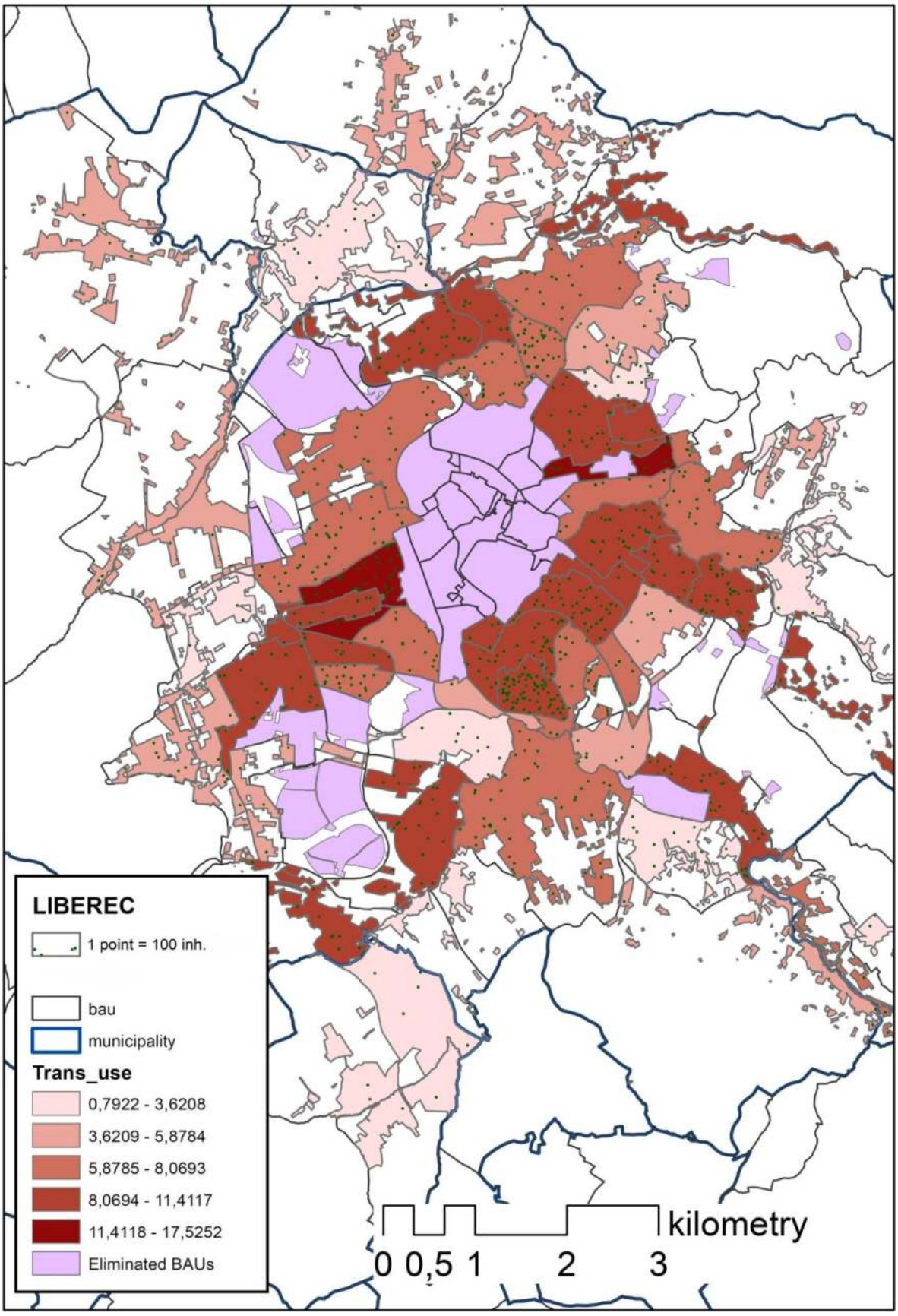


Figure 1. Results in Liberec – analysed BAUs without eliminated parts of the city (central parts, non-housing neighbourhoods).

*2.4 Statistic processing*

The goal of the statistical analysis was to establish statistically significant regression models for each city that would explain the use of public transport on the basis of population density in a given BAU. Then we focused on the appropriate adjustment of data and creation of a single set of data for regression analysis and the model of addiction between explained and the explanatory variable across cities.

The data of residential density and public transport use are available in three data sets distributed by town. The first step was the basic data editing, including compensation and reunification records in the data set to an initial value 0 and maximum value of index of public transport use around 18 for the planned unification of data. Followed by the basic statistical evaluation (e.g. to determine the median, standard deviation, skewness, kurtosis, etc.) and Shapiro-Wilk test was considered normality. Normality has not been proved; this has an impact on our conclusions that can be deduced from the statistical evaluation.

Variances hypothesis was tested for unified data for all three cities. The test showed equality of variances in relationship between public transport use and the residential density in all cities. The exception is the relationship of Liberec and Olomouc, where the hypothesis of equality of variances was not confirmed, but compliance was close.

Then we created 21 regression models with different settings and we selected the best four of them based on the most suitable parameters RMSE, $R^2$ and the test values characteristic "Pr > F". We have chosen, if possible, a model where the value "Pr > F" indicates its significance.

All tests were confirmed at a significance level $\alpha = 0.05$ and as statistical software was used SAS in version 9.2.

*2.5 Results*

Czech Budejovice

Six models were constructed for the data from Czech Budejovice. The best values was showed by a model, which is defined by a second order polynomial levelling, and it achieves the coefficient of determination $R^2 = 0.22$. According to this model the use of public transport is indicated by population density from 22%. RMSE (Root Mean Squared Error) has also relatively low value of 3.3 in this model. Value "Pr > F" reaches 0.02, therefore the null hypothesis is not rejected and the model can be considered as significant. The functional relationship is shown in the formula below (y – use of public transport, x – population density):

$y = -0{,}0009x^2 + 0{,}1508x - 0{,}8773$

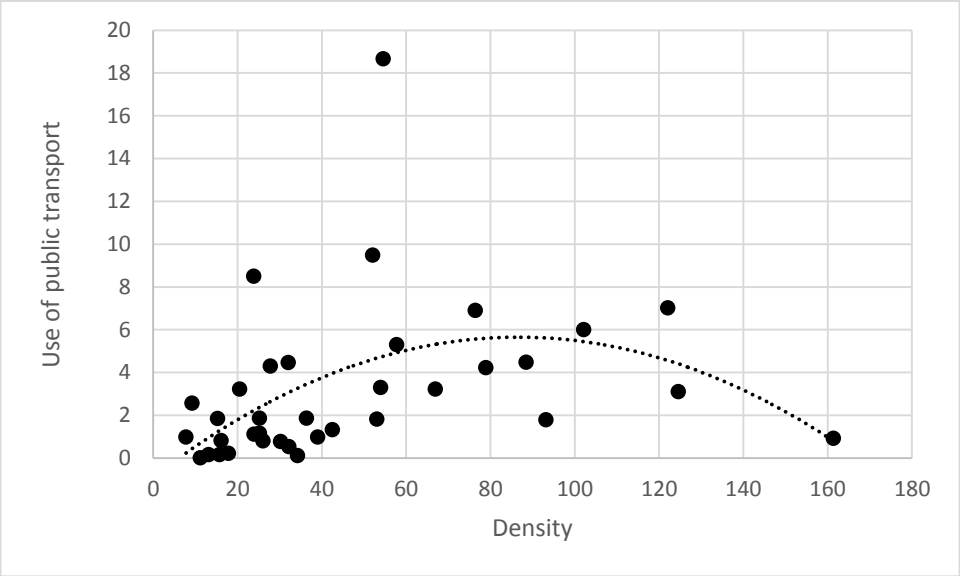


Figure 2. The relationship between residential density and public transport use in individual neighbourhoods in Czech Budejovice.

Liberec

The most appropriate model for Liberec was again selected on the basis of the best indicators value from six created models. The best values were showed by a model, which is defined by a third order polynomial levelling, and it achieves the coefficient of determination $R^2 = 0.357$. According to this model the use of public transport is indicated by population density from 35.7 %. RMSE showed by this model is also relatively low with value of 2.85. Value "Pr > F" is close to zero, therefore the null hypothesis is not rejected and the model can be considered as significant. The functional relationship is shown in the formula below (y – use of public transport, x – population density):

$y = 0.00001x^3 - 0{,}0035x^2 + 0{,}2931x + 1{,}6529$

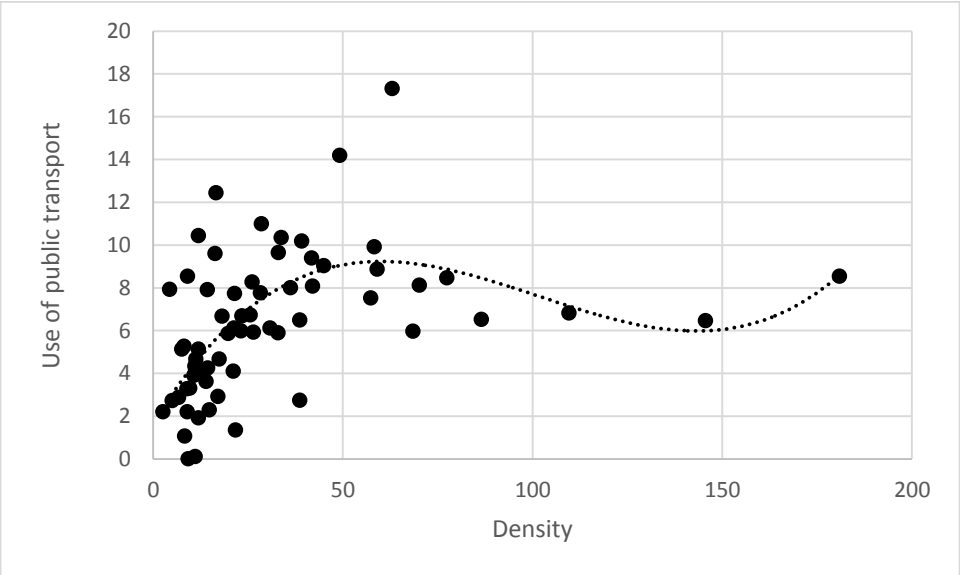


Figure 3. The relationship between residential density and public transport use in individual neighbourhoods in Liberec.

Olomouc

Six different regression models were created also for the city of Olomouc. None of them showed statistical significance. It can be chosen as the best second-order polynomial model from the available models that achieves a low coefficient of determination $R^2 = 0.06$. RMSE for this model reaches value of 3.6. Value "Pr > F" is very high (0.28) and therefore it is not statistically significant. For completeness, the following functional relationship designated by model below (y – use of public transport, x – population density):

$y = -0{,}0002x^2 + 0{,}0495x + 3{,}9064$

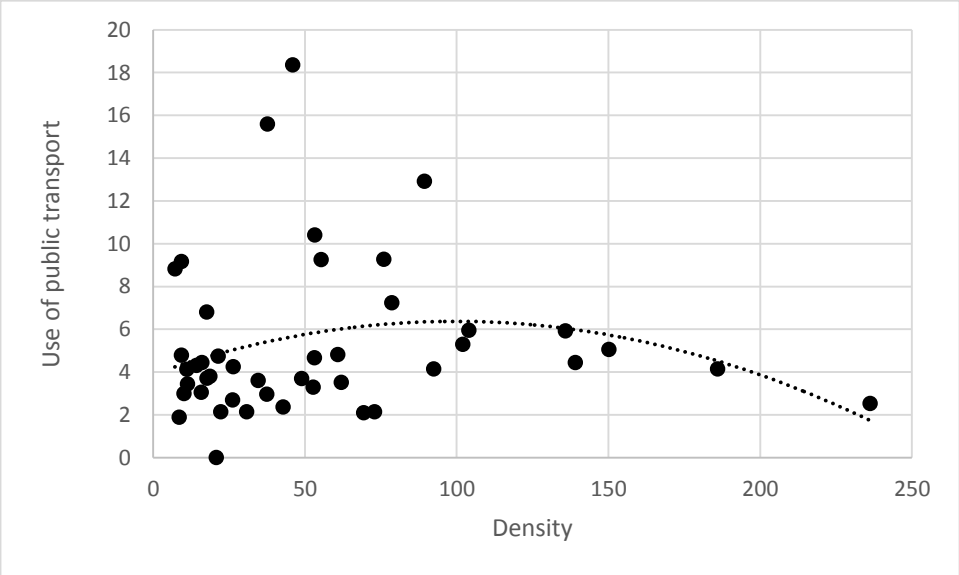


Figure 4. The relationship between residential density and public transport use in individual neighbourhoods in Olomouc.

The regression model for aggregated data from all analysed cities

Three models were created for aggregated data from all three cities. According to the indicators it was chosen model, which is defined by a third-order polynomial levelling. It achieves the coefficient of determination $R^2 = 0.1$. According to this model the use public transport is determined by population density from 10%. RMSE for this model reaches the value of 3.57. Value "Pr > F" is close to zero (0.0019) and therefore the model can be considered as significant. The functional relationship is shown in the formula below (y – use of public transport, x – population density):

$y = 3E\text{-}06x3 - 0{,}0012x2 + 0{,}1335x + 2{,}5327$

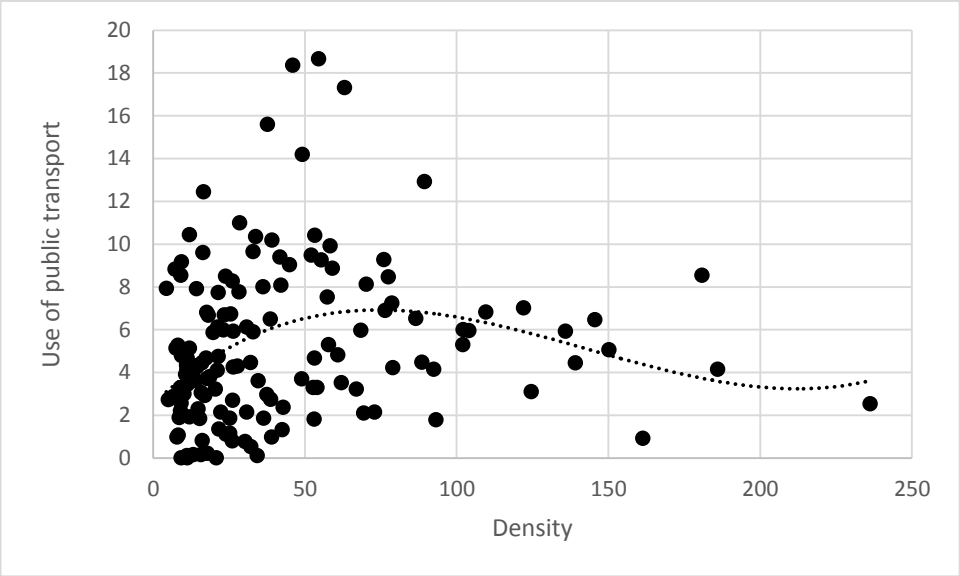


Figure 5. The relationship between residential density and public transport use in individual neighbourhoods of all three cities.

*2.6 Discussion*

Our study is limited by number of analysed cities and neighbourhoods. Furthermore the data of public transport use had different structure in all three cities and it was necessary to transform them. Only in Liberec we could analyse clear residential public transport use, because we had data derived by day time. So we made the analysis only with data of getting on passengers between 0:00 and 12:00 AM. It could be expected that those people are largely residents and not visitors and workers. The results could be more precise, if we could work with data of such structure from all cities.

The results are however quite similar in all three cities. We could observe that BAUs with density above ca. 70 inh./ha do not have significantly higher rate of public transport use in relative numbers (ratio of riders to number of inhabitants). The positive influence of increasing density is noted primarily in neighbourhoods with lower residential density. What could be consequences of such results?

At first we should mention that Czech mid-size cities are rather monocentric. People from peripheral areas make a large proportion of trips just to the central zones. All three cities have extraordinarily high numbers of passengers at stops in one central zone of a city. Also their system of public transport is concentric with one or couple of main transfer stops in central zone of a city. If we consider size of the urban area of the cities and distance between most of analysed neighbourhoods and central zones, we could not expect larger share of commuting by walk; the distance is largely more than 1 km. The monocentricity and the size of urban area together imply that principles of walkable city with residential density above 100 inh./ha (Hnilička, 2012) cannot be successfully applied in whole area of mid-size city. Such higher density could be appropriate in central zone, but there is no strong positive effect of such high density in peripheral neighbourhoods. On the contrary increasing residential density could decrease quality of environment in these neighbourhoods (Neuman, 2005).

Our previous research showed inequalities in free landscape accessibility in Czech mid-size cities. 64% of Liberec inhabitants live without direct contact with free landscape, although in Czech Budejovice it is only 37% (Felcman, 2014). In many cases development of new family houses cut off inhabitants of housing estates from free landscape in Liberec. Our results indicate now that

increasing residential density of those housing estates probably will not promote public transport use. Based on that, it could be recommended to protect green spaces close to prefabricated housing estates in Czech mid-size cities. Tools for increasing residential density should be targeted on neighbourhoods with lower density.

## 3 Conclusions

The results of our study indicate that increasing residential density positively affects public transport use rather in neighbourhoods with low density. Neighbourhoods with density above ca. 70 inh./ha – primarily prefabricated housing estates – do not have significantly higher rate of public transport use. We focused on Czech mid-size cities and we conclude that tools for increasing residential density should be targeted rather on neighbourhoods with lower density in these cities.

## 4 Acknowledgements

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# 'Definite space, fuzzy chronology - the planning history of the 20C street revisited'

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Keywords : streets, urban design, planning history

**Abstract**

*The street is a definite space but a strange category of object - void rather than solid. It is multifunctional: a public realm for trade, display, communication and social encounter; a channel for every kind of movement and a highway for vehicles; an architectural environment with distinctive aesthetic of enclosure, perspective and 'townscape'; an outdoor environment and part of the urban eco-system; a micro-climate with distinctive patterns of temperature, wind, sun and shade and humidity; a public infrastructure, a political economy in miniature with a unique combination of ownership and governance; a place with a name, address and identity - a locus of collective memory.*

*The standard chronology of 20C street history is a three-step 'Death and Life' narrative, based on the evolution of design theory, that sees it embraced by fin-de-siècle urbanism, rejected by the Modern Movement, rediscovered by postmodern urbanism. By reviewing this narrative from the perspective of the many distinct functions that streets perform, my paper reveals a fuzzy and overlapping chronology that puts both the death of the 20C street and its resurrection into question. The paper will also directly address the overall conference theme of the multiple governance of geographical space.*

## 1. Introduction

The street is a definite space with fuzzy responsibility - a microcosm of our conference theme. Its *definiteness* is physical and unambiguous: streets are contained by the vertical frontages of the buildings that line them and give shape and character to their space - *Stadtraum* - the characteristic enclosed realm of urban public life. They are named and mapped and mostly outlast the buildings for which they provide an address, just as buildings tend to outlast their human occupants. The older a town, the greater the age of its streets. giving them historical as well as contemporary definition.

The *fuzziness* of streets derives from the multiple roles that they perform. A street is a multifunctional space: a public realm for trade, display, communication and social encounter; a channel for every kind of movement and a highway for vehicles; a way-leave for public infrastructure; an architectural setting with a distinctive aesthetic of enclosure, perspective and townscape; an outdoor environment and part of the urban eco-system; a micro-climate with distinctive patterns of temperature, wind, sun and shade and humidity; and a public realm and locus of collective memory. Each aspect involves different issues of policy and brings its own set of rules. So the street which is such a definite space is also a regulatory fuzz, a complex political economy of ownership, use and governance.

## 2. Biographies

Each street has an individual life-history beginning from the moment when its lines are first traced on the surface of the earth. Some streets have distant origins as farm-tracks or animal pathways, others are formed by state authority and laid out with the force of a military action, some are commercial ventures developed to create urban value for the plots that make up its frontage and provide its economic rationale, others again originate in the spontaneous actions of citizens, marking out sites for informal settlement.

Narratives of the life and times of individual streets are a fascinating literary genre, whether written from a perspective of fiction, history, geography or ethnography. Street biographies can also be told cartographically through maps and visually through photographs taken from a fixed vantage point, revealing the shifting balance between vehicles and pedestrians, and the changing relationship between building facades and the public realm. 'Double Vision', a recent exhibition of archival and contemporary photographs of the forcibly removed neighbourhood of South End in Port Elizabeth compiled by former resident Yusuf Agherdien, shows the impact of the 1950 Group Areas Act, before and after the forcible removal of residents from a culturally diverse neighbourhood to segregated townships, and the replacement of vibrant streets with highway landscapes and gated townhouse complexes for whites only.

**3. The Grand Narrative**

However, the focus of this paper is not on individual streets but on the overarching history of the street as a design type situated right at the heart of twentieth century urbanism. The paper follows a simple structure, first setting out a standard, definite narrative as it might be taught to first year undergraduate students, then introducing the qualifying factors that make it fuzzy.

The received narrative of the history of the street can be readily assembled from standard texts - Stephen Ward, Spiro Kostof, Jonathan Barnett. The narrative begins in the pre-1900 world of the 'traditional' street, a term that encompasses many differences while expressing a shared reality of movement by hoof and foot on public thoroughfares framed by the frontage private frontage. This immemorial typology undergoes four transitions in the short space of the twentieth century.

First at the turn of the century comes the concept of town planning or urbanism, implying the application of collective action and technical rationality to the ancient practices of the street. Joseph Stübben's *Der Städtebau* (1907), Eugen Fassbender's *Grundzüge der modernen Stadtbaukunde*

[Foundations of the Modern Science of Urban Planning] (1912), Raymond Unwin's *Town Planning in Practice: an introduction to the art of designing cities and suburbs* (1909), Nelson Lewis's *The Planning of the Modern City* (1916), John Nolen's *City Planning* (1916), Edouard Joyant's *Traité d'Urbanisme* (1923). Joyant provides a complete manual of street-building which begins with the dimensions of every major boulevard in France, and proceeds to explain the formation of blocks and the technique of parcelling land, controlling building alignment and height, and placing public buildings. Common to all these early texts of 20C urbanism is the idea of a progressive transformation of the attributes of 'traditional' urbanism.

What happened next was a true example of a paradigm shift. The Modern Movement rejected the assumption of continuity in urban design. Corbusier's *Urbanisme* of 1925 derides the corridor-street - the *rue-fissure* - as unwholesome and unworthy of twentieth-century man. Under his tutelage the International Congress of Modern Architecture (CIAM) develops and disseminates a theory of the streetless city, in which wheeled traffic moves freely on its own road hierarchy, architecture is liberated from the servitude of facades, and nature penetrates everywhere. Monumental towers, clean geometrical architecture, unornamented whitewash and iconic landscapes combine with a compelling verbal narrative of machine-age progress. State patronage in East and West Transforms drawings and maquettes into full-scale city-building experiments.

But around the mid-point of the century another dialectical shift occurs. Wartime destruction and the beginning of postwar urban clearances heightened younger modernists' awareness of the significance of the physical settings of everyday life, and the power of people's attachment to particular places and local identities. Aldo Van Eyck, Jacob Bakema, Louis Kahn, Georges Candilis, Shadrach Woods and Alison and Peter Smithson broke away from CIAM and launched Team 10, shifting the emphasis from function to human association and quality of the everyday habitat. This generation reinstates the traditional street as object of emulation though their models of urbanity were no longer sought in boulevards but in the dense, picturesque, intimate environments of the casbah and the slum, the Italian hill-town, the Cornish fishing village. Separate but convergent movements for 'townscape' and for 'urban design' are launched in the postwar decade, and Gordon Cullen, Kevin Lynch, Edmund Bacon are among those who provide the necessary technique and terminology. It is a strange phase of design theory in which a fascination with the layout and human dynamics of the street finds physical expression in multi-level megastructures and pedestrian decks or in pocket parks under the lee of office towers. Writing in 1975, the best Shadrach Woods can hope for in *The Man in the Street: a Polemic on Urbanism* are street-like opportunities for pedestrianism and face-to-face encounter within a world of free-flow highway engineering and widely-spaced superblocks.

The fourth step in the dialectic takes urbanism full circle to address the agenda of modern living in a *rue-fissure*. As Nan Ellin shows in *Postmodern Urbanism* (1998) the return to the street originates in grassroots activism against the bulldozer in Paris, New York, Toronto, Brussels, Berlin, Barcelona. Community struggle against planned modernisation produces a considered defence of the conventional mixed street - the real thing, not the *ersatz* urbanism of Team 10. Using the powerful black-and-white simplicity of figure-ground maps, Aldo Rossi and Colin Rowe teach architects to 'forget architecture' and appreciate their role as urbanists, shaping space through the outer walls of buildings. Intellectuals such as Henri Lefebvre and Ed Berman find words to articulate the contribution of the street to political pluralism, cultural creativity, economic growth, and erotic possibility. Jane Jacobs and W H Whyte, in the distinctive tradition of American pragmatism, contribute micro-observations of layout and human behaviour in 'streets that work'. Whyte is also one of the first to articulate the economic rationale for street revival, that as the city lost industrial and commercial functions for which it was no longer competitive it would reassert its ancient role as the place where people come together face to face, human congress being 'the city's true export' (1988 341). So, revival of the street was supported from multiple perspectives. A planning theory based upon the shared public realm of central places harmonised equally with the emerging pattern of postmodern, x-generation life-style, and with growing awareness of CO2-induced climate change and the significance of the sustainability principle for transport and urban form.

By the last decade of the twentieth century we had arrived at a robust consensus around the principles of urban design. The mixed-use street was once again endorsed, indeed encouraged by official policy. The Blair government convened a Task Force chaired by Lord Rogers to promote the recovery of urban over suburban areas. Sir Peter Hall, who sat on the commission, spent the next decade demonstrating how the sustainable city was being realized in progressive urban projects around Europe, at Freiburg, in Stockholm's Hammarby Sjostadt, in the tram-based perimeter extensions to Dutch cities. All are street-based.

**4. Towards a Conclusion**

But here, in mid-May 2015, my paper ends on a note of incompletion. So far I have only described the definite. By the time we reach Prague in mid-July 2015 I will have added the fuzzy - which is the real point of the paper. Come and hear why the apparent consensus of the Urban Task Force has proved illusory, and why the clear-cut narrative we teach to first year undergraduates is alas mendacious.

*  *  *  *  *

# Research on the Relationship between the Accessibility to the Public Space of Communities and the Sense of Community

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Abstract: This paper mainly pays attention to the physical and psychological accessibility to the public space of three different types of communities in Shanghai, which are the Lilong area around Hefei Road, the worker housing around Sujiatun Road and the superblocks around Liyuan Road. After the investigation of the three areas, the physical accessibility of the three communities would be analyzed from two aspects: the physical structure and the boundaries. After the interview with the residents living here, the psychological accessibility which is more closely connected to the sense of community would be summarized and analyzed to the three communities respectively. And then a good community example—Hearthstone Cohousing Community would be given as the comparison. Finally, based on the analysis above, the relationship between the accessibility to the public space and the sense of community would be preliminarily concluded. And also some suggestions would be given to help enhance the sense of community.

Keywords: Sense of Community Physical Accessibility Psychological Accessibility

## 1. Introduction

Sense of community (or psychological sense of community) is a concept which focuses on the experience of community rather than its structure, formation, setting, or other features. Sarason summed up sense of community as "the sense that one was part of a readily available, mutually supportive network of relationships upon which one could depend and as a result of which one did not experience sustained feelings of loneliness" (Sarason, 1974) . Actually, citizen participation in community organizations has been viewed as a major method for getting strong sense of community through improving the quality of the physical environment, enhancing services, preventing crime, and improving social conditions ( e.g., Ahlbrandt & Cunningham, 1979; Churchman, 1987; Florin,1989). And citizen participation is mainly done in public space. Consequently, the accessibility for citizens to public space of communities is considered as an important factor in the formation of sense of community. That's the reason why this paper focuses on the physical and psychological accessibility to the public space of three types of communities based on our investigation.

## 2. Physical Accessibility

2.1 Physical Structure

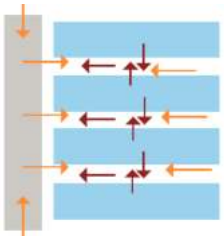
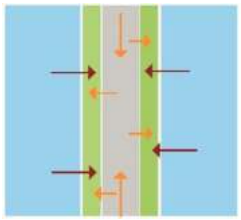
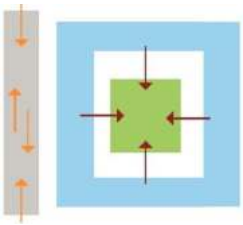
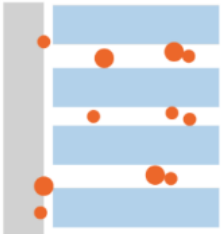
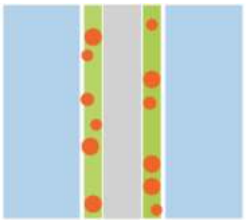
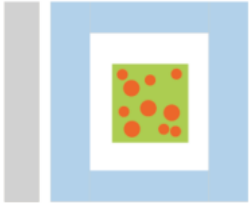
From the layout map, it is easy to be found that these three communities have their special distinguishing features. Lilong area (Hefei Road area) is a small scale community with narrow lanes through it. The Worker Housing area (Sujiatun Road area) has a bigger scale with mostly multi-storey buildings in it. And the Superblock area(Liyuan Road area) has a huge scale with high-rise housing in it. (Figure 1)

Lilong Housing Worker Housing Superblock

Figure 1. The Layout of Three Different Types of Communities (Source: http://map.baidu.com)

In Lilong， the public space and living space is mixed together, and people can go inside randomly. So activities occur freely outside and inside the area. In the Worker Housing Sujiatun Road area, public space is along the street, so it has high accessibility. Activities mostly happen along the street in the greenery. And in the Superblock area, the public space is inside the community and available only for residents, so it has low accessibility for people outside. Activities show an intensive aggregation in the middle courtyard. (Table 1)

Table 1. Physical Accessibility Comparison of Three Types of Communities

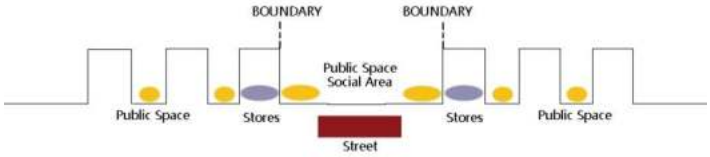
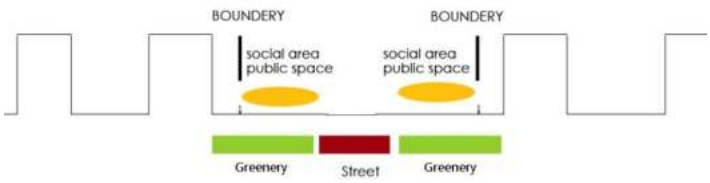
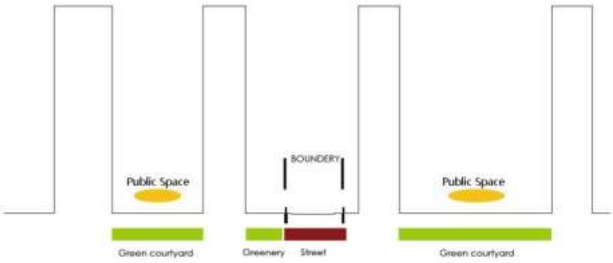
| Site | Lilong Housing<br>Hefei Road Area | Worker Housing<br>Sujiatun Road Area | Superblock<br>Liyuan Road Area |
|---|---|---|---|
| Physical Accessibility<br>Street<br>Greenery<br>Buildings<br>Flow of People(inside)<br>Flow of People(outside) |  |  |  |
| Activity Spots<br>Street<br>Greenery & Public<br>Buildings<br>Activity Spot |  |  |  |

| | | | |
|---|---|---|---|
| Photos | | | |

2.2 Boundary

In Lilong, no specific boundaries exist. No walls, no fences, just these stores around this area working as boundaries. Entrances spread along the street. So it is kind of totally open. In Sujiatun Road Area, fences and greenery are boundaries. The greenery working as public space is outside the fence facing to social people. In the meantime, the fences separate living space of the community from the social public space outside. So the life in the community is comparatively private. In the Superblock, fences as boundaries keep the greenery totally inside like walls. These boundaries separate people and activities inside from outside, which makes it a relatively closed community. (Table 2)

Table 2. Boundaries of Three Types of Communities

| Site | Boundary Schematic Diagram | Boundary Forms |
|---|---|---|
| Lilong Housing |  | Stores |
| Worker Housing |  | Fence and Greenery |
| Super-block |  | Fence |

## 3. Psychological Accessibility

Psychological accessibility is different from physical accessibility in these three communities. It is more about how people feel when they get into this place. As to how you get here, easily or hard, that doesn't matter so much. So psychological accessibility is more closely connected to the sense of community. Here, we have interviewed a few people who were opportunely in the public space when we were doing the investigation. And the information has been summarized in the table below. (Table 3)

Table 3. Interview Information Summary

| Site | Main types of users | Frequency of utilization | Activities | Users' living place | Neighbor relationship |
|---|---|---|---|---|---|
| Lilong Housing | The old<br>The mid-aged<br>The young<br>Children | often | Social<br>and<br>Private | around<br>inside | familiar |
| Worker Housing | Old people | often | Social | inside<br>nearby<br>far away | Not too familiar |
| Super-block | Old people<br>Children | often | Social | inside | not familiar |

As we take the "neighbor relationship" as an important factor of the sense of community, we could preliminarily recognize that the sense of community in Lilong and the Worker Housing is stronger than that in the Superblock.

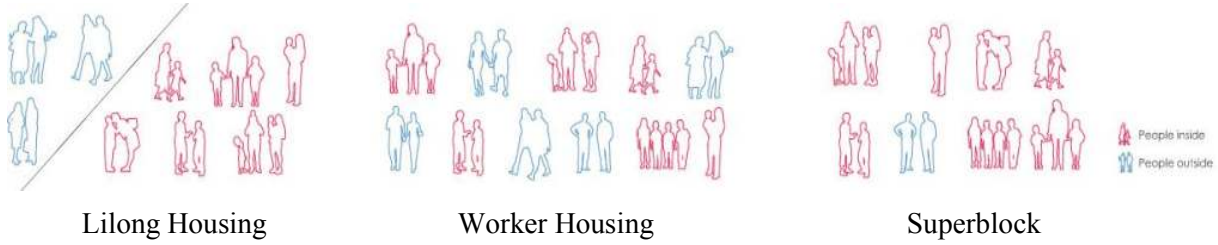
### 3.1 Lilong Housing

The Lilong itself is a very special kind of community. Here, the narrow lanes work as public and semi-public space. It doesn't have clear borders between public space and private space. Because of the incapacious living space and some kind of tradition, residents here always do private things in public space, such as doing the laundry and having dinner. To people living here, the second they step outside their houses, they get into the public space. Because of the small space scale, they can easily talk with each other even just stretching heads outside the windows, therefore making them more familiar and more intimate. Most of them have been living here for a long time. And thanks to the longtime brotherly communication, they almost know everyone living around this place. Somehow they get closely bound up with each other, and in this way the strong sense of community comes up.

To the people living outside, because the Lilong doesn't have boundaries like walls and fences, so it does have high physical accessibility, which means people can go inside randomly. But the thing is,

when you go into a Lilong house-block, you would have a strong feeling that you don't belong here. Even though the lanes inside are public space, it has a more private feeling, which makes Lilong space not so welcoming to people outside. Even if you are a new renter living here, you will find it very hard to integrate into the original residents. So the Lilong has high physical accessibility but low psychological accessibility to people living outside. This also reflects the strong sense of community in Lilong, which is some kind of exclusive and which is spontaneously formed not depending on physical boundary.

But on the other side, boundaries really can support the safety of a community. The sense of safety which is affected by the many strangers coming and going in the lanes is a big problem existed in the Lilong space.




Lilong Housing Worker Housing Superblock

Figure 2. People Mixing in Three Kinds of Public Space

3.2 Worker Housing

In Sujiatun Road area, the public space is along the street around the community. It has high physical accessibility to both the residents here and people living outside. This dynamic space which offers enough room for social meeting, is more welcoming than Lilong and the Superblock. It welcomes to different meetings with friends and strangers. Thus the public space in Sujiatun area has both high physical and high psychological accessibility.

But here comes the question. More welcoming, more strangers. Does it lead to less sense of community? Actually, these "strangers" are mostly from the communities nearby. They gather together sharing the public space to chat, to play cards, to do exercise and so on. People from different communities mix together harmoniously here. In this way, the sense of community goes outside one community and expands to more house-blocks, which consequently forms the sense of "big community".

Since the fences separate the living space inside from the outside public space, this Sujiatun area somehow creates a big sense of community while still preserving privacy. And because of the boundary, it has a good sense of safety too.

3.3 Superblock

The Superblock has very firm boundaries, which proclaims that it is totally not welcoming to the outside people. So the public space inside has both low physical and low psychological accessibility to the people outside. Even if boundaries sometimes can support the sense of community, it obviously doesn't work here. According to our investigation, most residents here are not familiar with their neighbors and they can hardly recognize each other. The sense of community here is very weak. Some old people moving out from Lilong to this Superblock express that they miss their old life in Lilong very much.

What makes this community get so little cohesion? The sense of belonging is a main problem. Originally, McMillan and Chavis identified one element of sense of belonging as "expectation of belonging"(McMillan & Chavis, 1986). At this time, that concept seems best described as the "faith that I will belong." Acceptance remains unchanged. These two elements emphasize the two points of reference that are constant in sense of community theory—the member and the community. In Lilong, the moment the residents step into the lanes, they get a strong sense of belonging thinking that they have already reached their homes. However, in the Superblock, only when they get into their houses, can they feel the sense of belonging and relax themselves.

The scale is also a factor which influences the sense of community. Compared with Lilong, all these narrow lanes and small houses, such tall buildings in the Superblock seem like huge living machines. People here get very weak sense of presence. The Superblock gives much attention to the community itself instead of the members living in it. (Figure 3)

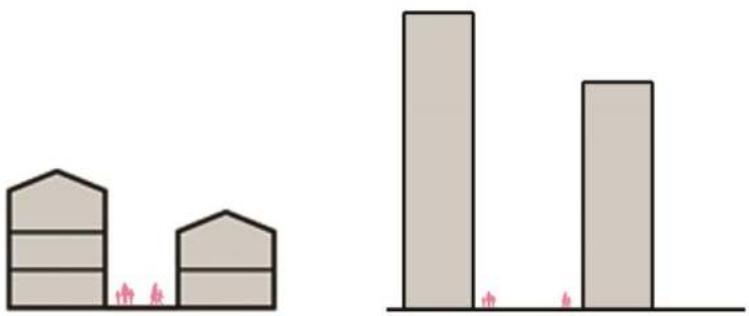


Figure 3. People's Sense of Presence

## 4. A Good Community Example—Hearthstone Cohousing Community

Hearthstone Cohousing Community has six characteristics. Firstly, all the community members participate in the community design, sharing their requirements. Secondly, neighboring building layout should reflect the sense of community, including household orientation, the setting of the pedestrian space, etc. Thirdly, the public facilities such as public kitchen, dining room, activity room, etc. should be free for every household with the management and use. Fourthly, Community residents

jointly maintain the community property, and hold regular meetings to make decisions for community development. Fifthly, there is no hierarchy in the social structure and decision-making principles. Lastly, every member should make a contribution in the collective labor showing that you are part of the community.

In the three kinds of communities we have mentioned above, Hearthstone Community is more like the Lilong. They both get small scale and some lanes. But the lanes of Hearthstone Community is much wider than that of Lilong. And Hearthstone doesn't have many stores around it. The walls of the houses form the boundaries of the community, which makes it have a good sense of safety. Residents here design this community and protect it together, and thus they get a very strong sense of belonging. Public space in the community which has high accessibility is open and welcoming to social people. All these elements set up a strong sense of community and make this community a practical reference case of the concept "Utopia". (Figure 4)

Figure 4. Hearthstone Cohousing Community (Source: http://www.hearthstonecohousing.com)

## 5. Conclusion

The sense of community is actually very complicated and has many influence factors. The accessibility to the public space is just one factor but gets some certain importance to it. The physical accessibility to the public space is mainly related to the physical structure and boundaries of the community. However, the psychological accessibility is more about people's feelings when they are in it. To people living outside the community, the psychological accessibility is mainly reflected by whether the public space is welcoming to them or not. And to people living inside, namely the residents, the psychological accessibility is more about the safety, the sense of belonging, and the sense of presence, etc.

From our investigation, Lilong Housing, Worker Housing and the Superblock all have their specific characteristics in sense of community. The Lilong has a strong sense of community, and meanwhile it has low psychological accessibility to the people outside (not welcoming). Therefore, the sense of community of Lilong is exclusive to some extent, and it is the sense of community in a small scale. The Worker Housing (Sujiatun area), its public space has high physical and psychological accessibility

to both the residents and people living outside. It somehow forms a great sense of community in a big scale, expanding the sense of community to more house-blocks. That is the most precious spirit of the Sujiatun community. As to the Superblock, a good sense of community is really hard to form according to its current situation. Maybe the managers of the community could hold some different kinds of activities for the residents to take part in. In this way, residents may communicate more with each other, and be familiar with each other little by little. It is time for the Superblock to put more attention to the members in the community emotionally, rather than just be a living machine providing them with living space.

To form a good sense of community, it is better that the scale of the community is well controlled from the sight of human scale. Boundaries can exist to keep the community safe and enjoying privacy. But the forms of the boundaries could be abundant and interesting, like fences, greenery, shops, not have to be cold walls. High accessibility to the public place makes contribution to form a great sense of community which breaks out the limit of community unit. The greenery ,some of which combine with pedestrian trails, some of which work as physical locations for social contacts and public events ,and some of which connect people to parks and playgrounds, promote good community identity and a neighborhood sense of community. Local authorities should take some measures to maintain the safety and good environment both in and outside the community. In the meantime, they could summarize and spread the good experience to more communities. This should cover not just green space or the outdoor public space but also public facilities such as shops, pubs and community centers. This information could then be used to inform planning decisions and public spending decisions.

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# A CASE FOR RECONSIDERING THE INCLUSIVE URBAN DESIGN DEBATE

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*Abstract*

*Mainstream theory and practice of inclusive urban design focus predominantly on the free access and use of the built environment. This becomes problematic when set against the homonymous theory which argues for places for all, under what appears to be a holistic, yet vague definition of 'inclusivity'. Moreover, a design focus on physical accessibility leaves unaddressed questions on users who are to benefit from inclusive design practices, to what extent and how that is to be achieved.*

*The present paper argues that in order to legitimately discuss issues of inclusivity in an urban design context, the discipline needs to consider not only urban design process and outcome, but also mechanisms behind exclusion/ inclusion processes and how these are embedded in everyday urban practices, artefacts and spaces.*

*This can only be attained by re-considering and re-phrasing the very concept of inclusive urban design. Building on a critique of the purpose and the function of the discipline, the paper challenges in-place notions of inclusive urban design and explores its limitations against taken-for-granted notions of everyday urban reality. This is done by drawing on sociological theories of socio-cultural production of space/place and of the body in space, with the aim to outline a more comprehensive and, potentially, more effective understanding of inclusive urban design.*

Keywords: inclusive urban design, (urban) reality as a socio-cultural construct

## 1. Introduction

Over the past decades, the discipline of urban design has aimed to step away from traditionally architectural concerns with the purely built form (Le Corbusier, W. Morris, F. L. Wright). Instead, attempts have been made to account for urban experiences as part of the design process (Jacobs, 1961; Lefebvre, 1991; Lynch, 1960). These endeavours have picked up in recent years with emerging reflections on urban design as a potential catalyst for urban (social) change (Boano in Carmona, 2014a; Harvey, 2003; Madanipour, 2006; Mayer, 2009).

These ideals feed into the contemporary debate of inclusive urban design. Although with a relatively vague theoretical base and a methodology inadequate for its declared purpose, the discussion on inclusive urban environments is gaining momentum on policy agendas (Gov.UK, OECD). Moreover, it reflects disciplinary (urban design) changes in understanding city-making processes with implications on the urban design process itself (Carmona,2010; Gehl, 2010; Healey, 1997). For these reasons it is opportune to critically assess the principles and framework of the inclusive urban design debate, if inclusivity is to be not a mere buzz-word, but an effectively working concept.

In its current form, the theory of inclusive urban design has a number of limitations, namely that it targets a narrow segment of end users and it engages only partially with principles of urban design. As a result, in practice, solutions of inclusion by (urban) design are predominantly ineffective, while the public realm remains, to a large extent, exclusionary of certain social groups.

Therefore, this paper explores an alternative conceptual framework for inclusive urban design with the purpose of informing both theory and practice towards more inclusive built environments. The alternative conceptual framework considers the urban design process and its outcome alike; the paper starts from challenging the existing limitations within the inclusive urban design debate and continues by building on social theories of socio-

cultural construction of reality/identity and phenomenology. This is done in order to better understand the mechanisms behind processes of exclusion and the potential pre-sets of inclusive practices. It is hereby suggested that exclusion from the built environment is not only physical as proposed by the mainstream literature on the subject, but also experiential. Consequently, it is argued that exclusion processes materialise in hindered access and use of the public space, as well as in design features which further re-enforce and reproduce social stigma – the central driver of exclusion practices. By understanding how the latter practices come into being and take a spatial form, it becomes possible to outline design tools and methods likely to counteract the inaccessibility of the public realm to certain social groups.

## 2. Emerging critique to the inclusive urban design debate

The on-going inclusive urban design debate focuses predominantly on the physical accessibility of the built environment. As a result of this, the available body of literature (CABE, 2006; Goldsmith, 2000; Dong et. al, 2000) and policy recommendations on the topic (GOV.UK) center on issues of mobility within public space and engage only marginally with other forms of physical exclusion from public space. It can therefore be argued that the inclusive urban design theory and practice engages only marginally with notions of inclusivity. In doing so, the inclusive urban design debate reproduces exclusionary practices which overlook (lived-in) experiences of the urban (Relph, 2008; Tuan, 1977; Rodaway, 1994).

The purely physical approach to inclusive urban design attracted a number of criticisms (Hanson, 2004; Imrie & Hall, 2001, 2003) and led to a re-evaluation of the relationship between users with disabilities and space, and its implications on urban design theory and practice.

The ideal behind the inclusive urban design (InUD) debate, as suggested by the available literature, is design devoid of barriers to access and use public space, a design which facilitates '*users having the ability to take control over their environments'* (Hatch, 1984, p. 4 in Imrie & Hall, 2003, p. 18). S. Goldsmith's 'Universal design' (2000), the Department of Transport's publication on 'Inclusive mobility' (2005), CABE's 'The principles of Inclusive Design' (2006) or Part M of the Building Regulations, are all referential documents for the practice of inclusive urban design. The principal argument behind contemporary InUD is that of a universal design (Goldsmith, 2000) that promotes the '*flexibility, adaptability and interchangeability of fittings and fixtures'* (Imrie & Hall, 2003, p. 16). Notwithstanding, this approach to inclusive design has been extensively criticized for being vague as to how user differences – of gender, race, physical needs - are to be accommodated (Hanson, 2004; Imrie & Hall, 2003). The principal issue arising from here is that inclusive (urban) design targets a rather limited number of excluded groups (the non-able bodied) while overlooking a diversity of other groups excluded from the free use of public space. This is mostly due to a unilateral understanding of inclusion/exclusion processes within the city. In its current form, the InUD debate lacks a conceptual framework which could potentially lead to a more comprehensive theory of inclusive urban design to inform more effectively inclusive practices.

Complementary to the theoretical limitation, a secondary critique takes form regarding the practice of inclusive urban design. The latter is aimed at the barriers in implementing features of inclusive urban design. The documents listed above, although intended to inform more inclusive urban design practices, remain simple guidelines with no design monitoring structure in place. Furthermore, with designers' tendency to overlook a large number of end users and with developers' prime interest in profit and cost margins of new projects (Imrie & Hall, 2001), there is a limited concern in investing in inclusive design solutions. Consequently, '*most places are bereft of basic design features, such as tactile paving, colour contrasts, clear signage and induction loops*' (Imrie & Hall, 2001, p. 233). This state of fact is supported by the lack of incentives in investing in inclusive solutions, by the particularities of the urban design theory, as argued above, and by the downfalls of operationalising notions of InUD when implementing inclusive urban design solutions. Although explorations of inclusive design are still incipient in the context of the built environment, there is a strong argument for broadening the field of this endeavour. '*[T]he focus (of inclusive design) to date has been on products, buildings and physical access to*

*buildings. Now it needs to broaden to whole neighbourhoods, villages and towns.*' (Burton and Mitchell, 2006, p.9).

Drawing on the above, it could be argued that a truly inclusive urban design is yet far from being attained, given the limitations of both theory and practice of InUD. Inclusive design '*is as much about process as products*' (Imrie & Hall, 2003, p. 24), which is why the present paper aims to challenge notions of inclusive urban design both in terms of process and outcomes with the aim of re-conceptualising the theory and practice of InUD. The three limitations to be hereby explored, as identified in the previous sections are first, the narrow segment of targeted end users, second, the inclusive urban design conceptual framework and third, the operationalisation of 'inclusive urban design' as a concept translated into tools and methods specific to the urban design discipline.

## 3. Outcasts of the public realm

The question of *who* is to be included in/by the inclusive urban design process is at the heart of emerging critical thinking in the field (CABE, web archives; Hanson, 2004; Imrie & Hall, 2003).

Recent endeavours to theorise the inclusion of marginalised individuals (disabled or elderly) within the design of public space propose a change in traditional understandings of disability (Hanson, 2004; Imrie & Hall, 2003). Previously regarded as an inability to use the built environment due to personal constraints/ restrictions, disability is nowadays reviewed from a socio-cultural perspective, by adopting models '*which propose that the environment itself actively produces disability. According to these models, a person becomes disabled by the barriers they face, not by their impairment'* (Hanson, 2004, p. 5).

In an attempt to move beyond existing stereotypes of disability associated predominantly with wheelchair users (Goldsmith, 2000; Imrie & Hall, 2003), studies of inclusive design broaden their scope and consider a wider range of dis-abilities, such as motion, sensory and cognitive related capabilities (Dong et. al, 2000, p. 47). The main purpose of this is to understand the users' specificities and respond to them rather than over impose a universal solution to all contexts. This approach led to researches more broken down into user requirements. For example, adding to an increasing body of literature on elderly experience in public space, E. Burton and L. Mitchell (2006) give special attention to a group segment suffering from dementia.

The underlining argument behind the socio-cultural model is that disability is socially defined, where the 'disabled' is labelled as such when set against the 'ideal' of the full-bodied space user. '*[A] focus on disabled people necessarily draws attention to the body and the diverse ways in which it is entwined with socio-spatial practices*' (Imrie, 2001, p. 233) is a different manner of describing the normative able-body, a body which is socially accepted and redefined. Discussions on the inclusion of bodily disabled users are often framed by socio-cultural notions of abnormality, dirt and disorder (Douglas, 2003; Foucault, 1977; Parr, 2000, 2006). '*[T]he (re)production of barriered and bounded spaces [...] reinforce the efficacy of <civilised and normal bodies>*' (Imrie, 2001, p. 233), thus the out of place character of an element is given by its deviant or disruptive nature. *'"Normality" is defined, to a significant degree, geographically, and deviance from this normality is also shot through with geographical assumptions concerning what and who belongs where*' (Cresswell, 1996, p.27).

There can be no discussion of the 'normal' in the absence of the 'deviant'; space and place as such have no inherent connotation of either concept but they are, nonetheless, '*used to structure a normative landscape*' (Cresswell, 1996, p.3) both in theory and practice. Moreover, they feed into larger notions of individuals referred to as being in and out-of-place.

The recurrent themes in the existing literature on the topic indicates that a debate on inclusion by (urban) design cannot be carried out outside social theories of socially-constructed notions of the normative and the body (Butler, 1999; Douglas, 2003) all falling under the wider concept of 'stigma' (Goffman, 2009). E. Goffman theorised three categories of social stigma: physically visible (noticeable deformations such as scars or certain disabilities),

deviations in some traits of character (mental illness or forms of addiction) and 'tribal' (cultural notions of ethnicity, nationality or religion). What all three forms have in common is that they are socially agreed upon as deviances from 'normality'. C. de Albuquerque (2012) writes about 'stigma' as an instrument of social differentiation and re-enactment of the social norm; it has an informative, reiterative and controlling role. In everyday life, stigma acts as a means to define the socially deviant, the unwanted 'other'.
Understanding the mechanisms behind stigma and, therefore, behind processes of exclusion is a pre-requisite, given that in-place stereotypes of the abnormal inform social and attitudinal barriers to inclusive design (Imrie & Hall, 2003).

Because from an urban design perspective, inclusion/exclusion processes are fundamentally spatial (Cresswell, 1996) and they are regarded as forms of physical accessibility to the built environment, partly explains the fact that the main approach to inclusion by urban design is centred around the able-body. This basic premise of urban design is further validated by more general approaches which frame social exclusion structurally – around employment, housing, minority (Social Exclusion Unit, 2000, 2001, 2004).

However, forms of social exclusion, other than those of the physically/ mentally disabled, are spatial as well, although little discussed in these terms (Power & Wilson, 2000; Wacquant, 2008). The reason for this is that the socially excluded are, although physically capable of using public space, refused access.
Experience has shown repeatedly that their bodies, associated with different forms of stigma, are labelled as out-of-place elements and denied opportunities of being in one place or another. This is the case of, for example, racially and gender exclusive spaces where space and place become *'useful surrogates for more direct forms of power*' (Cresswell, 1996, p.163) and elements of design are often '*used to control people and things*' (idem).

Within the inclusive urban design debate, scarce attempts have been made to explore social exclusion in the context of the city and thus anchoring it spatially. This is the case of C. de Albuquerques's (2012) report on the stigmatisation of Dalits and women with fistulas, of D. H. Nadal's (in Pancetti et al., 2012) study on the marginalised Rocinha favela, of M. C. Loschiavo dos Santos' (2007) project on integrating scavengers in Sao Paulo in a local economy cycle and C. Rishbeth's (2010) work on designing for ethnic diversity. The above studies are noteworthy because they make the link between the socially excluded and their spatial-cultural context. They illustrate that marginalisation is first, socio-culturally constructed, determined by the social norms/ values of the place where it takes form and second, spatially articulated in the design of places which they occupy/ appropriate or from which they are excluded.

In the case of disabled individuals, it has been argued that the lack of access ramps or tactile paving prevents them from freely using public space. Similarly, the lack of public seating or the presence of control signage prevents particular users from safe and comfortable access. *'[W]e are all potential or actual victims of architectural discrimination as a result of conventional building design*' (Hanson, 2004, p. 10) and the best example of this is that of the 'away from home toilets'; the absence of this element of street furniture is associated with discrimination by design on different accounts – able-bodied, age, gender (Greed, 2003; Hanson, 2004). It can therefore be concurred that an inclusive urban design, aimed at removing barriers to uses of public space, ought to engage with a diversity of socially excluded groups which are either overlooked or even banned from different public spaces.

Broadening the InUD target groups onto the socially excluded in more general terms is not here an argument for a built environment equally accessible to all users in the traditional understanding of inclusive urban design (CABE, 2006; Hanson, 2004). The claim is to acknowledge the diversity and plurality of urban users as part of the urban design process and to pursue a non-hindering built environment; a built environment which does not aim to re-produce and validate existing stereotypes that re-enforce stigmas and lead to the further marginalisation of certain social groups.

## 4. Re-assessing the urban design principles behind the 'inclusive' debate

As the existing body of literature indicates, current theory of inclusive urban design has looked extensively into questions of physical use/ access of the built environment. However, from an urban design perspective, this approach responds only partially to the core principles of the discipline. Questions of human (excluded) experiences in the city are not accounted for by mainstream InUD discussions.

This constitutes an inherent limitation to the quest for a more inclusive urban environment, all the more so as physical exclusion is always accompanied by an experiential exclusion. In other words, marginalised individuals are not merely denied the use of public space, but also a range of urban experiences, of enjoying the public realm, of appropriating it and of developing feelings of identity and belonging.

Understanding the mechanisms behind exclusion processes and how these processes become spatial is essential for developing a comprising theory and a capable practice of inclusive urban design.
The physical – experiential binary of being in the city is rooted in the urban design concept of 'place' as an ultimately social space (Cresswell, 1996; Lefebvre, 1991). Therefore, arguably, the city is simultaneously built form, everyday practices - 'performativity' and lived-in experiences – 'lifeworld'. This triad is fundamental for understanding processes of inclusion/ exclusion in the public realm. The reason for this is that it accounts for the co-contruction of the excluded subject, who is both created and creates himself and the (urban) reality which he inhabits.

If the 'built form' has fairly clear references to the materiality of the urban environment, the two latter notions, 'performativity' and 'lifeworld', require somewhat of a more detailed understanding before moving forward with re-conceptualising InUD. Both 'performativity' and 'lifeworld' are concepts traditionally anchored in the social sciences. However, they provide a twofold understanding of city-making processes which is fundamental to any discussion on cities inclusive of a diversity of end users. While ''performativity'' accounts for the socio-cultural (re)construction of (urban) reality and of social identities, the 'lifeworld' encompasses the phenomenological human experience of being bodily and emotionally immersed in (urban) places (Seamon, 1979).
Performance is theorised as the enactment of everyday practices which reinforce accepted uses and ways of being in place (Butler, 1990, 1999; Goffman, 1959). If for E. Goffman practices are scripted, played out and consequently consumed, for J. Butler they are the enactment of identity – the social 'self'. By performing the everyday – through actions, gestures and habits - we aim to add meaning to our lives and to define our place in the world.

> *'The city is soft, shapeable, moldable, like clay. It 'awaits the imprint of an identity'. It invites the individual to remake it, and the 'self' too; this process, of the formation of identity and the shaping/remaking of the city, is a dialogic process [ . . . ] in which the formation of identity is simultaneously the shaping of the city*.' (Nentwick, 2004, cited in Makeham, 2005, p. 152)

Building on the idea of performing the everyday, J. Butler phrased her own concept of 'performativity' as a way of being in the world. She defines it as *'that reiterative power of discourse to produce the phenomena that it regulates and constrains'* (Butler, 1993, p.4) and uses 'performativity' to argue for a socio-culturally constructed notion of the gendered body – i.e. being a *woman* means taking on a particular behaviour, values and presentation of the self as socially prescribed and accepted for a woman.

> '*The universal conception of the person, however, is displaced as a point of departure for a social theory of gender by those historical and anthropological positions that understand gender as a relation among socially constituted subjects in specifiable contexts. This relational or contextual point of view suggests that what the person< is>, and, indeed, what gender <is>, is always relative to the constructed relations in which it is determined*' (Butler, 1999, p. 15).

Analogously, if the female body can thus be defined and enacted, so can other types of (excluded) bodies, be produced socio-culturally, as argued previously. It could therefore be inferred that social identities as such are partly socio-culturally produced. J. Butler herself links her theory of 'performativity' to the deviant, stigmatised body: '*The abject for me is in no way restricted to sex and hetero-normativity. It relates to all kinds of bodies whose lives are not considered to be 'lives' and whose materiality is understood not to matter*' (Butler in Meijer & Prins, 1998, p. 281). The rationale applies to different categories potentially subject to social exclusion – i.e. disability (Hanson, 2004), race and ethnicity (Smaje, 1997). These identities are reproduced through performances of the everyday – gestures, actions, enactments. This performance of identity is simultaneously a performance of being 'the other' and it is both an expression and reiteration of identity, of *being oneself*, through repetition of manifestations by which one is discursively (self)defined (Urbinati & Warren, 2008). As spaces are moulded into places precisely through the agency of these performances, the attributes that they are invested with in turn re-shape users resulting into a city in a continuous process of spatial transformation (Shaftoe, 2008; Wylie, 2009; Gehl, 2010 etc.). This dialectical relation is considered here to be inherent to re-producing stereotypes of social stigma by means of exclusionary urban design practices.

The second concept in need of clarity for the purpose of the present paper is that of 'lifeworld' which, together with 'performativity', co-creates the urban experience and accounts for being-in-place in the city. 'Lifeworld' is the expression of phenomenologically inhabited (urban) space. While phenomenology is theorised as exploring *'the things and events of daily experience*' (Seamon, 1979, p. 9), one's 'lifeworld' is defined as the '*daily world of taken-for-grantedness*' (Seamon, 1979, p. 91), '*a concept developed in order to grasp the horizon of understanding the everyday, as well as life's threshold events, and thus also life's different perspectives'* (Madsen & Plunz, 2005). 'Lifeworlds' are characterised by memories, affect, personal values and sensorial experience; in other words, 'lifeworlds' are immersions in the surrounding physical environment.

Traditionally, the city was regarded as a container for everyday activities and experiences of the urban were understood as behavioural patterns that the urban design professionals could observe and integrate in good quality design solutions (Lynch, 1960; Whyte, 2001). In more recent decades, the post-modernist approach to social sciences has unveiled a narrow understanding of the human experience per se within the built environment. Including layers of experiencing the urban within the urban design process accounts more accurately for urban diversity and is likely to lead to a richer range of urban solutions and a good quality of public space. Consequently, by introducing the concept of 'lifeworld' next to the built environment and 'performativity' when discussing city processes, accounts for the lived-in experience of urban users (Buttimer, 2010; Seamon, 1979).

Both concepts of 'performativity' and that of 'lifeworld' are relevant to the inclusive urban design debate because they help understand processes of exclusion by design – where they take place, who is excluded and by what means – and subsequently to inform more inclusive urban design solutions – how to counteract, in InUD practice, social stereotypes and denied access to the public realm. If 'performativity' accounts for the socio-cultural construction of reality, 'lifeworlds' explain being in place as an immersion (Rodaway, 1994; May & Thrift, 2003) where individuals are understood as inhabiting '*the world before they represent that world to themselves and others*' (Anderson & Harrison, 2010, p. 10), as being '*part of the on-going becoming of worlds*' (idem, p. 11). Although 'performativity' is somewhat captured in InUD theory when discussing excluded identities as socio-culturally constructed, notions of 'lifeworld' are entirely absent from the debate. This is reflected in Gleeson's (2001) critique of existing solutions for disabled individuals, solutions which reflect no understanding and recognition of disabled experiential knowledge. As the inclusive projects discussed previously (de Albuquerque, 2012; Pancetti et al., 2012; Loschiavo dos Santos, 2007) illustrate, working with target individuals , rather than treating them as passive users, can potentially lead to successful inclusive solutions.

A concept that partially incorporates the built environment – 'performativity' – 'lifeworld' triad is R. Shields (1991) 'imaginary geographies'. Defined as a '*purely discursive (i.e. ideational, symbolic, and linguistic)*' (Shields, 1991, p.64) concept, the term of 'imaginary geographies is used by R. Shields to denote images or 'myths' of what/ how places are like, of self and of community identity. The argument is that the image a place

acquires in the eyes of the general public is dictated by the typical users encountered there and the specific form of activities with which they are to engage. '*The world is cognitively territorialised so that on the datum of physical geographic knowledge, the world is recoded as a set of spaces and places which are infinitely shaded with connotative characteristics and emotive associations*' (idem, p.264). According to this frame of thought, it is argued that the image the public holds of a particular place appears to be a discursive construction, product of collective and individual processes of signification alike. *'[I]n these recordings of geographic space, sites become associated with particular values, historical events and feelings'* (idem, p.29).These associated meanings inform socio-spatial practices and are being enacted by means of everyday performances. The latter are interlinked with lived-in experiences which further consolidate the constructed image of what a place is; in doing so, locally established spatial and social norms are being continuously re-enforced.

R. Shields suggests that 'imaginary geographies' incorporate the different facets of the place-making process where places, as 'centers of meanings' (Cresswell, 1996, p.13) have both physical and mental coordinates. The first takes the spatial form of the built environment, while the latter encompasses the subject's association with a multitude of urban places – such as accepted behaviour, customs, habits, memories, affect, attached meaning. For R. Shields the experienced 'reality' of the built environment remains subject to imagined, taken-for-granted 'truths' of where, when and how is space to be occupied or used (Butler, 1999; Gowan, 2010; Lefebvre, 1996), what makes it in post-structuralism terms a socio-cultural construct.

Overimposed to this generally accepted understanding of a place is the lived-in experience (Relph, 2008; Tuan, 1977), the subjective notions which each individual is likely to attach to a particular place; '*[b]ecause places are meaningful and because we always exist and act in places, we are constantly engaged in acts of interpretation'* (Cresswell, 1996, p.13). Normative in nature, this censorship of *being* in public space is reflective not only of accepted ways of appropriating space. As such, there is always a subject – the producer and an object – the product in every discursive urban reality of what a place/the city is, of how to behave in it or who is allowed to be there. The imaginary duality extends beyond the user – space dialectic, to that of the 'self' and 'other' as defined at both collective and individual levels. As discussed in the previous section, this is in line with contemporary theories of social identity – gender, race, class – being themselves socio-cultural constructs (Goffman, 1959; Butler, 1999) enacted through (self) performances of the body in place. As space is being reconfigured so as to correspond to mainstream notions of a good public space it becomes a means to delineate the norm-al from the deviant.

'Imaginary geographies' have also a spatial component which is the physical form of an enacted image of reality. '*Place is produced by practice that adheres to (ideological) beliefs about what is the appropriate thing to do'* (Cresswell, 1996, p.16), '*place reproduces the beliefs that produce it*' (idem). In other words, performing space by conforming to rooted ideas about them assigns each place with taken-for-granted characteristics, characteristics which in turn reproduce and regulate ways of performing place (Cresswell, 1996; Hetherington, 1997; Shields, 1991). Common understandings of who is to go, how to behave and what is accepted to do in Brighton or in a high luxury sea resort are very different. By subscribing to unwritten 'rules' of conduct and attitudes individuals further validate the image that the resort has for the general public – they 'construct' it as the type of resort that it is thought to be. Analogous, in the specific case of excluded groups, the accepted social norm operates with opposing notions of 'normality' vs 'deviance'. *'<Normality> is defined, to a significant degree, geographically, and deviance from this normality is also shot through with geographical assumptions concerning what and who belongs where*' (Cresswell, 1996, p.27). There can be no discussion of the 'normal' in the absence of the 'deviant'; space and place as such have no inherent connotation of either concept but they are, nonetheless, '*used to structure a normative landscape*' (Cresswell, 1996, p.3) and feed into larger notions of in and out-of-place.

The concept of 'imaginary geographies' is valuable for a potentially more comprehensive conceptual framework of inclusive urban design. Its relevance lies in the fact that it successfully bridges over social theories of understanding and inhabiting the world and the actual spatial reality of the built environment. This bridge is essential in the context of wider principles of urban design which are concerned with the physical form as much as

with experiencing the city – feelings of safety and security, community and belonging. Consequently, 'imaginary geographies' can be understood as records and narratives of place, deeply rooted in a physical setting. In the context of InUD, they could be used to describe and understand the particularities of place and place-experience where the quality of exclusion/inclusion is considered.

These are strong arguments for borrowing the concept of 'imaginary geographies' from the social sciences into the inclusive urban design debate.

Nevertheless, in order for this concept to respond adequately to the discipline's pursuits, an additional dimension is required. The reason for this is that while processes of constructing place by both socio-cultural and phenomenological means are accounted for, the built environment is dealt with as a passive container for everyday activities and meanings to be attached. However, '*places encompass the physical setting, as well as human experience and interpretation'* (Stedman, 2011, p. 672). Empirical evidence and InUD critique (Hanson, 2004; Imrie, 2001) suggest that characteristics of the built environment condition everyday performances in public space. Moreover, the same broader design characteristics (i.e. the absence of certain artefacts, spatial layouts, aesthetics, discouraged/preferred uses, processes of management and shaping the physical environment) contribute to the type and quality of experience of place and, as a result of this, to what could be referred to as exclusive/inclusive spaces. Drawing on this, it can be argued that features of the physical environment influence the type of urban experience users have (Stedman, 2011). Whether these are aesthetic qualities intrinsic to the architectural/ urban landscape object (Norberg-Schulz, 1980) or over imposed by means of the design process (Joerges, 1999), the built environment plays an active role in constructing experiences of exclusion/ inclusion from the public realm.

Understanding this particular aspect is essential because there can be little efficacy stemming from a well-defined inclusive urban design theory, if its products debilitate public space users while simultaneously re-enforcing social stereotypes and reproducing practices of exclusion.

## 5. Operationalising the 'inclusive' in inclusive urban design

The emerging critique of current inclusive urban design solutions extends from product to producers of public spaces. '*[D]evelopers, architects and designers tend to operate in ways which are inattentive to end users'* (Imrie & Hall, 2001, p. 3) partly because they '*have limited knowledge of disabled people and their needs*' (Imrie & Hall, 2001, p. 347), partly because the focus is on construction costs and development profit (Imrie & Hall, 2001, 2003). Arguably however, these are symptoms of a professional frame of thought deeply rooted in taken-for-granted social understandings of good quality public space and its users (idem). In practice, this leads to a widespread assumption across professionals of '*<sameness>, of normality, amongst the people*' (Imrie & Hall, 2003) with inherent repercussions on different forms of designing the urban.

This professional frame of thought is a key barrier to achieving a more inclusive public realm, as in urban design practice '[s]*pace [is] often used to control people and things'* T. Cresswell (1996, p.163). For this reason, a more inclusive urban design is likely to start from revising basic urban design principles – such as safety and security - that feed into notions of unwanted behaviour/ users in public space (Cresswell, 1996; Hanson, 2004) and, subsequently, into behaviour-controlling architecture (Savicic & Savic, 2013). Is hereby suggested that this essentially implies a review of the socio-culturally constructed border between the 'normal' and the 'deviant' within the urban design discipline. In other words, an inclusive public space comes with no pre-requisites of who is intended to use it and in what way this should be done. Rather than thinking of everyday performances and ways of experiencing the city in terms of 'right' versus 'wrong', design of would-be inclusive spaces can be looked upon as a mode of ordering space alternative to traditional forms of public spaces where designers and users alike conform to normative ideas of 'normality'(Douglas, 2003).

A different mode of ordering space is a pre-set of most urban spaces occupied by often socially excluded groups who have '*their own codes, rules, and symbols and they generate their own relations of power*' (Hetherington, 1997, p.54). As '*modern forms of social ordering*' (Hetherington, 1997, p.54) spaces occupied by the excluded become '*spaces apart, defined by the ambivalence or difference of their modes of ordering'* (idem, p.68). By no longer distinguishing between the 'normal' and the 'deviant' in urban design, disappears also the duality of behaviours, action and people being out of place for not complying with generally accepted social norms.
A separation of design theory and practice from established social norms is worthwhile discussing particularly in the context on inclusive urban design given the fact that given that certain discussions around extensively excluded groups (such as the urban homeless) are particularly hard to tackle in the current market-oriented design framework. Whether it lies within the urban design discipline's responsibility and resources to reshape social attitudes and behaviour is something that requires further critical reflection, this is not the subject of the present paper.

Notwithstanding the above, urban design practice is unlikely to effectively tackle spatial exclusion in the absence of different, more inclusive, parameters with an aim different to that of either controlling or disabling both access and use. The potential implications of this on the discipline's code of practice and design principles can be notable.

Bearing in mind this permeability of an inclusive urban design theory, it can nonetheless be argued that an inclusive space is difficult to achieve in the absence of an InUD process inclusive throughout. What is understood here by an inclusive urban design process means a reflection of inclusivity principles at all stages: designing, developing, using and managing (Carmona, 2014b).

As argued previously, inclusive outcomes fall outside traditional understandings of good design principles, functional spaces and end users. As such, the established state-of-the-arts tools and methods are potentially problematic in the case of, until recently, little understood groups of urban users. This could be one of the reasons why inclusive urban design practice has progressed slowly over time and is clearly illustrated in successful inclusive projects (Burton & Mitchell, 2006; Loschiavo dos Santos, 2007) where the methodologies used were not customary to the discipline. The underling argument for engaging with alternative methodologies is that a presumably inclusive urban design product – space or artefact - is unlikely to be successful if it is the mere result of a blueprint exercise.

It is therefore suggested that the in-place knowledge of excluded groups is invaluable to an operating inclusive principle (Imrie & hall, 2001). This in-place knowledge has a twofold purpose: it reports on the 'imaginary geographies' of exclusive places, as discussed previously, and informs inclusive solutions for a better quality of public space design. What this means is that an inclusive principle is fundamentally an empowering principle. Empowering is to be understood here partly as non-disabling (Hanson, 2004; Imrie & Hall, 2001, 2003) and partly as endowing agency to the target group (CABE, 2006; Imrie & Hall, 2001; Loschiavo dos Santos, 2007). Endowing agency means working *with* rather than *for*, like in traditional urban design practice, excluded groups; this is to say that so far marginalised groups are no longer likely to be treated as passive space users, but pro-active agents with the possibility of being involved at different stages of the urban design process.

In order for this to be attainable, existing tools and methods need to be tailored with the specificities of each target group in mind. Upheld methodologies such as public participation (Healey, 1997) require readjustment for this purpose, given that working with more vulnerable groups may well be problematic in practice. Social studies are rich in group engagement methods which could be adapted to the field of (inclusive) urban design, for example talking in place (Anderson, 2004; Gowan, 2010) or photovoice (Cappello, 2005; Wang et al., 2000). Similar alternative modes of engagement and the possibility of transferring them to InUD require further exploration so that the inclusive urban design framework is put to practical use.

## 6. Conclusion

The present paper proposes a re-assessment of the core principles and outcomes of the inclusive urban design debate. Challenging limitations identified both in theory and practice is the first step towards a re-conceptualisation of inclusive urban design.

A redefinition of inclusive urban design is built partly on social theories of socio-cultural constructs of (public) space, its normative users and uses and partly on a phenomenological – subjective - approach to documenting urban experiences. Arguably, an inclusive approach to urban design needs to be estranged from 'normal'/'deviant' space dichotomies and aimed at achieving places that are flexible in design and respond to a diversity of site specific urban users. Spatially, exclusive and inclusive places may well overlap – a space which allows for the presence of certain users may 'reject' the presence of others. For this reason, an inclusive design is not equivalent with a type of universal design. It is difficult to assume that a form of urban design can accommodate the conflicting needs and experiences of a plurality of space users. However, it will ideally pose no intentional barriers to the use of public space and will acknowledge, if not account, by means of the urban design process the diversity of public space users.

A critical reflection on both theoretical and methodological frameworks of inclusive urban design illustrated that inclusive urban design as a discipline branch holds insufficient comprehension of exclusion experiences and how these are embedded in the built environment. This relationship is all the more difficult to integrate in the urban design process given that the discipline's established tools and methods are not suited for this purpose. Therefore, the hereby proposed conceptual framework puts emphasis on understanding processes of urban exclusion and the spatial forms that this exclusion takes by primarily engaging actively with targeted excluded groups.

Urban exclusion is a factor which cannot be overlooked when discussing good quality built environments, nor feelings of community and belonging in the city. For this reason, the debate on the inclusivity of the public realm is underlining to all discussions on city-making processes and, subsequently, to practices of urban design.

## 7. References


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# Rethinking Urban Design Processes in Framing Public Places

*The case of Western Harbour waterfront development in Malmö, Sweden*

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**Abstract**

*This paper addresses the process of transformation of urban spaces and the contribution of urban design to framing public life. It manifests the multiplicities of interests towards good urban form, and people's experiences and engagements, as outcomes. The study acknowledges places as process and meanings, which require 'relational' and 'contextual' analysis. Reviewing the design processes, and the unintended consequences in associating use value highlights that engagement with place as an experiential quality needs high level of publicness that can be achieved at some levels within 'meaningful urban design'. However, the gap between experiential qualities and spatial aspects, which influence the meanings of places, should be sought in the place-shaping process: intentions and outcomes to find out how public spaces are: intended to be, physically built and socially used and experienced; in becoming places. The study area is the regeneration of the waterfront in Western Harbour, in Malmö, Sweden. By interviewing the key actors in planning and design process, and reviewing documents the paper highlights that the public spaces were not into focus as visual aspects of place However, the reality of everyday use in public space unfolded other qualities: that public space can be a catalyst for regeneration process. The study revealed the urban design potentials for place-making and suggests rethinking about design practice to act temporal and associated in the long-term process in cities. It highlights that a meaningful design should also concern the 'scale' of relations in space and time; and potentials of planning in place-making.*

**Key words**

Urban design, public space, place-making

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## 1. Introduction

In recent years, discussions around complex societies and associating life in urban public places have been the interest for many academics and scholars as well as activists and city makers. The question was constantly asking how urban context can solve so many economic, social, political, economic and environmental issues; while not being problematic for its users. Therefore, studying urban form and human behaviour experiences has been central to understanding how material production interplays with social and economic arrangements. Most of the research produced as the result often takes disparate positions. In academic literature, public space has been argued within physical decline, which can no longer provide public life (Sorkin, 1992). Furthermore, new trends in communication expect to take new forms of social life that less matter in public spaces (Banerjee, 2001; Castells, 2001). From urban planning and design perspective, social life in public spaces is interrelated with the quality of spaces. On the other hand, quality of space is framed by social norms and cultural values interwoven with political-economic relations too. The provision of public life by design of urban spaces therefore becomes a provocative topic, and forms critical theories around the relation between spatiality and sociality in different scales (Lefebvre, 1991).

Urban design has an integral role in production of the built environment, yet as a discipline has ambiguous term and broad definitions (Madanipour 1996 & 2014). Urban design practice in positioning public life in urban places was criticized for its limited and partial theories, and detachment from the laws that construct the society (Cuthbert, 2006), as 'amalgam of several disciplines' (Inam 2002, 35), and obsessed with the final product (Sorkin, 2009) and with the truth of the experts' knowledge as power of authority (Foucault, 1967). There is a frustration with the dominating language and the level of interpretations, which may present intentions in the form of 'valid' facts or as the most efficient ways of doing things. The tendency of urban design to uncritically adopt, combine and use theories without testing them enough clarifies why Marshall (2012, p.267) positions urban design at least in part *pseudo-scientific discipline*.

One of the reason urban design and its normative theories established was the intention to re-build the lost quality of places in the public realm, which nowadays it is being criticized for its achievements. Urban design should be reinvigorated from within, as Marshall (2012, 268) suggests. Carmona (2014) offers generating of a new knowledge around a unique subject and practice. Recent literature recommends a shift in thinking of urban design towards more 'pragmatism' (Inam, 2014), and as an 'on-going long-term process' (Inam, 2002). This perspective reflects the critical social sciences perspective, that urban design should seek an open-ended meaning (Sennet, 1990), concerning the urban changes in use and values (Madanipour, 1996). The same threats and potentials stand for place-making, regarding the subjectivity and complexity of sense of places and meanings. Places, in urban design, should be understood within multiple identities and avoid reductionism (Dovey, 2010) and be sensitive to the contextual relations in space and time (Massey, 1994). The socio-spatial relations in places, provided by urban design are therefore not 'deterministic' and 'linear' (Urry, 2005). As a result, meaningful and responsive urban design is an endeavour to bridge the gap between the theories and practice, and to reflect the reality of everyday life and learning from different experiences (Crawford, 1999, 2004). Madanipour (2014) suggests focusing on 'urban' than 'design' of urban design; and Inam (2014) proposes a radical shift towards 'pragmatism', empowered understanding of urbanism and exploring the potential of inclusive field of thinking and action.

Urban design, not by definition, profession, or responsibilities (which varies in different contexts [1]) but as a field of practice, is facing a big shift. 'Relational thinking' is recommended to study public space (Tornaghi and Knierbein, 2014), as the real object of this practice (Cuthbert, 2006), and thinking of 'place-shaping' as a process that reviews the post-occupancy of the place and the process of its delivery between 'design, development, space in use (place) and management' (Carmona 2014).

Accordingly, place is investigated as 'material-relational' (Dovey, 2010), as both 'product' with its micro-scale values, and 'process', within network of macro-scale values, thus reflecting experiential qualities (Arefi & Triantafillou, 2005).

Towards the goal of process and relational thinking and to enrich public life in urban spaces, as well as to investigate the gap between design and everyday use in public spaces, this paper examines a contemporary urban transformation project in Western Harbour (Västra Hamnen in Swedish), in Malmö, Sweden; where the production of waterfront public spaces was in nexus. To understand the potentials and limits of urban design and its contribution to place-making, this paper reviews the place by act of wondering about intentions and outcomes: How intentions were formed, how public space was physically built, socially and spatially used and practiced. The outcomes were sought in everyday life of the place, meanings and experiences; if public space becomes a place.

## 2. Conceptual framework

*2.1 Transforming urban spaces*

Public life, as a value of living together, has been specifically conceptualized in public spaces and regarded in different disciplines with different concerns. In urban design, mantras of urban qualities such as liveability, vitality, attractiveness, and safety are pouring in cities. To achieve these qualities, the modalities of urban design should develop to balance between these – sometimes conflicting-values.

However, in practice, urban design strategies are framed within the purpose/problem they get involved to propose/solve. Due to global economy, cities are adjusted with their markets in particular periods of time. Therefore, urban design in the production of the built environment has become a part of the urban development and central in the economy process that are supposed to be used as goods and services, as economic values (Lefebvre, 1991; Madanipour, 2003, 2014). Regeneration of public spaces is accordingly adapted as a response to such fundamental changes and contextual demands. Creating public spaces is framed by their effectiveness in economic process and its social consequences. Madanipour (1996 & 2003) posed this tension between use value and exchange value rises when economic transition and spatial transformation intensifies. He contends that leisure is the only major function has left in most of European public spaces.

Focusing on the new spaces of leisure and consumption, this is a phenomenon of regeneration of industrial cities (see examples in Melbourne in Dovey and Sandercock, 2002). For the cities in transition, if the market leads the development such as examples in UK, public spaces should be attractive and liveable places where use value is identified by number of activities and consumption and the provision of extra safety and security, and over-managed public spaces to guarantee the long-term investment (Carmona, 2008). In this case, spatial configuration is a tool to address economic demands, to manipulate people's access, movement or presence in public, as 'privatization' and 'exclusion' (Madanipour, 2003; Banerjee, 2001) which results loss of meaningful use in public spaces as pseudo-public spaces.

In transformation of the urban spaces spatial planning has an important role in territorializing of values and services and to shape future socio-spatial relation in places (Graham & Healey, 1999). Relational theories have un-linear conception of development and consider multiple time-space and meanings within different network (Healey, 2004).

*2.2 Urban design process and place-making*

Agreeing on the values of places between the process of globalization and localization, place still matters, though complex and multi-layered, beyond visual aspects and a product (Arefi & Triantafillou, 2005; Dovey, 2010; Arefi, 2014). Meanings of places are formed through time and highly subjective, embedded in people's narratives and experiences and interpreted by cultural and social context. Meanings are multiple and require deep human studies to be detected. The challenge for urban design is then to understand how socio-spatial attributes assign meanings to places, to be perceived and collectively experienced.

Urban design has a history for such contribution with place-making. In micro-scale, it was initiated by Jane Jacobs, praised the lively streets of Greenwich Village as an example of safe and diverse urban environment (Jacobs, 1961). William H. Whyte's Street Life Project, was one of America's most influential on cities, people and public spaces, conducted as pioneering studies on human behaviour in urban plazas in New York. Through deep observation, he showed how built environment contribute to people's different activities and behaviour. Human needs in public space was identified by Carr et al. (1992), as 'comfort', 'relaxation', 'passive engagement', 'active engagement', and 'discovery'. From human perspective, a 'responsive environment' was identified as accessible, connective, permeable and visible (Bentley et al. 1985). A human-scale environment offers a level of satisfaction and comfort, and that 'optional' and 'social' activities can take place (Gehl, 1996). In macro-scale, human needs and experiences were conventionally regarded in cities, where support places if they are well-located, visually accessible without any physical barriers (Hillier, 1996). Lynch (1981) emphasized on city unique image, both through physical elements and people's perception, and applied them in his *Theory of Good City Form*. Gordon Cullen named sense of place as '*the sense of being here- in a particular place'* (Cullen, 1961). Christopher Alexander acknowledged different scale of socio-spatial relationship (Alexander et al., 1977), and *'the timeless way of* building' (Alexander, 1979). In the mid-1980s, Jacobs & Appleyard characterized environmental urban design by 'liveable streets and neighbourhoods, minimum densities, functional integration and proximity, positive urban space, and human scale and variation' (Jacobs & Appleyard, 2000). Such studies admit the contribution of human experiences and narratives to urban design, in both micro and macro scales. Yet, such paradigm shift has been opposed for being utopian in a contemporary social context, and by underestimating the 'epistemological, political and ideological' aspects (Dovey, 1999), or by obsession with the power of architecture and people as objects, and consequently for reduction of complex reality of everyday life.

Urban design should concern place as a 'process' and assign the values it produces within the larger network. Meanings and senses as part of these values should be challenged not only through micro-scale of human perception but within particular relations of the context in macro-scale. The result of other disciplines' findings about sense of place such as human geography and political economy are required for meaningful urban design. Sense of place is an inseparable interwoven relation between physical attributes (material and location), activities (practices- social production and construction) and conceptions (meanings/phenomenological) in space and time (see for example Canter, 1977; Relph, 1976; Tuan, 1977; Cresswell, 2004; Agnew, 2004). People's experiences are at the heart of these studies. So, place is both subjective and objective, and the meaning embedded in places, are both produced and producers. It draws the attention of urban designers to manifest the multiplicity of senses and meanings by Looking into people's use of space, their action, perception and experiences. The city design and urbanism is emerged out of the demands of everyday use and realities that does not exist as taken-for-granted (Crawford, 2004).

There are studies that show how urban design in its history has failed because of focusing distinctively on physical aspects while expecting place-making as an outcome (e.g. branding/marketing and re-imagination strategies, Ashworth & Voogd, 1990). Yet, urban design role in place-making should be

discussed as a valid contribution in planning discussion, *if* urban design attempts to apply new methods to study human perception and experiences and pertain them to formal theories; and *if* urban design regards relations as the materials.

In this paper, the process of framing public life in public space is investigated through a contemporary urban design practice, to find out the functions and roles, and responsibilities in assigning values. Together with understanding the context and power relations, this is a systematic study across the entire process of creating and recreating places.

## 3. Methodology

*3.1 Research Design*

Since contemporary public spaces are built within a larger development, and urban development processes cannot be studied itself as an object; this 'phenomenon' should be studied in its 'context' (Campbell, 1998:2). Therefore the empirical data about urban design is explored within qualitative strategies and case study to handle complex urban processes. The case is 'illustrative and exploratory tool that nevertheless cannot easily be generalized or consistently replicated' (ibid). This case investigates a 'contemporary phenomenon within its real-life context' by posing *'how'* and *'why'* questions (Yin, 1994) about the waterfront public space as part of the development of Western Harbour (Västra Hamnen in Swedish) in the city of Malmö, south of Sweden. It is a 'unique case' in which the city aims at transforming an industrial harbour to a 'knowledge city'. The development was initiated by a housing exhibition (Bo01- stands for living 2001) in two phases. The case is characterized as a "best practice", a "prescient case" (Yin 1994, Campbell, 1998) because it is ahead of its time as national pilot for *sustainable urban development*.

The need of process thinking and analysis, led the research material to be collected by meta-tactics in the two areas of theory and practice (empirical data of the observable events of the cases, as well as literature review). Various sources provided different types of information, which called for 'triangulating evidence' (Yin, 1994) and alternative types of analysis and interpretation. It helped observing the establishment of design and development process, while keeping distance of what has been echoed either by designers' intentions, or reflected in the document, which sometimes not coinciding with the actual practices in place. Qualitative interviews were conducted in the form of *dialogue* and *open* in order to exchange views. To understand the design intentions, interviewing the key actors of the projects in planning office and consultants brought a valuable insight to the research and supported some of the (pre-found) facts, while revealed different levels of interpretation, trades-off and unexpected changes and consequences in the process of development. Online reports or published in [local professional] journals were supplementary sources to find out the challenges of the development, which urban design practice has been able to overcome, criticized for, or appraised by, was studied by reviewing documents, reflected as. To go beyond abstract intentions and to understand the reality of everyday use, this study applied participant observation while documenting realities by photography. The patterns of behaviours, practices and repetitions were studied without expectations, while evaluating them critically as urban design outcome and if there is any unintended consequence.

## 4. Result: Malmö's experience in waterfront development

*4.1. The Historic and political context*

The city of Malmö is Sweden's third largest city, located at the southern tip of the country with 300,000 inhabitants, which includes a high immigrant population of around 29%. The city's dockyards formed in reclaimed land in 1840, and Malmö evolved as a thriving industrial town. By the early

1980's, the Kockums shipbuilding industry was in decline and in 1990's vanished completely from the Malmö dockyards. The SAAB factory was replaced there in the 1990s, yet closed down soon. The city's future was in crisis. As a result, the City of Malmö (the municipality) decided the phenomenon of urban regeneration in the industrial area of Western Harbour, within a major strategy for the whole city (Malmö Stad, 2006; Larsson, 2015).

In January 1995 the municipal government initiated a comprehensive vision work 'Project Malmö 2000'. The intention was to formulate a possible positive image for Malmö, for the promotion of in-migration and entrepreneurial start-ups (Malmö Stad, 1999), a dramatized journey into the 'knowledge city'. Strategic spatial planning played a vital role for primarily shift and repositioning Malmö. The decision was in line with the establishment of the Öresund link- road and rail bridge- connecting Sweden to Denmark, and to the rest of the Europe, means positioning Malmö in Öresund region, which gave Malmö more opportunities to be re-imagined as the *knowledge city*. The two other strategies were the initiation of the housing exhibition: Bo01 - Living 2001- as part of the European Housing Expo in 2001 and the establishment a new university. Territorializing of both strategies was negotiated by the City of Malmö. Through spatial planning Western Harbour, an industrial site was proposed to be the *place* for new image of the city, close to city centre to get integrated with its potentials (Figure 1).

Malmö's period of industrial decline overlapped with a number of environmental disasters that had a particular impact on Sweden. This was parallel with new political interest in issues of sustainability discussed in 1992 Rio by United Nations, which highlighted the important role for local government in tackling climate change, which Sweden has a long tradition in that. In a climate of increased urban competitiveness, the condition was prepared for Malmö to choose particular 'environmental vision' and 'sustainable development' for the transformation of Western Harbour.

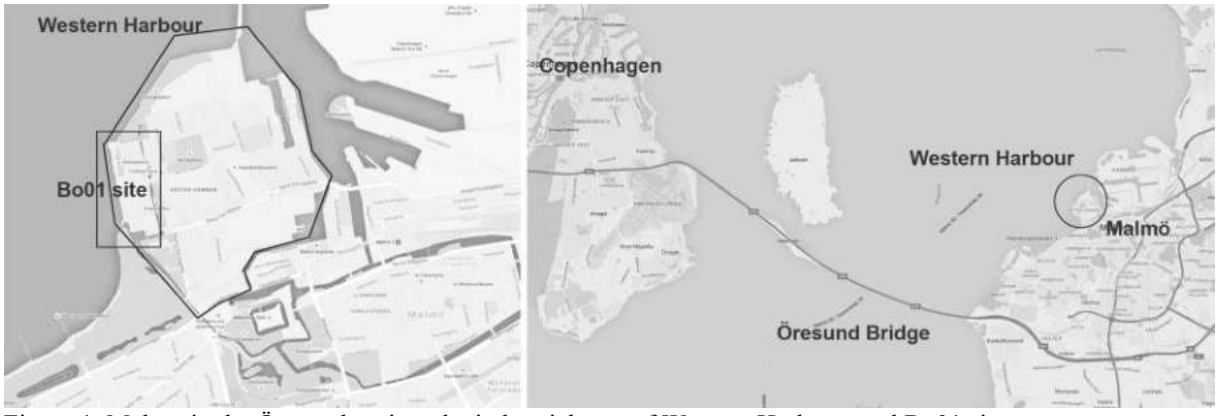


Figure 1, Malmö in the Öresund region, the industrial area of Western Harbour, and Bo01 site

*4.2 Design Intentions*

*4.2.1 Bo01 Vision & Development: City of tomorrow*

The design and development of Bo01, named as 'City of Tomorrow', was the first part in the process of transforming the former industrial harbour to a brand new living urban district (figure 2). A determined visionary and strategic work initiated in 1996 for the creation of attractive living and urban environments 'to build an ecologically sustainable information and welfare society' (Malmö Stad, 1999), to draw people's attention to Malmö after a severe emigration.

The site has unique spatial qualities, natural values and proximity to the city centre and to the future university that could invite new businesses and prospective developers for long-term investment to be economically profitable. Urban design had an integral role for regeneration and transformation process, for the provision of sustainable city to be *"more comfortable, economical, secure, and pleasant, exciting and beautiful* ... [through urban form which should meet] ... *people's aesthetic, emotional and social needs* ... [as]… *necessary conditions for tomorrow's wise buildings* (Tham, 2015).

Such visionary idea established a rational design process and was presented through a master plan, which the natural potentials of the site, climate restraints, and human well-being (biological and cultural needs) were central concepts to form the built environment. The master plan and leading the whole Bo01 project was accomplished by an experienced trustworthy Swedish architect, Klas tham, who is well-known for his ambition and experiences to shape the environment based on 'unmeasurable needs: comfort, safety, and environmental experience' (Tham, 1997). He put particular attention to human-scale environment, aesthetics and visual qualities, inspired by the old European cities to foster 'small-scale intimacy, awareness, security, complexity, mystique and surprise' (ibid, p.10). A mutual agreement from all actors involved in the project provided a legally binding document named 'Quality Programme', as a common platform between Bo01, the City of Malmö and the developers' representatives, to ensure the quality and attractiveness of the outcome as a legible and coherent built environment (Malmö Stad, 1999).

Figure 2, The regeneration of Western Harbour, left 1969, right 2001: Bo01Expo opening

4.2.2 *'Public space' and Social life as requirements for the 'city of tomorrow'*

One out of ten percent of the Quality Program underlined the 'public spaces', yet unclearly categorized, either by the location or by design requirements. What has been highlighted the most in this guideline was to reinforce the 'coherent urbane and unified identity' of all public (open) spaces. To achieve this goal, responsibilities were shared between developers, City of Malmö and Local Streets and Parks Department (Malmö Stad, 1999, pp.33-40). Physical legibility and coherency was essentially required through different facilities such as lighting, recycled material, colour and decoration, traffic prioritization, or standards for tree planting (ibid).

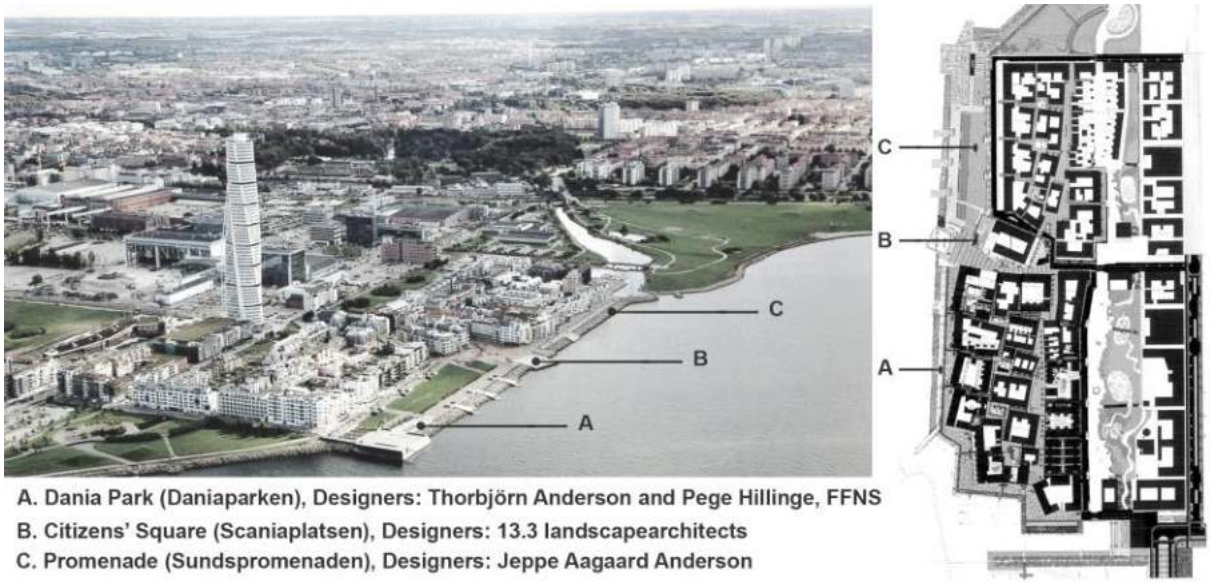
The scope of this paper, on public space is on the seashore (figure 3), which was designed through a competition process and by different designers in three parts: Dania Park (Daniaparken) in the northern part of Bo01, Citizens' Square, (Scaniaplatsen) in the middle of the site, and Promenade (Sundspromenaden) that connects the Citizens' Square to the marina at the end south of Bo01.

However, restricted guidelines of the Quality Program as well as the Scandinavian's philosophy about the landscape and nature have caused a uniform and legible outcome. A minimal design with rich and

durable materials arose from the Scandinavian landscape design philosophy for being in the nature and enjoying the view (Andersson, 2014; Anderssen, 2015).

In the quality program, the waterfront public space was intended for 'public recreation' as 'attractive destination where access and publicity are assured' (Malmö Stad, 1999, p 26). 'Social life' and 'needs for meeting and socialising' were aimed yet not scrutinized in the quality program. It was identified as 'safety access to activities' in public spaces and through services, besides using the technology and local network in the district for better communication'. 'Meeting points' were proposed in public places where public activities and services are triangulations for social encounters. Public places, e.g. cafés, library, laundry rooms, playgrounds, were intended to be situated at the entrance of each block, on the ground floor level.

The value of green spaces was described widely through human health, and rich spatial experience, and knowledge of biological diversity. Planning high intention to include vast green spaces along the waterfront was negotiated between the actors and the City of Malmö, which resulted changes in the master plan. Dania Park was intended to be a park, which makes culturally different value in Swedish culture of being out in the nature.




A. Dania Park (Daniaparken), Designers: Thorbjörn Anderson and Pege Hillinge, FFNS
B. Citizens' Square (Scaniaplatsen), Designers: 13.3 landscapearchitects
C. Promenade (Sundspromenaden), Designers: Jeppe Aagaard Anderson

Figure 3, The waterfront public space; right: Bo01 master plan, left: the real image, Arkitektur, 2011

*4.3 The Outcomes*

*4.3.1 Public Life: The site becomes the place*

Bathing in cities in some cases have caused by coincidence when people spontaneously started to swim in some part of cities. This phenomenon happened in Western Harbour waterfront after Bo01 was inaugurated. The shoreline public space offered visitors access to the water; the right, which the city and its citizens were deprived for a long time. The stairs, which were expected for sun bathing and enjoying the view, shortly, connected people to the water. It was a challenging circumstance for the City of Malmö, because swimming was banned in this site due to the safety issues. It was recognized that citizens' main interest and the need of this place had been ignored (figure 4&5).

The City of Malmö was about making decision in this particular situation: should citizens be prepared to accept planning 'reasonable decision' or if planning should accept social justice and act reasonable

(Campbell, 2006). The public use, as an unexpected outcome, turned to be an opportunity for Bo01 actors, struggling with the gentrified and not affordable development. Therefore, the city adopted approaches to accommodate public use where possible and changed the physical elements as well as the management policies. Paved stairs lead users into new wooden platforms with jetties, which enabled people to get in and out of the water. The popularity of the waterfront increased, and people's use of space gradually influenced their spatial knowledge and perception about the industrial identity of the harbour. They got access to the site where would not be possible unless the new development. They were enjoying an attractive environment at Western Harbour, which aimed at high quality urban form to increase the market value through its new inhabitants.

Figure 4, swimming just happened as an unexpected consequence on the site, photos: Thorbjörn Andersson

The public space, in which the least social values were expected to allocate, exceeded the city and even the urban designer's expectations (Tham, 2015). Accordingly, the 'public space' turned into a place, where public life could develop, and "the drama of communal life unfolded" (Carr et al 1992, p.3).

Another unintended consequence happened at the management and surveillance level. The trees in Dania Park, which aimed to reinforce the sense of place, sense of enclosure, climate protection and seasonal variation, were disappeared after some years (Andersson, 2014 & 2015). The trees did not survive even after a second try planting with an excessive cost. The management responsibility was not clear in the park, where the public access and used the space unexpectedly (ibid) like almost 20,000 people in a sunny summer day.

Figure 5, the gap between vision and reality; trees on the sketch of Thorbjörn Andersson, right: added platforms

*4.3.2. Spatial experiences and experiential qualities*

The waterfront has four areas that punctuate the edge of boulders and access to the water; three in the park, and one in Promenade. The land in Dania Park has been intentionally elevated to create different 'spatial experiences' in different location. In the middle of the park, three platforms are rebounded on a higher elevation in the form of terraces, looking to both green lawn and allies provide space for individuals and groups. Two large open plazas bound Dania Park. A grand hard platform in the north captures the best view of the site, which is left deliberately empty, as a flexible space. A projected platform out on the water in this point stands as a statue and landmark for the waterfront. All the ledges, stairs and edges are comfortable for seating. It was observed that most people visiting the park walk up to this point and spend some times there. The open square hosts several events and initiated activities by the City (Figure 6). Changes in flooring materials and patterns have high visual and aesthetic quality. The Citizen's Square situated at the middle of the site is the main entrance of Bo01 to the water and opens the view to Turning Torso tower (built in 2005) as the new landmark of Western Harbour, replaced the industrial image.

Figure 6, Various optional and social activities; Both left: Dania Park, right top: Citizens Square, right bottom: Promenade

wooden long steps of Promenade after seating and stretching out for individual or groups on both sides, either facing the sun and towards the horizon, or facing the promenade and protected from the wind. The whole waterfront is prioritized for pedestrians with extensive and safe walking and biking routes.

The high quality of the physical space encourages people for different optional activities, which are carried out by wish (Gehl, 1996). Taking a walk, standing around enjoying life, watching the view, sitting and checking phone, taking picture and sunbathing in the summer are the most observed activities. Although planners had aimed for more public places on the ground floor level, not the same interest for developers, therefore urban design reconciled developers' interest with limited

implementation of public places. The City of Malmö, perused the strategy for public spaces to be liveable and become meeting places. Following this strategy, the City took the initiative and runs regularly different social and cultural events in this public space, in which people do not only access to this place but can participate and be actively engaged with it. The public space is open to all Malmö citizens who do not necessary know each other, to exercise their interest and to express their feelings. The Waterfront public space became an ideal place for striking up acquaintances increases the possibility for social activities. Citizens' engagement and practices in the public space shaped a new image for Malmö on top of the branded sustainable identity of Bo01.

Bordering buildings, along the public space are relatively higher to reduce the wind; therefore the interior part of Bo01 is perceived more private and secure. For the same reason, permeability of the peripheral blocks along the public space is low and through the narrow internal streets and frequent plot lines (Figure 7). As a result, there is a weak continuous visibility through the blocks, which is less inviting for the regulars. The robust impression of public/private influences natural movement and avoid wandering freely through the blocks; otherwise in some areas there are signs of soft control of the privacy.

Figure 7, left: limited visibility to the public space; right: the privatized neighbourhood inside.

The buildings typology along the waterfront varies in the northern and southern part relatively to the time they were built (figure 8). The physical edge of Dania Park was built during the second phase of the development after the park had been formed and used. All are residential buildings have semi-private interface, in a form of front yards, whereas in the southern part, private doors and windows are directly opened to the public space. The high level of publicness of the waterfront and diverse group of users on one hand, and no interface between public and private in the southern part on the other hand, had made conflict for some local residents who had paid extra money to get the sea view, while other citizens who *'hated'* this gentrified area *'[…] just walked up and pressed their noses against the glass all the time'* says Scott, an American, who lived on a sixth-floor seafront apartment in 2005. He continued that *'[…] if I was on the first level or the ground level, I'd move out, and many people have done just that, six or eight months after moving in. Others have blocked their windows with shades […]* (Rose, 2005).

Figure 8, left: the semi-private interface of Dania Park; right: the solid edge of Promenade

## 5. Discussion

*5.1 Towards meaningful places and meaningful urban design*

The case illustrated the rational planning and design process with the aim at identifying high quality sustainable environment, in two main focuses of green living and human-scale form. Development and use of the public space, as part of regeneration process, became a key point and catalyst for an inclusive and liveable environment to stimulate social life. The findings of the study showed that people got the intended environmental qualities gradually through their engagement in public spaces. Their engagement at a certain time - when the Western Harbour turned to be a liveable place- was the result of unordinary public life which was unfolded and turned into formal outcome, like the way everyday urbanism aims to contribute to urban design (Crawford, 2004).The case study showed that the public space became the meaningful place when people's presence made a different, their practice was repeated and adopted to the physical place; as the process of social production and social construction of space (see more in Low, 2009, p.28).

This study highlighted that places are about urban processes, people, power and institutions. Places and meanings are more complicated object to be finite, they change through time. In addition, other direct or indirect factors and connections in macro-scale network and planning level such as spatializing public good, socio-economic dynamics, and political reasons influence people's knowledge and attitude and accordingly experience of the place. Urban planning and design assessed the social need as an unintended consequence, changed the regulation, facilitated the place by design and upgraded it with initiating more social activities.

The big lesson was that the citizens' voice was heard, and due to high planning ethics they were responded immediately, which fostered a democratic process. Later on, the City proposed new places and facilities for swimming, designed by the same designer and rich material as Promenade, in Western Harbour. Through this process – and following strategies for public spaces- the City is regarded by its simple but powerful definition as 'a human settlement in which strangers are likely to meet' (Sennett, 1977, 39). From planning perspective public space potentially becomes the site where different actors and their influences meet. Place-making then was a post-development effort, based on needs for cultural development, was a big step to rehearse civility where there is lack of friction, togetherness and any deeper reason to communicate (Bauman, 2001). That was a great achievement for Malmö with almost 170 different nationalities to gather a large group of people together. This is as much of the literature on city design and urbanism aims to address at the best of public space development.

'Towards opens attitudes', the City of Malmö is strongly aiming at 'rethinking about public spaces' for multiple social usages (Larsson, 2015). Place shaping then can be interpreted as production of space for 'collaboration and dialogue between diverse groups of users', which is in planning level (ibid). Besides, provision of constructive space in urban design perspective, is through place-shaping for 'complex forms of freedom' for individuals and groups, 'not only as an expression of distance and absence (…) but for connection, presence and mutual support' (Madanipour, 2014, p.247). To achieve freedom and democracy in public space is an integral point that should be addressed further in multicultural and super-modern societies.

## 6. Conclusion

Places and people both form meanings, by materials and relations, 'roots and routes' (Dovey, 2010): the former is shaped by urban designers' attempts and knowledge to create physical quality, visual identity and social activities, while the latter is limited by 'utilizing the affordances that particular material structure offers' (Cresswell, 2009, p.2). The former is traditionally addressed by standards and necessary criteria required to shape a good urban form, which determine human needs and patterns of behaviour (Kostof, 1991; Lynch, 1981; Alexander et al., 1977). However, this case study revealed that meaningful places are beyond *good urban form*, which is not necessary out-there. Urban design should rethink the approach of *what it would be,* also their attitudes towards provision and evaluation of *meaningful* public places (Crawford, 2004, Inam, 2014). Urban design should be contextually fit for specific culture and time.

Summarizing the major potentials and limits of urban design in framing public life and its contribution to place-making, the points are:

- Urban design has an integral role in solving economic and social problems by production of space but not only through shaping the form (design) but also through the use and management. Therefore, the success of urban design should be through only evaluation the form and outcome, but through the process of shaping, between intentions and outcomes, design and use, actors and users, macro-scale relations and micro-scale perceptions.
- Urban design should have a broad moral vision in solving problems in solving social problems.
- The social and cultural norms and values are reflected through the normative positions and experts' experiences and preferences in urban design practice.
- Unintended consequences are not necessarily negative outcomes if urban design is positioned within an informative environment with long-term urban planning, and if it has pluralistic approach to alter the solutions.
- Urban design practice involves experts in different scales and diverse roles to materialize planning visions: plans; frameworks and regulation, mediating between different actors and developers, trade-offs.
- Studying contemporary public spaces highlights the power of public authority and their relation in place-making.

I conclude this paper by addressing a critical question: how can urban design better navigate the contextual needs in transformation process, and in which scale the outcomes can be predicted in advance.

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[1] Urban design (or in Swedish Stadsbyggnad) is described as 'the methodology of ordering and shaping, composing, designing buildings, streets and public spaces in their entirety'. However, urban design in Swedish context follow special regards to 'natural and cultural values' and promotes 'aesthetically pleasing design of built-up areas, green belts, routes of communication and other construction' (Planning and Building act: Chapter 2, section 2, Quoted in Loew 2012, p97).

# Embodied practice and relational public space. Bridging critical social practice, planning and design through education

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## 0. Abstract

*Traditional approaches to understand space tend to view public space mainly as a shell or container, focussing on its morphological structures and functional uses. That way, its ever-changing meanings, contested or challenged uses have been largely ignored, as well as the contextual and ongoing dynamics between social actors, their cultures, and struggles. The key role of space in enabling spatial opportunities for social action, the fluidity of its social meaning and the changing degree of "publicness" of a space remain unexplored fields of academic inquiry and professional practice. This paper offers a different understanding of public spaces in the city. Its objective is to (re)introduce the embodied experiences in public life into the teaching curricula of those academic disciplines which deal with public space and the built environment (architecture, planning, urban design, the social sciences, etc.).*

*Relational theories of public spaces have been frequently discussed over the last decade, with differences in their way of addressing the relations between city materialities and social practice. The paper gives an insight into a recently evolving stream of relational pedagogy of public space, where theory of space is informed by perspectives and abstractions taken from human action constitiuting space, and related bodily encounters. Taking the example of the unexplored potentials of embodied cultures in public space, this presentation seeks to bridge theoretical approaches in urban studies and an introduction to performative tools in planning and architecture with the objective to highlight the everyday patterns and rhythms as starting point for theory building.*

## 1. Relational conceptions of public space

This paper discusses relational perspectives on public space in order to present a way forward in dealing with new challenges in architecture and planning education. Developing a pedagogical approach based on urban life and difference in public space is a crucial and a much needed challenge in an increasingly complex and accelerated urbanised world. Considering the ramifications of spatial practice and strategic interventions on urban everyday life, this is a key task for the education of urban professionals. Alternative (relational) ways of envisioning space are particularly needed in architecture and planning schools in order to reflect critically on the crucial role of academics and to amend historical patterns in the production of space.

While urban collectives and urban movements might not always reach the point of becoming 'critical counter publics' (Fraser, 1990), there are many ways in which theory and practice can be informed by the effervescence of daily life, and by the way people both engage with and signify

[1] This paper summarizes and adds on to the findings of the book: Tornaghi, C. and Knierbein, S., 2015. Public space and relational perspectives – New challenges for architecture and planning. New York/London: Routledge.

space. To some extent current debates on public space are aware of multiple emerging social dynamics that spontaneously evoke new patterns of public life or challenge existing ones. Contributions such as "Loose Space" (Franck and Stevens, 2006) or "Insurgent Public Spaces" (Hou, 2010) stress the power and innovation emerging from grassroots practices. Madanipour (2010) also feels that 'the complexity of the urban design, development and management processes (…), and of the configuration of urban societies in which they are located, makes it impossible to find simple answers' (p.237). In "Public Space and the Challenges of Urban Transformation in Europe", Madanipour, Knierbein and Degros (2014) emphasize the challenges faced by municipalities and urban populations in different European cities in terms of policies and programmes, and analyse the multiple roles of public space as a catalyst for urban change. An entire section is dedicated to public space in everyday urban life, revealing its multifarious potential for accommodating the changing patterns of everyday urban routines. This can be linked to Stevens' (2007, p.7) view that "urban experience and social needs are more than mere conceptual abstractions; they can be understood by looking at everyday life on the streets, at its specific and diverse qualities, (…) and in particular at the complex tensions which arise between different needs, different meanings and different users in spaces." Public space is understood as those places where public life unfolds (Madanipour, 2010). Public life relates to the (dis)enchantments of urban encounters, in which there are many and diverse ways of 'how people rub along, or don't, in the public spaces of a city' (Watson, 2006, p.2). However, the built arrangements (that is, their physical shape) of public space can only be interpreted as a snapshot of complex socio-historic processes of space production.

Philosophers, social scientists and other professionals have long tried to understand the workings of the relationships between society and urban space (see Schmid, 2005, p.194 for an introduction to absolute and relational space, and its philosophical history). In the course of these debates, so-called positivist conceptions of space have been challenged by relational conceptions of space. The first group of positivist approaches tend to consider space as existing more or less independently of human existence. Absolute conceptions of space are criticised as 'bedrock' concepts because they 'shift only slightly and move only slowly, despite increasing criticism of their usefulness and appropriateness' (Graham and Healey, 1999, p.625, citing King, 1996). The second group, concerning relational conceptions of space, tries to grasp the built space we perceive and touch as something that has grown over time and is constantly changing, as an outcome of the specific mutual relations between people and places, and their contexts. Here, we consider the material quality of the city as one aspect of such socio-historic processes. We look at space, firstly, as constantly generated by people – individuals or social groups – and, secondly, as indirectly affecting the everyday life of people, and in turn being transformed by changing everyday life patterns and thus by social dynamics. To put it simply, relational space approaches involve concepts that define 'lived spaces' as phenomena that can only be explained by their social, political and cultural context and by the relations between people and objects, both at a given moment in time and in the course of history.

Why is such an exploration necessary within architecture and planning? The modernist approach in these disciplines tended to view public space mainly as a shell or container, focusing on its physical and material structures, and functions. It ignored its ever-changing meaning, contested uses, social conflicts, and more generally the fact that public space is an outcome of contextual and on-going dynamics between social actors, their cultures and power relations. Today, absolute space concepts are still prevalent (as in the aforementioned bedrock concepts) in theory and practice, and tend to reduce public space to a conceptual container (without life and human experience). Such narrow concepts of space are influenced by perceived geometries that can be quantified by measuring and counting. The criticism directed at their proponents emphasises that architects,

planners and colleagues from related fi elds of the spatial arts run risk of disregarding social circumstances, political alternatives and cultural values when intervening in public space. Such a positivist, technocratic understanding of public space does not help in the search for a broadly accepted social path of urban change; indeed it contributes to the tightening of structural conflicts.

Since 1974, this contradictory situation has been explained as partly caused by the segmented and segmenting approaches to analysis and conceptualisation of modernist space among (and within) academic disciplines, but particularly in architecture and planning (Lefebvre, 2009; Stanek, 2008). The challenge is to find ways of dealing with the neglected human aspects in those disciplines that cast spatial visions into steel and stone, and provide the associated instruments for implementation. It promises a stimulating contest at the interface of theory and practice in cities, where interests in designing material change usually collide and confront interests wishing to produce scientific insights. These collisions and confrontations are immanent in capitalist urban planning and design, which treats space as an abstract two- or three-dimensional object to be sliced into workable pieces (Stanek, 2008). These pieces are then tailored by specialised disciplines, that is, by transport planners, landscape architects, light and urban furniture designers, regional planners, urban designers, architects, and the like.

This division of labour in shaping space leads to the alienation and marginalisation of citizens and critical scholars in ordinary practices: place is ripped out of its social and cultural meaning and origin. Since professionals in these specialised spatial arts' disciplines have been taught to understand themselves as neutral technical experts rather than as agents responsible for the spatial aspects of social change (a wider perspective in engaging with space), they hardly touch on the political or epistemological ramifications of their actions (a narrow perspective in engaging with space). These segmented and compartmentalised conceptions of space are constantly (re)produced and prevent a necessary understanding of spatial complexity and the political consequences and social impacts of strategic spatial interventions for urban societies. Above all, they lead to the incapacitation of local dwellers with everyday knowledge and experience of the values and symbolism inscribed within historically grown public space. Today, four decades after Lefebvre's critique, these discrepancies are still prevalent. As Lehtovuori (2010, p.4) states, 'space is conceived of as something separate both, from the meaning people give to it and the actual uses and practices taking place in space'. He considers this to be 'the main problem in architecture and planning's space-conception'. Academic division of labour and life-worldly alienation separate both politics and science from more accurate accounts of the complex nature of socially produced public space. The key role of public space in determining the structures of opportunity for social action, the fluidity of its social meaning and its changing public nature remain neglected fields in the academic education of future planners and architects.

Despite contributions that have provided conceptual tools to counter this trend, for example the latest evolutions of structure-agency debates, in the form of strategic relational approaches (Jessop, 2001; Jessop, Brenner and Jones, 2008), relational understanding of space and place (Graham and Healey, 1999; Tonkiss, 2005; Healey, 2006) and, more recently, neo-structuralist epistemologies of space quality (Moulaert et al., 2013), their degree of abstraction, and lack of relationship to the specific settings of everyday life and spatial practice often prevent them from being of use to a wider group of academics. This applies even more to practitioners who shape the built environment and design the institutional architectures that could enhance social processes. This 'rich texture of relational-space-theorising' does not (yet) lead to substantial change in planning and architectural practice as 'practitioners understand public (…) space predominantly as a visual (…) stage-set, not as a socially rich entity or realm, even less a process' (Lehtovuori, 2010, pp.4-5).

A way needs to be paved to frame space simultaneously by its built and social qualities, and the relationships between them. In applying relational conceptions of space to planning and design education, there must be a strong emphasis on spatial practice to serve as a transdisciplinary catalyst for sustaining social change in spatial terms. Simply put, relational conceptions of space help the understanding of material and immaterial aspects of different urban development phenomena by focusing on social processes, as well as on their cultural and political contexts and inequalities. But why would trained architects and planners find it useful to approach space relationally? As Harvey (2004, p.5) explains: 'There are certain topics, such as the political role of collective memories in urban processes, that can only be approached this way. I cannot box political and collective memories in some absolute space (clearly situate them on a grid or a map).'

On the other hand, the complexity and the abstract nature of relational conceptions of space are still greatly criticised in architecture and planning (Lehtovuori, 2010, p.18), and 'the relational terrain is an extremely challenging and difficult terrain upon which to work' (Harvey, 2004, p.4). Architecture, urban design and planning schools are inherently divided communities, encompassing advocates of positivist approaches as well as proponents of relational conceptions of space. The latter are usually assigned an overly theoretical, abstract and inapplicable impetus, whereas the former are often stigmatised as prescriptive, descriptive, and socially indifferent. Following Harvey (2004, p.6), rather than interpreting relational perspectives as merely contrasting absolute conceptions of space, we seek to understand them through a wider approach to (socially produced) public space which allows for self-reflexivity, criticism, proactive recognition of the marginalised, and the relevance of the everyday in all its social and material manifestations. It is in academic education in architecture and planning that absolute conceptions of space and different counter conceptions collide on a daily basis. It is here, where a dialectical relational approach seeks to overcome thinking in such dichotomies, that there is promise of new insights and innovative results. These efforts might contribute to enrich and revise academic curricula in architecture and planning will provide a useful way of enhancing interaction and collective reflection between academic institutions, governmental departments and planning practice, and within them.

A relational approach to public space can be an influential sphere of life in which to enact an alternative, and socio-environmentally just, coexistence of living beings, and that built environment professionals have a crucial role to play in making this happen. In a world where cultural, political and social hegemonies tend to influence public perception and 'where the story of city life as mixing and mingling is replaced by a story of antagonism, fear and exclusion' (Watson, 2006, p.1), we see a powerful tool in a socially grounded and radically different architectural and planning practice to counteract processes of neoliberal spatialisation (Brenner and Theodore, 2002). Closely linked to the above is the belief that public space is a crossroads where different knowledge fields overlap and connections can be made among them. It is therefore particularly important in establishing spatial practices to enhance lived space qualities, to develop trans-disciplinary dialogues – that is to say collaboration between academics (and academic inquiry) and non-academics (wide ranging forms of knowing) – in the endeavour to rethink the role of education in the field of public space.

In addition to academic approaches advocating a relational praxis, a plethora of grassroots and activist practices have emerged in the form of insurgent planning spheres, which implicitly involve relational approaches to space, without their potential being necessarily recognised by institutionalised planners and designers and their institutions. By learning from these emerging, spontaneous, critical and insurgent practices, and by experimenting with innovative pedagogical tools inspired by them, we seek to address and bridge the gap between relational approaches to space and relational spatial practices.

## 2. Educational Reflections on Relational Practice and Critical Pedagogy

Public space is created wherever learning is possible between various disciplines, between different communities and expertise fi elds – particularly those relating to everyday life. The following educational challenges echoe a practice-oriented trend that has gained momentum in the last decade and expands the notion of planning and designing beyond architects, designers and planners to include inhabitants of the city. Tonkiss (2014, p.2 and p.11) has recently emphasised a 'critical understanding of design in terms of both formal processes and informal (or less formal) practices'. Relating the concept of 'ordinary urbanism' (Amin and Graham, 1997) to public space research, she takes into account diverse forms of agency and activism within the processes of city-making. Similarly, there are various conceptualisations that value spontaneous and radical practices, which aim at reconciling aspects of planning, design and everyday life, for example: 'everyday urbanism', (Chase et al., 2008), 'guerrilla urbanism' (Hou, 2010) or 'insurgent planning' (Sandercock, 1998; Miraftab, 2009). Most of them deal with insurgencies and their geographies as a response to neoliberal tendencies through inclusive practices (Miraftab, 2009, p.32). These relevant contributions tackle public space as a core arena of participation, action and reflection.

Other than this general theoretical turn towards practice-oriented and inclusive approaches to city-making, the immense potential of learning from everyday life is neither acknowledged nor explicitly and sufficiently reflected upon in those disciplines that shape the built environment: existing insights have hardly ever been translated into practice, and have even been negated, ignored or circumvented by educators. This has produced noteworthy conflicts and tensions between urban populations and urban planning and design institutions in Europe and beyond (see Stuttgart protests in 2011; Occupy Gezi Movement in 2013). Planning and design professionals have not made systematic efforts to overcome the evident weaknesses of their formalised procedures, nor have relational thinkers succeeded in translating abstract theory into educational principles in order to raise future professional awareness in favour of inclusive social practices. In elaborating specific relational perspectives for planning education, this contribution substantiates the view that critical reflection and critical action need to develop out of mutual dialogue between those involved in practical interventions and those busy gaining scientific insights about its nature.

### 2.1 Learning and designing: Creating spatial conditions for relational learning

In public space, learning and designing can mutually enrich each other on a practical level: pedagogical approaches to design that include ludic elements of play can trigger fantasy and help in learning with less fear of failure. Playful interventions leave room for student experiences and values, and – when undertaken in direct contact and interaction with urban dwellers and space users – can help establish empathy between (future) urban professionals and 'the public'. Such pedagogical approaches are based on a number of innovations: they provide access to alternative places of learning; use irritation to provoke attention; seek opportunities to renegotiate spatial interests; work with repetition to enhance learning effects and leave room for (self) emancipatory action. These experiences correspond to ideas of education that see learning as an immersion process in the complexity of the daily life of local communities, i.e., as relational learning.

There are already a number of educational practices that transcend the boundaries of abstract space, partly under the influence of the educational turn in those professional areas dealing with the material qualities of public space (for example, public art). Alongside the benefit to students, urban professionals and teachers can become informed about (relational) theories of learning and related objectives of spatial emancipation and justice, and thus can establish a transfer between concepts in

education and pedagogy, and urban design and planning approaches. Scientific insights so gained about the minutiae of everyday life are grounded in local social practice, yet can enhance understanding of issues that are relevant for urban societies generally. Knowledge generated from relational practices is not just 'embedded', but first and foremost 'embodied' (Madanipour, 2013, p.378). Learning is understood as being both embedded and embodied in social relations; it emerges out of the interplay between individual motivation and collective stimulus, (for example, interactions between tutors and learners, learners and learners, public and learners). Pedagogically, this means supporting situations of co-participation, studying the proper social and spatial contexts of learning and helping learners engage in social practice that would foster socially innovative outcomes in a certain place. Place-based learning is coined as situated learning.

Action-orientated pedagogy has been used as an opportunity to activate a more horizontal and experiential way of learning: students learn outside the traditional classroom, from peers, from citizens, and in dialogue with teachers. Understanding planning and designing as practices of learning means going beyond an individual and unilateral understanding of the phenomena of social change, and offers a step forward towards collectively co-produced knowledge that is experience-based, materially embodied and multilaterally embedded in social relations.

## 2.2 Emerging and embedding: Acknowledging spaces of emergence and spontaneity

The collective pedagogical experiment in the making of public space means systematically exploring unplanned side paths and fostering student capacity to engage with the unexpected. Lived space becomes an open and experimental seminar room in which to teach these skills as students can try to test conceived planning strategies and defined design goals. Based on self-organisation, collegiality and open dialogue at eye level, pathways of self-organisation can be explored within the 'messy' environment of lived urban space. In this way, rather than thinking of teachers/lecturers as those directing students through educational activities, the social richness of public space can be acknowledged and explored at its fullest. Here, students learn to combine the achievement of procedural goals with a general openness towards substantial changes in strategies and goals during the process, while considering the range of possibilities of building or not building. Such an approach, based on the particularities of place, will not produce generalisable solutions, but rather situated strategies geared to respecting the peculiarities of specific people and places, and the precise social practices from which they emerge and on which they impact.

Learning about social relations can be fostered by employing dialectical learning fields that go beyond project demarcations. This means adopting a working practice that values and is embedded in locally existing socio-historic contexts, and that introduces perspective from the margin. In such peripheral contexts, there is the opportunity to experience the richness of spontaneous human interaction, such as often happens before or after process-oriented practices like street theatre events. Integrative and interactive public life situations can be valuable learning experiences. Embedding these (marginal, peripheral) lived space perspectives into urban professional curricula makes spontaneity and improvisation a normal part of the learning experience. In so doing, the peripheries produced by these demarcations can be turned into productive fields of learning from the margins. Yet a full transfer of these educational insights into practice has yet to be made: urban professionals are asked to leave the expert's pedestal and accept the evident limits of any skilful intervention in lived space. By reinterpreting these limitations as a potential, practitioners might be able to envision procedural goals, to deal spontaneously with emerging spaces and to work constructively with the clashes between collective and individual interests.

By recognising the ever-changing nature of public space, open-ended processes embrace the variety, novelty and surprise that the 'banality of mundane' or ordinary everyday life entails, and makes space for these practices to hold a legitimate place in planning and design practice. On a more abstract level, the study of changing spatial practices offers an understanding of public space as a core field for conceptual innovation based on insurgent practices. Instead of zooming out into meta-disciplinary accounts, researchers may look to both empirically informed and theoretically abstracted forms of cross- and transdisciplinary knowledge, gained via public space, and connected to the insurgent materialities of spaces of emerging (counter) publics.

## 2.3 Opening and sharing: Learning about new forms of inclusiveness from the open source movement

Public space is increasingly recognised as a place of open source-knowledge production where cultures of sharing may be conveyed. Many contemporary ideas for establishing and self-organising urban collectives and public movements, which try to unravel structural power relations or related controversies, have been adopted from the open source movement. Elsewhere, game prototypes are 'tested' through multiple user-feedback loops where public users are systematically invited to criticise and contribute at all stages of development, thus becoming the real developers themselves. Such endeavours acknowledge that public space is as endlessly completed as it is fully incomplete: incomplete because it is generated by unpredictable patterns of unknown and constantly changing user communities, which both interact with and constitute the open source movement.

Game designers can only draw near-ideal solutions; so do architects and planners. By linking emancipatory practices of open source-based game design to spatial planning skills, students are encouraged to focus on the imaginary, inventive, immersive and subversive features of any spatial intervention.. By contrast to new ways of global learning (such as MOOCS) and despite their advantages in reaching many people in different world regions, face-to-face learning in local public space is much more open to questioning, amending and reforming structural access to knowledge production, even though public space is anything but free from structural power relations. Since public space is saturated with power dynamics, it is where the constant development of new ways of thinking and new ideas, inspired by the creativeness of the open source movement, can be brought to light. Therefore, the material and embodied facets of power relations can be more openly and radically addressed, challenged and changed in place-based education.

We believe that from an engaged relationship with open source principles students can critically rethink the traditional positions of place-makers and instigate collective communication and action via public encounters, collective collaboration and face-to-face communication. In this sense, publics and collectives are considered as makers, producers and owners, rather than as spectators, consumers or passive users. Moving a step in this direction means promoting an open culture in public space education per se. It can be worth transferring knowledge about digital practices, based on open culture as a core principle, to non-digital public space as it helps experimentation with new dimensions of inclusiveness in mutually entangled urban and digital commons. Yet the open character of user-centred approaches in digital public space does not automatically lead to shaping urban public spaces in a more inclusive and just way. Rather, it is the professional habitus of the urban professional, his/her ethical disposition and epistemic finesse that helps to develop a professional 'position' for public space.

## 2.4 Activating and appropriating: Developing positionality while learning about politics of (public) space and time

In formal planning, practitioners often find it hard to react to the dynamics of social change, the pressures of migratory waves and the rhythms of everyday life. Everyday practices in public space may fluctuate between tranquillity and peace as well as between moments of open dissent, ambivalent behaviours and situations of spatial insurgence. Yet it is in public space where the conflictive nature of structural inequality and injustice results in local disputes. Our suggestion is that urban professionals can take inspiration from the work of activists and artists engaged in a plethora of forms of everyday urbanism, insurgent planning, and the creation of alternative counter publics. As non-state and non-profit actors, NGOs and activists are key to establishing transparency and to introducing socio-political dimensions into inclusive processes of city making. Student exposure to this range of experiences in public space can sharpen observational skills as well as place them in contingent situations where they will need to develop their own positionality.

Positionality refers to consciousness and willingness to take part in professional practice, starting with the mere act of considering planning and design not just as a neutral, apolitical or technological skill, but rather as a field where agents behave according to their own ideas, values and beliefs. Acknowledging their situated and embodied specificities means understanding their position and the distance that needs to be 'covered' to address, negotiate and bridge these differences. This acknowledgment can only happen when professional practices are informed by a socio-political mission aimed at enabling a diversity of values and at fostering inclusive and non-discriminatory processes. This change in perspective inevitably challenges students to abandon a supposedly neutral position from which to observe urban life and to conceive alternative plans for new urban spaces. On the same lines, a relational approach to public space needs to start with a critical appraisal of the institutionalised hegemonies, structures and systems of values (and interests) that tend to inhabit mainstream professional practices. This acknowledgement can take various forms: from supporting counter-movements or residual, marginalised practices and helping them to gain momentum, to more conceptual approaches that disentangle any forms of injustice and exclusion embedded in design and planning approaches.

On a theoretical level, the critique is that planners, architects and their related institutions often lack information about and tools to acknowledge civic claims and needs – some of them outspoken, others silent or oppressed – and the time(s) these demands seek to (politically) gain momentum. So far, canonised, orchestrated and strictly choreographed time lines for project life cycles are hardly ever synchronised with the diverse and changing patterns of collective time and public life. In that sense, the politics of public space needs to embrace both the spatiality and temporality of existing claims of spatial appropriation. This leads back to the initial consideration that social unrest sparked by urban design and planning interventions is a key conflict area from which all space related researchers can learn important lessons.

## 2.5 Overcoming othering and nesting: Reflecting and overcoming own biases and accepting difference in public space

Hegemonies over the (material, social, symbolical) use and (political) appropriation of public space do find their intellectual expression in planning and design classrooms as well as in the urban realm. Certain social groups in the marginalised (for example, 'migrants', 'drug addicts', 'the urban poor', 'the homeless'). 'Othering' – understood as a set of discriminative practices usually realised between individuals and groups pertaining to the majority society – is considered as being inherently nested in structures of thinking in academic education concerning space. This is illustrated in cases where ethnic and religious diversity is openly and bureaucratically oppressed by planning authorities, or by city and state officials.

On a theoretical level, post-colonial studies have long paved educational pathways in order to critically reflect on and react to such practices as 'othering' (Said, 2012, pp.173-174). However, in planning and design education teachers are often unaware of, or do not sufficiently care about, the same social stigmas they frequently (re)produce. Any processes of building awareness on the potentials of difference and tolerance need to be systematically and structurally initiated in order to open up inward looking disciplines to meet the challenges of collectively co-shaping public spaces. Historically, urban life has been characterised by difference in many ways (religion, ethnicity, gender, language, etc.). Thinking relationally about public space carries the potential to foster an awareness of social difference and a tolerant, fair and supportive inclusion of marginalised voices and weak interests. The introduction of public space-oriented acts of performative, experiential or counter planning is likely to produce professional policies of social justice and critical practice that may travel through very different contexts and find expression in the symbolic and discursive as well the embodied and material dimensions of public space.

Limits to altruistic practices in planning and design become obvious once their proponents are accused of quixotic romanticism and utopian idealism. But how, in the end, can we not just seek but also achieve a lived space-based planning and design ethos, thus trying to enhance practices that refuse spatial strategies and interventions that (openly or silently) expel, scorn or discriminate against 'others'? Planning and design, currently, is far from close to just and human practice, and there are fundamental reasons for this situation, which we need to disclose, denounce and oppose. A first step is to start from self awareness in public space, where students are asked to discover, enlarge and finally leave their own individual comfort zones, first by extending the individual to a group exploration and, secondly, by transferring this experience into the study of the existing urban life patterns of unknown social groups or political collectives and their spaces. In this way, students and teachers can learn about inner limitations (which we all carry), (relationally) understand how to deal with them and, most importantly, challenge them systematically.

## 2.6 Acting and reflecting: Collectively learning from the ethics of transdisciplinary exchange

With a plea for action-based research formats and a focus on the importance of practice for 'emergent concepts' we approach public space-related academic education as dialogical by nature. By combining social experiences and thought, planners and designers might learn from what the Brazilian educational scientist Paulo Freire, as early as the mid-nineteenth century, coined as a confluence of 'action' and 'reflection'. Reflection, for Freire (1973), is the critical component of education, resulting in a 'critical consciousness' in which learners become actors – not observers – and authors of their own decisions. When teachers and learners fail to reflect upon their own spatial relations or critically evaluate the nature of the information presented to them, they run risk of becoming passive and superficial by accepting dehumanising rationalities and de-contextualised ideas. Thus, they allow themselves to be swayed by deceptive arguments and political polemics. Freire thus proposed combining action and reflection into praxis, an idea that links back to earlier Marxist thinking on social praxis as the starting point of any theoretical consideration.

A transfer of Freire's educational studies to public space education implies that opportunities for reflection should occur not only after but also before and during student interventions in public space. Students take note of their learning starting point, assess their progress in the midst of the class unit and critically evaluate their own learning, both at the end of each intervention and at some time later. In this way bridges between theory and praxis are already embedded in dialogical, reflexive, forms of teaching, which anticipate and prepare the students for trans-disciplinary practice. The training of future professionals to master trans-disciplinary practice can therefore

start from reframing university education as not only a social institution with a public mission (see the eighth educational challenge) but also as a place where social innovation and knowledge is gained in dialogue and joint working with local communities, and where inclusive methods and tools are taught that carry practical relevance for improving everyday life realities.

These findings bring relational public space close to constructivist pedagogy and emphasise the relational character of learning, where teachers start from what they have rather than what they expect. Such approaches acknowledge that learners bring unique prior knowledge and beliefs to a learning situation and that knowledge is constructed uniquely and individually, in multiple ways and through a variety of embedded tools and embodied practices. At the same time, experiences of collective learning in public space enable students to dialogise and negotiate between different and partly contradictory positions and knowledge fields (reflection), and to enter into processes of active exchange and mutual enabling (action). This dialectical approach helps overcome situations where practitioners get stuck in project based rationales (i.e. budget constraints) or where scholars gripe in theoretical debates without linking back to everyday life questions and challenges, losing connection with wider societal questions. While training in dialogical and dialectical practices does not prevent potential conflicts or contrasting views from emerging, it will undoubtedly help create a working climate of trust and tolerance.

## 2.7 Collaborating and countering: Dealing with heterogeneous interests and resulting conflicts

Tolerance and trust, however, are aspects that urban professionals hardly ever come across in their education; rather, they are trained to serve their (party politics, profit-oriented or just passive) clients and to provide them with singular or individual spatial benefits. What happens, however, if the commissioner, client or – maybe more pertinently – the 'partner' in developing public space is a collective that is self-organised and whose primary goals and strategies are driven by non-profit and non-governmental motives and beliefs? Collectives, similar to emergent publics, do not represent one clear and singular interest, but heterogeneous and partly conflictual values and beliefs. Their self-organisation is not usually top-down. By contrast, they often seek to use horizontal and networked forms of operation, sometimes alongside (contradictory) forms of hierarchical management. At other times and when organised in a more ambitious way, they favour consensual ways of decision making, by trying to mediate antagonistic views in long-term negotiation processes.

In a nutshell, urban collectives and urban publics are uneasy 'partners'. Yet their role is as promising as it is demanding, since it allows stunning insights into the power of a plethora of social practices and concrete spatial claims. Results from planning and design processes that include collectives and publics as 'partners' range from social acceptance to cultural identification and ideally foster an activation of sleeping or silent resources such as social and cultural capital and local everyday knowledge. Yet such approaches need to be framed by (self)critical reflection on the risks of dogmatism, counter exclusion or exploitation, in order to make them suited to processes in which incremental objectives are jointly negotiated. Self-critical approaches in academic education facilitate the development of acts of critical practice. They allow and encourage the questions: 'why plan, why design'?

In public space, conflicts offer moments of intense learning about real interests, new appropriations and crucial socio-political questions. They can also be understood as burgeoning seeds that open momentary political spaces and help emerging cultures and publics express their spatial and temporal needs. They might even serve to activate local competencies and resources for an

outcome yet unknown. Studying conflicts in relation to counter publics and their spatial expressions in particular neighbourhoods, and collaborating with activist groups and NGOs in order to overcome certain conflicts, requires not just 'taking into account' civil society perspectives and goals, but also implies these as the essential starting point. Counter planning, in this sense, helps focus on emerging counter publics. Their study enables constant testing and reframing of the educational standards of those disciplines where people are trained to intervene in lived spaces. However, the potential of counter publics is not yet sufficiently understood by urban professionals, with the result that counter publics and counter spaces still remain a hidden and uncharted academic domain in architecture and planning.

### 2.8 Theorising and changing: Learning from the everyday and reinterpreting education as inclusion, participation and action

Theorising from everyday life in public space makes for the last and maybe the most ambitious of the educational challenges addressed in this paper. As public space changes, educational landscapes change too. Where earlier modes of education have largely rested on rigid divisions between learners and teachers exerted in the mono-functional spaces of the classroom, where relations were based on the premise of one to the few, and stimuli were offered within a teacher-centric 'push culture', contemporary landscapes of learning converge around a non-linear sharing model based on the premise of many to the many. In this networked model, a more diverse 'pull culture' of learning is promoted as learner-centric, where investigative forms of learning span from individual towards the collective. Here, space is assigned key significance, as changing learning strategies and practices require a fundamentally different approach to understanding and appropriating space.

Public space, in this respect, has been rediscovered as an arena where dialogue between the diverse epistemologies of the everyday can be created at the interface of theory and practice, as well as within these fields. Given this fertile potential, urban professionals need to overcome limiting approaches which combine or prioritise various positivist aspects belonging to multifunctional open space design. Following participatory action research principles, the core educational challenge here is to make students engage with practical notions such as investigating and developing relationships, yet in an open and non-determinist way. This means critically analysing the voices that both agree and disagree with their own vision, while also embracing those that challenge and contest them. Urban interventions in public space are therefore a very delicate issue for urban professionals, because the key skills they need to acquire are no longer goal-oriented and focused on structured action in an architectural or planned space. Rather, educational curricula need to focus on ethical aspects of building trust in, and becoming a medium for, communities and civil society, on acknowledgement of the limitations of their own professional role in the light of embodied knowledge, everyday life experience and political pressures.

## 3. Conclusion

### 3. 1 Changes from within the academia

By having explored educational reflections relating to relational public space we aim to put forward a radically different way of conceptualising, researching and teaching about public space, in the hope that this will impact on future practitioners' roles in policy design and professional practice. While the type of change that we envision for the future of urban public space is much wider than the reach of this paper, we nonetheless believe that much social innovation can be foreseen through the reflexive practice of academics, academic-activists and academic-practitioners. At the same time, the educational focus developed within such a relational

perspective needs to consider the current capitalist institutional frame prevalent in academia itself. As Merrifield (2000, p.181) underlines, 'In our own daily practice, we deal more and more with abstract representations and codifications of society which are wrenched out of the lived experience of both ourselves and others outside the academy'. This contribution has aimed to show that counter scenarios are already lived, experienced and practised in public spaces, embracing both urban places outside in the city, and inside universities' seminar rooms and lecture halls.

Rather than being a mere theme in urban research, planning and design, investigating public space helps overcome and bridge practice-oriented approaches and theoretical accounts to explain the abstract patterns of space production. A consideration of the relational ethics of public spaces has a key role to play in establishing these connections in a socially just way. With the aim of expanding these approaches and contributing to a change in urban education via public space, a sequence of pedagogical implications, challenges and opportunities have been elaborated that illustrate research results from an exploratory and experimental teaching and research practice in Vienna. Building on the reflections, the following eight transversal perspectives can contribute towards facing the manifold educational challenges that are inherent in relational public spaces.

## 3. 1 Educational challenges

The first educational challenge is to establish educational contexts, conditions and situations characterised by trust and respect and to start from the experiences that students bring into the learning process. That way, students are being made aware of the need to create spatial situations where they are able to respect people's local beliefs, routines and experiences, develop professional empathy and acknowledge the potential resources that urban dwellers might bring along. The emotional and practical aspects of the manifold relations implicated in these learning processes in public space need to be considered. The shift from co-learning to jointly changing the material arrangements of public space with urban dwellers requires the ability to acknowledge ethical, ontological and epistemic considerations implied in these forms of dialogic learning.

The second educational challenge is to engage with intuitive ways of learning based on the encounter with the unexpected and to acknowledge the patterns of social emergence as a core characteristic of public life. Appropriate tools and procedures that can capture the situated, context-specific and idiosyncratic nature of collective places and their social dynamics need to be developed. These tools both emerge from, and address, the context, problem and given situation, and ideally explore public space as relational space. Students will learn to link these dynamics back to the material dimension of public space, specifically to its emerging materialities, while they are encouraged to deal with the unpredictability and spontaneity of material claims and spatial appropriations.

The third educational challenge is to create a general openness to sharing different perspectives and ways of working within the daily life of the students. Public space, in this respect, can serve as an experimental arena where alternative ways of pooling resources for urban change can be envisioned, developed and practised as if real. Enabling alternative spatial appropriations that use public space as a common good beyond private fragmentations needs to start from the resources that lived space already offers. Welcoming attitudes to new perspectives (for example introducing public feedback loops) need to be cultivated as they offer a good opportunity for integrating new forms of inclusiveness.

The fourth educational challenge is to encourage students to take an informed stance and to develop a professional positionality towards their socio-political role as urban professionals by

developing their own ethically informed position. That way the politics of space and time of public space will be acknowledged as given ground for any professional action. Planning and design studios need to radically incorporate a new cronopolitical thinking, and its translations into practical project rationales, to enable the plethora of everyday life rhythms of space appropriations and re-appropriations to fully unfold. Both politics of space and politics of time are therefore central to relationally thinking of public space as lived space.

The fifth educational challenge is to train the ability to overcome individual, intimate and private comfort zones in order to develop professional skills of acknowledging, integrating and respecting social and cultural difference in urban space. This concerns the ethics of intervention in lived space as well as the ethics of the seminar room. A core educational aspect here is to focus on experiential learning in non-discriminatory situations where teachers include and appreciate as many different perspectives, languages and disciplinary frames as possible. Group formation for studio work can be organised along aspects of difference in order to stimulate self-experience and dialogue. On a theoretical level, postcolonial accounts of (public) space can help in revisiting current approaches, unravelling and opposing practices of 'othering'.

The sixth educational challenge is to combine argumentative debates linked to the public sphere (reflection) to the embodied interventions and public address in public space (action) in all pedagogic formats. On a practical level, this helps to develop experiential ways of public intervention and tools to induce processes of co-shaping public spaces. For students in these self-developed formats the analysis of the realised interventions is one core aspect: for this reason it is important that sufficient time is allocated for reflection before, during and after the participatory intervention in public space. Particular emphasis needs to be put on the de-briefing phase, when the ethical and epistemic implications of practical action can be unravelled, discussed and challenged, and the political character of any intervention in public space can be jointly exemplified.

The seventh educational challenge is to start from a study of and collaboration with collective claims, counter publics and their acts of resistance and contestations when developing an idea about their role as urban professionals intervening in public space. This way, students learn to develop their own politics of action in contested areas of social interaction, as well as to recognise already existing activist tools, knowledge and practices. Consideration of conflicts as normal opportunities to learn about socio-political aspects of public space rather than as exceptional risks to the formal and often canonised (party) politics of public space, can be a key component for socially-just decision making, where the involvement of civil society actors is not considered as a risk to urban development processes, but as their enriching precondition.

A good way to start dealing with this eighth and concluding challenge is to declare universities as public spaces where not only rational discourses are framed and perpetuated, but also professional practice is reinterpreted in its original and embodied sense: re-rooting the notion of educational politics to 'the collective', the public in its earliest connotation. This means addressing public space not merely as a theme but rather as a vehicle for gaining knowledge based on epistemologies and ontologies of the everyday. It implies considering research and teaching not just as ways of generating data and conveying information, but as politically informed processes to embed inclusion, participation and action into the life of the scholar with the aim of generating socially innovative insights and relevant knowledge on public space as lived space. This means nothing less than shifting the focus of urban professionals back to the shaping of everyday places of public and collective concern.

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# URBAN MORPHOLOGY AND SOCIAL REPRESENTATION: THE CASE OF MODERNISTIC HOUSING ESTATES

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*Abstract:*

*The spatial representation of community is present through different levels of built environment – from single dwelling unit and buildings with specific shared spaces to neighbourhoods and districts. In urban level the spatial representation of community is manifested in public spaces. Traditional urban public spaces - rooted in human cognitive and sensual capacities and cultivated for centuries-long development of adopting, using and identifying one self with a place – can be perceived as most natural field for public social interaction.*

*The paper describes the problems of legibility of modernistic urban patterns, its spatial and social dimension. Modernistic housing estates represent specific morphological structures where identity in urban level is generated by solitary buildings instead of public spaces. Public space is often designed as an open space without any specific content and with uniformity lacking social meanings. This setting can easily lead to disorientation and lack of inhabitant's identification with the environment. Based on problem analyses the study explores the possibility of reorganizing the public space in favour of legible public space without the necessity of massive changes in built mass. It presents the results of comprehensive research project "Housing Estates, What's Next?", which has taken place at the Faculty of Architecture CTU in Prague. During the process six specific modernistic neighbourhoods in Czech Republic were analyzed and more then 20 model solutions have been produced and evaluated.*

## 1. Introduction – Built Environment and its Social Dimension

Spatial organization of built environment and its social dimension are closely related (Doxiadis, 1966). Humans identify with their living environment and that respectively constitutes a strong part of their own identity (Lewicka, 2011). This interaction is to be found not only on a personal level but is true for different forms of social organization - these being personal, interfamilial, civic, national etc. (Kohout et al., 2011). In a common sense we often identify a given social entity (being a single person, family, community, nation or even an institution or corporation) with its home or seat. This relation plays, no doubts, an important role in constituting and maintaining social relations, it shapes their forms and allows for their continuity, further it plays an essential part in their representation.

In a way built environment represents a dynamic balance of several contradictory tendencies. That of stability and flexibility, control and openness, readability and need for richness and depth. To allow for all this it tends to organize itself in spatial units each of which usually representing a certain social phenomena (Doxiadis, 1966). Based on the ability of human senses to recognize certain physical phenomena, these spatial units tend to appear in certain given physical dimensions (Hall, 1966; Gehl, 1987). As was pointed out by John Habraken (1998) these spatial units also represent certain decision making levels in the process of environment creation and management. To manage their different duration periodicity through their clear separation plays also an essential role in environment ability to withstand time changes (Kendall, 2000).

In a standard municipal built environment we can thus usually recognize the following ascending line of environmental units: rooms – dwelling units – houses – blocks – enclaves – neighbourhoods – districts etc. (Kendall, 2000; Kohout and Tittl, 2012; Lewicka, 2011; Galster, 2001). By rule the units of a higher scale usually consists of several units of a lower scale and specific extra elements which usually tie the composing units together (Berghauser Pont and Haupt, 2010). This "adhesive" role is usually played by communication spaces, being private shared in units of a lower scale levels (such as apartment corridors), semiprivate (inner staircase in an apartment house) or public in units of higher order (streets, squares etc.). It is usually these spaces which allow a user to perceive the situation and give him basic orientation of the unit given. I.e. a corridor or a hall in apartment unit enables one not only to move through the apartment, but also to get a certain overview. The same can be said about inner communication spaces of a tenement house or in even more obvious form in the public spaces on urban scale. Main streets or squares usually allow not only for circulation, but at the same time offer basic navigation and further more give a sense of presence and identification with a particular place.

Common spaces therefore play important role in providing the unit with an ability to offer a sense of identity. Such identity is closely connected to the setting of its communication spaces. This is true to the degree that the unit common spaces often are the main discriminatory feature of certain typological forms: so we recognize corridor or hall apartment setting, staircase, corridor or gallery setting of an apartment house radial or grid urban patterns. Seeing common spaces merely in their circulation role as secondary (serving) as opposed to the functioning (served) role of the composing units, means overlooking completely their organizational role (organizing as opposed to organized) and equally important communication (in broader sense) and representational role (as identity bearing elements).

## 2. Housing-Estates - Characteristics and Defects

Czech housing-estates built roughly from the middle of the 20$^{th}$ century were planned like so many others in Europe and elsewhere in the world at that time with several underlying ideas. One was the spatial Modernistic concept of a free continuous park-like landscape with houses placed in this space as free-standing objects. These objects "freed" from the traditional formative mass/public space relation were first positioned in a rational row of slabs system, to be later substituted for more random composed types of massing.

As for their social concept, bigger housing estates were usually subdivided into so-called dwelling groups (roughly 1 500 inhabitants), neighbourhoods (ca 5 – 6 000 inhabitants) and districts (with tens of thousands of inhabitants). These units were served by corresponding planned public and commercial facilities (kindergartens, schools, shopping centres etc.). The unit system was usually applied directively often regardless of particular settings of the site and its individual character.

As for the planning-in-time aspect, housing estates were in a way built as "timeless" compositions with no clear concept of gradual change, future adaptation or renewal. This, together with the fact that from technical as well as ownership point of view these were often single planner, single-client and single-builder undertakings, proved to be a mayor limiting factors in their further re-/development. Especially in a situation when the ownership structure became massively fragmented in the privatisation processes following the social changes after the fall of Communism.

Despite broad range of applied urban patterns, when compared with the compact city forms, housing estates as a system tend to show certain characteristic deficiencies which tend to repeat in practically all cases and be therefore considered as inherent for this particular type of environment:

*2.1 Undefined public spaces*

Probably the most obvious characteristic of housing-estates urban fabric is the oversized public space. In comparison with traditional urban structure, where public spaces comprise about 25-35% of overall area, in housing estates this figure rises to some 60-80% (fig. 01). The modernistic vision of "living in park" brought along a new way of organizing urban fabric. Traditional municipal spaces were substituted by a concept of a free space without any specific content. It can be seen as symptomatic that in the nearly 70 years of living and using housing-estates no adequate and generally accepted names for their public spaces were adopted. The most often used word "greenery" for this "between-house-area" expresses sufficiently the helplessness of the situation and the lack of closer understanding and more structured use. The phenomenology of space which works with such terms as park, garden, orchard, playground, meadow, forest, but also parkway, alley, square with trees helps to understand particular space better. And such understanding not only facilitates identification but most of all helps to realize how to use such space, how to behave in it and consequently who is responsible for the space, who cares for it (Kohout, Tichý and Tittl, 2015). Unfortunately, the public spaces of housing-estates usually do not allow for their clear articulation and this decreased legibility results in their lower overall quality.

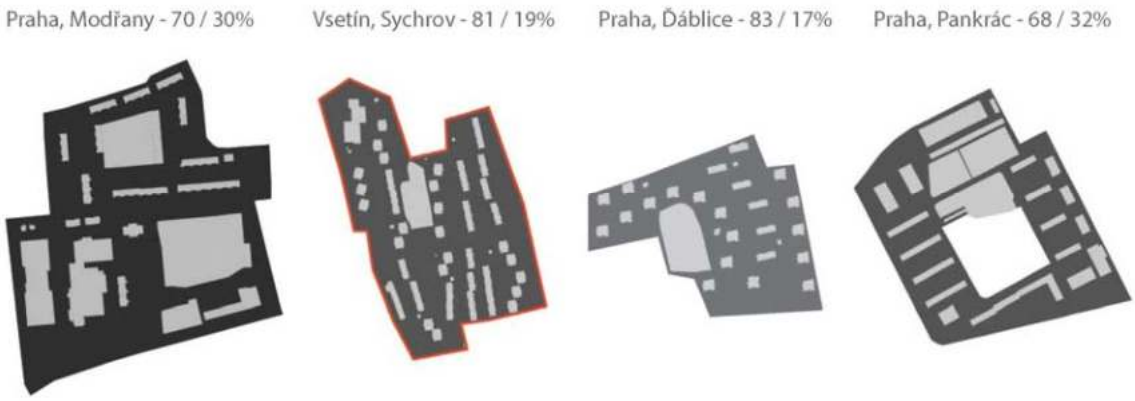


Fig. 01. Proportion of public and non-public space in typical housing-estates localities in Prague

*2.2. Unclear composition of units and the reversed mass/space relation*

Despite the fact that Housing-Estates and their strictly organised system of planning units and public facilities (kindergarten units, school precincts, neighbourhood shopping facilities etc.) represent in a way even more orthodox hierarchical system than standard municipal environment, these abstract units - due to the continuously floating public spaces – remain often undefined and unrecognizable from users perspective. Also public spaces with no clear delimitation can hardly become representations of any morphological units. It is often the case that such identification role is played rather than by public spaces by buildings themselves, usually those which play a public role, i.e. shopping centres, public facilities etc. However, such setting brings along several complications. Such buildings are often not authentically public (often they are privately owned). Also they can hardly orient a user in a way public spaces can (buildings usually do not offer any panoramic overview and therefore do not allow for better understanding of urban layout). But most importantly, the life cycle of buildings is by rule shorter (decades) than that of public spaces (centuries). They can therefore hardly become a stabilizing factor of the urban structure mental image.

*2.3. Absence of readable spatial pattern*

Public spaces do not represent only shared space of local communities with its programmatic content and symbolic meanings, they play as well a key role in forming urban pattern. In the spatial setting of traditional town the key part of public space system is usually performed by communications (streets) and their intersections (corners, squares). The public spaces are naturally defined by building mass and together they constitute a coherent pattern. On the contrary, in most of housing estates localities, the traffic network does not correspond to the spatial arrangement of buildings themselves and the spaces they form (fig. 02). The space is not oriented longitudinally in the communication direction (i.e. in the sense "from" and "to" somewhere), nor is it oriented perpendicularly (i.e. in the front – back sense). Further, housing estates public spaces do not form a comprehensible hierarchical system where the more and the less important elements would be clearly distinguishable. The communications do not take on the character of streets but they rather resemble roads, i.e. a phenomenon more characteristic for rural areas rather than a city (Kohout and Tittl, 2012).

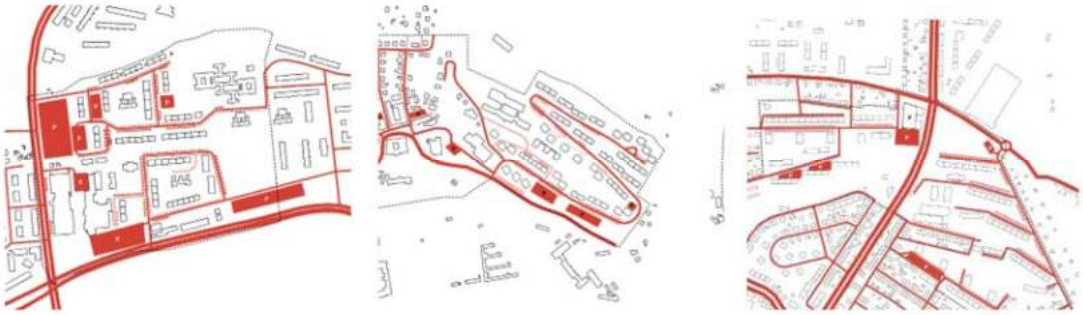

Fig. 02. Relation between built mass and traffic network; left: Modřany in Prague, middle: Sychrov in Vsetín, right: Skalka in Prague

*2.4. Lack of active parterre*

The fact that housing estates public spaces do not channel general movement (being of pedestrians, bicycles or cars) into clearly recognizable corridors supported visually by building mass has further two fold effect on formation of neighbouring private spaces and buildings. It brings along a lack of clearly distinguishable semiprivate space, suitable for certain types of outdoor activities (independent movement of small children, some types of house works etc.). Perhaps even more importantly, such arrangement negatively influences the possibility of commercial activities on ground floor inhibiting thus the creation of an active parterre – a living interface which would further stimulate public life of the neighbourhood and bring about their functional diversity.

## 3. Housing-Estates - Tools of improvement

Following section describes possible interventions in housing estates fabric targeting legibility of urban layout with adequate social meanings. It presents selected results of comprehensive research project *Housing Estates, What's Next?*, which has taken place at the Faculty of Architecture CTU in Prague. The project's general aim is to search for long-term and sustainable development strategies, which would result in housing-estates transformation into areas with adequate social status, stable mental image and functional arrangement. Six housing estates localities in Czech Republic (in Mladá Boleslav, Karlovy Vary, Vsetín and 3 in Prague) were chosen with aim to cover broad range of areas with different morphological, historical, sociological characteristics and regions with different level of development potential. Spatial, demographic, functional, traffic and other surveys were carried out on the basis of which 20 model solutions were produced with the aim of showing possible town planning strategies tackling the problems identified as the most pressing in respect to the areas future development.

Despite the diversity of housing estates spatial arrangement as well as their present development potential (pressure for further development in areas like Prague (Němec, 2014) or Mladá Boleslav, or on the other hand depopulation, in case of for example Vsetín), some general tendencies and themes can be drawn from the case studies executed. Most have a direct relation to the people-place relation and the social dimension of planning. They can be summarised into the following list arranged according to the scale of intervention:

### *3.1. Delimitation of spatial and planning units*

Referring back to a standard urban environment organisation (and its social meanings) described in the introduction, the key step in enhancing the legibility of housing-estates spatial structure represents delimiting distinguishable spatial and planning units - urban blocks, neighbourhoods, districts etc.

On the district level, neighbourhood arrangement is the main task. During this process critical parameters (number of inhabitants, dwelling units, public facilities etc.) were verified and corrections were made to match better their theoretical standard. Nevertheless this constitutes no dogma, divergences are possible, but they should be well-founded and their reasons should be preferably understandable from the environments context (terrain morphology etc.). Neighbourhood identity is usually carried by overall character of built mass and – in this case perhaps even more importantly – by key local public spaces. During the process these spaces were identified and set as a key element of public spaces pattern (fig. 03).

On the neighbourhood level, particularly critical is to define urban blocks (meaning block as a unit of urban environment). Predictably, the predetermined mass setting proved to be challenging when readable block structure was to be created. As a response, a highly diversified block typology was introduced, which manifested itself in different mass patterns as well as different sizes of the blocks. These ranged from small *urban islands* with only one side defined by a building mass, the other side usually articulated only by landscaping or fencing, to large *superblock* arrangements usually subdivided and with system of secondary permeability. Standard urban blocks with central semiprivate or semi-public space determined by building mass on all sides (though massing itself was usually with a less orthodox and more open arrangements) were of course also an option (fig. 04). Wide variety of block typology resulting from the effort to save most of the present built mass can be perceived not only as practical, viewed from economical and ownership aspects, but take into consideration also existing character and its mental meanings. Furthermore, specific block typologies can also provide for neighbourhood's specific character and as such are often found in examples of contemporary housing.

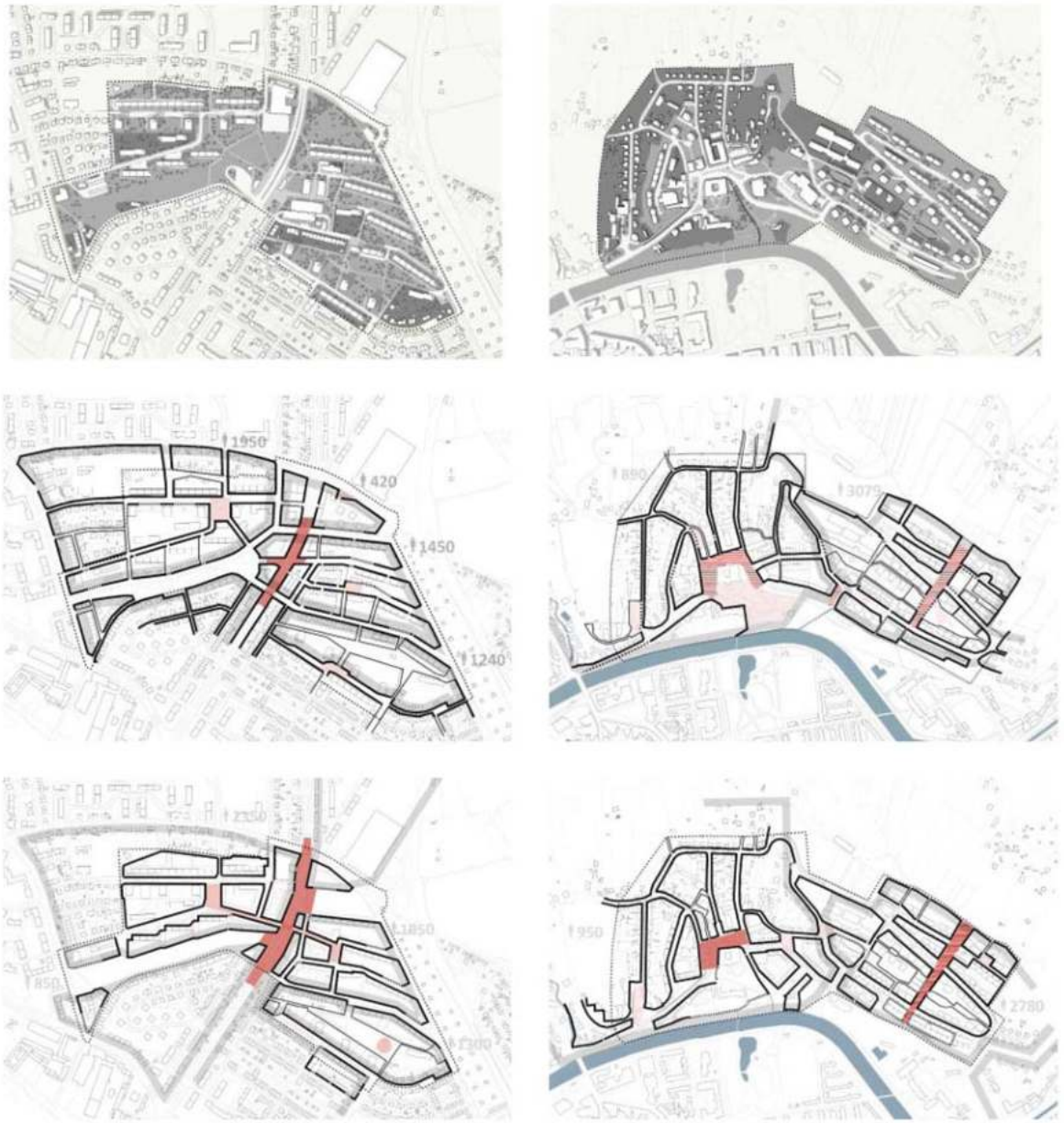


Fig. 03. Delimitation of comprehensible units (blocks and neighbourhoods) in two examples of housing estates – Skalka in Prague (left) and Sychrov in Vsetín (right); top - present state, bottom – two examples of possible unit delimitation for each locality in relation with number of inhabitants representing the neighbourhood community; source: Housing estates, what's next project case studies, Kohout–Tichý studio FA CTU in Prague, M. Decker, M. Marada (Skalka), R. Paulus, F. Bačuvčík (Vsetín)

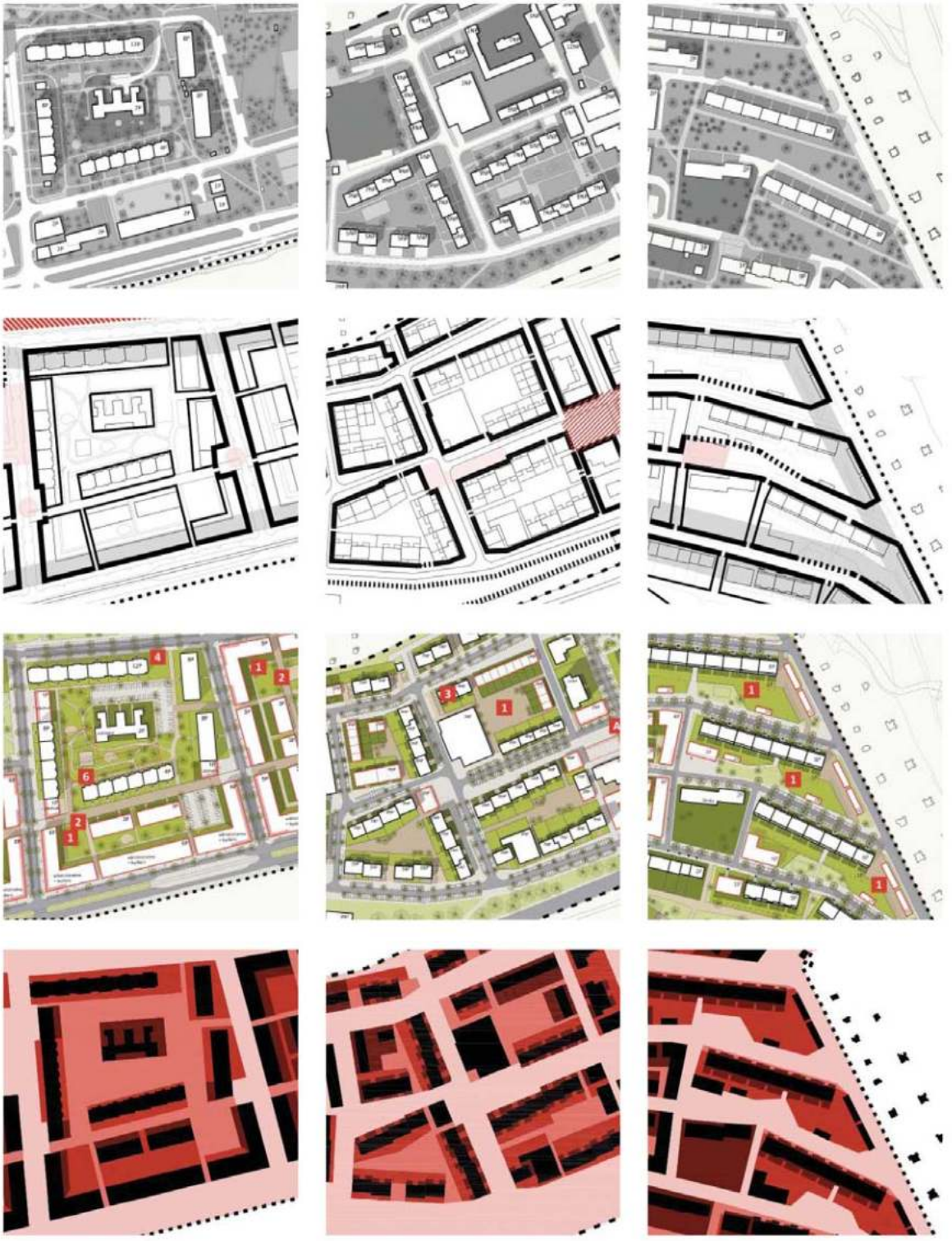

Fig. 04. Block arrangement possibilities related to housing estates built-mass organisation; left – superblock (Modřany in Prague), middle – standard urban block (Růžový vrch in Karlovy Vary, right – urban island (Skalka in Prague); top: current state, middle: rearrangement proposal (block delimitation and detail parterre organisation), bottom: diagram of hierarchy of privacy (for the key see fig. 05); source: Housing estates, what's next project case studies, Kohout–Tichý studio FA CTU in Prague, J. Sládek, T. Kafková, M. Decker

*3.2. Intelligible network of public spaces*

The basic characteristic of housing estate urban layout – the continuous unlimited space was assessed as one of environment's main disorientating factors. Individual case studies were therefore testing the possibility of its structuring into legible, nameable and limited spatial phenomena: streets, squares, parks etc. Effort was made to link these spaces into patterns, which spatial logic would be based not only on abstract compositional principles but would rather follow the underlying natural social meaning.

What was usually necessary to overcome in this process was the often unintuitive traffic system based on the principle of dead-end side streets connected to circling boulevards. Traffic connections have as a rule little to do with overall orientation of spaces indicated by building mass arrangement. It is therefore desirable to complement present communication into a more intuitive network by linking of the dead-end-streets. Different public spaces should have their natural continuation – they have to navigate the visitors and their orientation has to be clear and logical. Traffic intensity (the original reason behind the unintuitive traffic arrangement) can be effectively regulated by other means (mixed traffic streets or other types of reduced car-traffic on local communications) while avoiding the negative disorienting effect (Kohout and Tittl, 2012).

*3.3. Introducing broader variety of open spaces regarding hierarchy of privacy*

Urban fabric does not necessarily have to be composed of strictly private or strictly public spaces. *Semiprivate* open space shared only by inhabitants (e.g. yards of apartment houses), can be complemented by *semi-public* spaces (e.g. publicly accessible parts of blocks) with a more intimate character. Different level of privacy within the built environment stems from its distinguishable character. Such comprehensible heterogeneity caters for different ways of usage and helps inhabitants to identify themselves better with a place. Hierarchical sequence of outside spaces from public, semi-public, semi-private to private therefore fundamentally increases users capacity to „read", comprehend and patronize environment by different ways of usage (Kohout, Tichý and Tittl, 2015).

Such articulation of open space does not have to be related with introduction of new built mass (fig. 05). In the housing estates areas it can be in fact achieved only by relatively simple interventions: in many cases by plain landscape rearrangement (see section 3.4). This solution can not only enrich the quality of environment and bring more life into open spaces, but also help to find new use for the oversized public spaces and to distribute more evenly the maintenance costs. Despite this significant change in open space organisation, present character of „houses in a park" does not have to be changed fundamentally.

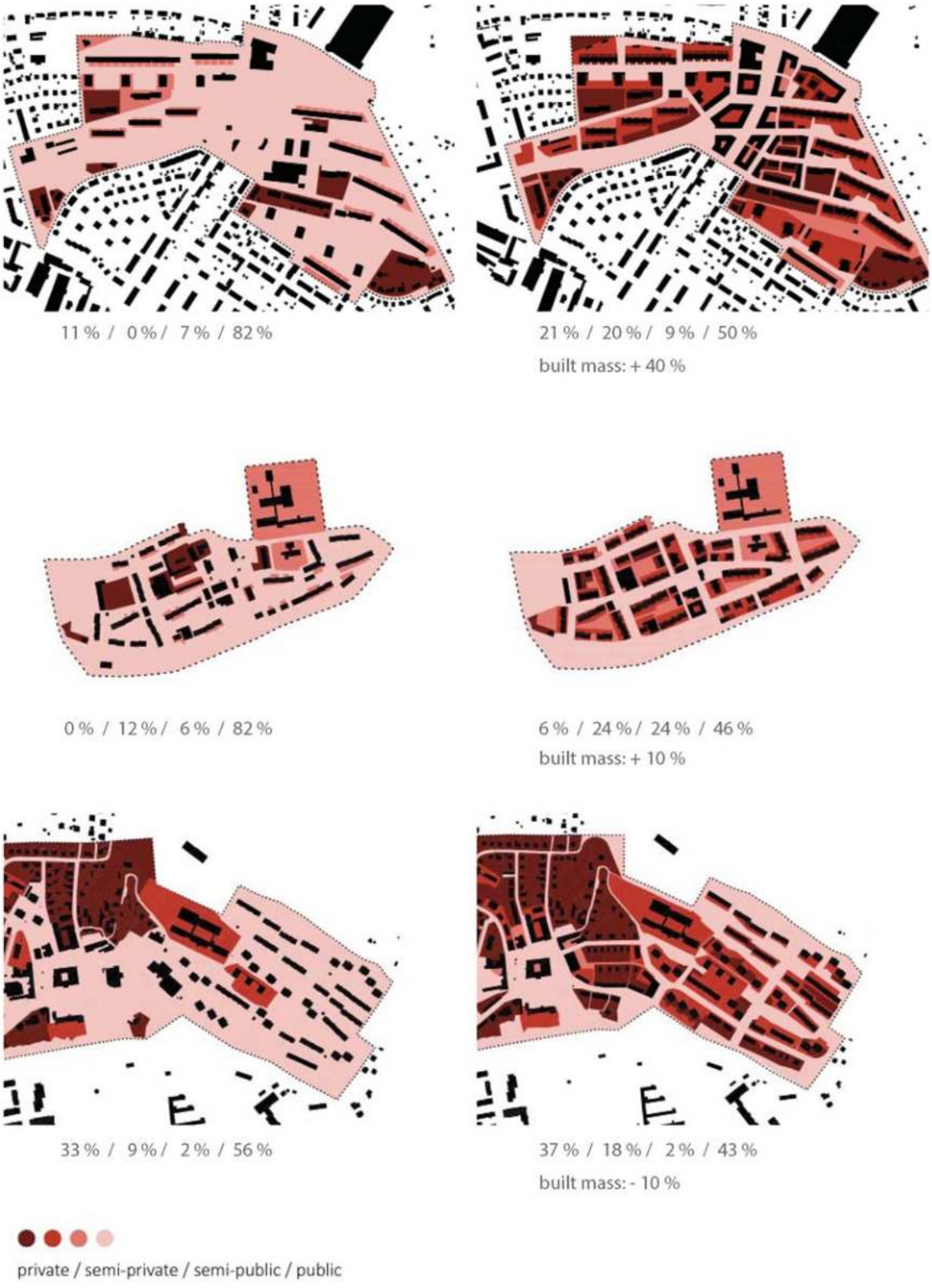


Fig. 05. Introducing broader variety of spaces with different level of privacy into housing estates fabric; top — Skalka in Prague, middle – Růžový Vrch in Karlovy Vary, bottom – Sychrov in Vsetín; left: current state, right: rearrangement proposal; source: Housing estates, what's next project case studies, Kohout–Tichý studio FA CTU in Prague, M. Decker, T. Kafková, T. Vrbová

*3.4. Articulation of the boundary between public and private*

From the point of view of direct impact on the user, the elements on a lower planning level play an essential role. This is even more important when adaptation of an existing urban fabric is being planned as due to pre-determined conditions the possibilities of later adjustments are decisively limited. Critically important in this sense are the boundaries between different types of spaces, which delimitate and define different units and determine the level in which a visitor can actually distinguish these urban elements. Most of all, the chosen type of boundary modulates the level of communication between the public and the private sphere and is therefore essential in moderating visitor's behaviour.

Probably the most important boundary represents the demarcation between block and street space. In the plan it is determined by street line, usually visible through edges of built environment, i.e. through buildings themselves or their articulated surroundings, such as front garden fencing. In any case, level of such articulation might vary dramatically in different areas. In housing estates context milder solution can be adopted regarding both respect to the "openness" of its character and predefined arrangement of built mass limiting range of possible solutions. Physical expression of the boundary can also manifest itself only through parterre organization (fig. 06). What is, however, critical is relation to ownership arrangement, i.e. division of lots, which should correspond to the real visible arrangement, in particular to positioning of street alignment.

At the similar importance as natural legibility of the boundary is its role as an active interface. Inhabited shared spaces or private gardens can introduce natural social control to public space, distinctive features of different activities in shops and services on the ground level led further identification to the spaces they address. In the housing estates context active commercial parterre can be introduced only by small additions in ground floor level (fig. 07).

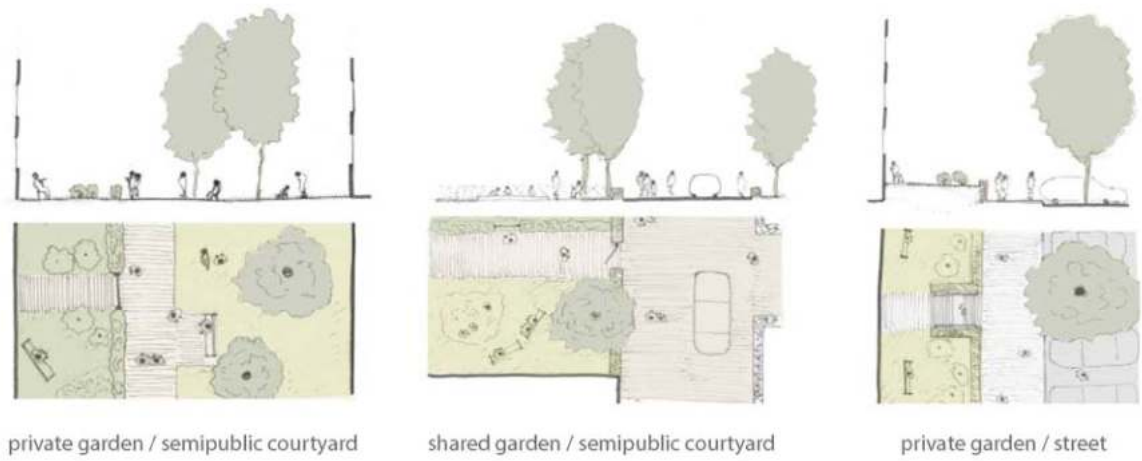


Fig. 06. Possible ways of delimitation of boundaries in urban environment by using small scale elements; source: Housing estates, what's next project case studies, Kohout–Tichý studio FA CTU in Prague, J. Sládek

Fig. 07. Introducing interactive interface in ground floor level – example of small addition to existing prefab slab; source: Housing estates, what's next project case studies, Kohout–Tichý studio FA CTU in Prague, L. Havelka

## 4. Conclusion

Despite the drain of more affluent inhabitants (Ouředníček and Temelová, 2012) Czech housing estates still remain socially manifold. But even in these relatively favourable conditions the environment shows some systemic deficiencies which, if not taken care of, could in future jeopardize today's relatively favourable situation.

As it was described in the analytical part of the text, housing estates environment is often conceived as disorienting. This lack of orientation means not only that people have sometimes difficulty to find their way (this happens mostly to visitors), but perhaps more importantly it means that it is difficult to understand the functional designation of certain, mostly open, spaces - i.e. what activities are or are not suitable. This is true not only on short term level (for instance where is it possible to behave in a more relaxed way, what places are suitable for more formal activities etc.), but also for long term activities (where is it advantageous to open a shop, where is it possible to add or substitute a building mass).

The freely running continuous park-like public space represent therefore not only much higher running costs, but also in connection with its anonymous character, lower social status, at the same time it brings along a higher potential for negative social behaviour (vandalism etc.). In a negative spiral effect disorientation leads to lower identification with spatial units and loosening of the person-to-place relation.

*Possible interventions*

The research project has brought forth planning models which show, that by decisive reorganization of the land ownership and adequately changes of landscaping and parterre a spatial organization of the environment can introduce higher level of legibility and intuitive orientation - a clear structure of graspable phenomena of building mass (blocks, neighbourhoods) and readable public spaces (streets, squares, parks, etc.) both arranged in corresponding hierarchical order. Further, such changes can also allow for relatively independent development of manageable lots mostly of the size of urban blocks. These critical goals can be often achieved without large scale changes in overall building massing. Also the areas can most often retain certain visual openness and a "garden" character - qualities valued highly by their inhabitants. As a result the environment's physical structure can reflect and absorb better elements of its social structure and adapt more flexibly to their ongoing changes.

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# 'BECOMING LOCAL' IN AMSTERDAM: THE SYNERGY BETWEEN CREATIVITY AND CITY BRANDING IN STRENGTHENING LOCAL IDENTITY

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Keywords: creative city, city branding, Amsterdam

## Abstract

*Cities are continuously changing due to economic conditions, demographic changes, urban planning policies etc. Newly emerging economies contribute to the consolidation of different outlooks in urban planning practices such as city branding, which has been widely connected with cultural policies. Nevertheless, this approach has been widely criticized since there have often been negative outcomes for the existing places and residents, as for example gentrification or loss of local identity. During the last years, a shift is observed towards the emphasis on the social aspect of city branding. Also, a new economy based on creative professionals appeared, enriching the theoretical approaches of the creative city and adding new dimensions in cultural policies. Strategies are now observed to be directed more to the preservation of the local identity and the collective memory of the city.*

*Two case studies in Amsterdam show two different ways of 'becoming local' processes. The first refers to the 'broedplaatsen' initiative – the 'Art Factories' program. This creative policy led to the construction of meaningful places with multiple uses, housing the creative professionals of the city and hosting multiple activities. Besides, the abandoned places were part of the history of the city and this evolution resulted in the preservation and strengthening of local identity. The second case study concerns Amsterdam's festivals, combining both global and local characteristics. Festivals are mostly situated in public spaces and offer an easy access for the visitor to the life of the city, thus a different way of 'becoming local'.*

## 1. Introduction

Cities are continuously evolving due to factors such as economic conditions, demographic changes, and urban planning policies. Newly emerging economies contribute to the consolidation of different outlooks in urban planning practices such as city branding, which has been widely connected with cultural policies. The idea of the creative city and the practices of city marketing and branding have been widely criticised as expressions of neoliberal ideas in the capitalist city. The literature offers a variety of city marketing and branding cases as well as the controversial discourse of the creative city. This paper analyses the linkage between the social approach of city branding and the creative city idea.

Passing from a theoretical framework to the analysis of specific cases from the marketing of Amsterdam as a creative city, the main hypothesis to be tested is if, and how, local identity is reinforced through the aforementioned processes. The first case refers to the 'broedplaatsen' initiative – the 'Art Factories' program. This creative policy led to the construction of meaningful places with multiple uses, housing the creative professionals of the city and hosting multiple activities. The second case study concerns Amsterdam's festivals, combining both global and local

characteristics. Festivals are mostly situated in public spaces and offer an easy access for the visitor to the livelihood of the city.

## 2. City Branding: cultural and creative approaches

Following the rise of the new leisure, cultural and knowledge urban economies, there was a growing need for cities to obtain distinctive characteristics in the post-industrial city and the economically globalized context (Cox, 1995; Beriatos and Gospodini, 2004). The new 'product' (good) of the city to be projected was its image and the new means in urban development was the city marketing process (Hannigan, 2003; Kavaratzis, 2004). During the years, city marketing passed through many phases, from a simple place adevertisement or promotion to an integrated city branding procedure, aiming at the production and distribution of an attractive city image (Kavaratzis and Ashworth, 2008). The outcome of the city branding procedure is the construction of a strong place identity, acknowledged by the target groups, belonging either to the internal environment (local community) or to the external environment.

Place branding has a variety of expressions, as for example destination branding or place of origin branding (Kavaratzis, 2005). Nevertheless, city branding is considered to be a strategic approach through which the place's image is improved, involving materiality, institutions, practices and representations (Kalandides, 2012). This offers an integrated version of city branding, taking under consideration all parts of the social context, trying to enhance the city's image. As Mommaas (2002) cites 'it is a strategy through which cities gain an image, a cultural value which ideally functions as a source of added symbolic and economic value'.

The place image to be created is strongly interwoven with the cultural psyche of the city. Peoples' culture (not necessarily coinciding with popular culture) is almost the most authentic element that defines the identity of the place. Thus, city branding that is based upon culture has gained ground, enhanced by the fact that a cultural image contributes to touristic growth. Cultural branding (Kavaratzis, 2005) became a very well renowned practice in the age of the flagship projects and led to the massive production of cultural projects, destined for cultural consumption. This approach was adopted by lots of cities around the world, integrating 'aggressive' cultural policies in their urban development agenda, and more specifically applying practices that intensified the 'cultural consumption' orientation. The 'Bilbao effect' has always been the desideratum, whereas reverse procedures often took place.

All these factors led to the 'hard branding' of the cities (Evans, 2003), with eventually homogenized cultural images and identities, without taking into account local distinctive characteristics (Knox, 2011). Gentrification and social exclusion were the most usual impacts after such actions, along with the loss of the collective memory, as many times flagship cultural projects replaced the authenticity of neighbourhoods (often slum or workers' neighbourhoods), with the gentrifying effects. The case of Barcelona is representative of this effect, with 'Poble Nou' and 'El Raval' districts being violently gentrified after the Barcelonetta redesign and the cultural redevelopment through MACBA, thus losing their historic local identity and the collective memory of the place. Numerous examples of cities around the world with similar characteristics can be spotted. Moreover, as Kunzmann (2004) says 'the cultural content remains the last bastion of local identity'. So, cultural branding could have a twofold and ambiguous role; on one side, negative outcomes for the social context of the city could emerge and on the other side strengthening local identity could be at work. The key is to define practices that could differentiate the effect favourably towards local identity and collective memory.

To avoid the negative results of aggressive city branding tactics, during the last years a more social aspect of city marketing emerged. Based primarily on participatory planning procedures and bottom-up processes, the 4R's place branding approach became quite popular (Aitken and Campello, 2011). Referring to the rights, roles, relationships and responsibilities of community's members, the city's image isn't now managed as a 'commercial product' that needs to be communicated. On the contrary, it is created by the true members of a community, hence linking the place's true identity and collective memory to the desired image and strategies. In this way, a place's cultural memory (Olick, 2007) can be preserved, safeguarding collective representations and urban symbols.

During the last decades, interest on urban development has shifted from mere cultural strategies towards the creative class and the creative city discourse (Landry, 2000/2008; Florida, 2002/2012). Creativity and innovation became the keywords in the 2000s EU's policies for an attractive urban image. This resulted in the anguished quest and adoption of the 'creative city' label from many cities. The catching idea, according to Florida's work, was the return to the human capital, entitled as the driving force of the new economy. On the other hand, Landry and Hyams define the creative city in relation to the creative and imaginative thinking at all urban levels, along with a set of attributes that mould a creative milieu (Landry and Hyams, 2012). Landry's ideas are more widely acceptable because of his holistic approach of the city as a complex and multi-faceted entity.

Nevertheless, the creative city rhetoric has been widely criticized, since the relevant strategies and proposals were connected to neoliberalist ideas, leading to 'creative destruction', slum clearance, gentrification, ambiguity of urban policies, etc. (Peck, 2005; Vanolo, 2008; Zimmerman, 2008). More specifically, Pratt (2011) describes Florida's creative city as 'hard branding with soft edge'. On the other hand, there can be a differentiated viewpoint concerning the linkage between city branding and creativity. Creative places can be spotted in cities that try to attract creative professionals or implement creative policies, involving public space, with positive effects on the social milieu.

## 3. Creativity in Amsterdam: Art factories, festivals and the public realm

Amsterdam is one of the most famous European capitals concerning its city marketing and branding strategy. The successful strategy goes through many stages and at many levels. The strong, but currently obsolete, image of sex, drugs and drinks on which tourism was based since the 1970s, had to be replaced by another image covering various domains in order to maintain and enhance the competitiveness of the city at the international level. Nonetheless, through participatory methods, certain 'priority dimensions' associated mostly with the residents' quality of life and cultural issues, were selected, concluding in three 'core values, namely creativity, innovation and the spirit of commerce on which the brand of the city should be based' (Kavaratzis and Ashworth, 2007). Nowadays, Amsterdam is considered to be the creative capital of the Netherlands, with the relevant policies, professionals, industries, networks, organisations and events.

### *3.1 The 'Broedplaatsen' initiative*

One of the most interesting policies, especially in the way that it had been evolved, was the 'Art Factories' programme – 'Broedplaatsen' initiative, designated as a 'socially inclusive' creative initiative (Peck, 2012). In the 1990s, Amsterdam had already developed the appropriate environment, where cultural and creative industries could flourish. An open, diverse and vital city along with dynamic, urban culture set the scenery for a prosperous 'creative era'. In the late 1990s, a squatters' movement set the breeding ground for this creative initiative, destined to be one of the most influential

creative policies in the city of Amsterdam and abroad. Vacant, occupied warehouses by artists and anarchists became the beginning of a controversy between them and the property-development bloc, 'between the soul of the city and the specter of gentrification' (Peck, 2012). Following violent interactions, a kind of negotiations occurred between the squatters and the municipality, with the squatting movement setting the foundations for the 'Art Factories' programme. The final outcome was the emergence of a new creative policy, based on the re-use of abandoned space by start-ups, dealing with culture and creativity.

The 'Bureau Broedplaatsen' is the main agency that undertook the coordination of this new venture since 1999. Its goal is to attract young creative professionals, who are considered to be the basis of the creative industry to be grown in Amsterdam. Primary responsibilities are the housing of all these professionals, taking into account the property crisis that offers a vast buildings' stock, available to re-use, and the precarious nature of creative jobs, thus searching for affordable and inspiring living and working spaces (Bureau Broedplaatsen, 2012). What is more important now for Bureau Broedplaatsen and the city is that the accumulation of such creative professionals attracts international companies, specialised in the creative sector, in order to establish themselves in Amsterdam. This concludes to the combined situation of urban development and the configuration of competitive characteristics in relation to the transformation of abandoned spaces in synergy with the local community.

The facts show that every year approximately 500 young creative professionals look for suitable living and/or working space in Amsterdam, and by 2012 more than 3500 living and/or working places have been created for them (Bureau Broedplaatsen, 2012). The Broedplaatsen Programme in its implementation affects urban environment in four ways: *cultural* – Amsterdam as a laboratory of talent; *economic* – attraction of international corporations; *social* - linking with the neighbourhood and bottom-up approach and *spatial* – avoiding gentrification and reuse of derelict space. The most interesting part is the adoption of the bottom-up approach in the way Art Factories are being created and the interaction with the local community. The 'NDSM Wharf' in Amsterdam is a representative case.

NDSM (Nederlandsche Dok en Scheepsbouw Maatschappij) was constructed in a derelict site in docklands, through bottom-up processes. It is about a 'self-made city that has developed naturally, driven by its residents'[1]. A private initiative, comprised of artists and other creative professionals, asked for the redevelopment of the former industrial area. After the supply of a financial budget, the total site of 80.000m$^2$ was redeveloped by them to an incubator of creativity, culture and talent (Creative Metropoles, 2010). Nowadays, NDSM hosts a variety of creative professionals and events, transforming a semi-private place to public space. Additionally, the self-organised initiative, derived from the squatters' esprit, avoided the shortcomings of possible gentrification, whilst allowed the productive usage of abandoned space, yet useful and important to the local community. Being the centre of underground culture and becoming one of the most vivid civic spaces in Amsterdam through creation, innovation and events, the NDSM 'Art City' safeguards the heritage, memories and identity of the city, moving from the industrial production to the creative production.

### *3.2 'Festivalisation' in Amsterdam*

Experiences, additionally to 'products' and goods, have long been targeted as the new cultural goods. The experience economy that emerged in the 1990s intensified the need for organising events in the city as experiences that could emotionally engage the consumer (Klingmann, 2007). Events are widely considered to be of the most important city marketing tools (Kavaratzis, 2004). Mega-events, cultural

[1] http://www.vandejong.com/en/#!/en/case/ndsm/

events and festivals of all kinds are being recruited for the configuration and promotion of the city's cultural image. Particularly during the branding of the 'creative city', the production of spectacular urban events has undeniably become a presumption (Harcup, 2000). The plethora of events in a city has once again been accused for cultural 'hard branding' of the city, whilst cities end up being 'festival marketplaces' (Harvey, 1991). Also, festivals are accused to transform the city, altering its spatial configuration and attributing the city with a particular identity, offering a sanitised version of it (Johansson and Kociatkiewicz, 2011).

There exists a variety of impacts of festivals on cities, but festivals serve not only economic development as well as induce erratic symbolisms. Positive social effects can be the residents' or visitors' socialisation, the community's boost of self-confidence and the residents' cultural quest. Some of the events rely on the cultural past or the collective memory of the city, trying to recreate the city's image relating the authenticity of the past to the imaginary present. In the case of Amsterdam, festivals are regarded as the strongest tool to strengthen the city's profile, as they can attract international attention (Kavaratzis and Ashworth, 2007). Along with the principal goal that the city's marketing plan has to serve, the events are considered to be the mirage of Amsterdam's tradition as cultural centre. This old image intermingles with the contemporary cultural image coming from the creative city identity, thus offering a plethora of urban events.

It can be said that Amsterdam 'suffers' from 'festivalisation': quick look on the city's official portal leaves the visitor stunned by the plurality of festivals, organised by various partners. The events are numerous, categorized in many genres, such as music, dance, culinary, theatre festivals etc. Surely, it is the place for a visitor to be from any background and in any time of the year. But do the same also apply for the residents of the city? It is certain that eventually the physical form of public space will be temporarily altered, but this is something required for the proper implementation of the event. What is more important is the representation of the real identity of the city's population through the plethora of festivals. Amsterdam's population is characterized by diversity and openness, with more than 170 different nationalities and 45% ethnic minorities, with great tolerance towards the LGBT community and a large percentage of young and active population[2]. The plurality of festivals reflects this image of the social context of the city, along with the contemporary creativity that defines the city.

Another viewpoint on the contribution of the festivals to the city is that a visitor becomes local and a resident rediscovers local identity or the collective memory of his/her city. Three festivals, amongst others, demonstrate this assumption. 'Grachtenfestival' (Canal Festival) is a classical music festival, open-air situated on the canals of the city providing stage for young, talented musicians. The festival is realized in public space, dominated by the city's history (canals), culture (classical music) and contemporary creative people (young and talented musicians). 'Roots Open Air Festival' is a world music festival, situated on an open park with free entry. The festival gives the opportunity of socialisation (open-air park), 'occupying' public space, yet for culture transmission through music and promoting diversity, supporting local ethnic minorities (world music). 'Amsterdam Heritage Days' is a celebration of the city's history with open doors of important buildings, monuments and private homes, tours, exhibitions and lectures, free of charge. The event features the built heritage of the city, part of its history, giving the opportunity to the resident for a cultural quest of his city and to the visitor a chance to 'become local'[3].

[2] http://www.iamsterdam.com/en/

[3] All information for Amsterdam's three festivals are driven from the site: http://www.iamsterdam.com/en/

## 4. Conclusions

City marketing and branding practices have been widely connected to the creative city idea in recent years. The need for cities to establish themselves in the global hierarchy demands new ways of celebrating their uniqueness and distinctive characteristics. Nevertheless, this nervy pursue of rise in the global rankings leads, in general, to serious impacts on the social context of the city. Cultural 'hard-branding' of the city, through flagship projects or spectacular events, can result to gentrified neighbourhoods and social exclusion. Local identity and collective memory are lost and residents feel alienated from the public realm, and not attached to the local community.

With the leading case of Amsterdam, as a city that carried out one of the most famous city marketing plans and place branding tactics along with the domination of creative identity, it has been shown that these practices, usually linked to 'creative destruction', don't only serve economic and urban development, but also serve and respect the culture and identity of the human capital of the city. The 'Broedplaatsen' initiative designated the inspiring Art Factories policy, through which the city supported cultural endeavours, subsidizing young creative people to develop their own space in derelict sites. The most important part was the adoption of participatory methods and the bottom-up approach in the process of the whole venture. The spillovers covered all parties and the policy seems to have been successful: the city gained a strong creative community that it was looking for; the squatters and creative professionals acquired officially their own, collective, artistic space, constituting an active community; the abandoned industrial heritage was redeveloped through new cultural uses and a bottom-up approach has been encouraged. The case of the Art Factories policy and NDSM demonstrates the image of the creative city as a multi-faceted entity with intertwined characteristics.

Additionally, festivals and events comprise the most important tools of Amsterdam's marketing, thus creating a city of spectacle. Nonetheless, local identity, in combination with the distinctive characteristics of the social context of the city, are depicted and celebrated by the plurality of the festivals and their themes. Besides negative outcomes that follow the city's 'festivalisation', people and their cultural diversities are represented through the events, along with the emergence of a collective memory. As a final conclusion, cultural branding of the cities has always been controversial. What is crucial for a socially oriented creative city branding, is the adoption of good practices, involving social inclusion and integration of local communities.

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# The research on the impact of the physical environment in the high rise residential complex on the local inhabitants' meeting place[1]

LI Qing

**Abstract:** Due to the scarcity of the land resource, more and more new development or redevelopment in China takes high rise as its building form. The large-scale development of the high rise residential complex has dramatically changed the urban fabric and the daily lifestyle of many Chinese inhabitants, particularly the way by which inhabitants meet together. The paper attempts to evaluate how the shift of the physical environment affects the mode of the inhabitants' behavior in the public meeting space. Based on the case of Houxiandaicheng, a typical residential complex in Beijing with the distinctive varieties of the layout of the high rise building clusters, the paper first describe the general features of the inhabitants' daily life in their leisure time and maps the features of the daily activities of the residents in the meeting place. Then it illustrates the relation between open place and the flat location of each inhabitant who plays in the outsider place and analyzes the correlation between the features of the open space and social relation based on the site. The study finds that there is a weak correlation between the size of the meeting place and the social behavior and neighborhood relationship; but a high-positive correlation between the types of the meeting place and the social behavior and neighborhood relationship; the quality of the meeting place has some impacts on the social behavior and neighborhood relationship, but the quality is not the decisive factor in the high rise residential complex. Besides the literature examination, the research methodology primarily consists of site observation, interview, behavior mapping and social network analysis.

**Key words:** the meeting place, the high rise residential complex, social network, neighborhood relation

## 1 Introduction

Because of the rapid urbanization and the scarcity of the land resources, high rise residential areas have become more and more common in not only coastal cities but also inland cities of China. This kind of complex has not only changed the appearance of the urban space, but has also affected the residents' daily life in the neighborhood. This kind of area sometimes leaves us a deep impression with some words like "high rise ", " less sky exposition", and "depress". However, when we walk into the area, the space between two high-rise buildings is much more wider than the one between two multistoried buildings, partly because of the planning ordinance to the basic sunlight demands. In some complex, the distance between high-rise buildings can even reach 80-100 meters, and makes it a "huge courtyard " which can be shared by the hundreds of residents in those buildings. However, the high density of population in the complex doesn't indicate people getting more contacts with each other. Actually, they meet on the road like strangers, and live without any words to their neighbors, which reflect an apathetic neighborhood relationship and a lack of the inner social cohesion to a certain extent. Due to the development of the modern transportation、 network and information technology, the traditional neighborhood which is regarded as " local entity" has entered a recession， but the place identity, local organization, and social capital in residential area are still playing important roles according to

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some relevant studies. Lots of residents at different ages are eager for enjoying a certain contact with their neighbors. B. Wellman once took a long-time investigation on the residents of Toronto in Canada, through which he found that the proportion in the active network in local neighborhood would increase dramatically when "contacts" is used as the factor of analysis instead of "tie", and so does the number of individual friendship with the feature of active contact originated from "locality". Although neighborhood has been liberated from "traditional constraint" which is all-inclusive and with highly solidarity, it still embodies some features derived from sociability, supportability, and identity.

Although those literatures have helped us a lot to understand the social structure deeply, however, there are few study connecting the social network with social space, and even fewer with the high rise residential areas. The open space in high rise residential area is totally different from the one in multistoried residential area. The differences on the horizontal and vertical scales between the two kinds of residential areas are big. Therefore, how much of an impact can the high rise residential area have on the residents' social neighborhood? Which features of open space in high rise residential area are related to the neighborhood social network? And how can those features affect the neighborhood social network? Those questions form the point of departure for the study.

2 The theory of space-based social network analysis

The earliest social network analysis is about in 1930s, a famous anthropologist of the United Kingdom named A. R. Brown concerned on the research of social structure. During 1930s to 60s, a serial of research, such as K. Kewin on the group structure, Moreno on sociogram, F. Heider on the social attitude, those researches promoted the discussion of social structure, and kinds of net concepts such as centralization, density, structure balance, and block etc. went deeper. Along with the theory, method and technology of social network analysis are being mature, social network analysis has become one of the important social structure research models. Social network can be used to analyze the strong ties and weak ties of one group. In 1970s,M. Granovetter proposed "the strength of weak ties", he suggested the weak ties would build a bond among groups and organizations, meanwhile the strong ties would maintain the inner relationship of the organization; Burt raised the theory of the structural hole, and proposed that there wasn't a necessary relationship between the tie strength and the amount of the social resources; L. Nan put forward that： the weaker the social network is, the more instrumental it will be in getting social capital, and also, individuals will get heterogeneous capital much easier. On the neighborhood level, the meeting place, mixed land-use, good design for houses, neighbors' walking suitability, the individual motives for others, limited individuals' choices, and the dependence among groups and so on, all those factors could affect the contacts among neighbors.

Based on the theory of social network analysis, the paper regards the open space in residential area as a special "actor", which becomes a key node in the social network. The paper will explore the relationship between the special "actor" and other actors (residents) with the social network methods. Firstly, I surveyed the social activities of the residents in open space, and had an analysis on their regularities; then, I mapped the residents' activities which took place in open space and the neighborhood social network between the special "actor"— place and other actors (residents), and calculated the density and centrality of the network; at last, I analyzed the relationship between the features of the open space and neighborhood social network. Based on

the observation of the basic characteristics of the open space in residential area, I present the research assumption as follows: the larger the scale of open space in residential area is, the stronger neighborhood social network will be; the richer the functional types of open space are disposed, the stronger the neighborhood social network will be; the higher the environmental quality of open space is, the stronger the neighborhood social network is.

The relevant data and materials are gotten mainly by on-the-scene observation, activities mapping and semi-open structured interview, the date of the field survey is from March 28 to April 7 (both workdays and weekends are included) with 97 effective questionnaires. The interviewees are the residents at different ages and on different income levels.. The case of our investigation is "Houxiandaicheng (HC)"—a typical high rise residential complex in Beijing, a middle and top grade residential area built in 2004 and located on the 4th Ring Road at the east of CBD. The site area is about 20.63 hectares with the floor area ratio 2.54 and 12500 or so population, among which 65% is migrant tenants. Youth and middle-aged people comprise about 70% of the HC population, and the rest 12% and 18% are respectively old people and children. This residential area is divided into four districts by local streets. The northeast district is district A with the area of 2.5 hectares and about 2600 residents; the northwest district, district B, is the smallest with about 1.8 hectares and 1900 residents; the southeast district, district C, is the largest with about 4.5 hectares and 4800 residents; the southwest district is district D with about 2.5 hectares and 2900 residents. There are clear differences in the layout of the open space in the four districts, which makes it more convenient to compare the space features of the four blocks and its neighborhood social network.

## 3 The features of the social activities in the public space in the residential area

As the social activities of residents are a media which connects the public space and neighborhood social network, the paper focuses on the social activities of residents first.

The developed public transportation, high owning rate of automobile, and amounts of beautiful parks, those factors attract Beijing citizens to go around in their leisure time. So do the residents in HC. Sometimes, they enjoy views, breath fresh air, play, meet friends and etc. in Caoyang park, Beihai, Temple of Heaven, even on the Fragrant Hill in their weekends, 30 minutes away from the complex by car, But at most time, residents have their social activities in the public space in their residential area. There same regularities present on the residents' behaviors through their weekends activities. According to the activity mapping of the 4 districts, the residents of district D have the highest activity intensity. There are even 70 persons playing in its open space during the peak moment; and on the contrary, the residents of district B have the lowest with only 15 persons during the peak moment; although district C owns most residents and largest land scale, there are only 30 persons during the peak moment. Compared with district C, district D has almost more than twice number of people playing in the public space (fig. 1, 2). It indicated that residents' activity intensity has a certain relationship with the open space in residential area.

The daily activities of residents can be divided into 8 kinds: playing balls (basketball, tennis, ping pong)、 fitness (jogging, doing tai chi, equipment exercises), walking dogs, playing games (children), taking care of children (parents), chatting, having a rest and taking a walk. Different activities perform different laws, and there are 3 kinds of activities last for the longest time: playing games, taking care of children and playing basketball. When enjoying those 3 kinds of activities, many people are gathering in the public space. And chatting, having a rest, taking a

walk and walking dogs, these 4 kinds of activities have a changeable performance in the public space. The interesting thing is that residents would form a familiar group as soon as they share the have same activities, which leads to a high familiar lever. Majority of residents who have social activities in the open space says that the number of the familiar neighbors is about 70% among the neighbors who they know to each other, which means they generally have closer contacts during playing in the open space and children who take part in the activities know each other well. The number of neighbors playing outside who don't know to each other is less than 5% (Tab. 1). And the neighbors having same activities make a subgroup of social network, partly because the relationship would be improved through chatting with each other while they take part in same activities. And also, when they walk dogs or take care of children, dogs and children often act as a medium for them to start talking, and neighbors would get even more familiar as they play balls. And these may generate deeper relationship in the neighborhood, such as: a mum asks another one to take care of her child by the way; or teenagers communicate with each other before playing balls together, or neighbor A leaves his keys to neighbor B when A is out, and so on. This reminds us that neighbors still keep a collective memory and warm neighborhood relation among Beijing citizens which happened before the start of open and reform policy, Actually, it's a long absence relationship for many other neighbors nowadays in modern society.

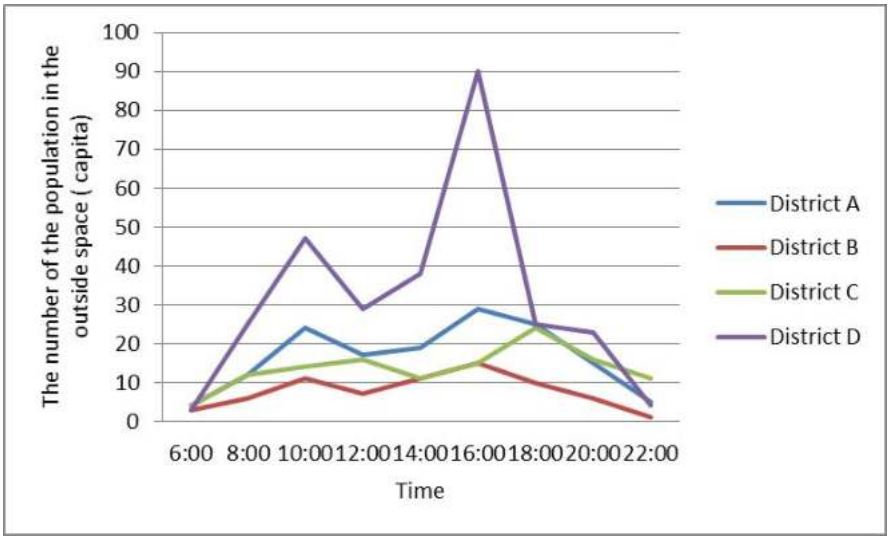


Figure1 The daily density of the inhabitants activities at differing blocks of Houxiandaichen
Source: author mapping

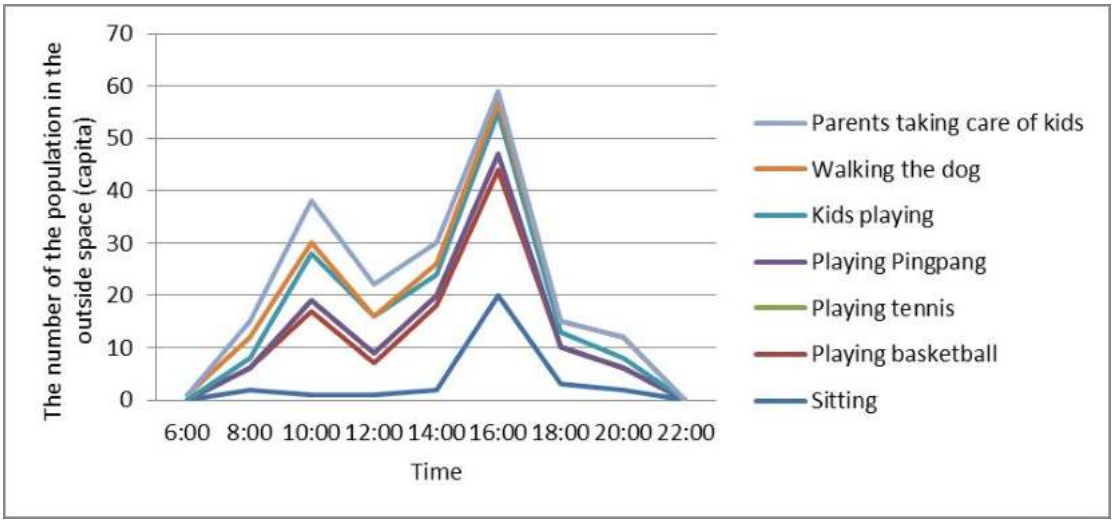

Figure 2 The daily density of the inhabitants 'different activities at block D of Houxiandaichen
Source: author mapping

Tab.1 The analysis of the relationship between the activities and the familiar extent among inhabitants in the open space in Houxiandaichen

| The familiar extent | Playing ball | Walking dog | Kids playing | Parents taking care of kids | Chatting | Sitting | Walking |
|---|---|---|---|---|---|---|---|
| Very familiar （%） | 40 | 64.7 | 41.7 | 44.1 | 41.3 | 43.2 | 52.1 |
| Familiar （%） | 38 | 17.7 | 58.3 | 23.7 | 35.6 | 29.8 | 22.2 |
| Know each other（%） | 20 | 14.7 | 0 | 28.8 | 23.1 | 27 | 23.6 |
| Strange（%） | 2 | 2.9 | 0 | 3.4 | 0 | 0 | 2.1 |
| Total（%） | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

Source: author statistics

4 The analysis of the correlation between the public space and the space-based social network in the residential area.

On the basis of the analysis of the features of the residents' behavior in high rise residential area's public space, now, we will have a deeper study on the relevance between features of open public, such as size, the functional type and the environmental quality, and neighborhood social network.

4.1 The correlation between the size and neighborhood social network

By referencing the social network analysis theory, the study regards the open space as a special "actor", called "place node"; and the address of resident who has social activities in the public space is regarded as "flat node". After matching the relevant "place node" and "flat node" with line, we can get "relation line". Through intercepting a typical moment of residents' social activities in the public space, we mapped the "spots" and "lines", and got a graph of the space-based social network in the residential network (fig. 3). In the graph, the relevant "relation lines" perform a subgroup deriving from the place node. We can find from the graph of the space-based neighborhood social network that there isn't a strong relevance between the space size and the number of residents having social activities (tab.1). For example, district D owns 50 "relation lines", and 28 of them (about 56% of the total lines) come from the same block with the "flat nodes", while 22 of them (about 44% of the total flat nodes) are not from district D, among which 17 flat nodes are from the other 3 districts, and the rest 5 are from other complexes at the west of the HC. It shows that district D has a much more attractive for the neighbors in other districts. District C owns the largest area and population, but there are only 18 "relation lines" which is much less than district D. And actually, there are 22 "flat nodes" in district C, and 8 of them are relevant with district D, main for playing balls and taking a walk, it means that 36% of the district C's "flat nodes" prefers having social activities in other districts. District A illustrates more obviously at this point. As the courtyard is separated by a wall, the number of people having social activities in district A decreased sharply. As a result, there are 21 "flat nodes" in this district,

and only 9 of them have activities in district A, which comprise only about 43% of total flat nodes in district A. Most “flat nodes” appear in district D and B, main for playing balls, taking a walk, play games (children) and walking dogs. Also, district D gets the highest score in measureing the centrality (tab. 2, 3).

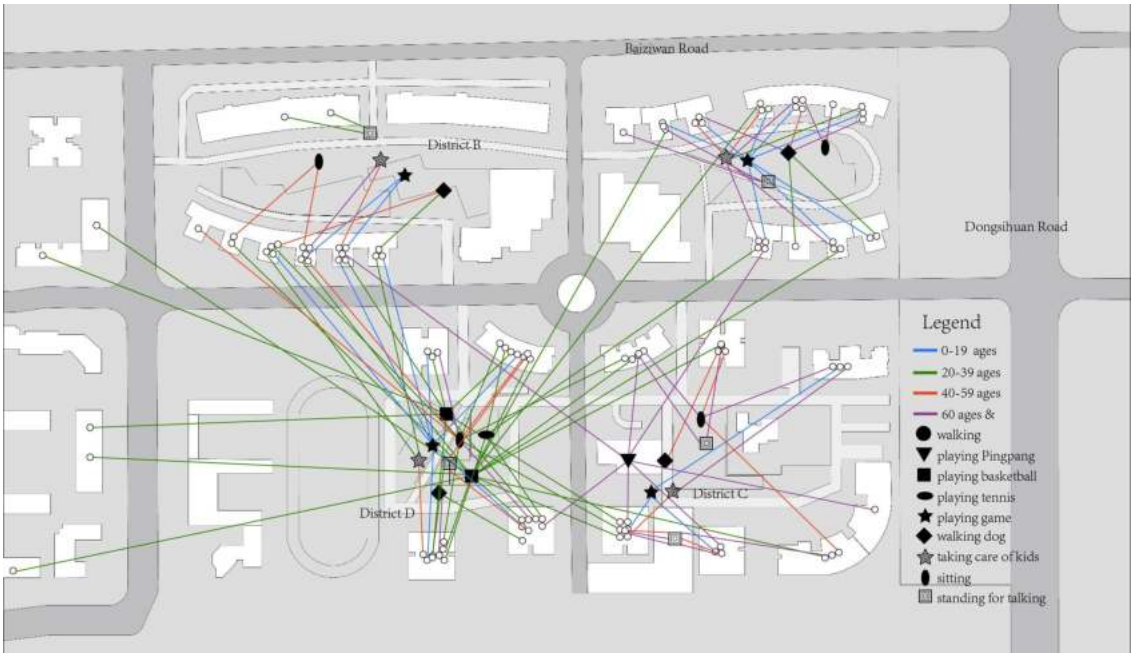


Figure 3 The space-based social network in differing blocks of Houxiandaichen

Source: author mapping

Tab.2 The analysis of the space -based social network in Houxiandaichen

| | | District A | District B | District C | District D |
|---|---|---|---|---|---|
| The amount of “flat nodes” | | 25 | 21 | 22 | 29 |
| Inside | “Flat nodes” in its own district | 20 | 9 | 14 | 28 |
| | “Flat nodes” outside of its own district | 5 | 12 | 8 | 1 |
| The amount of “relation lines” | | 20 | 9 | 18 | 50 |
| Inside | “Flat nodes” in its own district | 20 | 9 | 15 | 28 |
| | “flat nodes” in its own district | 0 | 0 | 3 | 22 |

Source: author statistics

Tab.3 Analysis of variables of the social network in Houxiandaichen

| | District A | District B | District C | District D |
|---|---|---|---|---|
| The amount of “relation lines” | 9 | 20 | 15 | 28 |
| Degree centrality | 9 | 20 | 18 | 50 |
| Standarded degree centrality | 0.09 | 0.21 | 0.19 | 0.51 |
| Betweenness centrality | 9 | 20 | 16.5 | 38 |

| | | | | |
|---|---|---|---|---|
| Standarded betweenness centrality | 0.09 | 0.21 | 0.17 | 0.39 |
| Closeness centrality | 194 | 174 | 179 | 164 |
| Standarded closeness centrality | 0.49 | 0.56 | 0.54 | 0.59 |

Source: author statistics

4.2 The relationship between the functional type of the public space and neighborhood social network

According to the map of the social activities in the public space, the functional type of the open space presents an obvious influence on the residents' social activities, because each functional type of place matches relevant residents' social activities. Overall, walking dogs, taking a walk and having a rest, such activities don't need high requirements for space disposition. However, physical exercises need a certain requirements for the space disposition generally. When children play, it would need a certain size of hard ground for running, riding tri-cycles and playing ball. Also, a playground with a small pool, sand holes, and slides, would help improve the attraction of the place to children. In terms of sociogram, district A has 5 subgroup: playing games (children), taking care of children (parents) , walking dogs, having a rest and taking a walk, the number is as the same as the one in district B; district C has 6 (one more with ping pong), and district D has 7 (two more with basketball and tennis compared with district C). The subgroup of basketball gets the most "flat nodes" about 12 where there is an informal basketball competition being held on one of the basketball sites. The number of "flat nodes" related to playing games is also big about 9 in district D, and the number of "flat nodes" related for parents to taking care of children is about 7. In all, children and parents are the main users of the open space. However, there isn't a big difference for walking dogs and taking a walk in the four districes.

4.3 The correlation between the environmental quality and the neighborhood social network

The four blocks of the HC belong to one residential complex, but they perform a certain differences because of the distinct planning and layout, later-stage management and property maintenance. In district A, the greenbelt between 2 buildings is comparatively attractive, and the trees there make a pleasant shade with a walking line and pergolas. Anyway, the environmental quality is good in district A. District B is a highly mixed block with the southern part for residents, the northern for SOHO and the eastern for business. As a result of management, there is a wall to separate the southern part and other parts, and to make the space break into pieces. In addition, because of the bad smelling from the trash cans by the main lane at the north of the residential area, the environmental quality is affected seriously. Although the northern part in district B is designed well, the property maintainers change majority of its hard ground into a parking site, that also lead a worsen quality. District C has a comparatively nice environment, but the hard ground is designed too boring and without careful maintenance; District D has a comparatively good maintenance, and majority of its open space is hard ground with a few trees. According to the evaluation from residents, the environmental quality of district A gets a highest score, district D follows behind, and district B gets a lowest one.

After having an analysis on the subgroups of playing games and taking care of children, we know that district B owns the fewest "flat nodes", and district A gets the most (fig. 4). It seems to

have improved the proposal that residents tend to have social activities in a better environment. But as we studied on the subgroup of having a rest (sitting), we found that district D owns most "flat nodes"(fig. 5). There is a certain number of elms out of the safety net of the basketball ground and tennis ground in district D, and under the elms, there are flower beds and chairs. Between two closed basketball grounds, there is a main lane which is 5 meters wide. So, residents would be attracted by the youth playing basketball unconsciously when they pass by, and maybe they would sit down to be their audiences. The old persons with some trouble in walking or sitting on wheelchairs, often prefer to stop under the elms to enjoy the warm sunshine while watching the basketball game.

Thus it can be seen that the environmental quality of place is a complex variable, and residents tend to choose a better open space, but meanwhile, rich humanity landscape is much more welcomed by residents. Such as the case of GC the sports places act as catalyst for the vitality of the open place.

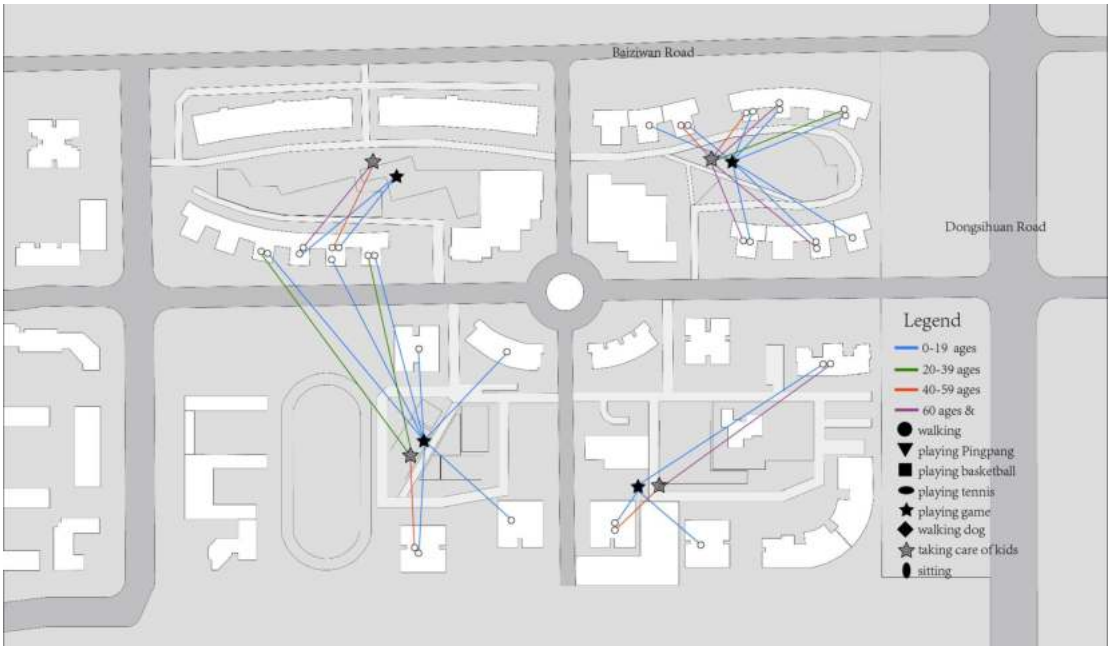


Figure 4 The social network based on the activity of (children) playing games in Houxiandaicheng
source: author mapping

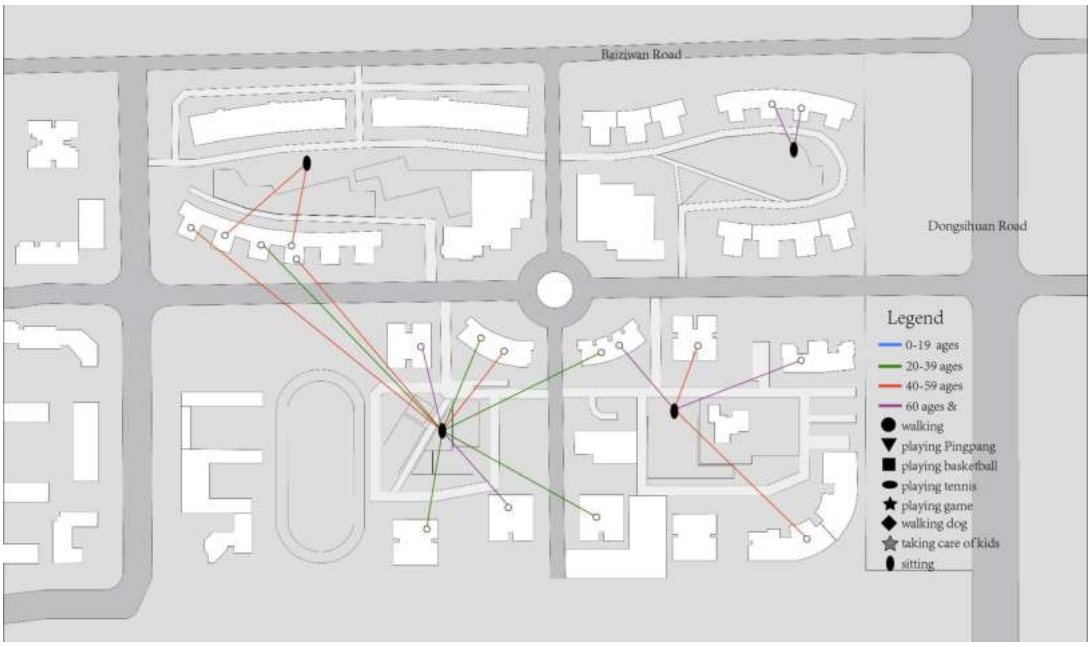


Figure 5 The social network based on the activity of sitting in Houxiandaicheng

resource: author mapping

6 Conclusion

Through regarding the open space in residential area as a main "actor" of the neighborhood, the paper establishes a kind of social network built by the "actor" and other "actors" (residents). The research found that: (1) the scale of the open space in high rise residential area does not have a clear correlation with the residents' neighborhood social network. Partly because of the relevant ordinance of the sunshine standard, there is a large distance between 2 rows of buildings, so it couldn't affect much on residents' daily activities even if the scale of open space is expanded. For instance, in the case of "HC" in Beijing, the open space scale of district C is 1.5 times as big as the one of district A, however, during the peak moments, the observed number of inhabitants in the open space in district A is a little more than the number in district C. (2) The functional type of open space in high rise residential area has a clear correlation with the neighborhood social network. Through the research, I found that different functional type of open space could build different neighborhood groups. Neighbors have high familiarity in a same neighborhood group, that's because those neighbors in the same group has lived in the same space for a long time, as a result, it's easier for them to get contacts. A free, open space with sport facilities could gather residents easily. For example, youth and middle-aged people are always seen in district D as it owns 2 basketball courts. This proves a proposal similar to Y. Gail—open space will be popular if there are things for residents to do. And it's also very important if the space is open and free, so that the utilization of the space will be fairly high. Sometimes, children rushed into the basketball court when there weren't any adults. They stumbled, lifted the ball up and tried to throw into the basket net like the elders under the attention of parents, this kind of humanity scene is not only a help for the children' socialization, but also reflects human nature, maternal love and the spirit of brave adventure. At the same time, it increases the compounded use of the space naturally, making the open space in high rise residential area be popular. (3) The quality of the open space has a certain impact on neighborhood social network. Good atmosphere of open space would attract many residents. For example, district A in "HC" has a good environment, and trees there make a

pleasant shade, so it's quite popular in the nice evenings. But in district B which has worse environment, the residents have much less activities there. However, the quality of the environment is not the main factor affecting residents' activities in open space. District D is payed more attention on hard ground environment with fewer trees, but more residents are willing to take a rest in district D than district A, although district A gets higher grades in the evaluation of the environmental quality. It indicates that although the green disposition is important in open space, we should also consider the function of open space, especially the demand of residents for contacts and "humanity landscape".

Although the open of the residential area and the basic building function of "courtyard" are not the key point in this research, they have a certain impact on neighborhood social network. In a word, the neighbors in high rise residential area can build much closer neighborhood social network through a right open space design. Lots of open space in high rise residential area has a huge potential on stimulating the neighborhood social activities in high rise residential area. Although the key point in my research is the social weak ties among neighbors, how to improve the social strong ties among neighbors with the open space in residential area should still be explored.

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# THE RELATIONSHIP BETWEEN POPS AND PUBLIC OPEN SPACE SYSTEM BASED ON SPATIAL POINT PATTERN ANALYSIS IN TAIPEI CITY, TAIWAN

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Keywords: Privately Owned Public Space (POPS), Spatial Point Pattern Analysis, Systematic Open Space

## Abstract

*In Taiwan, to achieve the goal of improving urban environment and disaster prevention capacity, some urban renewal development projects could apply for additional floor area bonus and result in part of the private property turn into the privately owned public space (POPS). Certain properties have become a unique existence in the open space system.*

*From 1980s, Taiwan government have provided incentives in exchange for more public open space through legal system, i.e. Zoning Code, Urban Renewal Act and Land Use Regulation, as a result, 483 POPS had developed from 1983 to 2013. Many local research have explored the effect of the individual POPS to the regular open space and proposed better usage and management of POPS. However, there is lack of debate about private property and the relevance of entire POPS system with open space network. Moreover, in most cases, the lack of proper and flexible design guidelines and review system could also result in poor design and limited usage due to the unwillingness of private owners. Accordingly, POPS could not serve better function to the surrounding built environment and citizens.*

*Hence, this paper will discuss the relationship between existing POPS and public open space system based on spatial point pattern analysis, choosing Taipei City, Taiwan as a case study area. This paper will expect to provide some information for better policy of public space system in Taipei.*

## 1. Research background

To achieve the goal of improving the urban environment and the capacity for disaster prevention, some building site owners can apply for additional floor area bonuses that results in part of the private property being converted into privately owned public spaces (POPSs). A lot of POPSs started up after the Taipei City government formulated the Regulations on Taipei Land Use Control in 1983. Then, some regulations, the Detail Plan for Keelung River Surrounding Area in 1994 and the Regulations of Bulk Reward for Urban Renewal in 1999, followed. The number of POPSs increased to 483 from 1983 to 2013.

The concept for the POPS regulations is good, but many people have questioned the openness of POPSs in residential zones. In 1997, POPSs became a social issue related to the applicability of their location and management. After that, the Regulations on Taipei Land Use Control were amended to cancel the bulk reward, extra floor area rewards for new building construction project, for residential zones. In 2014, the same issue arose, and it was reported that people wouldn't want to be converted to POPSs. Therefore, it is necessary to review whether the conversion to POPSs was able to achieve the primary goal for such spaces. In addition, the locations of POPSs were chosen on the basis of the laws without considering the entire planning scope. Hence, this paper discusses the relationship between existing POPSs and the public open space system itself.

## 2. Literature review

### 2.1 The relationship between POPS and public open space system in Taipei

In high density cities, it is difficult to get extra open spaces. In order to improve the existing open space system, one solution has been to create building lots to provide open spaces. In New York City, since the 1890's, a lot of skyscrapers have emerged in order to gain height and volume, resulting in some problems in the urban environment. As a result, the 1916 zoning resolution created a sense of openness, also known as "light and air," at the street level. Further, the Voorhees draft in 1958 proposed the first concept related to POPSs. "In order to bring more light and air into streets surrounded by tall buildings, as well as to create more usable open space, a bonus device has been established to encourage the setting back of buildings from the street line." (Kayden, J, S., 2000). Likewise, Taipei, as the capital of Taiwan, faces same problems related to the environment in open spaces. In addition, the city cannot expand its borders due to limitations related to basin and range topography. The urban growth is close to a saturation point, so it cannot afford more construction in open space land. That is to say, it is more important to improve open space system by putting in a strategic number of POPSs. The POPS policy has been in operation for 30 years. However, the question remains as to whether it has actually achieved the goal of improving the open space system. The literature review makes it clear that there has been limited discussion of the entire POPS system. Therefore, this paper discusses the contribution of POPS to the open space system. In the next section, we review the legal and planning purposes of POPS.

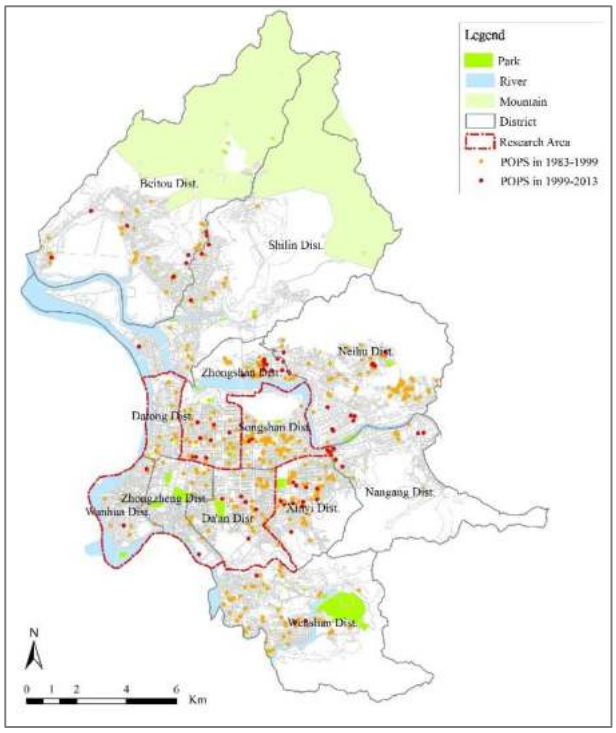



Figure 1. Location of existing open space and POPS in Taipei

### 2.2 Legal and planning purpose of POPS

The legal ground of POPS with a bulk reward in Taipei includes the Regulations on Taipei Land Use Control, Regulations of Bulk Reward for Urban Renewal and Detail Plan. The purpose of these laws is to improve the urban environment and to shape an open space network.

In 1983, Article 26 of Taipei City's Enforcement Rules of Urban Planning Law, Taipei first executed Land Use Control in Taiwan. In Chapter 11, the Comprehensive Design and Bulk Reward Regulations encouraged small building lots to merge into entire blocks in order to provide centralized open spaces for the public. The government use a carrot-and-stick approach to establish the rules of operation, management and rewards for POPS. In order to prevent budget increases, the urban environment had shared open public spaces (Huang, J. N., 2004). The locations of POPSs were ordered in residential zones, commercial zones and market land. However, POPSs located in residential zones caused many management problems at that time. Hence, residential zones were canceled as reward sites in 1999. After 1994, some planned areas had more design standards for POPSs but were still limited to commercial zones and high density land use as reward areas. Regulations of Bulk Reward for Urban Renewal was published in 1999. Among the rewards for planning and design (△F5), it was encouraged that building lots remain open spaces or plazas. In addition, sites could get bulk rewards by redeveloping urban renewal areas.

According to the policy review, we can classify the POPS policy into two phases. The first phase is the initial period from 1983 to 1999. It delineated general rules for locations and specifications at that time. However, the second phase started after 1999 and incorporated strategic rules. High density land use and urban renewal areas were its bulk reward objects. Table 1 shows the open space type. There are strip-type, plaza-type, pedestrian decks, arcades, sidewalks, etc.

After a review the three legal grounds of POPSs, the role of POPS laws in the entire open space system is discussed. Figure 2 shows the legal hierarchy of open space planning. In the open space system, POPS can remedy the weaknesses of the parks planning and green fields systems in order to improve environmental quality and the capacity for disaster prevention. Lin (1995) defended the open space system. POPS is part of the patch elements of the open space system. In addition, open spaces in building lots can be divided into two types: statutory open spaces and POPSs. Extra bulk rewards can be used to exchange more open spaces for public as POPS (Shie, Y. C., 2006). However, the exchange between public interest and private profit in POPSs has extended the debate on this subject. That is to say, it is necessary to review the contribution of POPS to open space environments from a legal standpoint.

POPS as provided in the form of bulk rewards is one of the tools implemented for open space planning in the legal hierarchy (Huang, J. N., 2004). POPS, as a patch type, increases the completeness of the entire open space network. However, the competition between three legal grounds causes developers to prefer building lots with higher bulk rewards and fewer specifications (Yang, S. Y., 2007). POPS cannot be located in areas with poor environmental quality as a result of the legal specifications. Next, we compare domestic and foreign policy.

Table 1. Legal and planning specification of POPS

| Related laws and plans | Purpose | Locations | Open space type (specification) |
|---|---|---|---|
| **Regulations on Taipei Land Use Control** | • To increase park and sidewalk construction<br>• To connect with existing open space | **1983-1999**<br>- Residential zone, Commercial zone, Market land<br>**After 1999**<br>- Commercial zone, Market land | • Strip-type (50 $m^2$ minimum area)<br>• Plaza-type(100$m^2$ minimum area)<br>• Pedestrian deck (4.5m maximum height difference)<br>• The atrium space on the first floor of the building |

| Related laws and plans | | Purpose | Locations | Open space type (specification) |
|---|---|---|---|---|
| **Regulations of Bulk Reward for Urban Renewal** | | • To improve poor environment<br>• To reward sites with good design | **After 1999**<br>- Urban renewal area | • Plaza<br>(200m$^2$ minimum area) |
| **Detail Plan** | **Keelung River Surrounding Area** | • To fulfill open space demand for increasing resident | **After 1994**<br>- Commercial zone, Entertainment zone (part of residential use is allowed) | • Plaza<br>(200m$^2$ minimum area) |
| | **Xinyi District** | • To shape open space network | **After 2000**<br>- Business facility zone, Special business zone (located in the main road) | • Strip-type (for 10-20m)<br>• Plaza-type (accounting for more than 15% of site)<br>• Plaza at street corner<br>• Arcades and Sidewalk |

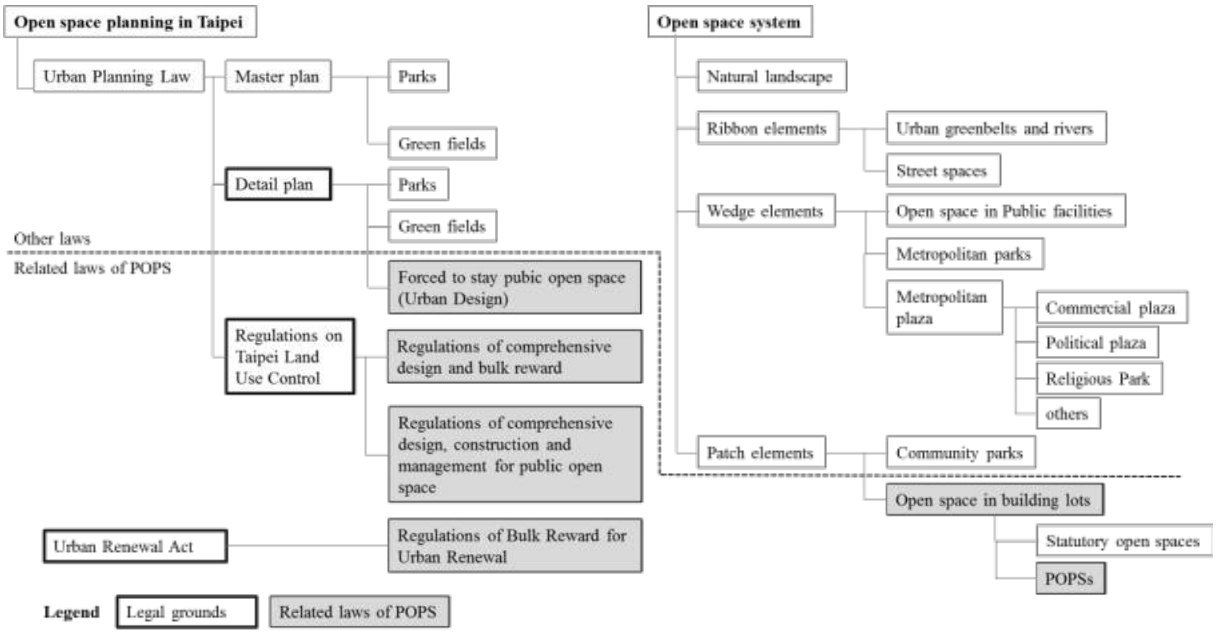



Figure 2. The relationship between POPS regulations and the open space system

## 2.3 Comparison of domestic and foreign policy

Because the USA was the first to use bulk rewards to encourage the private sector to retain open spaces, the Regulations of Land Use Control became more elastic. Furthermore, urban planning in Taiwan was also influenced by Japan. The regulations from Japan for comprehensive design and bulk reward were studied. Thus, in this section, we introduce the related policies in New York and Tokyo and then compare them with domestic policies.

Since the 1890's, a lot of skyscrapers have emerged in New York to incorporate a larger volume of people and activities, causing some problems in the urban environment. As a result, the 1916 zoning resolution created a sense of openness, also known as "light and air," at the street level. In 1961, New York City published The 1961 Zoning Resolution to establish bulk rewards and to give additional floor

areas a bonus, less than 20% of the original floor area ratio (FAR), for building lots providing plazas or arcades. It was the first case of a POPS bulk reward. Then the period of special purpose district from 1967-1973, the open space type became diversified, i.e. elevated plazas, through block arcades, covered pedestrian spaces, sunken plazas, open air concourses, etc. To achieve a specific goal according to an ideal situation, the New York City government formulated five special purpose districts. After 14 years of experience, in 1975, an "as-of-right" plaza was imposed with higher design standards. Then, in 1977, the "residential plaza" was proposed to differentiate it from urban plazas (Kayden, J, S., 2000). However, New York City Mayor Koch imposed overall laws in 1982. The points of the revised laws are shown as follows (Shou D. G., 1993):

1. The open space type of planning changed from a concept into a definite type with a regional planning system.
2. Forced specifications existed for some welfare facilities, i.e. locations of green fields.
3. The functions of space were required to suit daily life activities.
4. The concept of POPS standards changed from single into multiple, emphasizing functional rewards.

In Japan, the bulk rewards for open space design had two classifications: a Specific Block System and a Comprehensive Design System. In 1968, urban planning laws for land use control formulated the idea of specific blocks, having spatial standards about FAR, height, and building lines. The Building Standard Laws were revised in 1970 to enhance the Comprehensive Design System. If building lots with enough site area retained a certain percent of the area as open space and contributed to the urban environment, they were allowed more liberal specifications for FAR and height (Chen, L. F., 1995). The government of Tokyo formulated Tokyo Comprehensive Design Permission Regulations in 1988. To merge building lots into large-scale areas and keep adequate open space, the regulations liberalize the FAR and building type and ensured the environmental quality of open spaces and urban areas. However, due to the lower standards for site area (Specific Block: 5,000 m2; Comprehensive Design: 1,000-3,000 m2) in the Comprehensive Design System and the fact that it involves a simple process, it has higher usage.

After the case review, POPS foreign policy is compared with domestic policy. Due to different historical backgrounds, the primary subject of POPS development is different in each country. In New York, the USA case, POPSs play the role of improving building environmental quality in commercial zones i.e. CBD. In the case of Tokyo, Japan, the program assists with urban disaster prevention. In Taipei, Taiwan, urban renewal areas are included in reward area specification. Although the objectives are different in each country, the same goal for better open space environments is shared by all of them. However, the regulations specified for the locations of POPSs in Taiwan are generally applicable and result in uncertainty with regard to the sites developed for POPS.

Table 2. Comparison of domestic and foreign policy of POPS

| Country/ Area | Purpose | Locations | Open space type (specification) |
|---|---|---|---|
| **USA/ New York** | **1961**<br>• To improve urban environment | • Commercial zone, Business zone<br>• Special purpose district | • Plazas, Arcades, Urban plazas, Residential plazas, Sidewalk widening, Open air concourses, Covered pedestrian spaces, Through block arcades, Through block gallerias, Elevated plazas, Sunken plazas |

| Country/ Area | Purpose | Locations | Open space type (specification) |
|---|---|---|---|
| **Japan/ Tokyo** | **1968**<br>• To improve urban environment<br>• Development of merged building lots<br>• Urban disaster prevention | • Commercial district, Business zone, Residential zone, Industrial zone<br>• 1,000m$^2$ minimum area and open space should more than 65% of site | • Plazas, Green field, Sidewalk (100-300 m$^2$ minimum area) |
| **Taiwan/ Taipei** | **1983**<br>• To improve urban environment<br>• To shape open space network | • Commercial zone, Market land<br>• High density land use in detail plan<br>• Urban renewal area | • Strip-type (50 m$^2$ minimum area)<br>• Plaza-type (100m$^2$ minimum area)<br>• Pedestrian deck (4.5m maximum height difference)<br>• The atrium space on the first floor of the building<br>• Plaza at street corner<br>• Arcades and Sidewalk |

## 2.4 Related research

Many local researchers have explored the effect of individual POPSs on regular open spaces and have as a result proposed better usage and management of POPSs. However, there is less debate about private property and the relevance of the entire POPS system in the open space network. Most methodology use questionnaires or observed phenomena for such studies, and therefore, using quantitative analysis for the study of POPSs is unusual.

From a design and management perspective, law reviews and case studies are usually the research methods (He, S. B., 1988; Lu, G. B., 1989; CPAM, 1991). From the user behavior perspective, policy advice is provided by establishing evaluation subjects and surveying properties to investigate user behavior (Chiang, W. C., 1993; Chang, W. Z., 1994; Chiu, H. Y., 1995). From the effect of openness perspective, some researchers have conducted analysis by describing phenomena, comparing cases, or by doing law reviews and case studies in order to propose improvements (Tung, Y. Y., 1999; Rou, R. H., 2003).

In the past, the main discussion of POPS-related research in Taiwan was individual spaces; nevertheless, the debate on site locations and the influence of open space systems are rare. Moreover, a successful reward system should have systemic feedback instead of patch feedback. Depending on the complete plan and management system, a carrot-and-stick approach should work (Marcus & Carolyn, 1990: 13-15).

## 2.5 Open space system review in Taipei City

Table 3 reviews the developed ratio of open spaces in Taipei. Over the past decade, the developed ratio increased by 7.9%, from 43.0% to 50.9%, but half of the areas planned for open spaces have not been developed. That is to say, planning areas in open space systems cannot provide expected effect, and the differences are shown in Figure 3. Furthermore, each district is compared according to its green resources per capita in Taipei. The green resources per capita in the five districts, Wanhua, Zhongzheng, Songshan, Da'an, and Datong, are lower than 10 m2. These districts are mostly located in the western area, the old developed area, which lacks public facilities. In a situation where no open spaces can be developed, it is important to increase and connect the open space network efficiently.

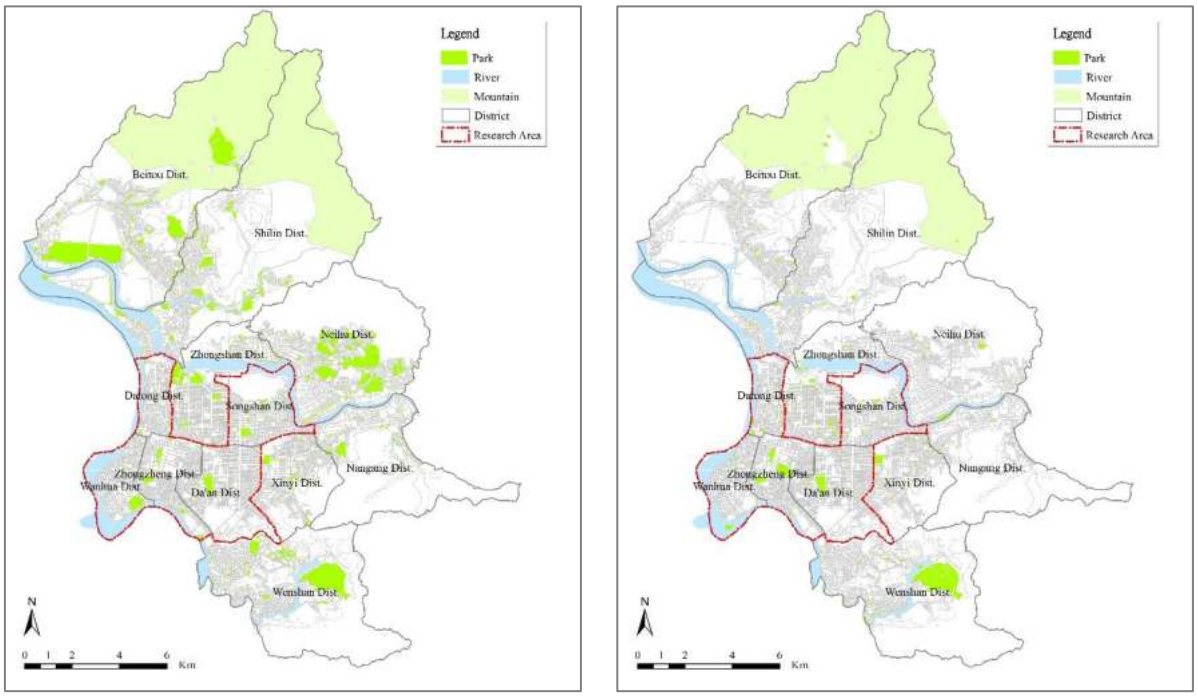
Current policies encourage building lots to remain as open spaces through the use of bulk rewards, but the contribution of POPS in areas with poor environments is still a question. Subsequent analysis will take these five districts as the research area to allow discussion of this point.

Table 3. The developed ratio of land use of open spaces in Taipei City

| | Year | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Open space* | Planning area (ha) | 1,425 | 1,425 | 1,429 | 1,443 | 1,444 | 1,435 | 1,315 | 1,324 | 1,326 | 1,333 | 1,335 |
| | Existing area (ha) | 612 | 617 | 635 | 630 | 646 | 664 | 669 | 669 | 671 | 677 | 680 |
| **Developed ratio (%)** | | **43.0** | **43.3** | **44.4** | **43.7** | **44.8** | **46.3** | **50.9** | **50.5** | **50.6** | **50.8** | **50.9** |

* Open spaces include parks, green fields, plazas, and playgrounds

Reference: Statistical abstract of Taipei City




Open space planning system

Existing open space system

Figure 3. Comparison of planning and existing open space system

Table 4. Green resources per capita in Taipei

| 2013 | Green resources* (ha) | Green resources per capita ($m^2$) | Park($m^2$) | Green field ($m^2$) | Playground ($m^2$) | Riverside park ($m^2$) | Plaza ($m^2$) |
|---|---|---|---|---|---|---|---|
| **Beitou Dist.** | 3,599 | 140.9 | 1,024,010 | 244,289 | 777 | 81,900 | 11,673 |
| **Shilin Dist.** | 3,998 | 138.0 | 752,103 | 139,083 | 908 | 523,789 | 10,570 |
| **Nangang Dist.** | 1,278 | 106.8 | 404,055 | 74,076 | 11,927 | 88,000 | 3,941 |
| **Neihu Dist.** | 1,727 | 61.1 | 767,550 | 58,732 | - | 477,702 | 5,489 |
| **Wenshan Distr.** | 1,580 | 58.2 | 2,059,587 | 22,888 | - | 512,853 | - |
| **Xinyi Dist.** | 672 | 29.4 | 406,421 | 45,598 | - | - | 87,062 |
| **Zhongshan Dist.** | 377 | 16.5 | 797,926 | 32,235 | - | 895,533 | 4,246 |
| **Wanhua Dist.** | 177 | 9.2 | 298,325 | 200 | 1,000 | 1,077,680 | 14,671 |
| **Zhongzheng Dist.** | 126 | 7.7 | 567,224 | 20,720 | - | 233,506 | 46,502 |
| **Songshan Dist.** | 122 | 5.8 | 178,742 | 4,860 | 468 | 872,161 | - |
| **Da'an Dist.** | 133 | 4.2 | 585,450 | 7,076 | - | - | - |
| **Datong Dist.** | 30 | 2.3 | 113,609 | 16,418 | - | 94,350 | 9,846 |
| **Total** | **13,819** | **51.4** | **7,955,002** | **666,175** | **15,080** | **4,857,474** | **194,000** |

* Green resources include parks, green fields, plazas, playgrounds, stadiums, educational parks, riverside parks, scenic spots, protected areas and national parks.

Reference: Statistical abstract of Taipei City

## 3. Methodology

The research process uses four scenarios and then compares the results of the scenario analysis. Average nearest neighbor and kernel density estimation are used as the research methods due to the spatial data type of point pattern. Through a global analysis, we can determine the intensity of clusters with POPS and open spaces in Taipei. In the average nearest neighbor analysis, the distribution of POPS and open spaces will show as clustered, random or dispersed. If the average nearest neighbor ratio is clustered, then hot spots are analyzed using a kernel density estimation in order to determine the differences among the districts. The result will show that the open space environment is improved whether or not through formulating the POPS policy, especially Wanhua, Zhongzheng, Songshan, Da'an, and Datong district.

### 3.1 Scenario Analysis

The literature review clarifies the planning and development of open spaces through the two phases of POPS policy. Therefore, the open space system is classified into four scenarios and shown as below. Subsequent analysis will involve a spatial point pattern analysis for four scenarios in order to compare the differences among the different scenarios and to verify whether the environment improved after executing the two phases of POPS policy.

- Scenario 1: Open space planning system (a total of 1,165; an area of 1,510.02 ha)
- Scenario 2: Existing open space system (a total of 253; an area of 397.63 ha)
- Scenario 3: Scenario 2 adds the first phase of POPS from 1983-1999 (a total of 634; an area of 466.41 ha)
- Scenario 4: Scenario 2 adds the existing POPS from 1983-2013 (a total of 736; an area of 481.11 ha)

### 3.2 Average Nearest Neighbor (ANN)

The null hypothesis of average nearest neighbor in hypothesis testing states that "the events are randomly distribution without clustering." The Nearest Neighbor Index is a distance statistic for point pattern data sets that gives the analyst an indication of the degree of the clustering of points (Chainey & Ratcliffe, 2005). In Average Nearest Neighbor, $\overline{D}_O$ is the average nearest neighbor distance; d is the nearest distance of dot i to dot j; n is the number of event points in study area. R is s nearest neighbor index; D¯_E is the average distance between the nearest neighbor and point.

$$\overline{D}_O = \frac{\sum d_{ij}}{n} \qquad R = \frac{\overline{D}_O}{\overline{D}_E} \tag{1}$$

The Average Nearest Neighbor is an index for evaluating point pattern distribution. If the index (Average Nearest Neighbor ratio) is less than 1, the pattern exhibits clustering. If the index is greater than 1, the trend is toward dispersion (Mitchell, A., 2005). If the index is near 1, the pattern is random.

### 3.3 Kernel Density Estimation (KDE)

Kernel Density is used to estimate the intensity of a spatial point pattern. Kernel Density Estimation represents the core area of design k1, k2, and uses points s1, s2 for the number of events within a core computing radius. The majority of events are assigned to different event groups, and then the density surface, the core area with a radius length τ1, τ2, will affect the accuracy of the estimates. Conceptually, a smooth, curved surface is fitted over each point. The surface value is highest at the location of the point and diminishes with increasing distance from the point, reaching zero at the search radius distance from the point (Silverman, B. W., 1986). If s represents a general location in R, and s1,…, sn are the locations of the n observed events, then density, λ(S), at s is estimated by (Bailey & Gatrell, 1995):

$$\hat{\lambda}_\tau(s) = \frac{1}{\delta_\tau(s)} \sum_{i=1}^{n} \frac{1}{\tau^2} k\left(\frac{s-s_i}{\tau}\right) \tag{2}$$

* $k()$ is a suitably chosen bivariate probability density function, known as the *kernel.*
* The parameter $\tau > 0$ is known as the *bandwidth* and determines the amount of smoothing.

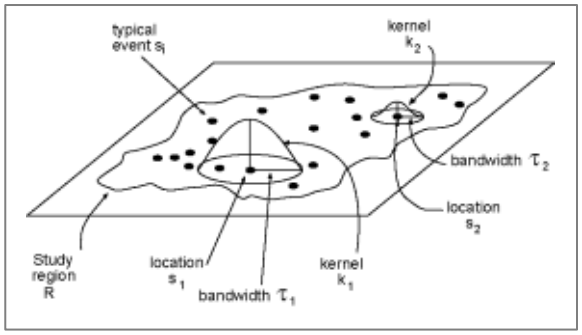



Figure 4. Kernel estimation of a point pattern
Reference: Bailey & Gatrell, 1995

## 4. Analysis

### 4.1 Average Nearest Neighbor Analysis

Table 5 shows that all of the average nearest neighbor ratios are less than 1 and that the Z-Score is less than -2.58 (P-Vale= 0.0000). That is to say, the point is a clustered distribution and allows the kernel estimation of the open space. In addition, reviewing the value of the four scenarios, the ratio of scenario 1, open space planning system, is 0.6155 more than the other scenarios. The case of scenario 1 shows that open space ideally tends toward an average distribution. In scenarios 2 to 4, the ratio become gradually smaller (from 0.6784 to 0.5541). The entire open space become more clustered after executing the different phases of POPS policy.

Table 5. Average Nearest Neighbor Analysis

| Scenario | Ratio | Z-Score | P-Value | Expected Distance | Observed Distance |
|---|---|---|---|---|---|
| **1** | 0.6155 | -25.1049 | 0.0000 | 243.1777 | 149.6825 |
| **2** | 0.6784 | -9.7868 | 0.0000 | 513.1923 | 348.1369 |
| **3** | 0.5585 | -21.2525 | 0.0000 | 331.9157 | 185.3595 |
| **4** | 0.5541 | -22.8559 | 0.0000 | 312.4617 | 173.1455 |

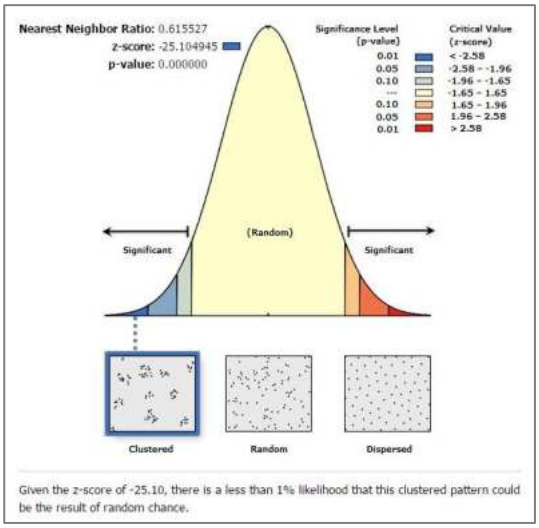



Figure 5. Scenario 1: average nearest neighbor analysis

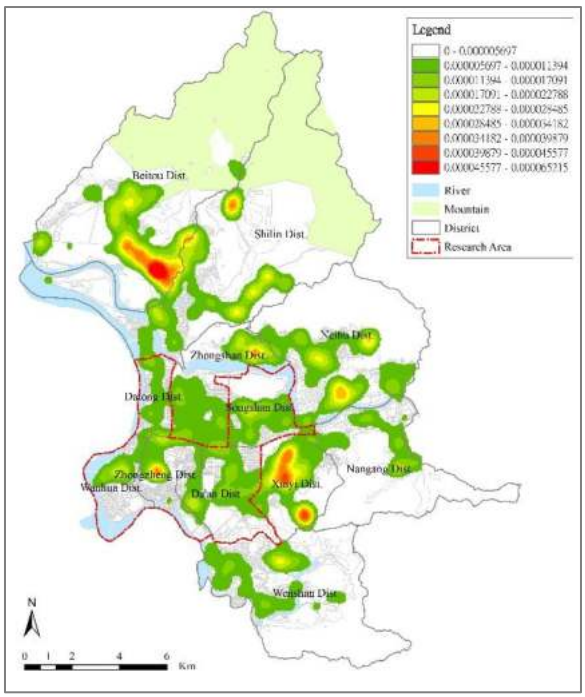
### 4.2 Kernel Density Estimation

Analyzing the point pattern using kernel density estimation can determine open space hot spots. Furthermore, the change tendencies for open spaces can illustrate the differences in open spaces in each district. Figure 6 shows the intensity of density. Red represents a high density open space area. White represents a low density open space area. The parameter setting is that the center of each open space is the kernel, the value of $\tau$ (bandwidth) is 600m, and grid size is $60m^2$. In the different scenarios, the open space is used for hotspot maps.

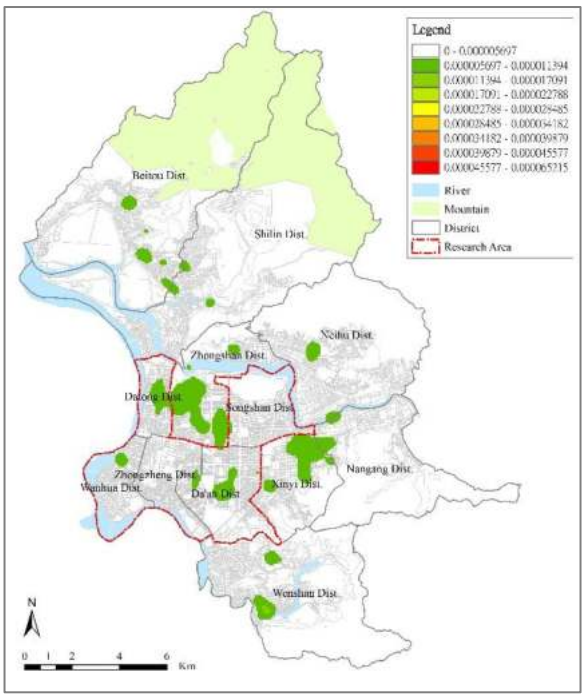
To compare the different open space scenarios, the ranking in the kernel density estimation is revised

as the same in each scenario. From the overall perspective of open space service density in Taipei, the service density of scenario 1 distributes even locations according to population density close to ideal conditions. The policy of POPS is to effectively increase the service density of open spaces because of changes in the different phases from scenario 2 to 4. Although, the POPS policy of has more strategic standard, the POPS tends to be developed in certain area with either higher bulk reward or less rigid requirements due to the different policies. Even though increasing the POPSs amount of 100, the area of 25 ha, from scenario 3 to 4, the entire open space system cannot be improve. Ideal planning cannot be realized in the case of some old community.

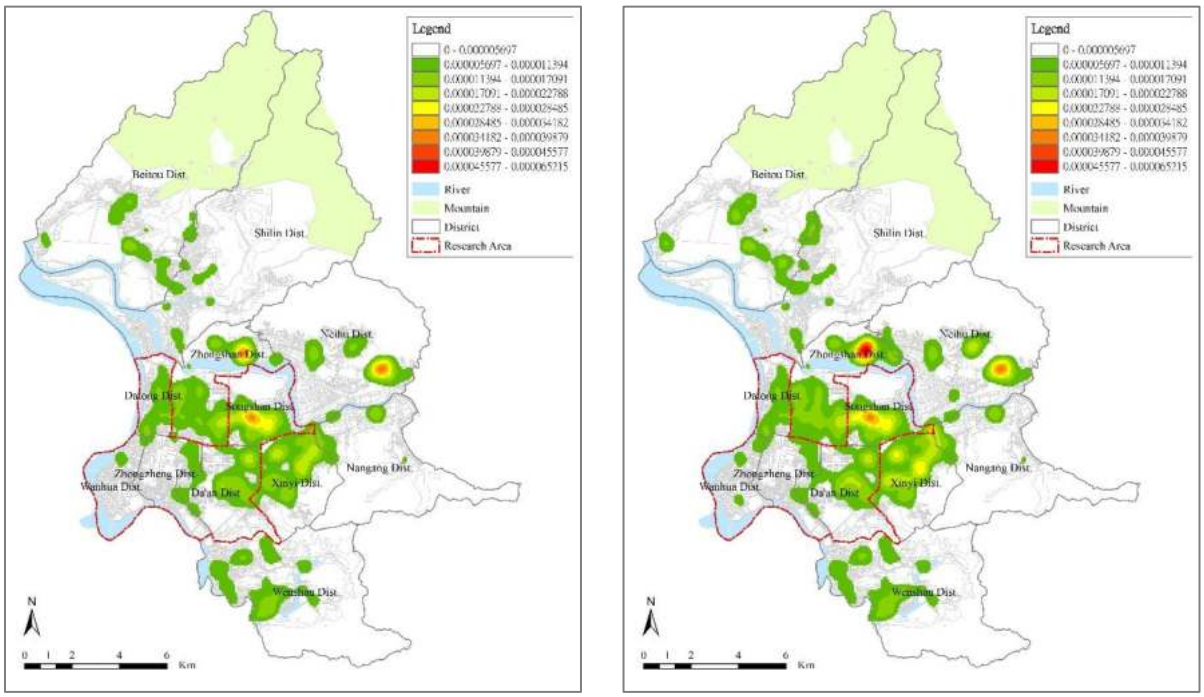
Moreover, the poor green resources districts, Wanhua, Zhongzheng, Songshan, Da'an, and Datong, are the research areas. In planning open space in scenario 1, there is a lack of open space facilities in the Wanhua and Zhongzheng districts. Some districts, Songshan, Da'an, and Datong, improved when moving from scenario 2 to scenario 4, but this was not the case in the Wanhua and Zhongzheng districts. The goal of a better urban environment was not met. Although the result of the POPS development did not fulfill original expectations, but from scenario 2 to 4 the POPS did contribute a bit to those areas need open space most. Still, if we want the POPS to contribute more to the entire open space network, then the open space type and development specifications should be made in order to attract private developers more.




Scenario 1




Scenario 2




Scenario 3 Scenario 4

Figure 6. Kernel density estimation hotspot maps in different scenarios

## 5. Conclusions

In high density cities, it is hard to create open spaces. This is why governments consider offering bulk rewards for creating open spaces. By developing strategic points for open spaces, urban environments will ideally be improved. According to the literature review, the policy at the first phase was generally about setting locations, but the policy became guiding principles in the second phase. However, different POPS specifications in regulations caused competition between regulations. Based on the analysis conducted in this study, the POPS policy actually improved urban environments according to the average nearest neighbor analysis. However, there have been little effects if the policy in the case of some districts with poor environment according to the kernel density estimation. In order to create better policies, it is necessary to increase rewards for areas with poor environments. On the other hand, rewards should be decreased for other areas. It is therefore possible to guide the development of POPS and achieve the goal of improving environmental quality.

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# TEMPORARY PUBLIC SPACES IN UNSTABLE CONTEXTS: PRACTICES, LESSONS AND TOOLS

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Keywords: temporary public space, rhythms, Beirut

*Interdisciplinary approaches to research on public spaces indicate the broad interest in understanding their complexity and roles as stages but also resultants of social interactions. Despite their ever changing nature (Tornaghi, and Knierbein, 2015), public spaces persist over time as expressions, experiences and relations of urban contexts with their urban dwellers, while being stamped by local particularities, and affected by global waves. In particular, the role of public spaces in unstable contexts is becoming one urgent strand for research. The paper focuses on temporary public spaces, which provide insights on how their temporariness reinstates common values towards mitigating unstable contexts. The paper first utilises the triad of space production by Lefebvre to explain the dialectics of the production of conventional and temporary urban public spaces, and explain how public spaces are affected by instability. Rhythm analysis (Lefebvre) is used as the framework explaining how the context-specific tools and processes of temporary public spaces address instability. An ongoing study since 2006 on Beirut's temporary public spaces serves to illustrate the role of temporary public spaces in mitigating social instability. Finally, the conclusion presents some lessons learned on temporary public spaces, which act as an impulse for urban recovery and social integration within unstable contexts.*

## 1. Introduction

Interdisciplinary approaches to research on public spaces indicate the broad interest in understanding their complexity and roles as stages but also resultants of social interactions. Despite their ever changing nature (Tornaghi, and Knierbein, 2015), public spaces persist over time as expressions, experiences and relations of urban contexts with their urban dwellers, while being stamped by local particularities, and affected by global waves. The global-local on the one hand refers to neoliberal spaces that are showcased, and the mundane urban spaces used by locals in their everyday routines. On the other hand, the global-local refers to the exchange and use values of these coexisting spaces (Lefebvre, 1991), and in turn projects spaces of possession and control versus appropriated spaces that meet social needs (Lefebvre, 2008). Appropriated spaces relate to time, rhythm, symbols, and practice (Lefebvre, 1991, p. 356). The more the space is programmed for a specific function and controlled, the less it lends itself to appropriation, and alternative uses by different users (Madanipour, 2004; Loukaitou-Sideris and Banerjee, 1998; Lefebvre, 1991).

While spaces with exchange value help in city branding for global competitiveness, and act as commodities, and showcases for attracting tourists, and other exclusive members of the consumer society (Madanipour, 2004), spaces with use value cater for different people's rhythmic urban activities based on context-specific values. The latter spaces are in constant change. Understanding spaces as changing, requires a relational perspective lens, which magnifies intertwined and sometimes tense cultural, social, economic, political, and other context-specific factors that produce these spaces (Tornaghi and Knierbein, 2015). The need to understand public spaces is augmented in unstable situations where disruptions to daily rhythms, common meanings, and practices occur. This is due to the spaces' potential to address drastic change (Degros, Knierbein and Madanipour, 2014), and consequently instability. This paper focuses on temporary public spaces, which provide insights on how their temporariness reinstates common values towards mitigating unstable contexts.

To unpack this relational view in the cases of unstable contexts, the paper first utilises the triad of space production by Lefebvre (1991) to explain the dialectics of the production of conventional and temporary urban public spaces, and to explain how public spaces are affected by instability. The next section presents rhythm analysis (Lefebvre, 2004) as a frame to explain how the context-specific tools and processes of temporary public spaces help in addressing instability. An ongoing study since 2006 on Beirut's temporary public spaces is used to illustrate the mobilisation of people to reinstate the city's public life in an unstable context. Finally, the conclusion presents some lessons learned on temporary public spaces, which act as an impulse for urban recovery and social integration within unstable contexts.

## 2. Productions of Public Spaces

There is a co-presence of public spaces delivered through the tools of design and planning, and those that are temporary. Each category has different characteristics presented in the literature. The former are currently affected by privatisation, and commodification, and the latter are characterised by their ability to enhance public life through creative space appropriation. Lefebvre's (1991) space production triad is useful in explaining what leads to these differences in public spaces, especially that 'space and society are closely intertwined, and the processes that shape space are at the heart of what characterizes societies' (Madanipour, 2004, p. 282). Moreover, this slant on public spaces interprets them as ever changing entities, which are closely knit to dynamic social, political, economic, and other factors (Knierbein, 2015). Shifting research from public space as object to research on these relations allows for establishing congruence between what is intended in the space and what is socially needed (Knierbein, 2015), especially in unstable contexts with high uncertainties, and constant change.

*Representations of space:* correspond to the tool that urban planners and designers use to communicate about urban space. Representations of space fall into the danger of becoming abstract spaces, devoid of meaning (Knierbein, 2015, p. 55). As discussed earlier, these are spaces with exchange value, which could fit in any time-space (Knierbein, 2015: 46). Examples are abundant, including cities in the UK where the main pedestrian streets are flanked by an almost identical series of chain stores, or in the case of Lebanon and its shopping malls that house similar content of identical chain stores that are equally available in shopping malls globally.

Representations of public space do not always meet social needs, as they are distanced from the users of public space. Madanipour (2004, p. 271) refers to 'cracks' in public spaces and defines them as 'neglect and decline, as well as tensions along the lines of social fragmentation and stratification.' If there is no sense of attachment or emotional belonging (as the exchange value prevails over the use value), public spaces could be dominated by specific rather than all user groups, could easily be changed to other uses or simply stay neglected.

Representations of public space are often out of pace with users' changing identities due to population mobilities, but also social fragmentation as in cases of conflict and war. Differences emerge at 'fault lines' in cities, where multiplicities occur (Holston, 1995, p. 444). Moreover, in cases of political instability, and raised security alert, control often results in the 'city's disintegrating public spaces and abandoned public sphere.' (Holston, 1995, p. 447) This is manifested in the erosion of public space by protective concrete elements and barbed wire (Németh and Hollander, 2010) that are a common sight in Beirut and other cities nowadays. Other forms of disintegration of these spaces include long-lasting effects of misuse, or even leaving these spaces on drawings without ever being executed and implemented as planned. Therefore, in the case of representations of space, instability is reflected spatially (cracks), socially (fragmentation, discrimination, exclusion even within members of the same

population), and also temporally (breaking rhythms or disappearing rhythms of everyday activities, festivals, events, holidays, curfews, and so on). However, mitigation in the form of the new and unforeseen manages to reappear (Lefebvre, 2004) in cities struggling with instabilities, such as in the case of temporary public spaces.

*Representational space:* correspond to the assembly of symbols, signs and values assigned to a space, including their dissipation through social media, billboards or even 'iconic elements, soundscapes, graffiti, media contents' (Tornaghi, 2015, p. 30). These signs, symbols and their dissipation customise a space according to its local culture and society. It is theis network of non-verbal communication, which informs people about the space. In contexts of instability, and with different symbols and signs the coding and hence perception of a space changes. One example in the case of Beirut is the demarcation line, which changed how people referred to the eastern and western city parts (Yahya, 1993; Fregonese, 2009).

*Spatial practice:* refers to the everyday practices taking place in urban space, and also the routines of urban life including elements of surprise and encounter that support the development of 'social relations' (Knierbein, 2015, p. 42). Spatial practices occur in lived space over time, and are essential to healing schisms occurring in unstable contexts. The everyday traffic, buzzing and flow of people are an indication of 'balanced' life, as opposed to calm periods following a natural or manmade disaster, where city life comes to a halt.

Thinking of public space as combining non-verbal communication and social practices allows for the production of public space, which includes possibilities for social change (Holston, 1995), since this approach incorporates the study of public space and the panoply of factors affecting it. Therefore, 'public space can be a catalyst for change, through actions initiated by residents, as well as public authorities and others' (Madanipour, 2004, p. 279).

Meeting social needs in situations of uncertainty requires experimentation, acquisition of knowledge, and creativity to understand the context, its specificities and constraints, and to arrive at desirable solutions (Christensen, 1985). Through informal networks of communication (Hillier, 2000), and exchange of information, individuals and groups are able to identify social needs, especially in unstable contexts, and search for opportunities to materialise those needs (Holston, 1995). Over time these needs might be claimed as rights that were not initially defined by regulation (Holston, 1995). In other terms, these groups create new tools for meeting common yet unrealised 'social needs' (Lefebvre, 2008, p .147). One tool is temporary public space, which provides the opportunity to meet 'the unintended and the unforeseeable' (Holston, 1995, p.443) in everyday urban life. In the context of Beirut as in other cities worldwide (Bishop and Williams, 2012; Franck and Stevens, 2007; Haydn and Temel, 2006), temporary public spaces reflect effectiveness in meeting social needs, implementing transformative actions (Walliser, 2013) and enhancing urban life. Literature on these spaces highlights several aspects: first, their various interim uses (see Drake and Lawson, 2013; Langegger, 2013; Pearsall and Lucas, 2013). In Germany interim use is part of the planning system, and indicates a time-limited occupation of vacant land for an alternative activity (Blumner, 2006); second, how they seize the situation of deindustrialisation, shrinking population (Madanipour, 2004), weak planning (Andres, 2013) and/or gaps in unresolved ownership (Colomb, 2012; Mady, 2012a), all of which often result in vacant urban land in highly accessible locations (Trancik, 1986; Loukaitou-Sideris, 1996; Foo et al., 2013; Németh and Langhorst, 2013). This contributes to the temporary spaces' success in terms of high accessibility (Madanipour, 2004), and in bringing vibrancy into urban life (Stevens and Ambler, 2010). These spaces provide opportunities for urbanites, be they economic, environmental or social (Foster, 2013; Pearsall et al., 2013; Drake and Lawson, 2013).

There are few references indicating how temporary public spaces could be a response to natural disasters (Karen, 2011), or manmade disasters inflicting social schisms (Mady, 2013), and the ability of these spaces to absorb distortions caused by disasters and mitigate instability by reintroducing various rhythms of urban everyday life.

## 3. Rhythm, unstable contexts and temporary public spaces

Rhythm analysis as defined by Lefebvre (2004) includes learning from cyclical and linear time patterns that recur yet generate differences. As events, actions, movements, and outcomes are repeated- yet not identically- they are always compared or measured against what is established as known within a specific context. What is established is built through history and common values, and what occurs refers to present time actions, for example response to instability. Rhythm facilitates appropriation through recurrence, yet allows for variations. Rhythm empowers, and gives right, allows for differences to coexist, introduces elements of surprise, discovery and encounter. Rhythm analysis facilitates the understanding of the link between current, intended, and past needs, top down interventions, mundane practices, and expressions of needs, which are then manifested in space appropriation.

Disasters and conflicts cause changes, and yield contexts with environmental, economic, political, social and other instabilities. These instabilities affect contextual rhythms of everyday urban life by annihilating the rhythms, disrupting them or completely altering them. Also, these instabilities could affect the use and exchange values of urban spaces, in turn affecting how people experience their cities. Spaces with use value imply appropriation, which is tied to time, rhythm, symbols and practice, or in other words to representational and lived spaces (whereas exchange value implies the representation of space). Through time, these symbols and practices along with their rhythms need to be reinstated, and this requires some form of power. On the one hand, for conventional public spaces, this power is reflected in celebrations, parades, group activities, public arts, staging public events, and festivals that are temporary yet change the spatial experience (Madanipour, 2004, pp. 279-283). On the other hand, this power is provided as a use-right in temporary public spaces (Mady, 2012a), as it gives the opportunity to representations of space to accommodate representational dimensions and lived practices. One of these practices refers to contact and communication during which ‘meanings and uses of public space are transformed through practice during social movements, the symbolic dimension of public space is decoded and reloaded, thus providing fertile ground for redirecting (political, medial) attention to silent claims and emerging needs.’ (Knierbein, 2015, p. 59) Reinstating social practices also means changing the perceptions of a space and its context, which is necessary in unstable situations. The reinstatement means regaining confidence, promoting a sense of attachment, and reversing a stigma that could become associated with a space or locale (Madanipour, 2004, p. 283) To achieve this, three aspects must be considered over time ‘resources, spatial situations, and strategies’ (Lefebvre, 1991, p. 356), which are implemented integral to the production of temporary public spaces, and explained in the next section.

An exploration of temporary public spaces through the lens of rhythm reveals how those spaces are able to cope with dynamic situations, facilitate users’ acceptance of change inflicted by instability, and continuation of their routine urban lives with positive emotions despite other disruptions, and uncertainties (Magis, 2010; Tidball and Krasny, 2014; Wilson, 2012). Temporary public spaces form one the medium bridging differences, platforms for dialogue, adaptation and even transformation (Walliser, 2013). They reinstate previously existing rhythms or introduce new ones with the result of mitigating instability. In these spaces, temporality ceases to be a time-span consideration and is transformed into ‘a prototypical phenomenon [that] tends to counteract temporality itself’, that is, it exists because of its transience and does not seek permanence (Haydn and Temel, 2006:17). In this

sense, temporary spaces challenge the idea of planned spaces (Groth and Corijn, 2005). These spaces respond to emerging needs linked to changes in culture, functions, activities and people, especially in light of increased global mobility (Low et al., 2005: 3; Cuthbert, 2006; Carr et al., 1992; Trip, 2007). Temporary public spaces fill gaps, and generate 'counter spaces' or 'public spaces where alternative paths of urban development beyond capitalist growth scenarios can be imagined, invented and explored' (Knierbein, 2015, p. 53), and spaces whose use value overwhelms their exchange value, as stated in Lefebvre (1991).

## 4. Lessons from Beirut's temporary public spaces

Beirut is a city, which has and still is experiencing ongoing political, spatial, social, economic, environmental and other instabilities, which expedite urban dynamics (Tabet, 1993) and render it a laboratory for actively experiencing and experimenting with public space production. Moreover, Beirut was specifically referred to in Lefebvre's writings (2004, pp. 99-100; 2008, pp. 239-240) on Mediterranean cities, but only to indicate the 'arrhythmic' everyday life that instability inflicted on this previously harmonious 'polyrhythmic' city. The disruption of rhythms manifested first spatially in Beirut's public spaces (whose genesis was based on imported representations of space such as the garden and square during the Ottoman and French Mandate periods), which were annihilated during the war period, and second socially through segregation that happened along sectarian and political divides (see Mady, 2012b for a brief overview of Beirut's public spaces). Reconstruction efforts in the city centre concentrated on providing transportation infrastructure[1], which only degrades public space (Lefebvre, 1991, p. 359), and different polarised groups then established their commodified spaces within their territories (Deeb and Harb, 2013), while other groups managed to produce spaces with common social values (Mady, 2013). Nowadays these concerns with rhythmic public spaces move beyond Beirut, and other contested cities (Gaffikin et al., 2013; Nagle, 2013) to encompass specifically in the Middle East and North Africa region (El-Husseiny, and Kesseiba, 2012), and broadly cities worldwide.

Before unpacking constituents of temporary public spaces, here is a brief note on the methodology. The data for this paper is taken from research on Beirut and temporary public space case studies, which included mapping, interviews with various stakeholders, and observations of these spaces. This research was conducted between 2006 and 2008 in Beirut (Mady, 2010), and observations of some of these spaces are still ongoing to present. The case studies include: one farmers' market, one flower market, an urban stairs with artists' exhibition, and six sports sites (refer to Mady, 2010 for detailed explanations on the case studies). The data is used to identify temporary public space users, and the experiences, expressions, and values that they attach to these spaces. It is equally used to learn about tools and processes for temporary spatial appropriation in Beirut. Also, comparing the cases in Beirut to those in other cities responds to the question on temporary public spaces' appropriation within unstable contexts, by reinstating and/ or introducing rhythms through 'resources, spatial situations, and strategies' (Lefebvre, 1991, p. 356). Different unstable contexts seem to give rise to creative solutions on the appropriation of urban public spaces.

*Resources:* in this case refer to the individuals and groups who produce temporary public spaces, and any materials or capital used to activate the temporary public space. In Beirut social exclusion occurs

[1] The real estate company Solidere who reconstructed the long sealed-off city centre re-established vehicular access with its surroundings, creating tunnels and bridges, thus severing the previous link from its surroundings (Lefebvre, 1991), which used to be tightly-knit neighbourhoods around the centre. Solidere conducted extensive land acquisition, reparcellised land, set urban design guidelines, and incorporated plans for public spaces, which are managed by Solidere yet owned by the municipality of Beirut. The realised public spaces were valorised for their exchange rather than use value.

on the basis of vulnerability, which could equally affect foreign migrants or the local native population (Madanipour, 2004). A public space, which mitigates social instability, is then able to serve Beirut's 'mosaic of different publics' (Deeb and Harb, 2013, p. 85). Examples include the two markets, which use their economic activities as a pre-requisite for social integration (Madanipour, 2004). These markets offer job opportunities for people (Walliser, 2013) who have difficulties competing in the market, and provide them with the opportunity to cope with stress, remain active, learn new skills, establish social networks, be empowered rather than stay dependent thus strengthening social capital (Wilson, 2013) in the form of collaborations between experts and everyday people through collective action (Mady, 2013). The organisers of these markets were identified as social entrepreneurs (Mady, 2013) who are open to experimentation and innovation (Christensen, 1985), and who work in small interest groups to produce these spaces. Note that sometimes the organisers operate at different scales, and network with influential individuals to gain power in promoting the proposed public activity. One example is the case of the farmers' market, which gets its certification for organic products from the Italian government, thus bridging the global with the local (Roy, 2005) to give credibility to the market, and perpetuate it.

*Spatial situations:* refer to the state of vacancy of urban spaces, rendering them available to host temporary public uses. As mentioned in the introduction to temporary public spaces, these vacant urban spaces are resultants of an absence of construction due to weak planning (Andres, 2013), a stagnating economy, or ownership disputes. In each case, this vacancy is time-limited, and once this temporal status changes, the temporary public space then has to relocate. In the cases from Beirut and to present, the temporary sports sites have been used for periods spanning 19-40 years, whereas the markets moved two to three locations in the span of 11-15 years. The urban stair has been used for the artists' exhibitions for 29 years. Note that the urban stair is seasonally used, the markets are periodically used on weekends, and the sports spaces are used either seasonally or periodically since they also serve as car parking spaces on weekdays. Each of these examples has its own rhythm, and contributes differently to urban life in Beirut.

The fifteen-year war in Lebanon meant that people were frequently on the run, adapting to new circumstances, and living with the unknown. Change and mobility became usual companions to everyday life, and to some extent, change was accepted as a constant (Wilson, 2012). Whereas cases of temporary public spaces in European and American cities presented the limitation of being terminated due to the switch of vacant land to construction land, in Beirut this switch meant the mobility of the temporary public activity and a search for a new location, as illustrated in the cases of the two markets. These temporary activities partly owe their flexibility to the simplicity and flexibility of their dismountable structures, and partly to the determination of their users to continue with the activity irrespective of the location (as reflected in the interviews within both markets). The temporary public spaces in Beirut, and unlike their counterparts in Europe and the USA, do not seek permanence, and are rather aware of their temporariness as a feature of the space. This is reflected in the agreement with the property owner, the municipal permit, and the creativity in mantling the markets every time (Mady, 2013). To what extent is the limited lifespan of the space worth investing in? Will these spaces disappear, and will their creativity stop? Beirut's temporary spaces show that the existence and use values overshadow the ephemerality of the lifespan. Not only do these spaces change location without losing their impetus, they have initiated similar temporary space mutations with other creative activities in different city parts, and on different week days. Moreover, the visitors of the two markets now visit the farmers outside Beirut, and explore parts of the country, which they had not visited before (Mady, 2013). The spaces have generated other rhythms within and outside the city. To some extent, these temporary spaces have raised people's awareness on the right to public space in Beirut. The case of the urban stair developed awareness of stairs as public spaces, and citizen campaigns to protect them as heritage.

Another difference with their foreign counterparts is that vacant spaces in Europe or the USA await the implementation of the plans designated for them, turning them into spaces with exchange value, or awaiting the arrival of an investor in the absence of any plans (Andres, 2013); in the meantime local authorities realise the opportunity of and support the temporary activities. In Beirut, the temporary public spaces are not part of an official city plan, and are not considered opportunities by the municipality; they are simply vacant properties (according to an interview with a municipal authority). However, the real estate company Solidere that is in charge of the city centre's reconstruction, has endorsed these initiatives for temporary public spaces to promote the return of the 'public' to the reconstructed city centre, and has mediated the use of vacant spaces for temporary public uses.

*Strategies:* refer to the tools and processes that the individuals and groups devise to gain access and right to temporarily use the vacant urban spaces for public activities. Note that unlike the example of squatting spaces, all the case studies in Beirut present temporary public spaces that are legally used, and which obtain municipal permits if required, as in the case of the two markets and the arts' exhibition. The sports activities do not require municipal permits, yet have the permission of the property owners to temporarily use the spaces.

The strategies listed in this paper are not exhaustive, yet they highlight those that are highly pertinent to unstable contexts: valorising local tradition, and local culture (for example the village spirit in the food market[2]; capitalising on what is Lebanese including: cuisine, flowers or paintings or in other words on shared beliefs and values (Hillier, 2000); organising events in response to different interests in addition to the routine activities (such as competitions, concerts, awareness campaigns, children's activities); choosing locations that are highly accessible, and not associated with a specific political or sectarian territory within Beirut[3]; using social networks as a 'coping strategy' (Hillier, 2000, p. 293), and building power to increase the space's use value and consequently lead to its change or reproduction (Hillier, 2000, p. 297) from a vacant site to an active public space. The effect in mitigating instability through these strategies is illustrated through one statement by one of the respondents at the flower market:

> 'People of different ages and sects, veiled women from different parts of the country come here. Beauty and values bring people together'

Examples on similar strategies are present worldwide; in Barcelona economic competitiveness is used as a strategy for social cohesion, in Wuppertal artists accentuated the role of urban stairs as public spaces, and in Coventry football was transformed into an activity that brought people together (Madanipour, 2004). Other examples reflect how similar temporary spaces provide opportunities to have positive emotions (Tidball and Krasny, 2014), similar to those indicated by users of the two markets through the interviews (convivial, refreshing, simple, different, interesting, emotional, friendly, and other).

Among the limitations of temporary public spaces is the risk of these spaces to fall into the 'common path of economic gentrification (Andres, 20113, p.771), and lose their intended social values. In this case, the spaces become club goods (Webster and Lai, 2003), which are selective spaces privileging (Hillier, 2000) some members of the consumer society. Here representations of space become instrumental in preventing such a direction towards exclusion, yet no universal solution exists.

[2] The village spirit is equally appreciated in other contexts in Beirut such as the decoration of cafés with a village spirit (Deeb and Harb, 2013, p. 118) because it moves away from the divides of politics and sectarianism.

[3] These are mainly spaces within the reconstructed city centre, which became no-man's land during the war years, as opposed to the polarised eastern and western Beirut districts (see Chapter 8 in Mady, 2010 for further explanation).

Understanding the context becomes of high significance (Lefebvre, 1991) in limiting global influences that are superimposed on local spaces, and preventing them from transforming the spaces' use value to exchange value. 'Therefore, context-specificity means that a place of public life needs to be analysed, interpreted and shaped according to its local embededness in a specific social, political and cultural context' (Knierbein, 2015, p. 51).

## 5. Conclusion

This paper presented the possibility of informing the production of urban public spaces especially in unstable contexts through lessons learned from the analysis of temporary public spaces. Case studies of temporary public spaces in Beirut, Lebanon were used to illustrate the relational reading of these spaces, and how they mitigate contextual instabilities.

While generally 'public spaces can be used to bring people together to improve the quality of life and to project a positive image...' (Madanipour, 2004, p. 281), temporary public spaces mitigate instability that is manifested spatially, socially, and temporally in the daily practices and representations of the city. These spaces reinstate or introduce rhythms in everyday urban life, and generate social values that lead to social integration and conviviality. Temporary public spaces achieve this while tapping on resources, spatial situations, and devising strategies. With little capital and a lot of dedication (Mady, 2012a; Walliser, 2013) these spaces present 'opportunities for sustainable and dynamic urban development' (BMVBS, and BBR, 2008, p. 5).

The analysis of everyday life and its rhythms moves away from merely observing practices ranging from the mundane everyday actions in public space, to norms followed by a whole society (Lefebvre, 2014, p. 232). This analysis is considered as a tool for understanding social meaning in everyday urban life (Knierbein, 2015, p. 54). This tool informs the conceived spaces of designers and planners that are not necessarily immersed in the concrete reality of the lived, perceived spaces, and are in turn lost in their abstract representations on plans and other related documents.

Temporary public spaces as tools for establishing long-term values and meeting future challenges could be integrated within planning systems and used as a response to instabilities, be they economic, political, social or other. Beirut's cases indicate that such spaces leave positive social memory (Wilson, 2013, p. 208) within a volatile and highly fragmented society, and even project a positive image (Madanipour, 2004) of Beirut especially after its war reputation. However, the analysis presented in this paper is specific to the context of Beirut, where instabilities and the production of Beirut's public spaces are contingent to the context specificities and factors affecting the city's stability and urban life. Further practices and research on temporary public spaces in different contexts are necessary for a broader understanding and further development of this tool.

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# SOUNDSCAPE MAPPING IN THE URBAN CONTEXT: A CASE STUDY IN SHEFFIELD

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## Abstract

*According to the recently published ISO 12913-1, soundscape differs from the acoustic environment, since the first refers to a perceptual construct, whilst the latter to a physical phenomenon. Noise exposure has been a main concern over the last decades, but from the planning viewpoint limited attention has been given to the perception of the acoustic environment and its representation at a city scale. This paper aims to establish a method for representing soundscape through source-related maps and secondly to correlate the sound sources with the urban context in terms of specific activities. Using a grid-based sampling methodology within the broader area of Sheffield city centre, soundscape data were collected in 90 spots, during morning and evening hours. Afterwards, soundscape variability for technological, anthropic and natural sounds was represented by maps using a Kriging interpolation technique in GIS. Preliminary results show how sound sources' spatial variation in urban soundscapes is closely related to urban contexts and activities, therefore urban activities can be relevant for designing the soundscape of the urban realm. The paper ultimately points out how soundscape mapping can be used as a tool for planning purposes and urges to rethink the design process of the built environment also from the sonic viewpoint.*

## 1. Introduction

Soundscape has recently been defined in an international standard as an "acoustic environment as perceived or experienced and/or understood by a person or people, in context" (ISO, 2014). Such a definition is somewhat comparable to the European Landscape Convention (Council of Europe, 2000) that defines 'landscape' in similar terms (Brown, 2012). Hence, there is a general agreement that soundscape – as well as landscape – concerns human perception of the environment.

The soundscape philosophy implied a paradigm shift from a 'reactive' approach to noise to a 'proactive' attitude towards sound, considering this element as a resource rather than a waste. Indeed, community noise has been a main concern over the last decades, but from the planning and design perspective, limited attention has been given to the perception of the acoustic environment in its positive aspects and its representation at a city scale.

There is a current need to position soundscape management into planning policies (Kang 2007; Andringa, et al., 2013). For this purpose, new operative tools are required to be used by planners and policy-makers. Some researchers investigated the possibility to use spatial analysis to study the sound environment of urban contexts (Ge and Hokao, 2005) and possible ways to record and represent the soundscape (Ge et al. 2009). Furthermore, a number of studies investigated the relationship between

soundscape and landscape as well as land use metrics and urban morphology (Hao and Kang 2013; Liu et al. 2013a; Liu et al. 2014a; Liu et al. 2014b; Hao et al. 2015).

Apart from that, numerous studies have started visualising soundscape using GIS tools to map sound sources in urban areas or parks (Irvine et al. 2009; Liu et al. 2013b; Hong and Jeon, 2014). The mapping process is usually performed using various interpolation techniques (Li and Heap, 2008). The most widely known such as Kriging and Inverse Distance Weighting (IDW), have previously been tested for noise assessment purposes (Can et al. 2014). Nevertheless, there is still no clear consensus about what soundscape-related information is relevant and should be collected for planning and design purposes and how soundscape and urban contexts relate to each other.

This paper aims to propose a method for representing soundscape through source-related maps and secondly to correlate the sound sources with the urban context in terms of specific activities. For these purposes, soundscape data and audio recordings were collected in 90 spots in a typical European city, Sheffield (UK), according to a grid-based sampling methodology. Afterwards, a laboratory experiment was carried out with 20 participants, in order to investigate possible relationships between the individual assessments of the acoustic environments and a set of urban activities.

## 2. Soundscape mapping

### *2.1 Study area and data collection*

A study area was selected in Sheffield city centre, since it combines many different land use characteristics and can also be considered a typical example of a post-industrial average-size European city. Furthermore the area is characterised by a dense and varied network of local and national level of streets as well as transport infrastructures (e.g. railway, tram, buses). The total area extends to 3.6 $km^2$. A grid of 200 × 200m was implemented, segregating the region in 90 tiles. The measurement points were defined at the centroids of all tiles, as shown in Figure 1. In case a centroid resulted to be non-accessible due to legal or physical restrictions (e.g. buildings), the closest publicly accessible point was selected.

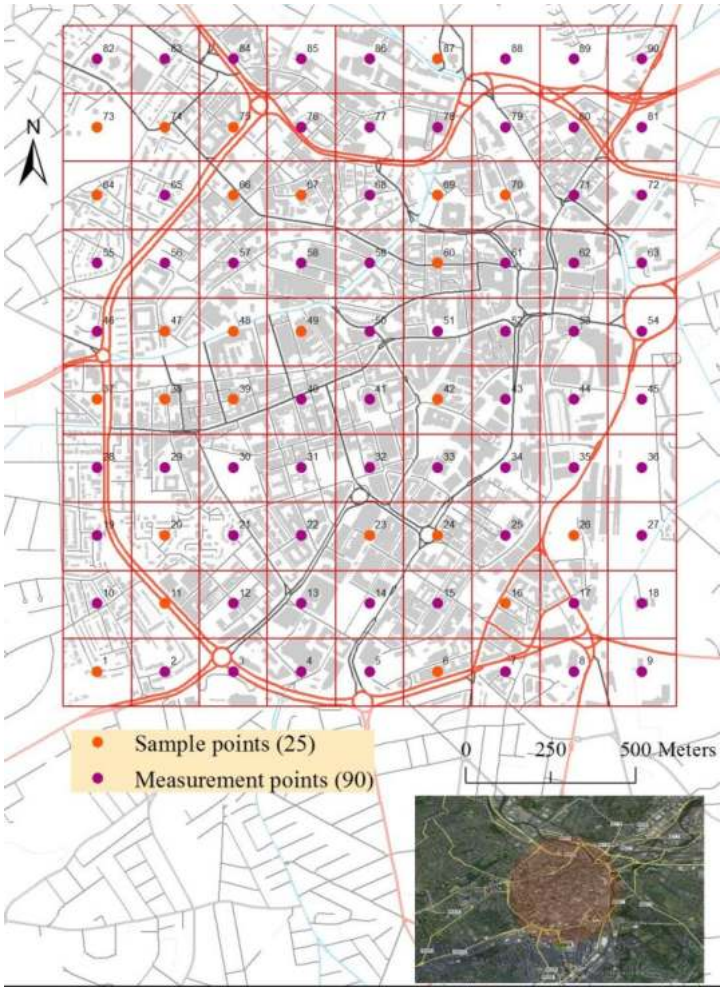


Figure 1. Study area with measurement and sampling points in Sheffield

A researcher collected data at each spot twice over 4 working weeks: during mornings (09:00–12:00) and afternoons (14:00–17:00). For each measurement session the researcher recorded the equivalent sound level ($L_{Aeq}$-2min) with a sound level meter (MicW i436 - class 2) and carried out 2-minute audio recordings of the sound environment by means of a binaural kit connected to a portable recording device (Edirol R-44). Furthermore, the researcher reported "what sound sources it was possible to hear" by ticking off on a form with possible sound sources selected during a pilot on site campaign, as shown in Table 1.

Table 1. List of sound sources used during the soundscape data collection

| Category | Sound sources | |
|---|---|---|
| Technological | Cars | Alarms |
| | Buses | Grass Mowing |
| | Trucks | Industries - Fans |
| | Trains | Industries - Other Machines |
| | Airplanes | Construction |
| | Bicycles | Domestic |
| | Fireworks | Recreation |
| | | Miscellaneous |
| Natural | Wind | Rain |
| | Trees Rustling | Birds |
| | Grass Rustling | Dogs |
| | Water Sounds | Insects |
| | Thunder | Frogs |
| | | Miscellaneous |
| Anthropic | Human Speech | Roller-skating |
| | Human Singing | Music - Live |
| | Human Laughter | Music - Recorded |
| | Crowd of People | Music - Shops |
| | Footsteps | Church Bells |
| | | Miscellaneous |

*2.2 Mapping methods*

After the data collection was finalised, all the information related to the audible sound sources was transferred in the ArcGIS software (v.10.1) for further processing. The audible sources' occurrences were aggregated per type and these values were averaged over the morning and afternoon conditions. Then a prediction surface was created using the kriging interpolation method for the technological, natural and anthropic sound sources accordingly. The surfaces were created based on the Ordinary Kriging method and the spherical semivariogram model, considering all the 90 points of the study area.

*2.3 Characteristics of sound sources*

According to the perceptual data, 3 soundscape maps were created for the study area. Figures 2–4 show the spatial variability of audible technological, natural and anthropic sound sources respectively.

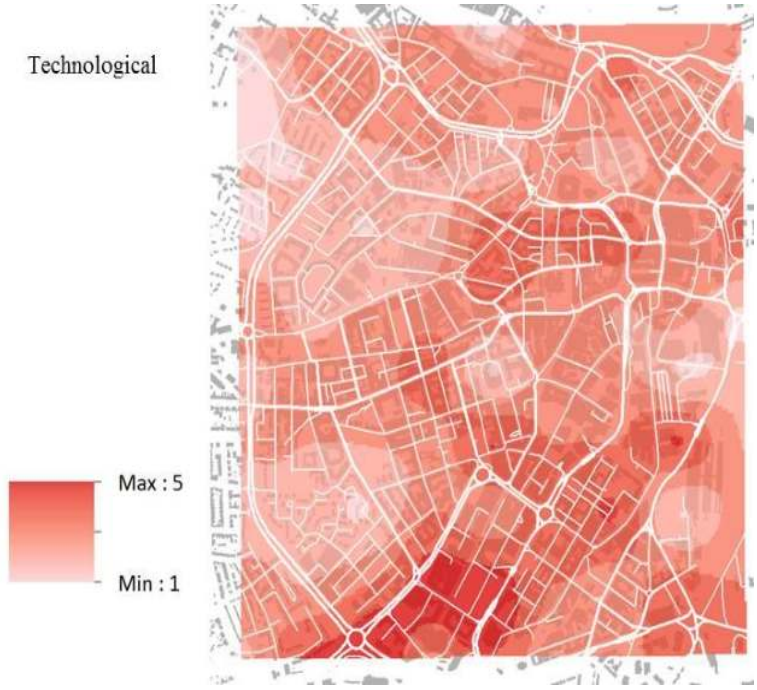


Figure 2. Spatial variability of the audible technological sound sources

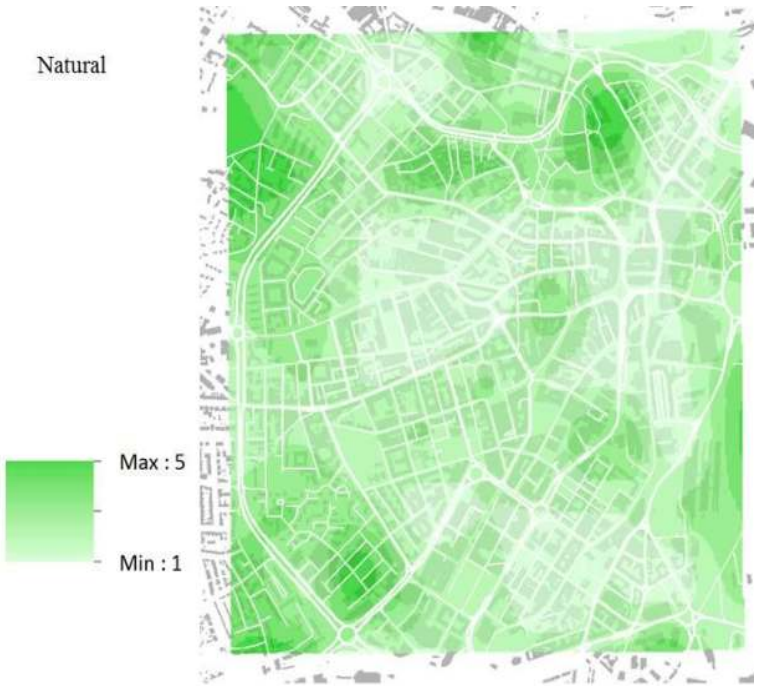


Figure 3. Spatial variability of the audible natural sound sources

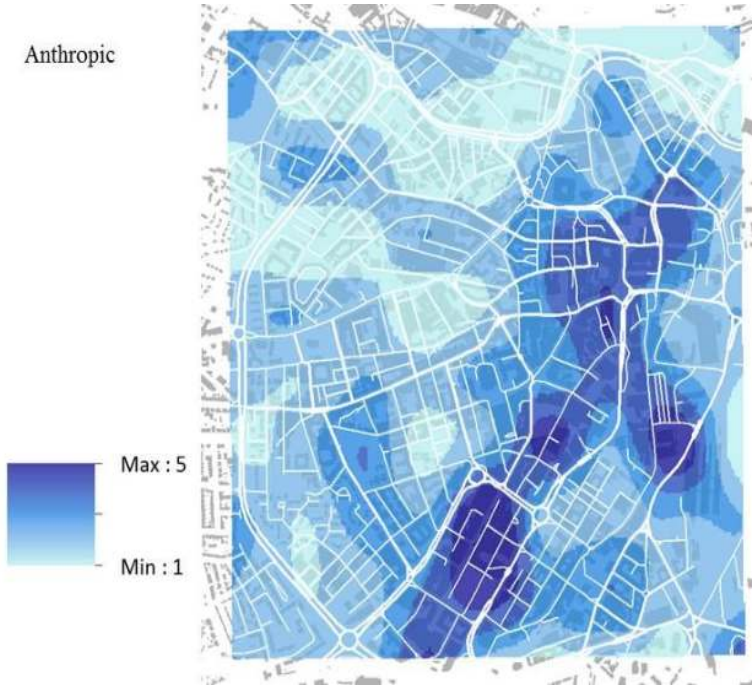


Figure 4. Spatial variability of the audible anthropic sound sources

According to Figure 2, areas on the north-west side of the ring road – mainly covered by University buildings, parks and residential houses – present low level of technological sources. The same happens on the south-west side of the ring road, which is a purely residential area. Low technological sources are also present in the east side, close to the train station because of the natural area on the east. Similarly, another small area with absence of technological sounds can be identified in the city center, with many pedestrian areas. High concentration of technological sources was observed in the roundabouts of the ring road and along the main roads in the central zone of the study area. The highest number of sources was observed in the southern part, which was expected due to the combination of traffic and light industrial activity.

From Figure 3 it can be seen that increased number of natural sources is evident in specific areas around the ring road which constitute parks, exclusive residential areas or places close to the river on the north. The west side of the study area is more privileged in terms of natural sounds because of the proximity to urban green spaces and playgrounds, while the house type with backyards or front yards enhances the presence of birds and animals. The city center presents the lowest aggregation of natural sounds with a small presence in various squares. It is also surprising that most of these places are along the main highway creating a contradictory soundscape environment with increased number of technological and natural sources very close to one another.

Lastly in Figure 4, anthropic sources seem to create a corridor from north to south starting from the river and continuing along the commercial and former industrial area of the city center. These are areas with many shops, services, entertaining activities and active social life during the greatest part of the day. Another vital point is the train station on the east as well as the corridor on the west close to the student's accommodation houses and the Devonshire Green square. The presence of human sources is limited on the rest of the study area apart from some small exceptions close to the river on the north and the green area of Ponderosa on the north-west.

## 3. Relationship between soundscape and urban context

In order to investigate the relationship between the soundscape of a place and the urban activities that are likely to occur in such a place, an audio-visual laboratory experiment was designed. For the experiment, 25 out of the initial 90 spots were selected around Sheffield (See Figure 1). The first selection criterion was to choose sites representative of all the possible land use categories according to the Local Plan of Sheffield within the study area. Consequently, areas appropriate for residential, industrial, open green space, commercial and educational purposes were selected. The second criterion accounts for the availability of the street view option in Google Earth in order to create the videos.

*3.1 Experimental set-up and procedure*

Twenty undergraduate and postgraduate students from the University of Ghent (Belgium) aged between 23 and 33 years old, took part in the experiment (16 males, 4 females; $M_{age}$ = 27.5 years, SD = 2.82). All of them were citizens of Ghent, while 16 participants had previously visited England at least one time in the past. However none of them had been to Sheffield before. The auditory conditions were the same for the total duration of the experiment, since it took part in a listening room using specific equipment. Each participant received a reward of 5 euros in cash after completing the experiment.

From the initial audio file, a 30sec audio part was extracted representative of the sound environment at each spot. Then the audio excerpts – previously recorded on site – were combined with the visual excerpts in order to create 25 audio-visual representations of 360$^o$ view. This process was performed using Camtasia Studio software. The audio excerpts were also calibrated so as to be as representative as possible with the on-site conditions. For the calibration, a test sound of 30 seconds was used from the initial recordings. The dB value of the test sound was measured using Matlab and the calibration was made based on the dB level of the original signal. Then the volume was adjusted based on calibrated equipment and a dummy head with 0.1” microphones, as shown in Figure 5.

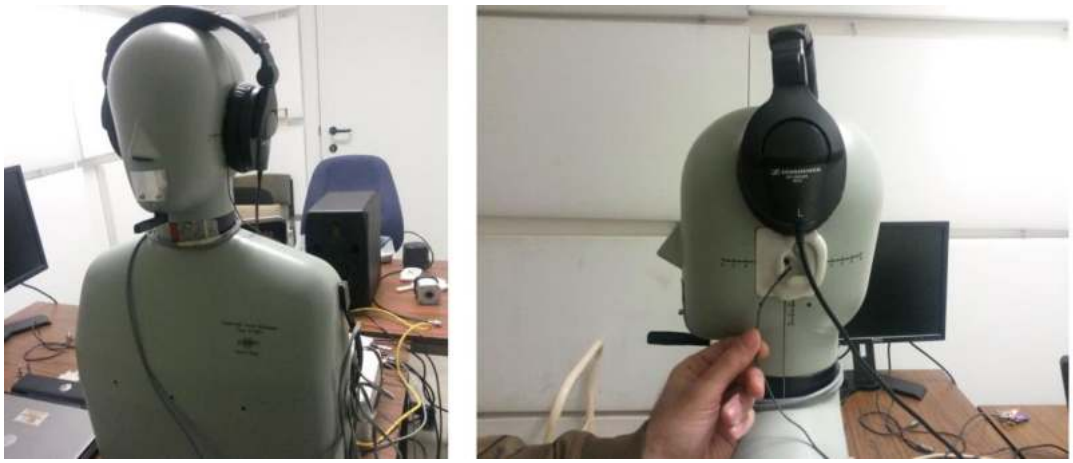

Figure 5. Calibration test on the left ear of the dummy head and the 0.1” microphones

A structured questionnaire consisting of two main questions was prepared based on the soundscape model proposed by Axellson et al. (2009, 2010). On one hand there was a list of 23 urban activities;

namely: outdoor informal games, walking, jogging or running, socialising-conversing-chatting, picnic or barbecue, experiencing active street life, individual outdoor activities, spending time with friends or family, escaping city stress, experiencing peace and quiet in general, nature appreciation, school and student work, residence, offices, shops, shopping, restaurants or cafés, industrial activity, road or rail transportation, parking a car, appreciating inland water, boating or fishing, swimming or bathing, appreciating cultural heritage. For each urban activity participants were required to assess on a scale ranging from 0 to 100 its suitability (i.e. kind of activities that would fit in this place), as shown in Figure 6. On the other hand, a list of 4 sound sources types was presented to participants; namely: traffic sounds, sounds from people, natural sounds, and construction sounds. Similarly, the participants were asked to assess the audio stimuli by defining on a 0-100 scale the extent to which they could hear each sound source type (0 = "Do not hear at all", 100 = "Dominates completely"). The audio-visual stimuli were presented to participants using the SurveyGizmo software, with randomized answers for both questions and different video sequences for each participant. The numbers in the scale bar for all the answers were invisible so as to avoid possible rounding tendencies from the participants. The average duration of the experiment was one hour, while the participants were able to watch the videos more than one time in order to answer the questions.

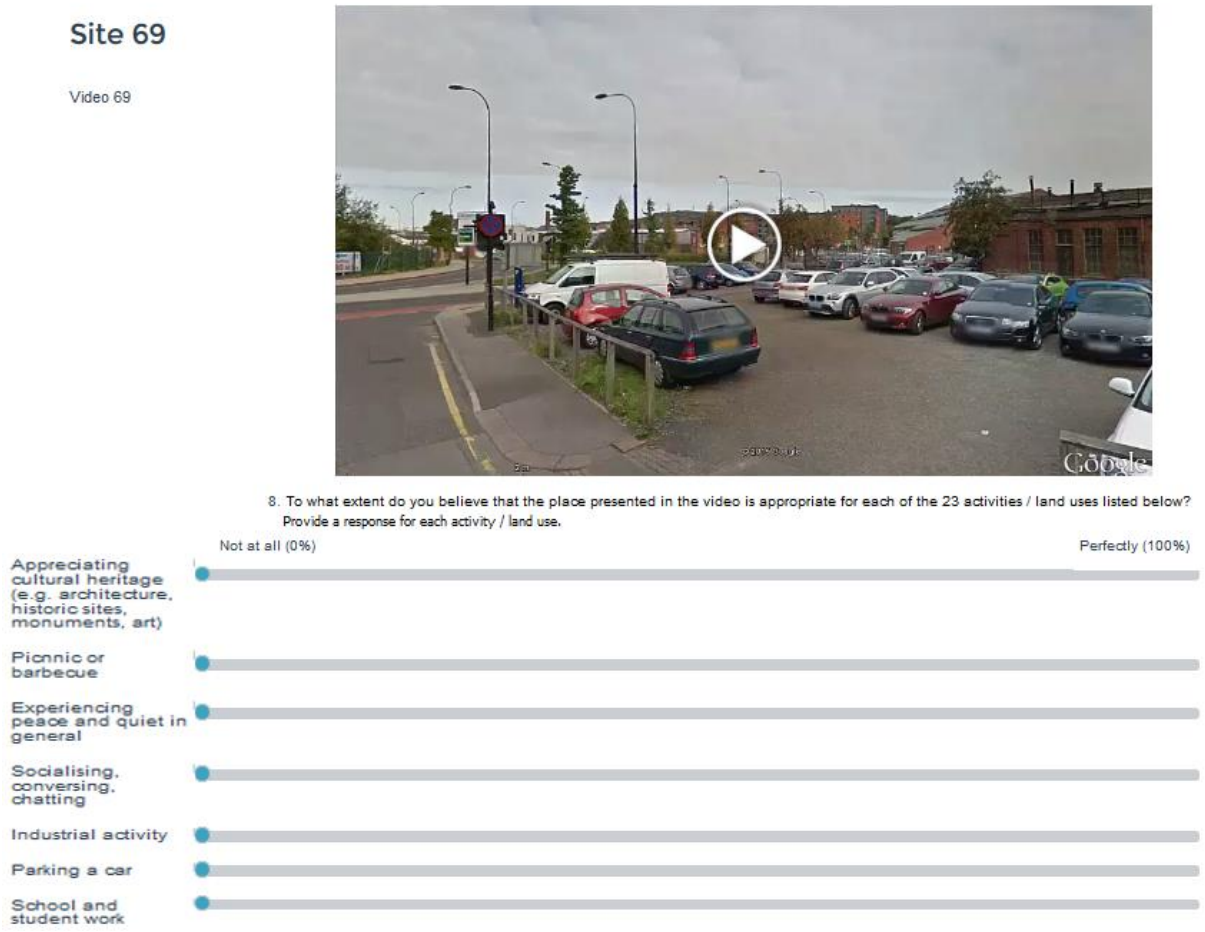


Figure 6. Sample from the questionnaire structure concerning the urban activities assessment

*3.2 Clustering of sound sources profiles and urban activities profiles*

For the purpose of this study, a cluster analysis was performed on the individual responses using the Ward method. This method is particularly useful when the ideal number of groups to form is not known and needs to be estimated as an output variable. Such a method discriminates attributes based only on their distance from their centroids. In this analysis, the agglomerative hierarchical clustering procedure is applied to the 25 spots. Firstly, the attributes related to the sound sources were used as variables. The algorithm merges two groups at each step, until all elements end up in a single group. The method minimizes the sum of squared distances between the points and the centroids of their respective groups, summed over the resulting groups. The same clustering process was applied considering the urban activities. For both cases, the interpretation of the agglomeration schedule table from the hierarchical analysis (not shown in the paper), suggested that the use of three clusters would be suitable to describe relevant sound sources and urban activities profiles (Can and Gauvreau, 2015). The aim of this process was to identify plausible profiles of sound sources types as well as urban activities' profiles and define the cluster membership to those for the 25 selected spots.

Once the optimal number of clusters was defined, the K-means clustering algorithm was used in order to identify the cluster centres. Regarding the sound sources as presented in Table 2, spots which belong to Cluster 1 are typical of more natural sounds and a balanced combination between traffic and construction. The presence of anthropic sources in these sites is limited mainly due to time variations over the day. Spots which belong in Cluster 2 are highly dominated by traffic and occasional construction sources with a very low presence of people and natural sounds. Finally the presence of people and traffic is highly evident and equally balanced in Cluster 3 with a low contribution of natural or construction sounds.

Table 2. Cluster centers using K-means clustering method

| | **Clusters** | | |
|---|---|---|---|
| **Sources** | **1** | **2** | **3** |
| Traffic | 25.3 | 81.9 | 47.6 |
| People | 11.3 | 3.2 | 63.1 |
| Natural sounds | 50.9 | 6.2 | 10.4 |
| Construction | 20.2 | 11.3 | 13.4 |

From the urban activities perspective, spots which belong in Cluster 1 are placed in areas surrounded by greenery or open spaces as it can be seen in the sample pictures of Figure 7a. These places are primarily suitable for residential purposes, outdoor activities, relaxation, socialising and nature appreciation. To a lesser extent they can also be considered appropriate for educational activities, however they are inappropriate for commercial and industrial amenities or offices.

Spots in Cluster 2 as shown in Figure 7b are mainly appropriate for commercial activities involving shops, restaurants or cafes. They are usually squares; pedestrian or small commercial streets with an active street life where people can spend time shopping, chatting and socializing. Working spaces such as offices are less appropriate there as well as residential and educational facilities. Finally natural green elements and transport have a secondary role in these places.

Points in Cluster 3 presented in Figure 7c indicate a mixture of uses comprising of residential, educational, parking and office facilities. The presence of transportation infrastructure is also obvious in these places combined with small industrial facilities. Overall, commercial and educational services are not suitable there, neither outdoor nor social activities.

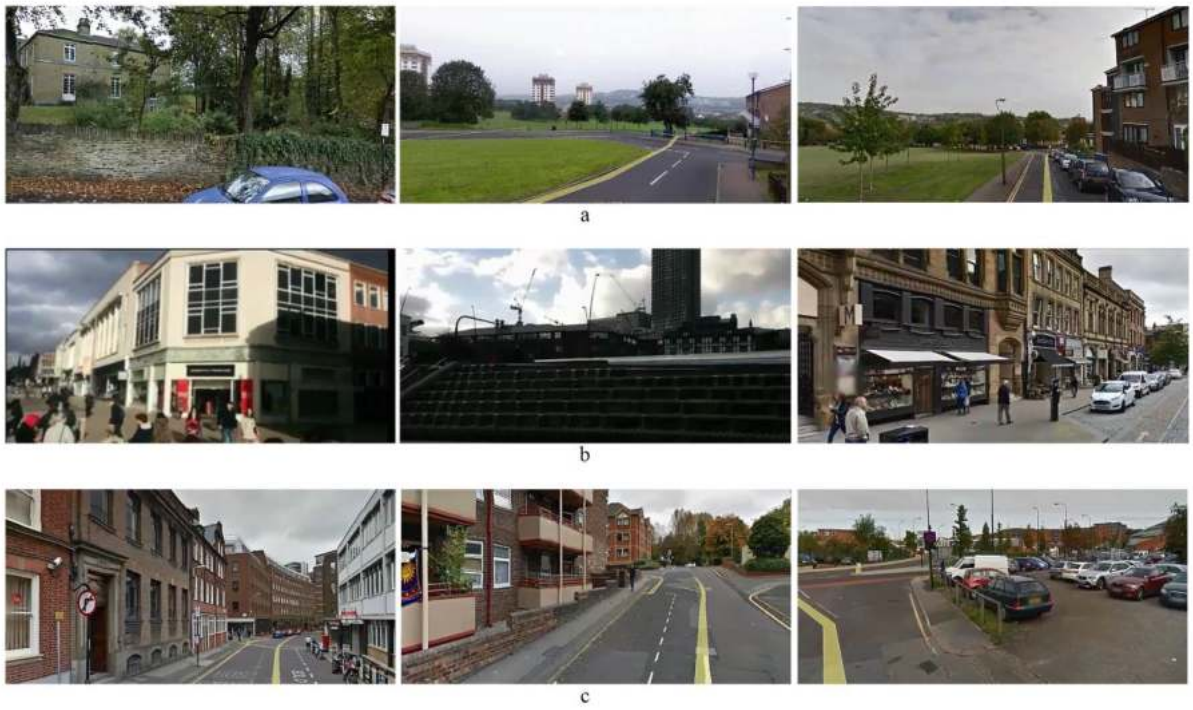

Figure 7. Activity profiles: (a) Cluster 1: Residential areas, (b) Cluster 2: Commercial areas, (c) Cluster 3: Mixed land use

*3.3 Relationship between soundscape and urban context*

A chi-square test of independence was performed to examine the relation between sound sources profiles' membership and urban activities profiles' membership as presented in Figure 8. Results proved that the sound sources profiles were not equally distributed (random) in the activity profiles, $\chi^2$ (4, N = 25) = 11.389, $p$ = 0.023. Detailed results presented in Table 3 denote that the expected frequencies of all sound sources were either higher or lower than the expected ones with a maximum variation of 3.1 in absolute values between the traffic sounds and the mixed class of urban activities. On the contrary, the lowest variation (0.4) was detected between the human sounds and the residential profile.

A comparative analysis of the videos which belong in each cluster revealed that the majority of the places belong to the expected sound profiles. For example residential areas are equally distributed between the natural and the human sound profiles. Mixed activity areas, which include residencies, offices, education and parking spaces; are split among the sound profiles where traffic sounds prevail, while natural or human sounds are present to a smaller extent. Finally, all the places with commercial activities are related to human sounds; denoting an active street life during the recording period. However there were also other places where there was a disparity between the expected and the actual

sound classification. In two cases there were activities which were combined with natural sounds, while they were expected to be combined more with traffic. Another example is the prevalence of human sounds in places which were also expected to be combined with traffic such as mixed residential and office spots.

Table 3. Cross tabulation of sound sources profiles and urban activities profiles

| | | | **Urban Activities Profiles** | | | |
|---|---|---|---|---|---|---|
| | | | Residential | Mixed | Commercial | Total |
| **Sound Sources Profiles** | Natural sounds | Count | 2 | 2 | 0 | 4 |
| | | Expected | 0.6 | 2.9 | 0.5 | 4 |
| | Traffic sounds | Count | 0 | 11 | 0 | 11 |
| | | Expected | 1.8 | 7.9 | 1.3 | 11 |
| | Human sounds | Count | 2 | 5 | 3 | 10 |
| | | Expected | 1.6 | 7.2 | 1.2 | 10 |
| Total | | Count | 4 | 18 | 3 | 25 |
| | | Expected | 4 | 18 | 3 | 25 |

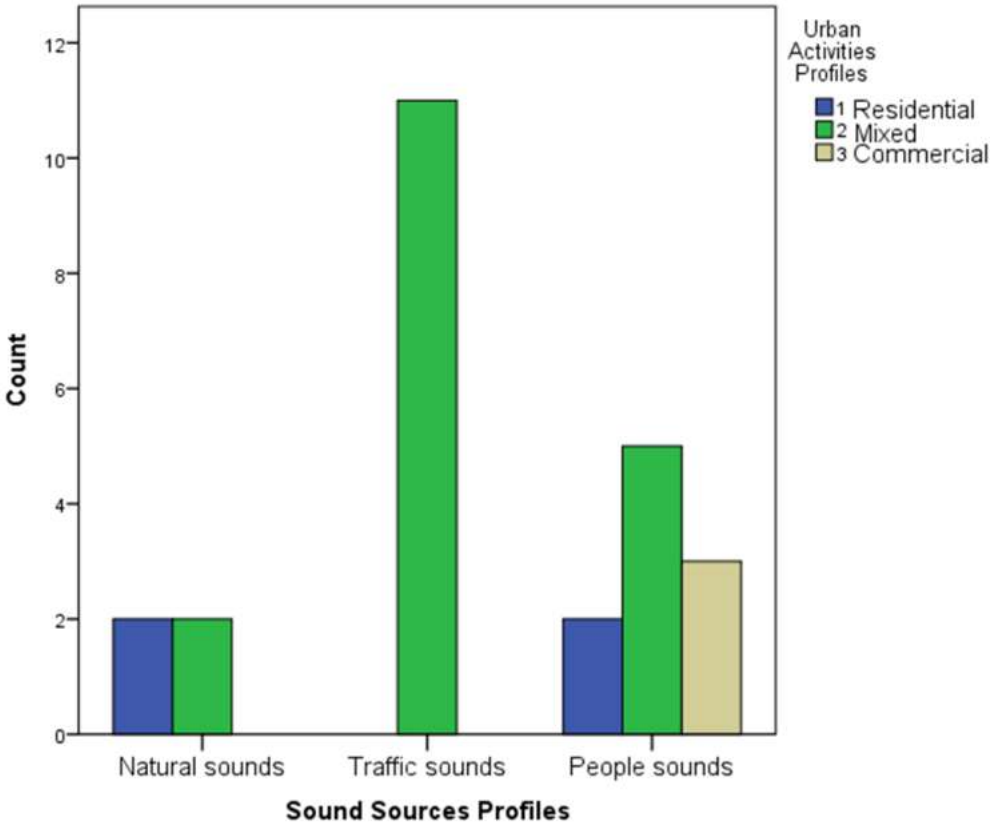


Figure 8. Membership frequency of the urban activities profiles in the sound sources profiles

## 4. Conclusions

The aim of this paper was initially to describe a methodology for mapping different kinds of sources and visualise their spatial distribution in the study area. From the results it was possible to detect the peaks and lows of each sound source and have a visual representation of the source variability. In spite of the fact that the methodology which was followed can be used only for short time representations; the average of morning and afternoon values provides more robust results for the study area.

Secondly an attempt to correlate sound sources and urban activities was investigated. According to the results the correlation between the sound sources profiles and the urban activities was statistically significant and not random. All the activities corresponded with the expected sound profiles with some exceptions. This happened either because of the time variation in the soundscape during the day or due to the absence of human sources in both recording periods (morning, afternoon). Furthermore, a positive effect in urban design can occur from the correlation between sound sources and activities. Since it is usually difficult to change the land use character of a place; targeted actions towards the modification of one or more sources – such as traffic – can improve the soundscape of a place and change the balance of the perceived sounds. Consequently a defined urban context can be improved according to the balanced combination between the character of the place and the proportion of the audible sound sources.

To conclude, soundscape mapping as a tool should be considered together with the landscape and urban design at a certain stage. As the management of the urban environment is not just a land use process, but also a human-related process, an interdisciplinary approach has to be applied, combining the land use policy with landscape design and human perception.

## 5. Acknowledgments

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# Spatial Requirements on University Sites of the 1960s and 1970s

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Keywords: Knowledge transfer, Campus Universities, Innovation

*There is consensus in regional economic literature that urban structures are stimulating innovations by knowledge transfer. Creating knowledge is no longer exclusively generated by scientists but produced by combining practitioners, scientists, creatives and highly qualified manpower. Knowledge, particularly research and science knowledge, is available inside and outside the 'laboratory' and is created in different locations and conditions.*

*Universities are grave components of cities relating to innovation, regional and global knowledge transfer and by responding to society shifts. Assuming that knowledge society has specific demands on space and urban structures, I argue that knowledge society causes spatial demands on university sites as well.*

*The research project considers a special type of universities – the large-scaled campus universities, founded in the 1960s and 1970s outside the city centres. Challenges and measures for advancing the sites rise on different scales of urban design: constructional, spatial and strategic. Based on own research the speech gives answers on different levels:*

- *How do spatial conditions influence the inter-relation of university and society in context of innovation processes?*
- *According to social dynamics, university sites have changed under spatial and architectural aspects. Especially the campus universities of the 1960s/1970s do not meet the spatial demands of today's knowledge society. Which measures of urban design help to stimulate interaction between 'creatives' to create knowledge and innovation?*
- *Regarding the local and regional policy, how can different stakeholders be involved in these processes to combine the interests and goals?*

## 1. Introduction – Cause and Focus

Universities as parts of cities and regions are of vital importance to face the structural change from industrial society to knowledge society. As locations of informational and social exchange processes universities contribute the alliance of knowledge intensive players and institutions with their regional and local conditions.

In urban and spatial research the role of universities within regional and urban context and their importance as attractive locations for working, culture, living and life for employees of knowledge-intensive branches are broadly investigated (Florida, 2005; Matthiesen, 2009). In contrast the structural and spatial impact of universities, their impact on the urban fabric as well as the (spatial) requirements the knowledge society has on university sites are not yet deeply explored. An academic void in current spatial and regional research is raising the question of the importance of the structural and spatial character of university sites and the character's impact on the attractiveness in context of knowledge-society.

This research project presents a part of the findings of a PhD research, which dealt with a special type

of universities: Universities which were founded as new universities in the western part of Germany in the 1960s and 1970s. The research acts on the assumption, that universities and their spatial conditions and surroundings – each location offers specific circumstances and needs – do play a leading role for facing the structural change from industrial society to knowledge society. The focus of research is set on the structural and spatial components of university sites. In principal the sites are faced with the same challenges, but depending on the specific type of site – different dates of origin offer a different pattern and integration into the urban fabric as well as varying types of uses and spaces –, different measures, implications and strategies have to be implemented individually.

One of the main targets of the research was to find principles for the conceptual and strategic development of the universities of the 1960s and 1970s. The explanation of structural and spatial features within university sites and their impact on the urban fabric are the main value proposition.

## 2. Theoretical Background

2.1 *Knowledge Society – basics and spatial demands*

Although the concept of knowledge society is discussed differentiated and controversial, it is more than a buzz-phrase (Wiesner/Wolter, 2005 p. 34). It is consensus, that society is changing from an informational-based to a knowledge-based society, but different positions are assuming whether this change is already accomplished or still processing.

Within the knowledge society theoretical or research knowledge is a central, dominating factor regarding not only economical growth and production, but moreover it is influencing social behaviour and public life (Wiesner/Wolter, 2005, p. 35). Research and knowledge are transformed to production factors, universities are economic location factors and knowledge is the trading good which can be „sold“ (Elm, 2002, p. 17). Based on the complex attributes a multidimensional reflection of the knowledge society is necessary to understand its economical, technical, historical, social and cultural features (Höhne, 2003, p. 62). Global availability of knowledge, permanent dynamic and diversification of knowledge production, transdiciplinary, the influence on different features and the concluding demand of “lifelong learning” are of most importance (Wiesner/Wolter, 2005, pp. 36–37).

Within the knowledge society the implicit form of knowledge, intimated connected with persons, is the central value. This tacit knowledge is created through exchange. For this reason space is gaining importance to create, advance and transfer the knowledge (‘learning by doing’; interaction). Boarderlines between science and society are fading and getting more permeable (Nowotny, 2006, p. 27). Characterizing knowledge society, three main attributes can be summarized:

- *Human capital* in combination with its knowledge is an important resource in 21st century, as factor of production and as immaterial economical and tradable good or service.
- The distinguishing mark of this form of knowledge production is that creating knowledge is no longer done by scientists exclusively. It comes into existence through combining practitioners, scientists, creatives and highly qualified manpower. In this context highly qualified and creative people and their requirements are the main driver in the environment of innovation competition and for the economical power of cities and regions which are competing in acquiring the „smartest heads“. *Space* in which highly qualified and creative people are meeting is increasing in importance. Knowledge, particularly research and science knowledge, is available in and outside the ‘laboratory’, that means that the context of knowledge and its practice and implementation is enlarging and it is used by experts and laypersons. Knowledge is expanding and is produced in different locations and conditions.

- A City, or *urban structures* in general, as interaction platform for knowledge owners and knowledge environment is getting more and more attention to develop knowledge networks for science and economy. Of course knowledge owners can work everywhere in terms of globalization, but this fact again increases competition of cities to gain them as their citizens. Thus society is addressee as well as producer and developer (Nowotny, 2006, pp. 33-34).

Analogous to the meanwhile corrected misunderstanding of informational society discus, knowledge is ubiquitary available and the meaning of spatial and context specific physical or cognitive distances is decreasing or leading to the "death of distance" (Cairncross, 1997), due to availability and usage of new technologies, space is gaining importance and urban accommodations are the baselines for current society. Castells emphasized in 1996 that the relevance of space is increasing especially in cities and moreover in metropolitan areas (Krücken, 2006, p. 60). Therefore the transformation from information to knowledge is a complex and interactive process, which needs local space and face-to-face context of knowledge-innovators. The combination and transfer of diversified knowledge relies on locations where social relationships between knowledge-keepers are necessary for emerging learning and knowledge processes (Dörhöfer, 2010, p. 107). "Although information technology does allow for a greater flexibility in terms of location, particularly for some office functions, it is also resulting in new urban concentrations for face-to-face activity. People need human contact and the city is the place for that, even if technology allows us to do otherwise if we choose" (Ward Thompson, 2002, p. 68). A city, or urban structures and functions in general, provides innovations and networks, knowledge is evolved from (Kunzmann, 2004; Etzkowitz/Klofsten, 2005; Matthiesen, 2009). In context to knowledge society cities are acting as hubs and production locations of knowledge. They provide privileged locations for knowledge transfer, knowledge generation and knowledge exchange. Current urban and regional studies identify these types of locations as "Knowledge-Cities", "Cities of Knowledge" or "knowledge-based cities" (Matthiesen, 2004, p. 11; Matthiesen/Mahnken, 2009, p. 16; Kunzmann, 2004, p. 29). Based on their agglomeration advantages cities have the possibility to enforce a system of spatial and cognitive interaction between different actors and institutions of the knowledge society. Therefore cities force the exchange of tacit knowledge (Amin/Cohendet, 2004; Boschma, 2005; Matthiesen, 2009).

Universities are grave components of cities relating to innovation, regional and global knowledge transfer and in responding social shifts. The innovation effect of universities is undisputed. Within this context universities are a landmark and a central position for demographical and structural development of cities and inner-city accommodations due to their contribution as incubators of a knowledge-based city development. Of special interest is the direct impact of universities on their spatial surroundings and urban fabric as well as on social, economical and cultural sectors. The criteria for integration and linking university sites, the spatial surroundings are the main tasks in this context. It can be assumed that universities are spending a major contribution regarding the development of cities and regions as 'sticky knowledge places' for knowledge-intensive actors and institutions. They are important incubators for the knowledge-based formation, because "in a healthy knowledge society the university becomes the city, and the city becomes the university" (Corneil/Parsons, 2007: 115).

*2.2 The Role of Universities*

Universities today are global acting institutions, but have deep roots to the local layer. The university can be seen as an important building block of the city, especially the European city. Universities and their spatial context have always reflected social, political and economic conditions (Rüegg, 1993, 1996, 2004, 2010).

The expansion of knowledge during the last 4 decades, especially in the area of higher academic education (Martin Trow, 1974, called it the "shift from elite to mass education"), created new tasks and a different comprehension of the institution 'university'. In knowledge society with theoretical knowledge as a strong baseline universities and research institutes are axial institutes – they are schools of knowledge society (Mittelstraß, 2002, p. 67).

Universities keep their status as research locations by generating new knowledge, especially advanced research as well as application oriented knowledge. They are enlarging their position as "think tanks" and the ability of identifying relevant knowledge as well as absorption and distribution the according knowledge to students, scientists and free economy. In summarize, universities act on different levels:

- accumulation of knowledge
- creation of knowledge
- distribution of knowledge
- commercialization of knowledge
- sustainability of knowledge (Schneidewind, 2009, 12)

Besides these tasks universities are faced with other challenges, which not only deal with their core businesses. Since 1999 the Bologna-Process is the most intensive change in teaching and research European universities have to face. On the one hand universities and research institutes should act global and be cross-linked for gaining best output in research and teaching, on the other hand they should act entrepreneurial and compete in international rankings and ratings. Today's universities are "diversified, expanded, globalised, 'marketised', 'technologised', neo-liberalised and potentially privatised" (Morley, 2012, 27). The challenges are very diverse, as figure 1 shows.

To maintain university competences, which were traditionally developed, and to create new competences, new organisational structures must be realized internally but as well according to spatial requirements. Transdisciplinary, project studies, practical use of theories, their transformation into "real life" or life-long learning need new or different spatial conditions (Hubig, 2002, pp. 46-47).

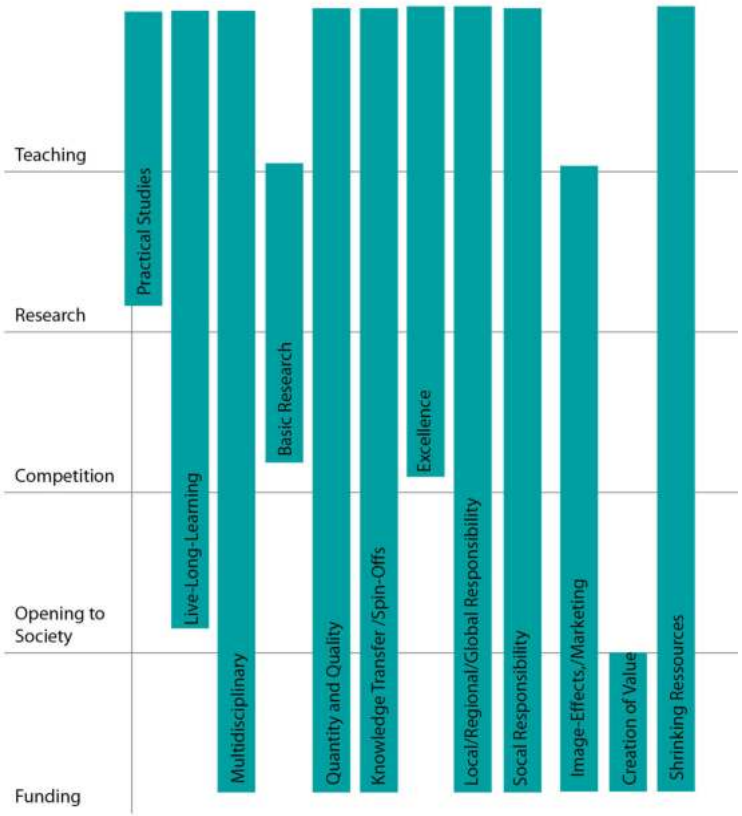


Figure 1: Challenges for Universities

As described before, there is a close cause-effect-relationship between the discussion about the knowledge society and the spatial level of the 'city'. Urban structures with their properties (density, utilisation, cultural and social structures) are particularly suitable for generating and distribution knowledge. It arrives at the conclusion that 'urbanity' in context of knowledge-society is gaining more importance. Urbanity offers a structure, knowledge can be developed from in the most effective way. Knowledge society requires certain urban parameters. Looking at universities as institutionalized knowledge economy for a city, the question of spatial circumstances and how structural and spatial needs can be covered is arising. According to these manifold tasks there is no regional demand for pure knowledge location: Diversity, communication and transfer are the main focus, but without loosing the objective of education and science:

- Functional mixing of university functions and peripheral utilization (spare time, living, working)
- Spatial hierarchies
- Identifying architecture
- Social concentration and interaction
- Access, interface to cities
- Consideration of complex requirements of internal and external users

Assumed that knowledge society has specific demands on space and urban structures (Perry, 2008; Benneworth/Charles/Madanipour, 2010), the assumption is that knowledge society causes spatial demands on university sites. In this context it is the 'Third Role' of universities, which has to be regarded in urban and regional planning. In concepts for developing university sites 'urbanity' has a leading role, not only because of measures regarding the site itself, but to combine the site with its spatial and functional surroundings. These projects and current developments are often associated with terms like knowledge economy, the requirements of the knowledge society and the knowledge-based designing and development of cities and urban structures. These terms constitute the strategies of universities and cities and their marketing. Not only in cities, in which the universities are deep-rooted, but also in small cities, which use colleges or universities – often as new founding or settlements – for establishing a profile in the regional, national or international competition.

The question of structural and spatial development and designing of university sites is getting more important in current urban planning discourses. Urban design concepts, development frameworks or campus plans are evolved, which explain the function, scale, siting and cost of new developments and the improvement of existing facilities to produce an academic setting that is both functional and spatial. From an urban planning point of view different aspects are in the focus of the research, especially regarding questions of urbanisation and linking the sites with the urban fabric. Christiaanse defines, that the discussion about attractiveness of the interdependency of university sites and the urban pattern need a specific design and handling of the spatial conditions, to break up boarders and open the reputed 'gated community' of the campus (Höger/Christiaanse, 2007, p. 29). Similar aspects should be taken into account during the planning phase of company campus areas. As private projects with influence on the image and attractiveness of cities they symbolize a new configuration of private spaces in the public grid of cities.

Current company and management strategies are forecasting future developments of universities with the campus-principle as a major orientation in planning. Open structures, public spaces and a new social architecture are the core elements for interacting in terms of the knowledge society. Beside the physical level it is the social, intellectual and sustainable structures, which have to be taken into consideration. Baseline of the physical development or their guidelines is the public spaces, the buildings and the infrastructure. But in addition to that the strategic approach is important to combine different stakeholders and their development goals.

## Spatial Focus: Universities of the 1960s and 1970s in Germany

The research project considers with a special type of university sites – the large-scaled campus universities, founded between the 1960s and 1980s, the so called 'reform universities' in Germany. Because of the increasing numbers of students in the 'economical boom era', higher educational space was needed and so it was decided from the government not only to extract existing sites, but developing new ones. Those developments accompanied with a reform of education and organization, which was reflected in the construction and spatial guidelines, the structural and physical appearance, the design-guidelines, the hierarchy of public spaces and the composition of buildings. These new university sites of this time were build as campus-universities outside the city centre and – like Jessen (2003) depicts – do not settle the claims of the current society, which are linked with and open to society and the composition of the city.

The new sites were designed as universities with all the typical faculties. But they should also offer public and social space. That meant a big demand for building space. The areas needed to offer more than 100 ha for all the buildings and spaces which were needed. The sites of this modern construction area followed a typical hierarchy and structure:

- Density is reduced from the inside to the outside
- Core with important functions (library, cafeteria, audimax, administration)
- Crossing axis (functional- and open-space-axis)
- Public infrastructure as boarders
- Surrounding landscape

The sites today are approximately 50 years old – build of concrete and steel, they need to be reconstructed in different topics. The interior, especially laboratories and central uses like canteen kitchen or libraries, need refurbishment. The suburban campus-sites need to be improved on different spatial and functional levels to strengthens their role as activators for economical and spatial innovation (knowledge-clusters, research and technology parks), as Christiaanse and Hoeger illustrate by examples like the Science City ETH Zürich or the Hightech-Campus Berlin-Adlershof (Höger/Christiaanse, 2007).

As the foundations of universities in the 1960s/1970s often were instruments of a 'structural change 1.0', which besides the reform and spread of education was boost by industrial location, the aims of the current 'structural change 2.0' are the qualification and advancement of these university sites and settlements as „knowledge scapes" (Matthiesen, 2009). These advancements often are closely connected with urban and/or regional development concepts, strategic processes and urban governance. The universities of the 1960s/1970s made their cities to 'university headquarters'. Todays concepts have additional ambitions: with structural and spatial measures, their physical and functional linking to urban sorroundings and strategical devices for local and regional policy they are purposed to be developed to 'knowledge-based cities'.

## 3. Hypothesis

For detecting the challenges of the university sites of the 1960s and 1970s, their (spatial) basic conditions are faced with the (spatial) demands of the knowledge society (Figure 2). It is obvious, that most of the spatial conditions are divergent to society's demands.

As a result of the comparison of the conditions of the university sites with the demands of the knowledge society, the hypothesis for the empirical studies can be drawn: *The university sites of the 1960s and 1970s in Germany do not correspond to the demands of today's knowledge-society*.

If we think of the requirements of the knowledge society spatial conditions need to be improved or reformed, and of course terms like live-long-learning need specified conditions. In summery, the starting position of the large-scaled sites offers a lot of potential for the needs of the knowledge-society. The challenge is first the existing gap between the city and the campus, on the other hand the retention of the typical modern structure and details. Challenges and measures for advancing the sites rise on different levels and scales: constructional (micro-level), spatial (meso-level), strategic (macro-level).

| LEVEL | | DEMANDS OF THE KNOWLEDGE-SOCIETY | | CONDITIONS OF THE UNIVERSITY SITES |
|---|---|---|---|---|
| | | Density | = | Density |
| | | differentiated by its typology | \|\| | concentrated |
| | | Human Scale | \|\| | Functional Scale |
| Urban Design | | Variability of Built Spaces | = | Variability of Built Spaces |
| | | Coherent Morphology | = | Coherent Morphology |
| | | heterogeneous and linked | \|\| | closed and definied |
| | Morphology | Spatial Hierchy | \|\| | Institutional Hierarchy |
| | | Mix of Uses and Functions | \|\| | Separation of Uses and Functions |
| | | Spatial Sequences | = | Spatial Sequences |
| | | Public Spaces | \|\| | University-Public Spaces |
| | Functional Space | Consideration of Secondary Functions | \|\| | Separation of Uses and Functions |
| | | Meeting-Spaces | = | Meeting-Spaces |
| | | in spatial sequences | \|\| | in central functions |
| | | offhanded spaces | \|\| | plannend spaces |
| | | social proximity | \|\| | spatial proximity |
| | Social Space | Integration/net-structured | \|\| | orthonally organised |
| | | Identity | \|\| | Functional Identification |
| | Atmosphere | Open | \|\| | Closed |
| Spatial and Spatial Design | Urban Pattern and Intersections | Integration | \|\| | Separation |
| | | Clustering | \|\| | Centralization |
| | | Participation | \|\| | Separation of University and Public |
| | | Glocal | \|\| | Regional |
| | | Interdisiplinary | = | Interdisiplinary |
| | | Mix of Uses and Functions | \|\| | Functions for University-Uses |
| Strategic | | Knowledge-based Development, Network of Stakeholders | \|\| | University as a self-sufficient Player |

Figure 2: Comparison of Demands and Spatial Conditions

## 4. Methodology: 3 Case-Studies

The hypothesis and the findings of the theoretical comparison of the conditions and demands are surveyed by the analysis of three case studies. It was asked, which spatial and strategic elements exist at university sites of the 1960s and 1970s. For understanding today's conditions the history and the development of the sites must be analyzed. Besides the finding for each case-study a main question for the empirical work is, if the findings can be compared or generalized, or if each site has individual conditions.

The Ruhr-University of Bochum (1962), the University of Bielefeld (1969) and the University of Siegen (1972) acted as case studies for the empirical work. All universities were founded in the 1960s/1970s in the federal state of North Rhine Westphalia, in the western part of Germany.

For the analysis of the case studies different methods were used, according to the different approaches on spatial and strategic layers and levels identified in the theoretical framework (Figure 3). The *study of historic literature* and documents gives information about the foundation of the sites and the social and political backgrounds in the 1960s and 1970s, by which guidelines of design and architecture were influenced. The *enquiry of current concepts* for the development of the sites gives information about the strategies of a knowledge-based development.

For the empirical research *interviews with stakeholders* were fundamental. The guided interviews with a total of 14 stakeholders gave important information about the history of the sites, their future development and, according to the professions and responsibilities of the stakeholders, interesting and different views on tasks of development and challenges. For every case study at least one stakeholder belongs to the municipality/planning department, to the management/administration of the university and to the "Bau- und Liegenschaftsbetrieb NRW", the agency, which is responsible for management and operating of the university's sites and buildings.

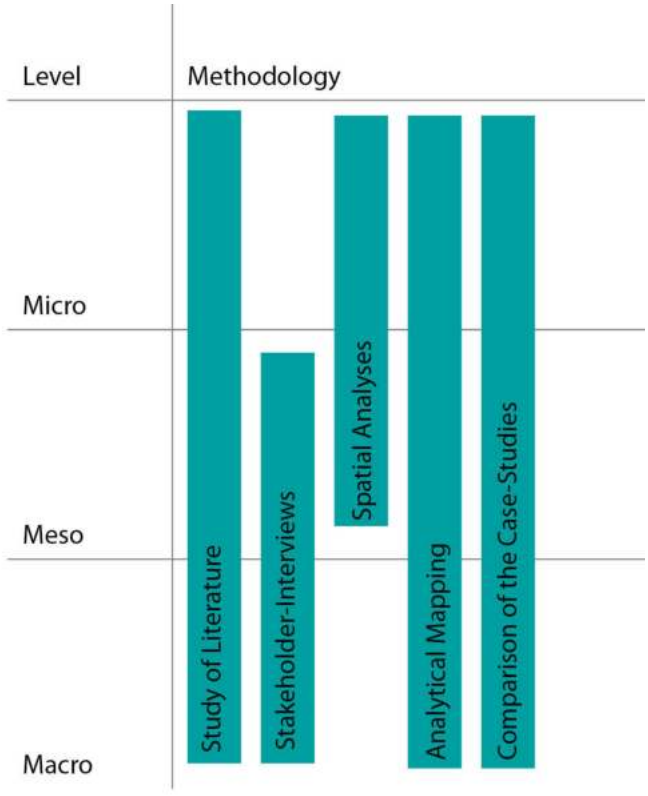


Figure 3: Research Methods

Besides the interviews, *spatial analyses* were the central method for finding out principles on the macro-, meso- and micro-level of the universities. The main characteristics of the spaces were visualized in maps (analytical mapping) of different spatial and thematic layers. The findings of the spatial analyses, combined with the information of the stakeholder-interviews, gave a well-grounded characterization of the different sites, their abilities and challenges on following levels:

- Morphology and Building Characteristics
- Functional Space
- Social Space
- Urban Pattern and Intersections
- Atmosphere
- Strategic Level

Exemplary on the functional level the functions and their interaction were investigated. As the analysing map of the case-study of the Ruhr-University of Bochum shows (Figure 4) the functions are mostly separated in a main part of 'teaching, learning and research', which is supplemented by the main axis with central functions like the library or the Auditorium maximum. Corresponding to the separation of the functions the social spaces of the sites in total are different as well (Figure 5). The character of the social space follows the density and the types of functions. In the central axis there is a high social density. Students and researchers meet here, get in communication and use the space for recreation. The spaces between the buildings do not work as meeting places very well, because people just go here to reach their offices or lecture halls.

In a last analytical step the findings of the three case studies were reflected and compared. The aim was to find out, if the particular findings show commonalities and regularities. This last step sets the ground for the central findings and the conceptual work of the project.

Figure 4: Functional Space, Case-Study Ruhr-University of Bochum

## 5. Findings and Conclusions

As a result of the comparison of the central empirical findings different fields of action can be identified. These fields can be found on mainly four levels:

- Functional Space
- Social Space
- Urban Pattern and Intersections
- Strategic Level

It is not imperative to develop kinds of 'patent remedy' for acting in these levels, but options and restrictions which offer possibilities for improving the sites in terms of the requirements of the knowledge-society. The empirical work has shown, that – besides lot of differences – similarities and spatial principals can be found.

The sites are separated from their surroundings and the urban patterns by their dense and – in some cases – brutal morphology and by their mono-functional character as well. The *functional spaces* concentrate on learning and research, but do not open the sites for other groups than members of the university. The knowledge-society asks for different and urban structures, with mixed uses and spaces for communication. The university sites of the 1960s and 1970s do not offer these needs. Current planning strategies focus on opening the sites by mixing function and making the sites attractive for other users, for example by cultural events or scientific programmes for new audiences.

Figure 5: Social Space, Case-Study Ruhr-University of Bochum

Corresponding to the functional spaces the *social spaces* are characterised. Although it was a requirement in the date of origin to create different spaces for meeting and communication, the spaces today do not correspond with the demand of the knowledge society. First the interdependence with the functional space asks for more public and mixed-uses, secondly the design of the spaces need to be improved. Often the original materials of the 1960s and 1970s today are in a bad condition. Furthermore today's society asks for smaller dimensions of public spaces than the sites do offer.

The social spaces do not invite the public – so it can be summarized that the spaces are not really public spaces. In the consequence they are used primary by students and researches. To connect the public with the university the opening of the sites is necessary – functional, as described, but as well by opening its boarders to the urban fabric. The *urban pattern* often separates the sites from the surrounding, often residential areas. So the functional gap is intensified by a morphological breakout. This problem of different morphologies and intersections cannot only be solved by building smooth transitions, but has to be solved by functional measures as well.

The last level is the *strategic level*, which connects different stakeholders to increase awareness for the importance of universities for the development of the city or/and the region. The 'Leitbild' of the "Knowledge-based Development" describes the process of interaction between municipality, university and society to strengthen common goals. To manage this important aim some municipalities have an own "Knowledge-Manager", who arranges round-tables to bring stakeholders together, or promotes public activities.

Regarding to the hypothesis the empirical findings confirm the statement, that *the university sites of the 1960s and 1970s in Germany do not correspond to the demands of today's knowledge-society*. But – with a closer look to the case-studies the characters of the sites and the different levels – the challenges are not the same in detail. This leads to the conclusion, that for identifying planning strategies and measures for designing, a deep going analysis of the spatial conditions is essential. This analysis has to consider the needs of the users – students, researchers, management – as well as the demands of society to create lively sites and to integrate the peripheral university sites into the urban fabric – where people meet, communicate, research and create new innovations.

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# CREATING IMMERSIVE SOUNDSCAPES FOR URBAN OPEN SPACES

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## Abstract

*How do typological urban factors influence the possibility to experience designed immersive soundscape within the urban landscape? Are there similarities between different projects built during the last 50 years across the world?*

*Soundscapes in situ can be designed by lowering noise levels and adding new sounds. Several urban open spaces (in Paris, Bern, Vienna, Graz, Zadar, Thessaloniki, Sheffield, Cardiff, Dordrecht, Miami Beach, New York City, Phoenix, San Francisco, Chicago, San Louis Potosi, Melbourne, Sydney, Campbelltown, Onohama and Xi'an, for instance) are characterised by designed soundscape elements that have the immersive quality - they offer the 'surround sound' designed experience.*

*This interdisciplinary analysis covers urban (spatial), environmental acoustic (and electroacoustic) and music factors and their mutual influence. Different methods of designing immersive soundscapes within the urban landscape are being analysed using the geospatial data.*

*Methods of achieving designed soundscape span from electroacoustic multichannel soundscape systems to the soundscape articulated through mechanical and acoustic qualities of urban design elements, such as pavement, vegetation or a built structure designed for a specific waterfront promenade, square, plaza or park. Two general spatial principles are recognised: open and enclosed. The former can feature different levels of integration of a soundscape design into an urban design, while the latter tends to isolate certain places from unwanted factors to a certain degree using strong architectural elements.*

*The spaces here analysed were rarely conceived solely to enhance an urban soundscape. Designed immersive soundscapes intertwine contemporary sound art, music and urban design and enrich urban open spaces giving them a new layer of a landmark quality.*

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## 1. Introduction

The quality of urban open spaces contributes directly to the quality of city life. Soundscape is a significant factor of the urban ambiance's integral experience and influences the mood and health of the population. However, benefits of the holistic approach to the phenomenon of sound in cities have hitherto not been made distinct enough for such an approach to be widely accepted even though the significance of soundscape has also been recognised in defining the spirit of a place from the aspect of urban planning, landscape architecture and the protection of cultural heritage.

With an aim to contribute to the methodology for the enhancement of soundscape in urban open spaces, this paper explores interdependencies of various urban and acoustic factors influencing the possibility to experience the designed immersive soundscape. Several urban open spaces are being analysed using the geospatial urban data and literary sources. The research is conducted within the framework of the Heritage Urbanism - Urban and Spatial Planning Models for Revival and Enhancement of Cultural Heritage research project, financed by the Croatian Science Foundation.

### 1.1. Designed soundscapes as an enhancement of urban open spaces

With an aim to mitigate the distinctly negative influence of noise on the quality of life, the quantitative approach to soundscape in the form of noise mitigation measures has been included in the systematic planning and design of the built environment. Noise mitigation does not completely encompass the issue of urban open spaces or the attainment of acoustic comfort as a significant requirement for the planning and design of urban open spaces which can be planned solely by including the qualitative approach entailing the consideration of soundscape content. For the aspect of planning and design of the built environment, this entails the following: 1) the suppression of unwanted sounds with landscape and architectural barriers, 2) the valorisation of existing preferable sounds by attentively treating their sources, and 3) the addition of new sources of preferable sounds into the urban open space (Murray Schafer, 1994, p.271). The latter principle, as well as the combined approaches, is in the focus of this research.

This paper therefore aims to contribute to the systematisation of the method of adding new preferable sound sources into urban open spaces from the viewpoint of urban design.

### 1.2. Typology of urban open spaces

The terms *urban open space* and *public space* are not precisely defined and differ from one discourse to another. They overlap in the case of types of squares and streets but tend to differ when it comes to

other spatial-functional types. Urban open spaces are places of social interaction and important factors for creating healthier sociable communities. Urban open space is a term that covers a wide range of public, semi-public and private publicly accessible spatial-functional types (***, 1986, p.2).

Urban open spaces are places accessible to the public, used for collective or individual purposes. They are created using a minimum of two different principles, applicable to the whole built environment - by planned or *ad hoc* interventions (Carr, Francis, Rivlin, Stone, 1992, p.50). This research focuses on holistically designed urban open spaces, where *aural experience* is included in the design.

Their role is ambiguous. Streets, roads and squares have a basic traffic function on which other roles are superposed. Functional social and ritual activities take place in urban open spaces - daily routines and occasional or periodic ceremonies. They are used for private activities such as shopping, recreation, exercise and stay. Sometimes they happen to be the scene of activities that threaten the society on a certain level, such as crimes and protests. There are also distinct types with the principal function of stimulating social life: parks, plazas and children's playgrounds (Carr, Francis, Rivlin, Stone, 1992, pp.11-12). Parks and plazas are among the most frequent types within this research.

According to the synthesis of different authors, the following types of urban open spaces can be distinguished based on the spatial-functional criteria: square, sequence of squares, plaza, pedestrian street, city stairway, portico, urban park, waterfront park, waterfront promenade, public garden, neighbourhood park, memorial, urban forest, forecourt, pocket park, market, children's playground, sports playground and infrastructural spaces.

Within the framework of this research, all of the included urban open spaces are primarily intended for pedestrians. The broadest definition of the term *urban open spaces* was initially used so as to include a large number of examples in the consideration and to reduce the possibility of non-recognition of certain factors.

## 2. Methodological framework

In order to systematise the principles for the enhancement of soundscape in urban open spaces, from the viewpoint of urban design, key urban and acoustic factors must be defined. Key urban and acoustic factors were chosen for this study with an aim to detect the trends in urban soundscape design with implications for the planning practice: the type of urban open space, the type of designed sounds, sound source localisation, the acoustic aspect of elements of urban design and the spatial aspect of elements of soundscape design.

### 2.1. Key urban and acoustic factors

Noise mitigation methods include factors primarily related to legal, economic or city management measures, such as motor traffic speed reduction. On the other hand, this research focuses on factors directly influenced by the urban acoustic design.

Therefore, key urban and acoustic factors refer to the general principle of soundscape enhancement proposed by Bill and Mary Buchen. Their principle of designing a theme sound park includes the use of noise protection and placement of sound sources in the area of acoustic shadow it creates (Buchen, Buchen, 1991, p.8). Its implementation varies regarding the type of urban open space and external factors.

The analysed urban and acoustic factors influence the design of the following principles: 1) adding sound sources (acoustic art installation, electroacoustic system, alarm system, fountain), 2) attenuating

sound sources (engineered acoustical barriers), and 3) achieving acoustic distinctiveness (designed acoustic effect).

For the purpose of this research sound sources are reduced to **the types of positive sound sources** in order to facilitate comparisons by individual sound sources, by which the aural experience of the analysed urban area is generated (similar to those used in the standard questionnaire on the quality of the sound environment - Swedish Soundscape Quality Protocol (Axelsson, Nilsson, Berglund, 2009)): 1) sounds of people (talk, laughter, steps, suitable music, children's plays, bicycles), 2) sounds of nature (wind, rustling of leaves, water, waves, birds), and 3) sounds of designed sources (category added specifically for the needs of this study - musical sounds, art installations, signal sounds). The sound of architecturally designed sources may occur by mechanical, acoustic or electro-acoustic means.

**Sound source localisation** directly influences the immersiveness of the designed soundscape. A soundscape is considered immersive if designed soundscape elements can be experienced simultaneously from two or more directions. Sound sources can be arranged to act as a point, line, field or a complex spatial form. While the first is the most common arrangement of sound sources in urban open spaces, others offer the designed immersive soundscape experience (Oberman, 2015, pp. 130-143). The immersive character of the designed soundscape can positively influence the overall assessment of an urban open space (Oberman, 2015, pp.288-299).

Linear arrangement of sound sources means that, while being in the inner space of the designed soundscape, users are able to experience the added soundscape elements from two different directions. The line may consist of a single physically elongated source or of a number of point sources spatially close enough to be considered a line. Sound propagation from a linear source can be diffused or directed. Orientation is often influenced by the existence of architectural and landscape elements, such as topography or barriers limiting the propagation of sound in one direction and localising its diffusion in the other, or by the possible directivity of speakers (in case of an electro-acoustic system). A linear directional model, for example, is conditioned by the speakers placed alongside the facade of a building (part of the electroacoustic multi-speaker system at the Yarra River Southbank Promenade in Melbourne, for example) or a fountain of an elongated plan which is designed as a waterfall (at the Sheaf Square in Sheffield, for example).

The arrangement of sound sources determining the field within an urban open space means that multiple sound sources are distributed in space in a way that makes the area in which the added soundscape element is being experienced as spatially continuous. The user in the strict space of the designed soundscape can experience the added soundscape elements from at least three different directions.

**Urban design elements** can directly generate different acoustic effects, mitigate noise and define spatial ensembles. Regardless of the level of noise in a particular urban open space, there may or may not exist an architectural barrier designed for noise mitigation.

The optimal space of designed aural experience can be articulated by varying degrees of architectural boundedness relative to the contact area, usually with the goal of a separation from external influences to allow unhindered imaginary aural experience. Designing a pavilion intended for a specific aural experience is the most common way to envelop the inner space of an optimal aural experience.

On the other hand, the inner space of the designed aural experience may not be highlighted by architectural design, but purely acoustically. In that case soundscape becomes the sole means of separation of a certain space by highlighting its part.

Figure 1. (*Left) Sea Organ in Zadar. The space of optimal aural experience is architecturally indicated by steps that descend to the sea, but is not separated from the contact area (Google Street View, photo taken during October 2011)*

Figure 2. *(Right) Echo pavilion in Zagreb. The space of optimal aural experience is defined within the pavilion building (Google Street View, photo taken during August 2011)*

**Pronounced acoustic effect,** significant for experiencing an achieved sonic environment, can be a designed (Echo Pavilion in Zagreb's Maksimir, for example) (Oberman, 2015) or an unintended consequence of architectural and urban interventions (such as Youngstorget in Oslo) (Maag, 2013). This implies an acoustic effect in the strict sense (such as a reverb or a pronounced echo) rather than being understood in the way interpreted by the theory of sound effects whose starting point is that every aural experience can be explained by one or more acoustic effects, i.e. that an aural experience deprived of the acoustic effect is not possible (Augoyard, Torgue, 2011).

## 2.2. Criteria for the selection of analysed urban open spaces

This study includes an overview of urban open spaces from around the world (Regarding the Augoyard's recommendation (Augoyard, 1978) to avoid research on soundscape that does not include the field experience in the first person, this study includes specific urban soundscapes around the world, while referring exclusively to the factors that have been estimated not to be influenced by direct experience). The main criteria for choosing the relevant urban open spaces for the analysis was their acoustical specificity which is documented well enough to allow assessment of key urban and acoustic factors.

The research is based on urban geospatial data provided by the *Google Earth Pro* application which enables an overview of the historical satellite imagery, area measurement, the screening of spatial-functional type of the urban open space, the position of the urban open space in the city, pedestrian accessibility of the urban open space, changes in the urban open space over a certain period of time, the characteristics of the urban structure in the contact area and the recognition of the designed sound sources documented in other literary sources.

## 3. Designed immersive soundscapes within urban open spaces

A total of 25 urban open spaces characterised by the designed immersive soundscape, built in 21 different cities in Europe, the United States of America, Australia, Japan and China, were analysed in relation to key urban and acoustic factors explained in the previous section (Table 1).

The majority of the analysed urban open spaces and/or designed soundscapes implemented within them were built between 1999 and 2011 (the newest public space being the Wilgenwende Dordrecht Park designed by Lola architects in 2009, still unfinished at the time of this research). The oldest analysed designed immersive soundscape within an urban open space was the electroacoustic sound

art installation *Times Square* by sound artist Max Neuhaus, implemented on the Times Square in New York City in 1977. It was built underneath the pedestrian area, with the speakers in the ground plan forming a field (Neuhaus, 2009, p.49).

Table 1. Chronological overview of analysed urban open spaces and key urban and acoustic design factors which influence the immersiveness of the designed soundscape (Oberman, 2015. pp. 322-467)

| **Urban Open Space, Year of the Implemented Soundscape Design** | **Spatial-functional Type** | **Designed Immersive soundscape elements** | **Sound Source Localization Characteristics** | **Boundedness by Urban Design Elements** |
|---|---|---|---|---|
| Times Square, New York City, 1977 | Square | Sounds of designed sources (musical sounds - multi-speaker system) | Field | Open |
| Yacht Road, San Francisco, 1986 | Seafront promenade | Sounds of designed sources (musical sounds - mechanical system) | Lines | Enclosed by pavilion elements |
| Arizona Science Center Plaza, Phoenix, 1986 | Plaza | Sounds of designed sources (musical sounds - mechanical system) | Line | Open |
| *Le Jardin de Bambou* (*Parc de la Villette*), Paris, 1987 | Theme garden within an urban park | Sounds of nature, sounds of designed sources (musical sounds - multi-speaker system) | Lines and Field | Enclosed by garden and pavilion walls |
| Lassallestrasse 1, Vienna, 1992 | Plaza | Sounds of designed sources (musical sounds - multi-speaker system) | Field | Open |
| Yarra River Southbank Promenade, Melbourne, 1992 | Riverside promenade | Sounds of designed sources (musical sounds - multi-speaker system) | Field | Open |
| Forecourts of ANZ Stadium, Sydney, 1999/2000 | Plaza | Sounds of designed sources (musical sounds - multi-speaker system) | Fields | Open |
| Pedestrian bridge *Lorrainestrasse*, Bern, 1999 | Footbridge | Sounds of designed sources (musical sounds - multi-speaker system) | Line | Open |

| | | | | |
|---|---|---|---|---|
| Aquamarine Fukushima, Onahama, 2000 | Seafront promenade | Sounds of nature (amplified by acoustic design) | Line | Open |
| Campbelltown Art Center, Campbelltown, 2001 | Urban park | Sounds of designed sources (musical sounds - mechanical system) | Field | Open |
| Birrarung Marr Park, Melbourne, 2002 | Urban park | Sounds of designed sources (musical sounds) | Field | Open |
| Millenium Stadium River Promenade, Cardiff, 2002 | Riverside promenade | Sounds of designed sources (signal and musical sounds - multi-speaker system) | Line | Partially enclosed by the stadium building |
| Lendkai 1, Graz, 2003 | Plaza | Sounds of designed sources (musical sounds - multi-speaker system) | Line | Partially enclosed by the museum building |
| Millenium Park, Chicago, 2004 | Urban park | Sounds of designed sources (musical sounds - multi-speaker system) | Field | Open |
| *Obala Petra Krešimira IV*, Zadar, 2005 | Seafront promenade | Sounds of nature, sounds of designed sources (musical sounds - mechanical system) | Line | Open |
| Sheaf Square, Sheffield, 2006 | Square | Sounds of nature (designed sound source - water fountain) | Line | Enclosed by the sculptural wall |
| Linz AG Center, Linz, 2006 | Plaza and portico | Sounds of designed sources (musical sounds - multi-speaker system) | Field | Enclosed by the portico |
| William Barak Bridge, Melbourne, 2006 | Footbridge | Sounds of human beings (designed sound source - multi-speaker system) | Field | Open |

| | | | | |
|---|---|---|---|---|
| *Kipos Tou Ichou* (*Nea Paralia*), Thessaloniki, 2008 | Seafront promenade | Sounds of nature | Lines and field | Open |
| *Laberinto de las Cyencias y las Artes*, San Luis Potosi, 2008 | Urban park | Sounds of designed sources (musical sounds - multi-speaker system) | Field | Enclosed by the pavilion walls |
| Forecourt of AAMI Park, Melbourne, 2010 | Plaza | Sounds of human beings (designed sound source - multi-speaker system) | Field | Open |
| Les Erdi Plaza, Melbourne, 2010 | Riverside promenade | Sounds of designed sources (musical sounds - multi-speaker system) | Line | Enclosed by the wall with mounted multi-speaker system |
| Lincoln Park, Miami Beach, 2011 | Urban park | Sounds of designed sources (musical sounds - multi-speaker system) | Field | Open |
| Garden of Labyrinth (Master Gardens Expo 2011), Xi'an, 2011 | Theme garden within a urban park | Sounds of designed sources (musical sounds - mechanical system) | Field | Enclosed by the garden and pavilion walls |
| Wilgenwende Dordrecht Park, Dordrecht, - | Urban park | Sounds of nature (designed sound source - selected treetops) | Field | Enclosed by the artificial topography |

Previous research (Lacey, 2014) on the influence of spatial-functional types on the designed soundscapes pointed out two factors that benefited the public acceptance of the designed soundscape: 1) the transit character of the urban open space, and 2) the non-disruptiveness of the soundscape experience.

The research on multi-speaker electroacoustic systems in Melbourne's urban open spaces, conducted by SIAL Sound Studios (SIAL Sound Studios are a multi-disciplinary research facility at the Royal Melbourne Institute of Technology), indicates that added soundscape elements are better accepted in spaces intended for transit (such as streets, footbridges and underpasses) than in spaces with high social presence (such as squares, plazas or promenades). For instance, the designed immersive soundscape such as the one designed for the Yarra River Southbank Promenade in Melbourne (built in 1992) proved to be an imposition on the existing spatial programs (Lacey, 2014, p.10). On the other hand, the mechanical acoustic installation of the Sea Organ in Zadar (built in 2005), built also in the waterfront (seafront) promenade (*Obala Petra Krešimira IV*), is being highly praised both by the local community and tourists (Jambrošić, Domitrović, Horvat, 2013; Zanki, 2013). The latter is 13 years younger than the former which was decommissioned after some 20 years. This case only speaks for the site specific character of research results within the field of architecture and urbanism.

Urban open spaces offering the non-disruptive advantage are beneficial for the experience of the designed soundscape since it can be experienced as a more traditional piece of art - the passer-by has the opportunity to become the listener of the musical composition (Lacey, 2014, p.11). In that way the urban open space can become an integral part of an art piece. On the other hand, the aforementioned installation *Times Square* was conceived to be experienced within a loud and noisy soundscape and perceived as a work of art mainly by an informed group of individuals (Neuhaus, 2009). Therefore, the boundedness of inner spaces of the designed immersive soundscape is analysed via the enclosed and open principles. The enclosed principle is considered to offer a higher degree of non-disruptiveness on two levels: 1) the urban design element acts as a noise barrier in case of adjacent noise sources, and 2) the urban design element influences the integral perception of the urban open space by emphasising the inner space of the designed soundscape experience in case noise is not an issue.

A small number of analysed projects are urban open spaces dedicated to the experience of the designed soundscape. For example, in *Le jardin de bambou* (designed by Alexander Chemetoff in Parc de la Villette, Paris) water channels were designed along the entrance steps to draw attention to the acoustic experience created by the sound of rippling water with an aim of 'introducing' passers-by to *Le cylindre sonore* pavilion (designed by architect and sound artist Berhard Leitner) dedicated to the acoustic experience. Speakers' locations in the pavilion are highlighted by concrete perforated masks. The whole garden lays *cca.* 3 meters lower than the surrounding surface to acoustically separate passers-by from the soundscape of the rest of the *Parc de la Villette* (Leitner, 1998, p.144-148).

## 4. Conclusion

Without attempting to draw a definite conclusion (due to methodological limitations characteristic for the scientific research within the fields of urbanism and architecture, such as the influence of external factors and specificity of each site) on the influence of typological urban factors on the possibility to experience the designed immersive soundscape, the following trends are visible: 1) the most complex designed soundscapes (which include the principles of adding different types of sound sources and different urban design elements that influence the designed soundscape experience) appear within urban open spaces designed with the goal of experiencing them (typologically it comes to theme parks), 2) all of the analysed sound source patterns can be found in all of the analysed spatial-functional types of urban open spaces, regardless of their inherent shape (which can be linear or field-like), although sound sources forming a field are more common in urban open spaces having the characteristics of a field than in linear ones, and 3) the analysed urban open spaces characterised by the designed soundscape typologically include plazas, squares, urban parks, waterfront promenades and pedestrian routes like footbridges and underpasses.

The most common spatial-functional types of urban open spaces characterised by the designed immersive soundscape are urban parks (32% of the 25 spaces analysed), waterfront promenades (24%) and plazas (20%). Large urban parks are considered to offer the highest degree of non-disruptiveness and are not characterised by high social presence and functional complexity like other analysed urban open spaces. In 3 out of 6 cases, waterfront promenades contain the designed soundscape elements which are inspired and generated by the sea itself. Plazas, being semi-public spaces, are considered to represent the adjacent building as well as the investor, so the designed soundscape has the goal of contributing to their attractiveness.

The spaces here analysed were rarely conceived solely to enhance the urban soundscape. Designed immersive soundscapes intertwine contemporary sound art, music and urban design and enrich the urban open spaces giving them a new layer of a landmark quality.

# BRICOLAGE URBANISM FOR URBAN SOCIAL COHESION

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Keywords: Bricolage Urbanism, social cohesion, sustainable neighbourhood

## 1. Introduction. The need for urban social cohesion at a 'local' level.

It is expected that 83% of the European population will be living in urban areas by 2050. This prospect brings enormous pressure on European cities that are already facing serious challenges due to financial crisis, globalization, demographic change, increasing flows of migration, disparities among and within cities, inner city decay, urban sprawl, climate change etc. These challenges have a cumulative effect on deepening social exclusion, social polarization and increasing urban violence and spatial segmentation (Urban-Net, 2011; Dhéret, 2015).

For the aforementioned reasons, social cohesion resurfaced in the public sphere and became a foremost need for the contemporary European society, centring on the rights of the individual. Europe has to deal with rapid and radical changes, which upset the mechanisms that have traditionally ensured the maintenance of social bonds. European cities are delegated to play a leading role and tackle the challenge of inclusive growth. They agglomerate all the complexities of social life on a concentrated territory, and they import/export factors of cohesion and fragmentation of their own system on a daily basis. Furthermore, the views of how social fragmentation and cohesion should be addressed vary significantly among groups and people, but also among different types of actors within cities (Urban-Net, 2011). The emergent call for socially cohesive cities is proved by the recent provision that approximately half of the European Regional Development Fund (ERDF) for the period 2014–2020 will be spent in cities, enabling them to design and implement cohesion policies and test new ideas in urban development (European Union, 2014).

In the quest for urban social cohesion macro-structural and local reinforcing processes must interact and "people based" policies need to be complemented by "people and place" ones (Meegan and Mitchell, 2001). For socially cohesive urban futures Urban-Net report (2011) recommends re-orienting current modes (academic and practice) of urban design and planning towards "socio-spatial cohesion" and "environmental sustainability" at multiple scale levels. Developing a common European methodology through an urban social cohesion based approach, the report argues for a shift from the global-metropolitan to the "local" dimension with particular attention to participation and empowerment of inhabitants of neighbourhoods.

The development of urban social cohesion is traditionally perceived as a topic for social-cultural, economical and political experts rather than a consideration requiring multi-scalar spatial design and planning handled by architects, urban designers and planners. As Madanipour (1998) argued, space has a major role in integration or segregation of urban society. It is a manifestation of social relationships and can affect and shape their geometries. Relevant literature already indicates the significance of urban morphology, such as accessible public and private services, availability and quality of infrastructure, physical or ecological barriers, properties condition and environmental quality, etc. (Meegan & Mitchell, 2001; Kleinhaus, 2004; Loukaitou-Sideris 2006; U.N., 2014). Thus, social inclusion or exclusion is a socio-spatial phenomenon.

In this context, we argue that urban morphological aspects related to social cohesion need to be further explored by focusing on the 'local' dimension. Our research explores how urban morphology at the smaller scale, the neighbourhood, contributes to social cohesion policy. With due caution against physical deterministic arguments that social problems can be eliminated by redesigning space, we aim at investigating ways for the promotion of social cohesion within the built environment, on the basis of urban design and planning premises.

Athens' inner city neighbourhood Omonia has been chosen as a case study. Over the past decades the population of the area witnessed large-scale changes and violence due to socio-economic exclusion related mostly to immigration and economic depression. However, its urban fabric cannot adapt in a critical, creative and cohesive manner to these changes due to constraints from preservation, legislation, ownership, FAR reduction/stagnation etc. Through the technique of bricolage, based on relational micro-scale urban interventions, we aim at developing a desirable and sustainable level of urban social cohesion, that would exclude extreme situations such as defensive bonds and fragmenting terror. Subsequently, we propose design actions related to social cohesion criteria, on both public and private space in order for the area to regenerate as a socially cohesive neighbourhood. These actions are intended to be flexible and to enable participation, among others of stakeholders, communities and citizens so that they develop towards a state that is suitable and sustainable.

## 2. Towards socially cohesive inner-city neighbourhoods through urban bricolage.

*2.1. Bricolage Urbanism: A social cohesion approach based on micro-scale urban interventions*

In the pursuit of socially cohesive cities we adopt the concept of Bricolage Urbanism (Rodi, 2015). The notion of bricolage as a way of looking at and producing things was first introduced by Claude Lévi-Strauss in 1962. It offered an alternative vision of creativity to that of Modernism. Rather than a hommage to science, bricolage is described as a creation of meaningful structures out of events. For Rowe and Koetter (1978), the most eloquent expression of bricolage could be found in the city. They rejected "total design," and proposed instead the notion of "collage city" within which a functioning network of pocket utopias can be accommodated.

The unprecedented urbanism of small, spontaneous and collective acts that we nowadays notice in cities, seems to outfox technical expertise and top-down procedures. Public posting of citizens' individual needs and desires on social media becomes a form of public discourse. Current austerity urbanism and social cohesion issues in our cities seem to have contributed towards this phenomenon. Whilst such small-scale interventions are central to the life of cities, yet they remain peripheral in design discourse.

This paper introduces *Bricolage Urbanism* as a process towards socially cohesive urban environments, not just as urban acupuncture. Based on the shared responsibility of all players, *Bricolage Urbanism* focuses on how small-scale neuralgic interventions can have a direct impact on urban morphology and life through a relational, situational and, predominantly, cultural approach. In analogy to Lévi-Strauss's *La Pensée Sauvage*, it intends to propel a discussion about the disciplines of architecture, urban design and urbanism, that will not be sought in citizens' design but in citizens' desires. An objective is to calibrate the nature of small urban acts and to critically appraise the potential trajectories the practice of urban design and urbanism could take in the future. Bricolage urbanism is a planning method and does not replace masterplanning, local planning and other strategic planning tools. But it can enrich, expand, inspire and motivate planning procedures, helping to create a better urban life.

Specific aspects relevant to *Bricolage Urbanism* are (Rodi, 2015):

- Micro vs. Macro interventions. Is the design of urban environment predominately small-scale activity or a bold, large-scale transformative activity? Can small-scale urban changes work in synergy and have a direct impact on urban life? Can they re-adjust easier? Are they less or more vulnerable? How can success of a small intervention be measured?
- Design authorship. Who should design urban interventions? Should they be designed at all? Does urban morphology matter as citizens' participation and empowerment?
- Aesthetics and economics. Do small-scale interventions produce better space than big projects do? In the context of crisis and uncertainty, are small-scale projects more effective and more feasible? Are they more manageable and likely to get done?
- Social cohesion. Can small interventions make a meaningful contribution towards social cohesion? Can small interventions, though ephemeral and low impact, scale up to a broader social return?
- Design Practices. How can design be engaged so as to propose current physical transformations of the built environment? Do small-scale interventions pay less attention to the rulebook and more to the real principles of how we actually do things? Is triggering the design process more important than predetermining its outcome?
- Resilience. How small-scale urban interventions contribute to climate change and other resilience? Are they 'resilient' themselves, that is, easier to fix or undo when they go wrong?

*2.2. Focusing on the 'local' level: neighbourhood social cohesion.*

The research perceives social cohesion as a bottom-up process that focuses on neighbourhood scale. Neighbourhoods provide a useful scale for studying social relations, ties and conflicts in everyday life. One of the reasons why neighbourhoods remain an object of policy interest is the revival of notions, such as 'local community' as means to tackle social exclusion (Forrest & Kearns, 2001). Furthermore, the increasing interest in bottom-up approaches and transition processes as the 'third way' between incrementalism and strict planning, are part of the sustainable development (Grosskurth, 2009).

The quality of social integration at the neighbourhood level is the basis for social cohesion at larger scale, especially in an era when many social relations take place outside neighbourhood communities and virtual social networks seem to be "further eroding the residual bonds of spatial proximity and kinship" (Forrest & Kearns, 2001). According to Moulaert (2010), dynamics of change at the local level, is an integral and vital part of wider urban dynamics and is the pivotal scale through which urban change ought to be understood, although in a multi-scalar way. The local scale can be more "tangible", or a "better" or more "just" and "democratic" level at which to analyse, organize, and imagine change, whilst macro-level solutions are significantly more difficult to find (Moulaert, 2010, Meegan & Mitchell, 2001). The local is a privileged and empirical entry point for understanding the modalities of social cohesion through social innovation, social learning processes, spatial change, new policy initiatives, or collective action (Atkinson, 2007, Rodriguez, 2009, Urban-Net, 2011).

A neighbourhood should not by definition be seen as a "spatially integrated Gemeinschaft", but as a key living space through which people get access to material and social resources. It helps them pass to reach other opportunities and symbolises aspects of the identity of those living there (Meegan & Mitchell, 2001). Thus, four different perspectives on neighbourhoods are identified: neighbourhood as community, as context, as commodity, or as a consumption niche (Forrest & Kearns, 2001).

Socially cohesive but increasingly divided neighbourhoods may coexist in a city. Excessively strong ties within communities or groups in neighbourhoods may cause urban violence related to social, racial or religious conflicts. If there is conflict within or between strongly cohesive neighbourhoods this might impact the macro-cohesion of the city. Thus, social cohesion at the neighbourhood scale is

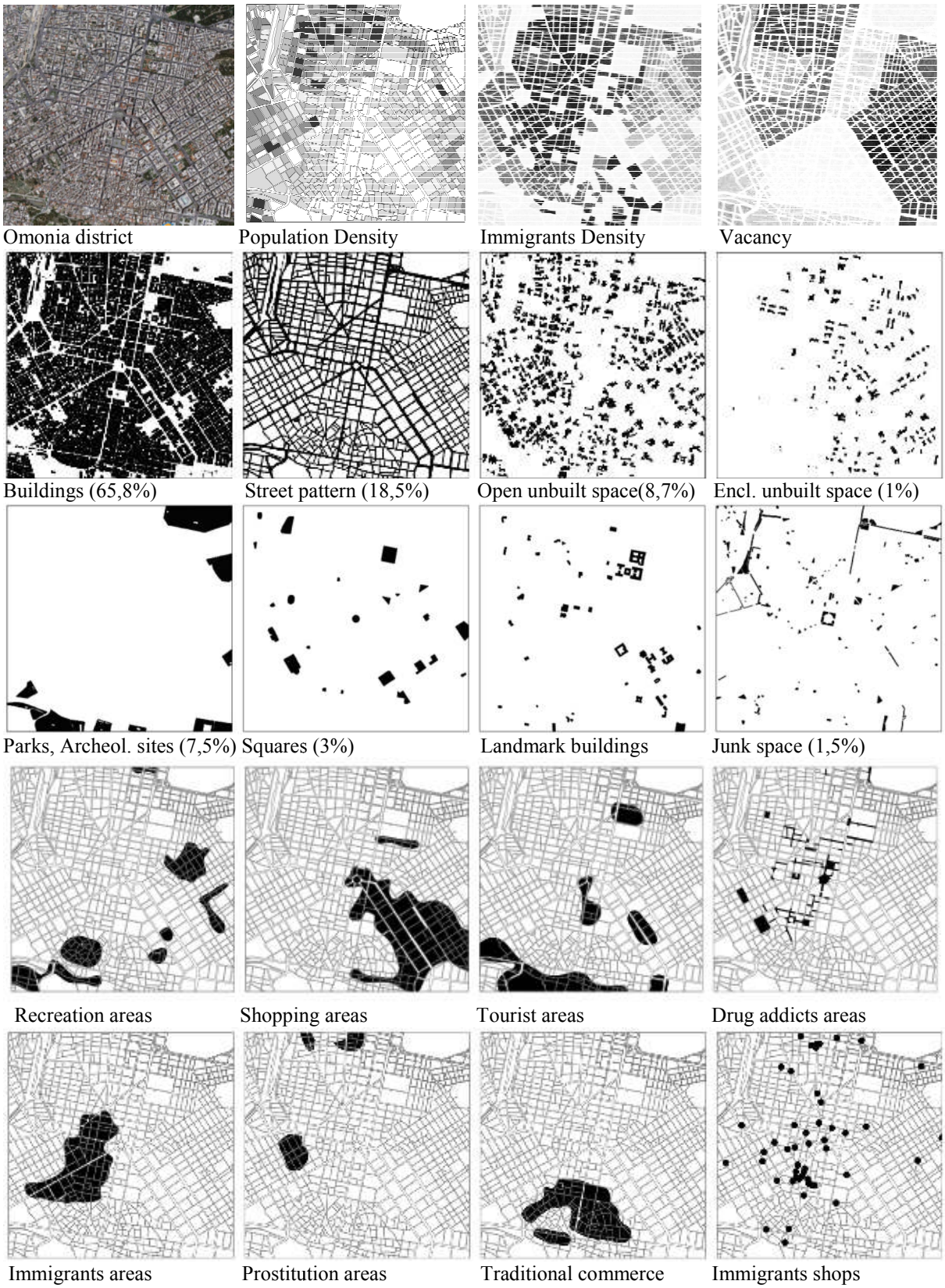


Figure 1. Land uses and activities in Omonia

not unconditionally a good thing and we should aim for a simultaneous, multilevel perspective on it. Forrest and Kearns (2001) state that the less robust and less deep-rooted neighbourhood networks are, the more stable and conflict-free the social order in which they sit may be.

*2.3 Expanding to new grounds and stakeholders of social cohesion.*

**Collective and personal responsibility.** The European model of social cohesion acknowledges the welfare state as the prime guarantor of rights and the public interest. However, urban regeneration and other services formerly provided by public domain have been outsourced. Citizen actions help find solutions and open new horizons in cases where public action is missing. The establishment of new public forums to strengthen those already in place and incorporate concerns for the general interest and for defending the well-being of all, particularly the most disadvantaged, in private action, is essential for asserting the values of social cohesion (Council of Europe, 2005).

Following the aforementioned arguments, the research expands the concept of 'responsibility' for social cohesion from stakeholders as the state and citizen organizations to individual citizens and owners. Doing that new, not publicly owned, spaces in urban fabric, are emerged as a potential social cohesion generators that belong to private and common ownership.

**Public and private space.** Importance of public space as befitting tool for social cohesion has already been established. Our study further expands this quest to the privately owned territory of city blocks. It explores the imperative to further elaborate on the privately owned space of high density urban centres that lack public space in order to achieve social cohesion. We do not withdraw from public realm. We look for opportunities that exist with the private and common ownership instead. Design interventions into the public, semi-public, semi-private and private realm are explored. Emphasis is given on both the fragmented common areas where responsibility is fuzzy letting space underused, as well as built up space, the existing apartment buildings.

*2.4 Social cohesion related criteria*

As Bollens (2006) argues, urban designers and planners should be able to work with areas such as public spaces, neighbourhoods, historic areas, housing, and other urban public facilities to promote good 'inter-group' life. He proposes (a) an urban form that is flexible and porous enough to allow for integration in urban processes (b) city planning that engage marginal groups by encouraging and facilitating participation during the planning process (c) cities that allocate sufficient opportunity for neighbourhoods to present their cultural and historical identity within urban neighbourhood and (d) a sense of 'public-ness' in public space, necessary to respond to all social and ethnic groups.

In the pursuit of socially cohesive urban environments, a high degree of **connectivity** is considered an important cross-cutting strategy. Madanipour (WUF7, 2014) suggests connection 'across' and 'within' space by loosening spatial barriers. Cooper, Fone and Chiaradia (2014) conclude in their research on which factors in the built environment facilitate, or impede, the development of social bonds, that physical connectivity or severance has a significant effect on social cohesion. Street patterns, alternative routes, numbers of intersections and dead-end streets, entrances to the area and route options are some of the urban features that impact connectivity.

A high degree of **accessibility** is also required. Neighbourhood street patterns, networks and open spaces should be designed so as to provide access using various modes of mobility. Accessibility may also refer to a neighbourhood's proximity to services and infrastructures.

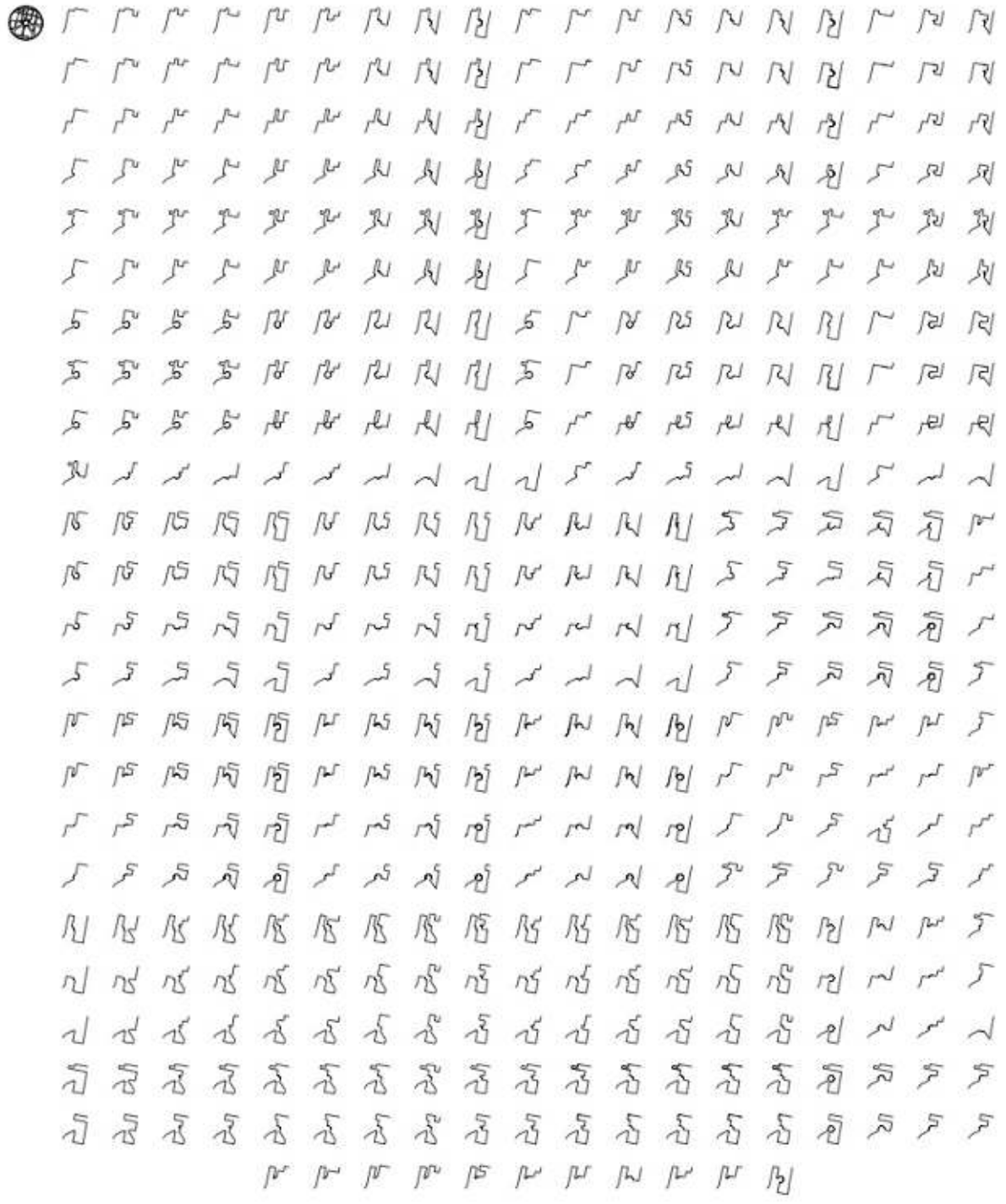

Figure 2. Alternative routes within a conceptual circle of a 200m.-radius connecting two points at a straight distance of 400m

Increasing **walkability** in a neighborhood may promote social cohesion as well. The ability to walk in a neighbourhood indicates not only a type of mobility, but also a type of sociability between neighbours. Architectural and environmental quality, land uses, street patterns, wayfinding ability, human comfort and safety are some of the features that contribute to an individual's decision to walk.

**Flexibility** should characterize master plans. Planners should allow communities and residents to develop a distinctive character of place and shape it in ways meeting local needs and changes in populations, work patterns and social life. Flexibility should include creative use of buildings and open space. Research identifies the importance of flexible and adaptable housing to provide space for families to grow without having to move away from a community where they have become established. (Woodcraft, Hackett and Caistor-Arendar, 2011)

**Social interaction** can contribute to social cohesion. Social relations provide an important source of information and social support that help us get by and cope with everyday problems (expressive social resources), while others are more useful to 'get ahead' in life (instrumental social resources) (Lin, 2001; Wellman, 1992). In order to achieve intimate social interactions the setting and aspects of the built environment should provide individuals with opportunities of contact and interaction within reasonable distance.

Spatial proximity is not a sufficient condition for social interaction (Kleinhans, 2004; Blokland, 2008). Social mixing does not necessarily result in the formation of strong relationships between different groups. However, interaction is more likely to occur between groups when different tenures are placed in close proximity to each other (Lawton, 2013). Therefore, a variety of people and **diversity** of households is considered important for creating an inclusive urban environment. **Integration** in an urban area can be achieved through a mix of housing types in order to accommodate a variety of households, ages and income groups. The role of diversity can vary, and can include the diversity of land uses, an array of architectural styles or the promotion of social and cultural diversity (Fainstein, 2005; Blokland and van Eijk, 2010).

Other authors warn that a high degree of heterogeneity may have unwanted consequences, such as coolness between neighbours (Gans, 1961; Goodchild and Cole, 2001). Even tensions may arise when diverse social and ethnic groups are mixed in close proximity. As Lees (2008) argues "socially mixed neighbourhoods are just as likely to engender social conflict as social harmony, due to the clash of different cultures, classes and socioeconomic groups". Research conducted at the building and block level shows the desire for separation of communal social space within socially-mixed apartment blocks (Uitermark, 2003). Therefore **privacy** should also be provided.

The perceived **safety** of a neighbourhood is a fundamental part of social cohesion. Safety and fear of crime are related to activities that take place in public environments (Loukaitou-Sideris, 2006). Intentional physical risk, such as violence and terrorism, or accidental, such as fall and collisions, can force people to stay indoors, therefore limiting social interaction and cohesion. Some of the claimed associations between safety and the built environment include the benefits of natural surveillance, i.e. windows directly overlooking streets, which is said to increase perceived comfort and safety. Poor condition and maintenance of the built environment are also claimed to have detrimental psychological effects on people's sense of safety.

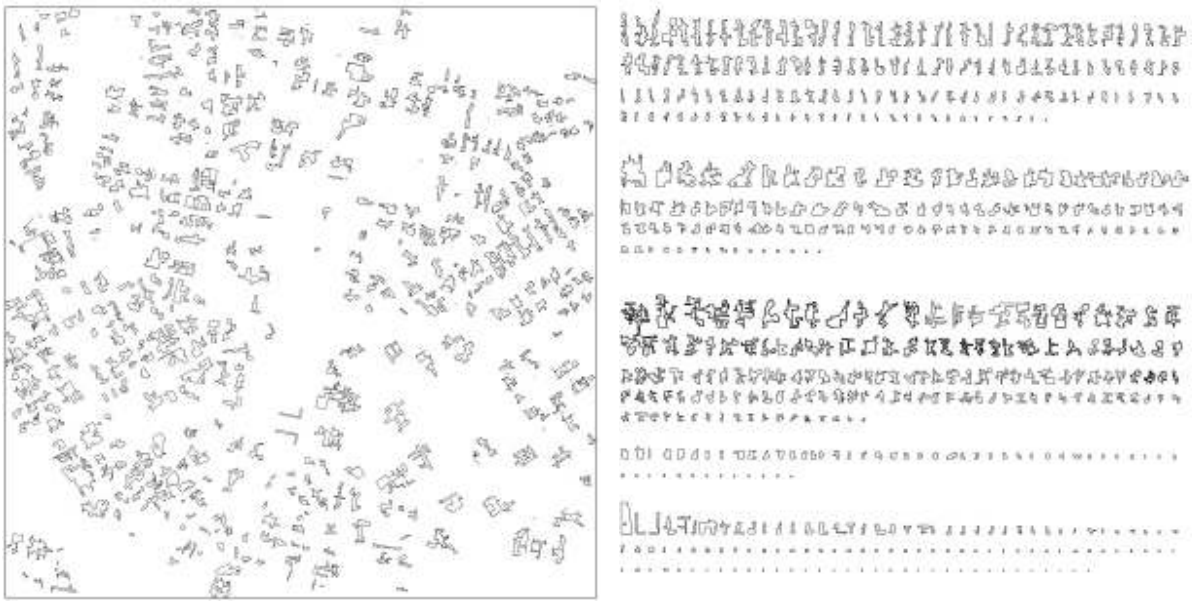

Figure 3. Location of unbuilt space in the city blocks (left) and typologies (right).

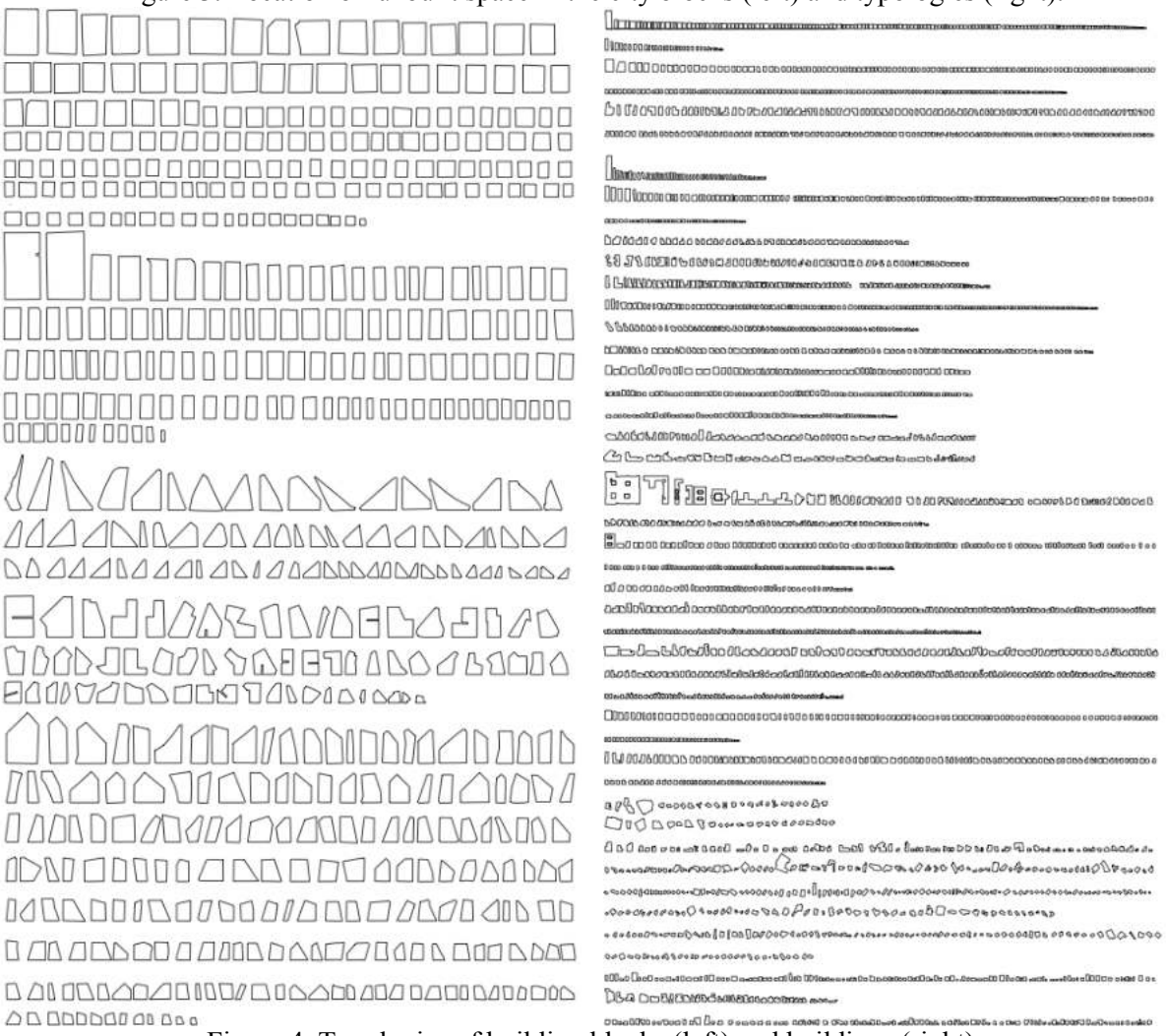

Figure 4. Typologies of building blocks (left) and buildings (right)

## 3. The case study of Omonia, Athens

*3.1 Issues of social cohesion in the examined neighbourhood*

As case study a central Athenian neighborhood, Omonia, has been chosen. The selected site has an area of 4.000.000 $m^2$ (2mx2km). Its estimated population is 40.000. A concentration of multiple land uses is observed (retail, housing, offices, recreation, hotels etc.) (Fig. 1). Around 600 building blocks are to be found within the site. Residential have been recorded in 80% of the city blocks (median average number of residents per building block is 85). Green space is only found at the periphery of the site, while public space is lacking.

Omonia was the principal square of the 1834 neo-classical city plan of Athens by Ed. Schaubert and S. Kleanthis and the intended location of the royal palace, the pole of a patte d' oie pattern opening towards the Acropolis (Tzonis and Rodi, 2013). The relocation of the palace led to a continuous transformation of the square and the neighbourhood. High population densities, building heights and FAR without supporting infrastructure led to the neighbourhood's development and subsequent dramatic downgrading. A middle class area during the 1950s and 1960s, it was abandoned by its residents. Several failed regeneration efforts were made so as to reaffirm its identity as the city's heart. The area is currently inhabited by immigrants, prostitutes, drug addicts and dealers living in very confined spaces in dilapidated buildings. The population has become diverse with no single group representing a clear majority. Omonia has become a no-man's land, with a negative and impersonal identity. The square itself is an empty square occasionally hosting waves of immigrants.

Since the early 1990s and due to its geographical position and the broader geo-political change, Athens has received large numbers of economic immigrants who have largely affected the city's socio-economic and socio-spatial structures. Following the 2009 economic crisis, increasing difficulties started when the available niches in the labour market were reduced and the average immigrant's profile changed towards that of a less educated/skilled male. (Maloutas, Souliotis, Alexandri et al, 2013). Nowadays, half of the immigrants in Greece live in broader Athens. Out of this population, 44% of lives in its central sector where inexpensive housing can be found. They count for the 19% of municipality's total population. Immigrant of diverse ethnic background live within proximity of each other and mix with Greeks who remained in the center after the 1980s and 1990s suburbanization and sprawl. This unintended social mix and spatial proximity did not eliminate social difference. Separation in terms of everyday life, consumption patterns and the use of services, along with a mix of cooperative and conflicting coexistence have marked these two and a half last decades of substantially increased ethnic diversity in Athens. Studies dating even back to the 1990s, identified areas excluding immigrants in inner Athens. However, comparative research among European metropolises, showed that there is no area in Athens that could be classified as ghetto (Maloutas, Souliotis, Alexandri et al, 2013; Arapoglou and Maloutas, 2011).

The threat of conflict or disrupted social ties also results from symbolic divisions, as well as ideological and political mediations. Lower-middle class groups feel trapped in a common destiny with immigrant populations in contrast to the upper-middle class who prospers in the fashionable and emerging suburbs. The potential threat for social cohesion is reflected in terms of deprivation and material inequality since the ethnic mix of populations living densely in Omonia, in aging rented accommodation and with deficits in public infrastructure. Too often an apartment building may host households belonging to more than three ethnic groups. The size and level of apartments signify economic and social discrimination even among the residents of a single building (Arapoglou and Maloutas, 2011).

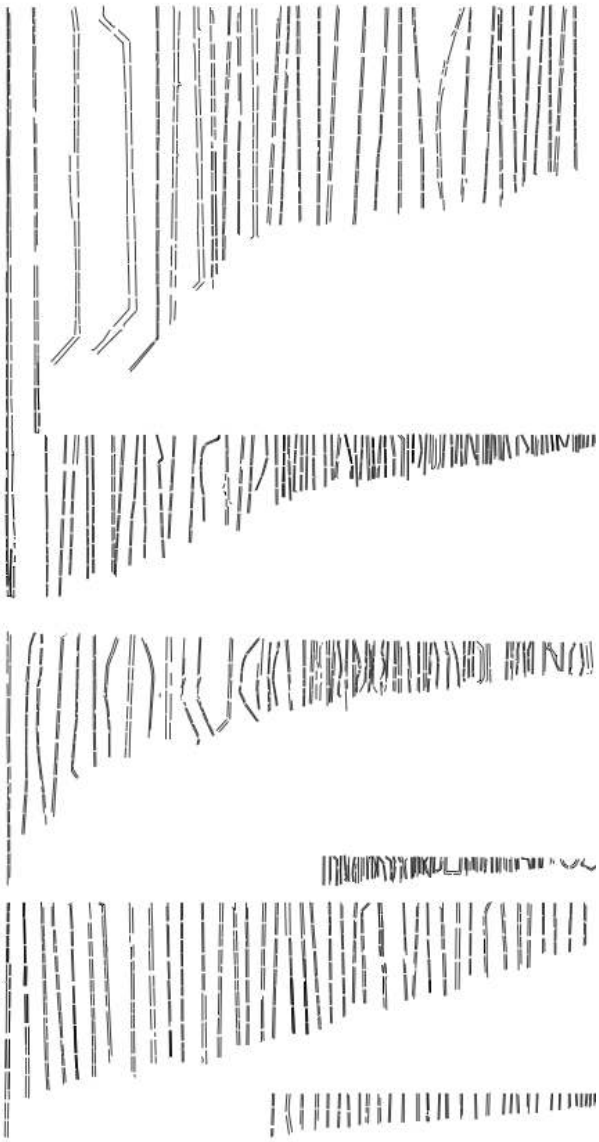

Figure 5. Typologies of streets

Figure 6. Typologies of encl. un-built space, squares, important buildings, junk spaces and green areas

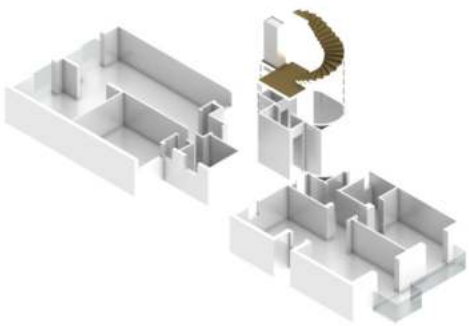

Figure 7. Division of an apartment building into two

*3.2 Dissatisfaction with the city and people.*

In a survey conducted on how citizens perceive quality of life in 79 European cities and 4 surrounding areas, Athens ranked last in most fields (European Commission, 2013). It was the only city where a majority of respondents expressed dissatisfaction with the life they lead (45%) and the place they live in. (56%).

Although safety was not an issue of importance in the majority of the cities surveyed, in Athens was seen as the most important of all. It is the only capital where the majority of respondents do not feel safe in their neighbourhood (63%) and city (81%) with an increase of 32% since 2009. As regards to immigrants, respondents in 7 out of 10 cities agreed that the presence of foreigners is good for the city. In Athens a significant majority disagree with this statement. On the question of whether foreigners are well integrated, 82% of respondents in Athens disagree. This is the highest percentage among all cities in the survey. Athens surroundings follow in rank. Respondents were asked whether they agree that most people in their city can be trusted. In 64 out of 83 cities included in this survey more than 50% of respondents agreed that people in their city can be trusted with Athens ranking last with only 18% of respondents trusting their fellow citizens.

In European cities, level of satisfaction with regards to green spaces is generally high. People in Athens show again the highest level of dissatisfaction (77%). Athens respondents also show the highest dissatisfaction among Europeans with regards to public spaces such as markets, squares and pedestrian areas. Finally, Athens ranks second before last concerning on satisfaction with the state neighbourhood streets and buildings (27%).

*3.3 A spectrum of interventions: Design action to promote social cohesion*

As already mentioned, a critical goal of *Bricolage Urbanism* is to develop new interpretations of public and private space through micro-scale interventions, and also generate new forms of urbanity addressing the integration of the individual with the collective, and the urban with the environmental. The aim is to provide maximum outcome through minimal means, and to establish a network of community partnerships to act as programme generators. *Bricolage Urbanism* moves across scales and develops a series of architectural and urban design elements that are able to satisfy inhabitants's needs.

In Omonia, we explore new and divergent ideas to invert urban decay. We identify a set of design actions for the transformation of the area into a socially cohesive urban neighbourhood. Design actions in the neighbourhood can take place in public space (squares, streets, parks etc.), but can also take place within private or common areas (internal courtyards in city blocks, entrances, roofs, apartments, etc.). Omonia lacks usable open and green spaces. Instead of demolishing parts of the urban tissue to provide new common areas, the strategy activates junk spaces in the public realm and the unused interior of city blocks that can be connected to the street. This "new common ground" functions as a framework for social and physical development, creating a porous urban fabric for the community with environmental benefits. Junk space turned to usable public space will contribute an increase in public space equal to 50 % of the current total area of city squares in the neighbourhood. Access and development of the interior open space of city blocks can contribute further increase, equal to 250% !. These new common areas could provide opportunities for social interaction between residents of different incomes and backgrounds. In this way, they may accumulate extra social capital, which is expected to have a positive impact on social inclusion and cohesion (Fig. 2, 3, 4, 5, 6)

Design actions of *Bricolage Urbanism* operate on private space and transform both city blocks and apartment buildings (Fig. 7, 8). These actions may include insertion of small-scale housing units into

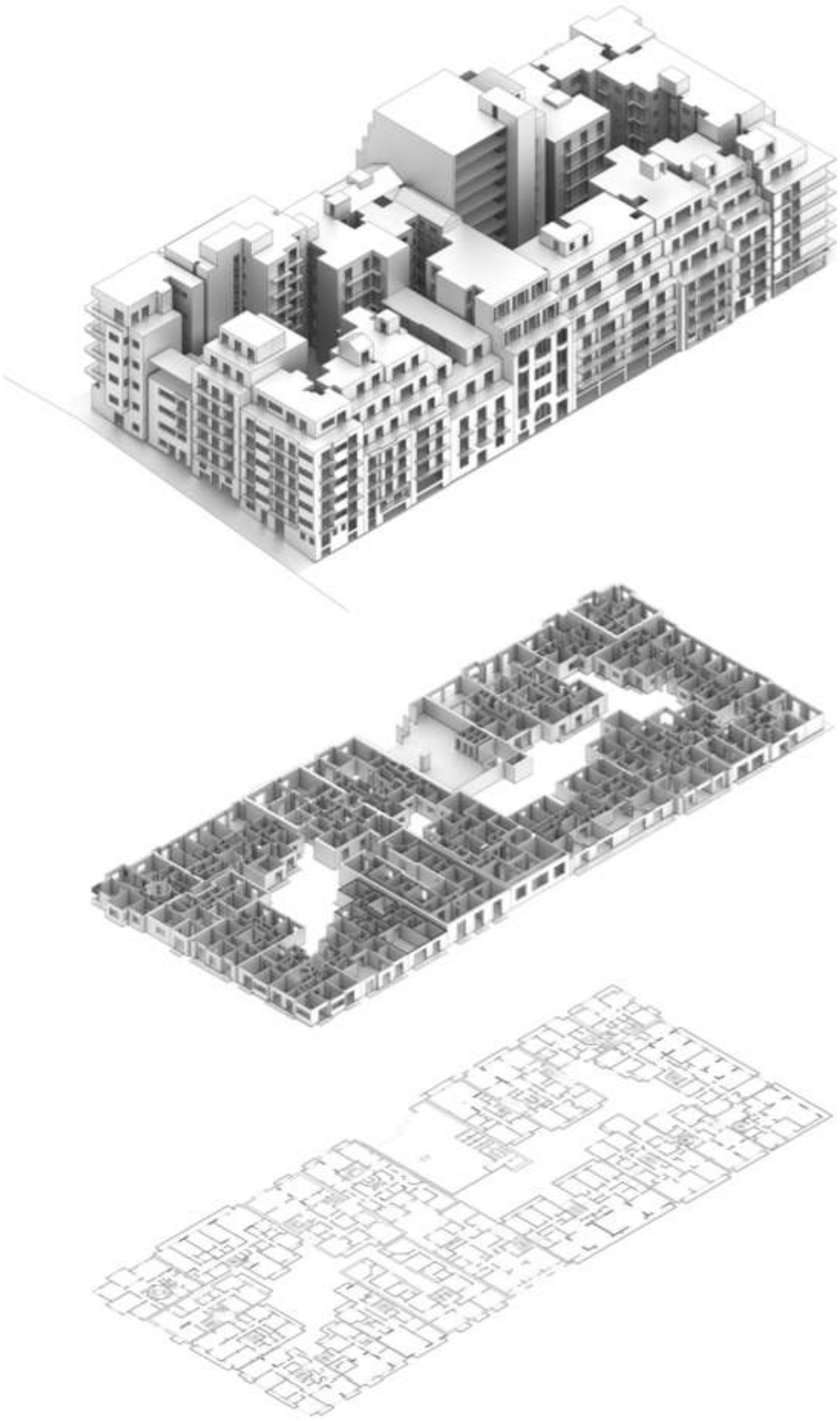

Figure 8. Typical Building Block. Exploded axonometric.showin building volume, un-built space, lightwells, typical floor, staircases

residual spaces of existing blocks, creation of green roofs, integration of planted courtyards and social spaces with cultural, recreational, educational and communal programmes in the interior of city blocks, and invigoration of vacant lots through their linking with adjacent streets and leftover spaces. New pedestrian paths consisting of open air and enclosed accesses and passageways will form networks connecting these new social spaces. As for apartment buildings, we propose transformations towards flexible and varied unit types for households in contrast to the homogeneity and repetitiveness of existing apartments. These changes will offer new facilities and infrastructure addressing a wide range of programmes and catering to a strongly diversified population.

## 4. Conclusions

Promoting and strengthening social cohesion is a principle shared by European societies. In the pursuit of socially cohesive urban neighbourhoods, people-based and place-based policies have to work together. Urban space is perceived as the arena for social cohesion. The densely populated centre of Athens, Omonia, experiences the dramatic impact of immigration and conflict. Public space is lacking and, also, underused. New strategies and patterns of use have to be introduced. Thus, in order to achieve social cohesion, the study expands its scope beyond public urban areas (streets, squares, parks etc) to the private realm (city blocks, apartment buildings, apartments, inner courtyards and roofs). The research established social cohesion related criteria and their correlation to urban form through typo-morphological features. It can inform the thought and work of planners, designers, and decision and policy makers and contribute to the critical analysis and design so as to regenerate high density neighbourhoods. However, we would like to warn against the pitfall of physical determinism that relates morphological features and social cohesion as for example, in the perception that exclusion rates are due to the existence of junk or underused space in the city blocks.

Through Bricolage Urbanism our research aims to contribute to the:

- Development of an appropriate physical setting for a heterogeneous urbanity through small-scale relational and situational urban interventions.
- Urban design process that emphasizes the importance of intervention on both public and private space to meet essential needs of local and migrant communities.
- Perception of the city as a shared space enriched with opportunities for social and cultural activites
- Intensification, reactivation and reinvention of urban space for and with the participation of local people and immigrants through the process of design and implementation of urban interventions.

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# WHAT DO CITIES REALLY NEED TO (RE)GENERATE? RE-CONCEPTUALIZING URBAN REGENERATION PRACTICES AS "GRAFTS".

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**Abstract**

*Extensive and complex dynamics are affecting urban contexts, radically altering the physical form, social relations and the use of space of the European city as we knew it. Often, both formal dis-organization and fragmentary social relationships change the perception of the "urban", particularly in the peripheries. The concept of "contemporary suburb" has different meanings; today it refers to different realities, including empty spaces, incomplete and/or unfinished places lacking identity.*
*In my view, however, these "fuzzy" spaces can lead to a return to the City, or better to a renewed concept of the urban, based on the neighbourhood as a "minimum unit" of urbanity.*
*I will start here from two considerations: 1) the lack of urban quality and of those elements able to construct identity in the city formation process; 2) a diffuse sense of "rootlessness and alienation" which is perceived much often in the new peripheries. This is part of my PhD research, dedicated to understanding which are the most important design elements able to build new urbanity, quality and identity, in contexts increasingly more fragmented and inhomogeneous.*
*In this perspective, I proposed the concept of urban "grafts" - borrowed by agronomy, to re conceptualize development in contemporary cities. "Urban grafts" include both tangible and intangible elements as source of compatible and sustainable (re)generation, able to integrate the new within a living organism, influencing the morphogenesis of the urban space, as well as the chances to improve social interactions.*

**Keywords:** Contemporary Urban Transformation and Peripheries, Neighbourhood, "Urban Grafts".

## 1. Introduction

This paper would like to propose part of my Ph.D. research about the development of the contemporary City and especially on the reconceptualization of the spatial and social dimension in the neighbourhoods. The sudden changes in the European urban context, and also the economic, social and technological transformations have led to a reconfiguration of space and time lived in cities. The contemporary urban space is increasingly characterized by complexities, changes and specialized aspects. The intensity of these changes leads to review two fundamental components of urban living: the space and the social relations.
It's necessary to find a renewed concept of the urban quality and a "sense of belonging" and local identity. What features and projects or processes can be taken to renew this?
My PhD research has been working on three keywords: the "urban grafts"; the peripheries of the contemporary city; the neighbourhood. These topics are considered key elements for a process of urban regeneration. I have introduced the concept of "urban grafts", borrowed by agronomy, to re-conceptualize development in neighbourhood and contemporary peripheries.
I submitted this paper in the track about "urban design quality and its social dimension", because I believe that it's necessary to review a model of urban development, from the size and morphology of the neighbourhood as a "minimum unit" of urbanity.

## 2. The components / elements of the contemporary city that we need to work on.

This essay examines the concept of an urban (re)generation, recovering the "concept of neighbourhood" and improving the relationship between morphology, quality and local identity.
Below I would like to express some considerations about the relationship between the lack of urban quality and a diffuse sense of "rootlessness and alienation" which is perceived much often in the new peripheries of European contemporary cities.
The research question is whether it's possible to (re)configure unfinished urban spaces and suburbs in liveable and recognizable neighbourhoods.

I want to consider the practice of "urban regeneration" as both a process and an outcome, a response to decline or degeneration. Urban regeneration is defined as << the transformation of a place showing signs of morphological, environmental, social and economic decline or, rather, as the infusion of new vitality to communities and places in decline, through long-term and sustainable improvements to the quality of local life >> (Evans, Shaw, 2004).
In this perspective, I am proposing the concept of "urban grafts" to revitalize, to renewal, as well as in agronomy, an urban place/neighbourhood and also a community.
This paper confirms, also, the concept of urban design as << an art of making places for people…it concerns the connections between people and places, processes and urban form…>>.
Moreover the features of urban design reflects the values of society, the perceptions and aesthetics of the urban environment. Thinking about quality and identity during the whole development planning process, it's the best way to promote successful and sustainable (re)generation and "place-making". If the contemporary City is considered as a "complex and self-produced" organism, it's necessary to look at all local dynamics which can condition the morphogenesis of the urban space.

### 2.1 "Urban Grafts": join together to (re)generate and to improve neighbourhoods.

Today, in the contemporary European cities, many urban transformations are oriented toward "micro" (Indovina, 2008, pp.8-9).
Local programs and regeneration projects neighbourhoods are numerous and there are careful studies of new urban transformations, but most contemporary European city have a standardized development, without recognizable features, a globalized urban context that often creates monotony or even an alienating effect for citizens.
It's, therefore, necessary to identify possible components, by me defined "urban grafts", that are able to "join" to the context for activate and improve the processes of physical and training identity, especially in the suburbs where they have never formed or were interrupted.
The use of "urban grafts" can address the urban planning, influencing the place morphology and also people interactions in the intermediate size of the neighbourhood.
In the contemporary urban space, so increasingly fragmented and chaotic, many people are looking for a "sense of identification" with the environment in which they live. Then you must also working on the concept of "community planning" for a social cohesion and vision of the City as a common resource.

The research has developed through a "qualitative" and experimental methodology. I chose to use a "place-based approach", based on the characteristics of the territory and, in contexts already consistent, you can choose an "area based approach", to recognize the local strengths or weaknesses. I also decided to use an approach "people based", referring to people who live or use the neighbourhood and addressed the active participation of citizens.

The proposed methodology is to describe, analyse and compare a series of incomplete and/or unfinished places lacking identity from the perspective of their deficiencies through the identification of grafting functions.
I have developed a matrix, a graphic representation of the relations between the different urban contexts and some characters and functions of the proposed "urban grafts".
The evaluation of certain planning practices, in Europe in recent years, as case-studies develops a number of examples that can be as models for the understanding of my research of "grafts".
The functions of the "grafts" may be multiple ( to reactivate, to correct, to organize, to regulate the development, to regenerate, to give identity…), improving the condition unsuitable.

I believe that these "grafts" have three main issues on which we can work:
- Physical Space (related to morphological characters, the structural elements and criteria of the urban)
- Socio-Economic (linked to the social, cultural, economic, and participation of local identities)
- Intangible (the expression of "a sense of community", the promotions and activations of citizenship)

The research aims to explore the main components and dynamics of the contemporary city, especially about both physical structure than identity of neighbourhood.
I'm interested to understand the capability of this "urban grafts" as an opportunity for urban transformation and to propose some conclusions with implications for planning.

## 3. Conclusion

In conclusion, in this paper, I would like to express that the contemporary European urban peripheral areas, only through "compatible and sustainable urban grafts", can go back to being quality spaces joining the ability to "city developing" and a good "community planning/building".
So the search could be continued on the analyse of the database and of some particular case of need and practices as examples, to find not an ideal model and the perfect neighbourhood or the "lost community", rather of identifying those components, can improve the grafted context and better address the urban transformation.

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# "PUBLICNESS" OF THE SEAFRONT WITHIN RECENT URBAN INEQUALITIES IN IZMIR (TURKEY)

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Keywords (maximum 3): public open space, urban inequalities, Izmir (Turkey)

## Abstract

*Based on my user survey, this research discusses how users of a main promenade/seafront in Izmir (a metropolitan city, Turkey) negotiate for this promenade's "publicness." It attempts to relate such negotiations to polarized discussions about urban public life and inequalities in Turkey, at which imaginations of Izmir play a significant role since 2000s. Izmir has a high rate of immigration since the 1990s especially with Kurdish people and other groups from Turkey's urban and rural areas. Given Izmir's Mediterranean climate, this promenade is widely used, although the activity areas are limited to a walkway. Interestingly, this promenade is attached to relatively better-off central and coastal neighbourhoods with long time dwellers but also has easy access for those neighbourhoods on the hills with middle and low income residents, including recent migrants. Yet survey results tell that this seafront is primarily used by those living in coastal and nearby neighbourhoods and has evolved mostly as "a kind of communal" public space of a "decent district"—Goztepe, which is known as representing the "modern" life style. Surveys are analysed to see whether and to what degree the users negotiate the "publicness" of this seafront, given the users' socio-economic and demographic characteristics, habits of using urban public spaces, the quality of their neighbourhood life and the physical conditions of users' dwelling. The results suggest that especially the site design favours middle-age working people over older people, children, women, teenagers and those who want to socialize.*

## 1. Introduction

Economic shifts taking place in the late 20th Century have changed and accelerated the discussions about public space as part of political sphere and of built space. Although most of these discussions of public sphere and urban public spaces have evolved as isolated from each other, we must consider them together (Blomley, 2001; Schmidt & Nemeth, 2010). An examination of "publicness" with a consideration of access, agent/control, and interest (Benn & Gaus, 1983), for instance, cannot be separated from the examination of conditions for political participation. Compartmentalizing such examinations leaves urban designers, planners and others dealing with the improvement of built environment in an apolitical position with limited tools of implementation.

This paper is driven from two arguments: First, any analysis and design implementation of urban public spaces should relate to the issues of urban justice and equity. Here *ideally* public spaces are taken as "open" or "accessible" parts of the built environment for all people with different socio-economic and demographic characteristics. They are necessary for providing communication and socializing opportunities for their users and thus, for improving social ties and sense of comfort and safety in the society (Burgess et al., 1988; Boone et al., 2009; Howard et al., 2002; Madanipour, 1999). Also, such opportunities for meeting with those different from the "self" and for representing of identities with differences within community and society can give the individuals and groups a ground for claiming to be a part of "the publics." Thus, for the continuity of public life and public sphere, public spaces as actual built environment are necessary (Mitchell, 1995; Mitchell & Staeheli 2005). Besides, those spaces containing and/or relating to natural environment and advantageous climatic conditions also add to the users' health.

Given these benefits, especially public open spaces should be considered as a part of "*environmental amenities"* (Boone et al., 2009**)**. Similar to the distance from "environmental disamenities," being/living in close proximity to environmental amenities are necessary for individuals' health and life quality. Similarly, public open spaces should be taken as public service areas (usually) developed by public resources. Thus, the distribution of public spaces in the city and their design should be considered as the distribution of opportunities for getting access to public services and resources (Byrne & Wolch 2009; Talen & Anselin 2001; Talen 2001; Wolch et al., 2005).

However, access to the environmental amenities and public service areas is not "equitably" available for all neighbourhoods and city dwellers, which is a serious planning and design problem (Boone et al., 2009; Sister et al., 2010; Heynen, 2006; Swyngedouw & Heynen 2003). Similarly, access to and design of some public spaces might favour certain advantaged social groups over others or disfavour the disadvantaged groups further, and thus, cause or perpetuate urban inequalities (Harvey 1973; Sister et al. 2010; Wolch et al. 2005). Consequently, analysis, planning and designing of public spaces must be part of the discussions about urban and environmental justice, especially within the neoliberal context of urban policies that encourage the development of public spaces as consumption spaces and even discourage their uses as spaces for public representation (Low & Smith, 2013; Mitchell, 1995; 2003).

The second argument tells that any analysis of urban public space should take these built spaces as part of multiple spatial relations. Here, plan and design and use of public spaces are mediated by the interplays of multiple contexts of individuals, communities, places and cities—that is, by users' position in the webs of socio-economic, political and spatial relations and also by these built spaces' macro contexts defined by the state, civil society and the market. Everyday practices in and for public spaces should be taken as the spatialized power relations reified and unfolded through the local practices in these built spaces.

## 2. Study Context and Site

Izmir is the third biggest metropolitan city of Turkey with 4 million people within its provincial boundaries (Figure 1 & 2). To understand the "publicness" of a public open space in Izmir, it is necessary to outline how public discourses and public life in Izmir have been shaped by the economic changes and political context of the country including the urbanization trends based on immigration and polarized and defensive camps between "modern versus Islamic" "dominant-way-of-life."

In the 1980s, Turkey shifted towards liberal economic policies relying on international market forces, following a military *coup*. The gross national product (GNP) per capita doubled between 1980 & 1998 and then continued to increase with a smaller rate, facing with economic crises in 2001 and in 2008 (TUIK, 2014). However, the disproportionate share of the national income between different income groups and urban inequalities has got worse. Besides the redistribution and agricultural policies of its neoliberal government, Turkey has its own conditions that have worsened such inequalities. Turkey has always an urbanization trend supported mostly by immigration to cities, especially with the first peak in 1960s-1970s along with the mechanization of agriculture and labour-intensive industrial production. The state then had relative tolerance of the illegal housing areas mostly by rural migrants, which provided the migrants with upward mobility and ability to escape poverty and exclusion. This tolerance and migrants' coping mechanisms disappeared after the mid-1980s, because urban land has become a primary source of rent for the private sector and the number of "urban transformation projects" and of laws and regulations supporting such projects has increased tremendously (Ataöv & Eraydın, 2011). In the 1990s, the rate of immigration especially from the east regions to western metropolitan cities (primarily, Istanbul, Ankara and Izmir) was the highest, along with new agricultural policies and the armed conflict between PKK (Kurdistan Workers Party) and Turkish State forces on the east and southeast of the country.

Meanwhile, after the 1980s, there was a considerable growth of civic associations including Islamic ones[1]. Next to global forces and influences, the Islamist groups' increasing power in party politics and civil society since the 1990s has made the discussions about multiple identities more intense and even polarized and defensive. Especially in the 2000s, the debates about "the Turkish national identity" got intense. The Turkish national identity was established during the early Republican Era of Turkey (1923-1945) along with various westernized "modernization" and "nation building" projects, which was realized by suppressing various identities based on ethnicity, religion and other characteristics (Keyman, 200?). Questioning of this ideology has been supported by the government held by the Justice and Development Party (AKP) that has an origin on the Islamic right and now "a representative of the new liberal-conservative trend in politics" (Tosun &Tosun, 2008) and has won the national elections since the 2000s, following the Islamist parties winning of municipal elections for metropolitan cities of Istanbul and Ankara and others (except Izmir) in the 1990s. Turkey has had on-going tensioned discussions and practices about secularism and "modernization versus Islam" as "the dominant-way" of life and of the state-operating.

Figure 1 & 2: Turkey and Izmir.

Interestingly, within this political context, certain metropolitan cities in Turkey (namely, Istanbul, Ankara, Izmir and Diyarbakır) got certain symbolic but also politicized images. *Istanbul* and *Ankara* had rivalry and conflicting symbols when building the modern Turkish national identity. Istanbul was the old capital and the most affluent city of Ottoman Empire with a multicultural but traditional (non-western) life to be left behind by the establishment of Turkish Republic. Ankara was the capital of new and young Republic built upon a "modern" and "national" identity (Tekeli 2000, cited by Erkip 2006). This conflict is softened (even disappeared ) since the 2000s with the increasing economic investments of both central and local governments held by AKP to Istanbul as the main city open to international economic links and to Ankara as the capital city with major governmental institutions. Within this context, however, *Diyarbakır* and *Izmir* have emerged with strong symbolized and politicized positions. Izmir has been the representative and protective of the Turkish national identity and "the dominant-way" of life and of the state operating, whereas Diyarbakır has been the "fortress" of Kurdish identity. Such images have been supported mostly through the media and politicians at both right and left-wing, although the municipalities in Izmir have been held by the leftist/ social democrat parties only since the late-1990s.

[1] Some has accepted this growth as a sign for the "emergence' of civil society and "new citizenship" in Turkey with the history of the dominant patrimonial state and "de-politicization" by the military coup of 1980 (Wedel, 1997) or as part of the 1970s' associative movement (Hersant & Toumarkine, 2005:7) that influenced by new international agreements in the post-1990s including the European Union for which Turkey has as a long-standing candidacy for membership.

Now two contrasting views about Izmir, a "fortress" of the Republican ideas with its "modern" dominant-way-of-life *versus* Izmir as the racist-fascist city, has been circulated especially by media and politicians. On the one hand, given that Izmir is also known with its *past* cosmopolitan identity (with its "enlightened," "civilized," "democratic" and "modern" urban life style and "educated" or "civic minded" locals) mostly for being a trade port between 18th-20th century and that Izmir had street protests against AKP-government's policies, it is fair to say that most people of Izmir (Izmirli) are proud of their city's identity as a fortress of "modern" life style defined usually according to urban middle class notions and to "the Turkish State as a secular social welfare state shaped by loyalty to Atatürk and his secularism" (Ataöv & Eraydın, 2011, pp.99). On the other hand, Izmir and the cities in West Anatolia (the hinterland of Izmir then) have had reactions to the threats to the Early Republican ideas about Turkish National identity (*mostly by Islamic trends*) and rising reactions against the Kurdish nationalism.

However, such polarized discourses in Turkey and about Izmir are shaped mainly by the declining economic and political power of Izmir with its hinterland after 1980s, in contrast to other metropolitan cities. Similarly, the local reactions might relate to nostalgia for those days with the economic power of Izmir (Yıldırım & Haspolat, 2010). Izmir has been a port city organizing its hinterland based on agriculture and mining since the 18th Century and also a banking centre of the Ottoman Empire until the early 20th century. During the late-20th Century, given its economic power with tourism sector and mild Mediterranean climate, Izmir attracted high rates of immigration originated in other parts of Turkey and also abroad, but also has lost its economic importance as port city similar to other port cities in the neoliberal era. Its share of GNP has decreased 10% since the early-2000s and also political power in Turkey's governance, in contrast to Istanbul and its nearby cities and also Ankara with its region with higher share of public investments and GNP (*add numbers*). Known with its rates of education level higher than national averages (26% and 14%), the city has an increasing unemployment rate after the economic crisis in 2008 especially by those with higher education level over the national averages (respectively, 44% and 39%) (TUIK, 2014). Its hinterland had loss of property in agriculture, whereas it also attracted immigrants from other rural parts of Turkey especially with Kurdish descents.

## 2.1. Study Site

Within the city of Izmir, there are spatialized differences shaped by various socio-economic and historical factors. At the end of the 19th Century, the city had two main settlements—Karsıyaka and Izmir (today's Goztepe district, where our study site is located). After 1950s with rapid urbanization rate supported by immigration rate, the city grew up along the bay area where these two settlements became central and coastal districts. Today a high percentage of city population live around Izmir Bay Area that is surrounded by hills beginning to rise suddenly after the seashore. Major urban public spaces (i.e., public squares and seafront with concrete promenades built on filled areas after 1980s, and also some major shopping malls) are located generally in coastal districts (Figure 3—to be added later).

Including Goztepe district, central and coastal neighbourhoods in Izmir are known as better-off districts where also social democrat parties got the majority of votes—regardless of whether people are there with social democrat ideology or the liberal, educated, middle-class, centre-right vision. In contrast, in 2002 and 2007 elections, AKP was strongest at the neighbourhoods away from the coast and at the outskirts of the city (Tosun & Tosun, 2008). The promenade, the study site along the seafront, is located in one of these old city district—Goztepe district, known with its middle- and upper-class locals born-and-raised here or with long residency and also place-ties with property ownership. Locals of Goztepe and Karsiyaka have claims that their district has been the major site for emergence and continuity of the public life style that "has made this city the City of Izmir" and people there "*Izmirli*s"—here the **"***urbanites*," rather than necessarily local dwellers, of Izmir (Senol, 2015; work-in-progress).

The section of the seafront chosen for this study is highly used especially in the evening hours during hot summer days of Izmir. Overall, the seafront extends for around 5 km. from a ferryboat pier to the city centre along (see Image 1). The study site is the part with the only pier until the city centre. As the seafront is separated from residential areas by a major road, the main entrance to the study site is through a pedestrian bridge. From the vehicular road to the sea, the seafront has a green surface (ca. 2 m.), a bicycle road (ca. 1.5 m.), a walkway (ca. 4m.) and concrete wall/sitting areas (Figure 4 & 5).

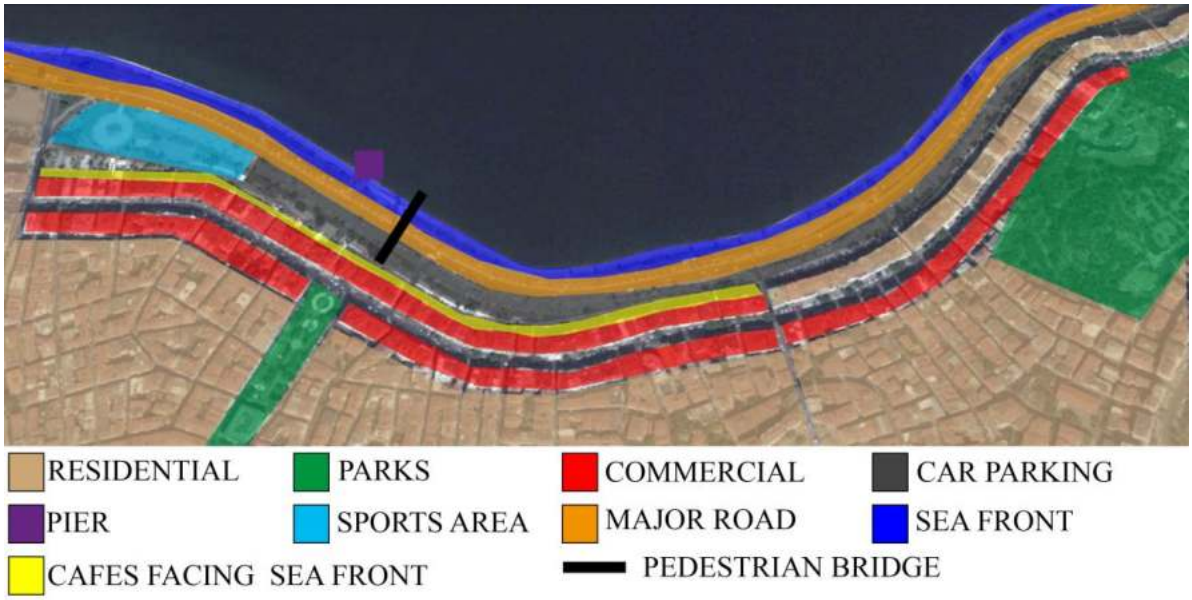


Figure 4: The study site (seafront) and its nearby surrounding.

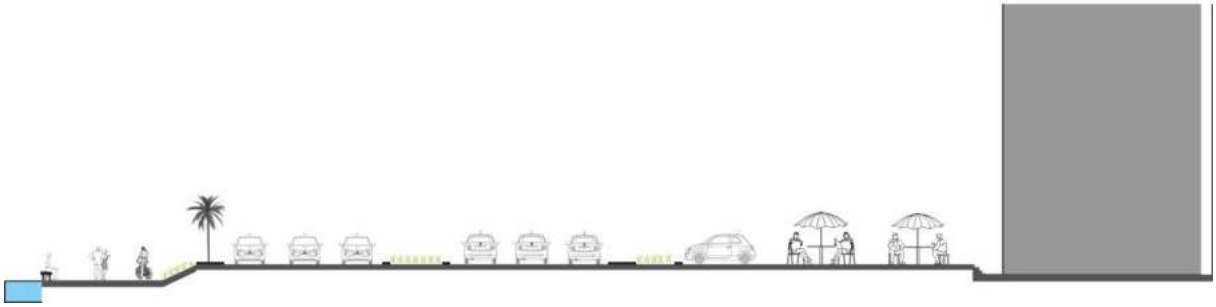

Figure 5: Cross-section of the seafront and its nearby surrounding (from left to right: sea, seafront, major road, car parking and cafes, buildings)

## 3. Study Methods, Analysis and Findings

To gather the main data for this study, I conducted a user survey (251 respondents) on the study site between 7.30—10.00pm on 3 days per week (including Saturday or Sunday) from mid-June to mid-September and. The themes of survey questions were about the respondent's **1)** use (frequency, density and kinds) of the seafront and nearby areas, **2)** socio-economic and demographic characteristics, **3)** perception of comfort and safety on the site, **4)** perception and habits of using public spaces in Izmir and also in their neighbourhood, and **5)** characteristics of their dwelling and household. To analyse the survey data, besides the descriptive analysis, we deployed regression model using the Ordinary Least Squares technique. The number of observations (N) is 251 respondents. The data gathered under Theme 1 above was the dependent variable (Y), whereas the Themes 2, 3, 4 and 5 constituted the independent variables (X).

In order to understand the determinant of Y, we refer to the following regression model: $Yi = \alpha + \beta 1\, X1\, i + \beta 2\, X2\, i + \beta 3\, X3\, i + ei$

> *i*: 1, 2….., 251 (the index notation for the individuals participated in the survey) and *e*: error terms which are assumed to follow a normally, identically and independently distributed residuals.

When evaluating the results of the regression analysis, this study underlines the variables (X) that has a positive/negative and significant coefficient at 5% significance level which actually means that for the respondents that have higher X1, we observe higher Y.

### 3.1. Profiles of the Respondents

Overall, according to their socio-economic characteristics, there appear two main groups. Of total 251 respondents, the first group is early-middle-age, working and married people. The second group is either young usually university students or upper-middle age and non-working people. Of all respondents, the majority holds or pursues university degrees (60.5% compared to 26% of Izmir) and is Izmir's "locals" who are born-and-raised or living here for more than 25 years, whereas a third has been in Izmir since the 1990s. Also, the majority lives in households with a medium[2] or upper income level and usually 2-3 breadwinners, except nearly one third with below-medium-level and with one or none breadwinner.

These characteristics can be detailed among female and male respondents, which would suggest various user profiles on the site (see Table 1). Accordingly, the majority of both male and female respondents are in the age groups of 26-45 (respectively, 76 out of 132 and 65 out of 119), usually with a paid-job, a university degree and a household with upper income level with at least 2 breadwinners. Yet the percentage with university degrees is higher for women. Relatively older men here are married with kids and the younger ones live in households usually with 3 breadwinners—*probably* with parents. Women in these age groups have different marital status but usually no kids. The largest share of women here (43 out of 65) is younger (25-35 years old), of which two third is single. Of the men in this group, nearly a half is born & raised here and a quarter is relatively newcomer to city with a residency of 5-15 years. In contrast, nearly half of these women have been here between 5-15 years.

Among female respondents, those with upper-middle ages (here, 45+) compose the second largest group (37 out of 119). They are usually housewives some of whom have university degrees and are married or widows older than 55. As the age among them increases, their household income generally decreases from upper- to below-levels. Interestingly, the majority of male respondents with the age of 46 and over (31 out of 132), usually with secondary school degrees, have no paid-job (probably retired and/or have income as landlords). They have *usually* one breadwinner in their households with a medium income level, except a quarter with upper-income level. Both groups have been in Izmir more than 25 years.

Those between the age of 18-25 of both female (17 out of 119) and male (25 out of 132) respondents have or pursue university degrees and are not working, single and living in households with three breadwinners and medium or upper income levels. More than half of this group have been in Izmir between 15-25 years, thus, come to Izmir as a child after 1990s.

### 3.2. How They Use the Seafront

Most of the respondents (57% of all) are the frequent users of the seafront with the visits daily or for a couple of times weekly, whereas a quarter visits a couple of times per month. At the seafront, the

[2] This study considered the household income level between 2501-3500 Turkish Lira as "medium".

majority of respondents stay for 1-2 hours (48%) or 4-5 hours (35%) majorly in the evening and early-night hours. They mainly exercise and walk/stroll and then rest/sit. Given the site's physical elements, the mostly used parts of seafront are walkways, and then seashore with sitting and less so the green surfaces and benches.

The results of the regression analysis suggest certain socio-economic characteristics, general habits of using urban public spaces and also neighbourhood characteristics have a statistically significant coefficient. Accordingly, it is no surprise that mostly the **frequent-users of urban public spaces** (i.e., open spaces or malls) come to the seafront often and also stay here longer (i.e., from 4-5 hrs to 1-2 hrs) than those less frequent users of public spaces. Interestingly, more **working people** use the seafront more often. Also, they use the seafront mostly for walking, strolling and exercising. The less frequent users are those without any paid-job (retirees, housewives and students); they usually sit and rest and meet somebody on the seafront.

There appear also **gender differences** in the use of this site. Mostly those with child care responsibilities at home use majorly green areas and also the walkway. 22% of respondents have childcare responsibilities. Mostly this group of respondents come to the site with a company. Yet other results make this gendered difference of site use interesting: More **women** tend to not-use green areas but use mostly walkways. In contrast, **men** mostly use the sitting areas including the green areas. Also, women stay here for shorter period (from 20-30 min. to 1-2 hrs), whereas men stay for longer period from 1-2 hours to 4-5 hours.

Given the physical setting of the seafront designed majorly with continuing stripes of green surface, bicycle paths and walkway and then concrete wall with sitting areas next to the sea, it is easy to understand how mainly active uses are performed here. This might also explain why the age groups of respondents concentrated at the age groups of 26-45—the group with a high percentage of working people—is highly represented among the respondents.

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Another significant finding relates to the respondents' use and perception of **public spaces in their neighbourhood**. Overall, in their neighbourhood, only less than a half of respondents have either a park, cafes, access to seafront or most of these places "*that they can use*." Of all respondents, most consider the quality of these places "average" (44%) or "good" (40%), but only 12% thinks that number of such places in their neighbourhood is enough. Similarly, more than a half (63.7 %) have neighbourhood parks in walking distance to their home, but only 26.3 % of all respondents use these parks. Asked about the reasons for not using these parks, non-users (37.5%) majorly underlined uncomfortable physical (e.g., park design only for kids) (12.1%) and social conditions (e.g, teenagers bothering them) (4.9%) or their dislike (7.7%) of these parks and/or their preference of using the seafront with wider horizon and size.

Interestingly, the regression analysis suggests that mostly the respondents with public places or cafes in their neighbourhood visit the seafront more often. Also, when choosing the activity areas on the site, understandably more respondents without any public places "that they can use" in their neighbourhood and also interestingly, more of those with a neighbourhood park nearby their home **use the green areas** at the seafront. These findings suggest that the presence of public areas in their neighbourhood does not guarantee the respondents' use or like of these places or none-use of other public spaces. Also, the purposes of using neighbourhood spaces might be different from using this relatively larger space next to sea with chances of meeting people other than their neighbours.

### 3.3. Sense of Comfort and Safety on the Site

Respondents' perception of comfort and safety of the seafront constitute other set of findings here. Overall, more than a half has been living in Izmir more than 25 years (65.4%), whereas 20% is here for less than 15 years. Nearly all respondents think that Izmir is a comfortable and safe city and has urban public spaces with a quality at average (41%) or above average (47%). More than a half of respondents (59%) goes primarily to open public spaces for relaxing in quiet and fresh air and for

exercising. The rest visits mainly shopping malls for shopping, entertainment and socialization with friends. Of all, a high percentage (73.7%) visit public spaces with a company—usually with a friend, then a family member or both.

*Sense of Comfort*: Of this seafront, most respondents (except a third) think as comfortable. A common emphasis is especially about positive aspects of the site location next to the sea and its size with wide space that gives the sense of relaxation and comfort. However, when asked specifically about the design, uses/activities and users of the seafront, slightly more than a half of them complained about mainly **the physical conditions** and less so **social conditions** there. Nearly all the negative aspects of physical conditions are related to practices of design (including the uses and activities) and the lack of climate-sensitive design of the seafront as a public space. These include mainly keeping the uses for bicycling, jogging and fishing on the same (narrow) site with relatively few sitting areas and without any protection from sun and the wind, and disturbance of traffic on the major road.

Complaints about the social environment of the site appeared much less than its appreciation, respectively 3% and 10%. Majority of complaints here relate to the users' attitudes (rather than socio-economic and demographic characters*)*—such as not keeping the area clean, dog fouling, those fishing on the site with long fishing rod,"some men" public drinking "next to the families/kids"). However, interestingly, the appreciation of social environment/ users talks mostly about how "people here are decent" and/or the "district is decent" and the site has people "like a family," pointing out Goztepe District. Also, interestingly when asked about which neighbourhood they live, the majority of respondents give the name of neighbourhoods attached to the seafront (Figure 6—to be added later). Majority lives in the neighbourhoods at the edge of the seafront, followed by those in walking distance around 15-20 minutes. Of the respondents, 90% come to the seafront on foot. Most of them (50%) walk here for 5-10 minute, and others (35%) for 10-20 minutes or for 20-30 minutes (10%).

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The regression analysis shows who (un)comfortable is with the conditions of the site. As such details might have more explaining power for urban design and planning, here we emphasize mostly characteristics of those respondents **uncomfortable** with certain aspects of the site. Primarily, the **older age groups** think of the seafront uncomfortable with its physical design. As mentioned earlier, the percentage of non-working population is higher for the age groups above 45, whereas mostly non-working respondents use the area for sitting, resting and meeting people.

Meanwhile, respondents' habits of using urban public spaces in general impact significantly the perception of comfort level on this site. The **frequent users of** urban public spaces and those who use urban public spaces for socialization take this site uncomfortable due to its urban design. Similarly, using urban public spaces with or without a company seems to affect the perception of comfort here. Overall, a third of the respondents visit other urban public spaces and also this seafront usually alone, while the rest come here mainly with a friend or then a family member. Regression analysis suggests that those visiting urban public spaces **with friends** consider the uses/ activities on this seafront uncomfortable. Also, those coming here **with family members** (kids…??) are not happy about the site design due to its lack of protection against climatic factors (e.g., wind, sun, rain and waves). Those who use urban public spaces **alone** are not comfortable about the site design and especially about the user profile here. When we examine to see who comes here alone, we can see that as the respondents' education and also age level increases, their tendency to come to the site alone increases.

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Nearly all respondents come to the seafront on foot, where most of them live in the neighbourhoods attached to the seafront or nearby neighbourhoods relatively with longer walking distance, detailed above (Figure 6). Thus, for most, this seafront might be imagined as part of their district/ neighbourhood. When examining the relationship between respondents' perception of comfort level of the site and of their neighbourhood characteristics, such close geographical and social proximities should be kept in mind.

According to the regression analysis, mostly the respondents living in neighbourhoods attached to the seafront (i.e., 5-10 min. walking distance) (4? %) are not happy about the uncomfortable design and

lack of protection from climatic factors at the seafront. However, more of those coming to the seafront on foot (90%) find the site's climatic comfort well. How to explain this? An explanation might relate simply to the relatively big differences among the senses of climate factors at neighbourhoods. Those living relatively far from the site (and thus, from open and wide space with sea breeze) might be comfortable at the seafront as that might be providing with climatic factors different from their neighbourhood spaces. Meanwhile, mostly the perception that their neighbourhood provides "good" living quality seem to impact the respondents' perception of the seafront as comfortable with its design and climate conditions but uncomfortable with its uses and activities.

*Sense of Safety:* More than a half of all respondents think that the site overall does not have safety concerns. When asked details, 131 out of 251 respondents detailed where and why are (un)safe along the seafront. Given the size of the area, the majority detailed that the crowded and well illuminated areas (usually concentrated around the cafes, elevated pedestrian bridge and the pier) are much safer (Image 3). Of respondents, 10% emphasized that the site is safe because people here are and the district/ neighbourhoods here are "good"/"decent." Similarly, for the unsafe areas on the site, 39% of 131 respondents pointed out the isolated areas with a few people and dark/without enough illumination, which extends at the both ends of the crowded area with pedestrian bridge and the pier. Also, nearly a half of respondents pointed two districts (Üçkuyular and KonaK-city centre) located at the both end of this promenade as too crowded with too many "different unknown" characters as unsafe areas.

The regression analysis tells that the habits of using other public spaces in the city affect significantly the respondents' sense of safety in this seafront but along with differences in the kind of habits and also in their emphasis of physical or social conditions of the site. Most of those going majorly to the malls especially for the purpose of socialization have a strong sense of safety in crowded areas (such as cafes) of the seafront. Yet for those visiting mostly open spaces and all public spaces for relaxation, the open areas at seafront are safer. Meanwhile, mostly those visiting urban public spaces with a company tend to find this seafront "safe because the district is decent," "people are nice/safe here" or "here is crowded," but unsafe due to the lack of design elements such as illumination and lack of activities that lead to isolated places especially at night time. In contrast, those enjoying urban public spaces in general alone find the site safe because of "its quietness" and "well-illuminated places" and unsafe because of user—characteristics -attitudes and certain places with a crowd of "too mixed of characters." Meanwhile, as the education level and also the age of respondents goes up, so does their tendency to come to the site alone.

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The survey also checked the respondents' sense of safety in this site by asking the question of "*whether it is safe for a man (or woman) to use the site alone*", a few said "unsafe" with a higher percentage for a woman alone than man (10,8% vs. 4,7%). Overall, their reasoning focused on the arguments—such as "nobody would bother anybody here" and "nothing bad happen, as it is crowded/well-illuminated"—which had a higher percentage for the question about woman's than man's safety (63,4 % vs. 59,5%) . Interestingly, also the presence of police power is given as a major response (17.3 %) but only for the woman's safety.

The results of the regression analysis tells that mostly those using public spaces for socialization say that "man alone" can use this space safely. Yet interestingly, with a lower significance, mostly those with a habit of using urban public spaces alone find this site for a woman alone, but not those who visit public spaces with a company. When giving reasons for why this site is safe, the responses change for the cases of "a woman or man alone." Mostly those visiting public spaces with a company and (with a lower significance) mostly female respondents say that the site is safe for a man alone mostly because "*man can defend himself*," "*there is police*" and "*because he is a man*." Male respondents mostly give reasons such as "*nobody would bother him*" and "*it is crowded and well-illuminated*." To explain why woman alone on the site is safe, mostly the respondents with higher household income level and also (with a lower significance) male respondents say that "*nobody would bother a woman"* and *"it is crowded here"* or *"she would defend herself*."

Similarly, those with lower income and also the frequent users of urban public spaces and (with a lower significance) and female respondents explain their reasons for why the area might be unsafe for a woman alone by saying that because *"she is woman"* and *"there might be some 'unsafe' people around,*" rather than "*nobody would bother him"* and *"it is crowded and well-illuminated.*"

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When asked about how to increase comfort and safety on the site, overall, more than a half of the respondents (61.2%) emphasized the need for design and planning implementations—such as well illumination, more and comfortable sitting areas with protected from wind and sun, separated bicycle-motorcycle roads and exercise areas from pedestrian walkways, places for children, measures for traffic calming on the major road next to the site. Of all, 10% emphasizes that people there need to care about the site and its uses, whereas a significant percentage (19.2%) ask for police surveillance.

The results of regression analysis suggest that most of those with longer stay in Izmir (born-and-raised or for more than 25 years) and of those who lived in another city more than 5 years believe that the site is already safe and if needed, users should solve the problems there, rather than any police or design control. Similarly, the probability of this answer emphasizing the social control to increase comfort and safety on the site is also high among those respondents whose neighbourhood has public spaces and also who live next to the site. Those with relatively shorter (less than 15 years) stay in Izmir and also most of working people argue for the need of police control, camera surveillance or urban design solutions on the site.

## 4. Evaluation and Conclusion

To be added later

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**PAPER TITLE**

**Urban Porosity Patterns for Exchange in the City: the case of Europan**

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**Abstract**

The author of this article develops an Urban Porosity Pattern Matrix through which he studies how urban design projects relate Public Agents (catalysts for public flows) with Urban Interfaces (multiscalar perimeters-edges of urban patches and enclaves), through an urban actors' filter, to envision a porous connective urban environment. In fact, the analysis focuses on the passage from the Europan ideas competition stage to that of implementation. (European Urban Design/Architecture Competition for young professionals). More precisely, the Urban Porosity Pattern Matrix establishes a reading of Europan winning projects under implementation and demonstrates through their mutation, the tolerance of the projects' actors to urban porosity. The author participated in several Europan activities regarding the concept of urban porosity: working on the actual sub-theme of the competition (member of Europan Scientific Committee), writing an article for the catalogue of Europan implementations, ("Welcome back in my back yard: an exploration of urban porosity", 2012) and animating a debate in the Europan 11 Forum of Results in May 2012 in Vienna, ("Creating Urban Fluidity through a porous urban fabric"). Through this article, he links the Europan urban design processes with the problematics in regards to Urban Design Quality and its Social Dimension, mainly how urban design could overcome the fragmentary social pressures and the withdrawal from public space.

Key words: Europan, Urban porosity, Project Actors

## 1. Introduction

In this article the author argues for the collective character of urban design practices that establish urban porosity "friendliness" among the project actors, resisting the fragmentary social pressures such as privatization and withdrawal from public spaces. Urban porosity emerges through an exchange between public flows (Public Agents) and urban patches or enclaves (bound by Urban Interfaces) (Shane, 2005). Urban porosities may have spatial manifestation however, they emerge through an "actorial" filter created by diverse actors' agendas during the formulation of urban design projects.

The author demonstrates how the Europan platform (European architectural competition for the city of young professionals), is a pertinent research area since part of its activities evolve around implicit and explicit processes of acculturation of urban actors with urban porosity agendas.

The author has developed an Urban Porosity Pattern Matrix through which he studies how urban design projects relate Public Agents (catalysateurs for public flows) with Urban Interfaces (multiscalar edges of urban patches and enclaves), through an urban actors' filter, to envision a porous connective urban environment. In fact, the analysis focuses on the passage from the Europan ideas competition stage to that of implementation.

As a matter of fact, the Urban Porosity Pattern Matrix emerged gradually through the involvement of the author in Europan activities (Stratis 2005). More precisely, he studied the process of implementation of some Europan projects to write an article on urban porosities for the Europan Implementations publication (Stratis, 2012). Plus, he co-animated a debate based on the same theme, with Pascal Amphoux (the author and Amphoux are both members of the Europan Europe Scientific Committee), in the Forum of Europan Results in Vienna, 2012.

Firstly, the author introduces, through three stories, the tension between enclaving dynamics and urban porosity practices demonstrating the challenges of urban design towards a less fragmented urban environment.

Then, the author refers to the tensions between Public Agents and Urban Interfaces that take place in the stories, yielding to either practices of enclaving or to those of "knitting" urban patchworks. By doing so, he gradually formulates the Urban Porosity Pattern Matrix.

Further on, the author justifies the relevance of the Europan context to urban porosity challenges especially, that of the transformation of public agents and interfaces during the passage from an ideas stage competition to that of implementation.

Then, the author employs the Urban Porosity Pattern Matrix to unfold some of the findings through the study of a selection of Europan winning projects during the rite from the ideas competition stage to that of implementation.

Finally, he concludes with the implications on processes of collective urban design practices and their relation to the Urban Porosity Pattern Matrix. In fact, the author addresses how the Urban

Porosity Pattern matrix could be both analytical and conceptual tool to support the urban porosity friendly nature of urban design practices.

## 2. Urban design challenges in fragmented urban environments

### 2.1 Urban design as hybrid patchwork making

Urban design lies in fact, in a crack between architecture and planning (Shane, 2005 & 2011, Sorkin, 2001). Urban Design which emerged in the 1940s and is actually gaining popularity (Mandipour, 2006) is a field which by definition has a fragmented character vis-à-vis overall planning development plans. It emerged with the realization of the impossibility to have control over entire cities because of a shift in the social, political and economic contexts. Urban design has become a legitimate tool to city authorities which have gained importance over national planning. In the case of Europe the cities have an important say in their urban transformation, (Stratis, 2012, 2014). The public sector still plays a decisive role in North European cities, contrary to the most of South European and North American ones. Even so, we are witnessing a decreasing influence of the European welfare state on city making, which may increase urban fragmentation. Opposing to the fragmented logic of projects coming out of urban design practices, Sorkin reintroduces the concept of Master Plan stressing its importance for its unifying characteristics.

Shane approaches the urban environment as *"a variety of patches, or enclaves that are interconnected by an ecology of armatures – transportation and communication networks – set in landscape and crucially complicated by a wide variety of embedded heterotopias"* (Shane, 2005, pp 14,15).

His approach aims to strengthen urban design as an emerging field of inquiry for new strategies and tactics to deal with a hybrid patchwork, (Shane, 2005, p.11). In addition, he emphasizes the urban actors' role, in activating a transformative recombinant system of urban elements. Such activation takes place by a sort of urban splicing analogous to genetic recombination, involving sorting, layering, overlapping, and combining (Shane 2005, p. 6). In fact, Shane revisits Urban Design as an agent to help the urban actors operate in a complex and recombinant world with nobody in charge of the overall system. In other words, no actor dominates.

The importance of actors in urban design has been put forward by a recombinant urbanism approach (Shane 2005), where the city is considered to be made of actions taken place by a perpetual re-alliance of all sorts of actors, (Vlay, Stratis, 2010). Shane reminds us of Kevin Lynch's theories but also those of the recombinant approach of Kriers' brothers and of the Urban Design Agency (UDA) kit-of-parts aiming to make accessible design decisions to the broader public. However, such approaches have led to the New Urbanism movement with problematic

modes of participation (Sorkin, 2001). Madanipour brings forward the multi-actor environment of urban design through his approach with three kinds of actors those of regulators, producers and users (Madanipour, 2006).

The actual challenge is to reintroduce unifying characteristics through urban design practices beyond the master plan itself. A sort of acupuncture approach seems to be more appropriate, aiming gradually in a nonlinear manner to a coherent whole by readjusting initial common visions.

### 2.2 Three stories of challenging urban design

Each of the three stories mentioned below, brings forward a different challenge for urban design regarding its posture vis-a-vis fragmentary social pressures and segregation tendencies. The stories build on the relevant urban design references, setting the grounds for the article's problematics.

The first story is about a rather isolated gated community, such as an elderly village in Orlando USA and its political influence for the new US president back in 2012. The second story is about the opening up of a ghetto area in Hooglviet, Netherlands through redefined State urban politics called WIMBY (Provoost, 2008). The third story comes from Europan itself and is about the urban dimension of new housing in Vienna, Austria. Urban connectivities are established between the housing site and the city by a complex alliance of urban actors who participate in the transgression of an ideas competition winning project to its implementation.

***Story One: beware of the intolerance incubated in isolated enclaves:*** An article in the French newspaper Le Monde back in May 15$^{th}$ 2012, was commenting on the likely decisive influence of the USA presidential elections outcome by the elderly community of the "Villages" in Orlando, USA. As a matter of fact, the Obama's policies on national health care were against the exclusive character of such gated communities, endangering the established balance of their protected lives and healthcare services. The article went on interrogating on the possibility of a third age populated enclave in Orlando to influence the whole world by tipping on one US presidential candidate over the other, blocking Obama to run for his second presidential period. We all know the outcome of this debate; however, we are aware of the increasing segregating practices supported by the neoliberal globalized economies guessing that such overturn may take place in the near future.

The spatial organization logic of the "Villages" in Orlando is based on the "New Urbanism" ideals which promote the quality of the proximity scale, human scale and mixed uses. However, the homogeneity of the "Villages" inhabitants in regards to age group and income class, transforms such urban patches into introverted enclaves, intolerant to any social changes that may affect their serenity. The neoliberal market forces zealously, promote such enclaving processes and their spatial products (Easterling, 2005) that thrive in the globalized economy. The art of

enclaving eloquently described by Banham (1971), regarding Los Angeles is upscaled to a globalized context.

The point of this story is the increasing intolerance of such enclaves' populations that eminently could affect the rest of the world with their priorities in keeping their status quo. We are witnessing a generalized NIMBY phenomenon where, what counts is not any more what goes to their back yard, but how the outside world should be changed so that their back yard stays intact.

**Story Two: Use WIMBY politics for rebranding segregated urban areas:** Hoogvliet is the name of a failed modernist housing project in the Netherlands. A spatial product of the Dutch modernist Welfare State policies, that failed to adjust to the contemporary Dutch residents' demands thus, gradually abandoned, becoming a stigmatized urban area. A State initiative promoted the urban porosity as the vehicle to reverse the stigmatized identity of Hoogvliet. WIMBY is the name of the project, in other words a "Welcome In My Back Yard" project, (Provoost, 2008). Through an acupuncture approach, an explicit welcoming of the rest of the city into the housing project site takes place, with new mobility networks, public program both for the residents and for all city inhabitants, with the ground getting reshaped to filter such flows. The engagement of the architects' community as well as that of the housing project allowed another level of connection to take place in regards to the actors involved. However, the crisis of the welfare state has hit even the Dutch door, forcing the cities' actors to rethink their actual urban design practices, such as that of master planning that generated between other things, a considerable amount of vacant housing (Rietveld R. & Rietveld E., 2014).

We keep in mind the role of the State in WIMBY politics and we should start wondering what could be alternative actors' alliances to keep up such politics in the context of a weakening State across Europe.

**Story three: Give an urban strategy to a housing project: "**Oasis 22" is the name of a recently built housing project in Vienna. It is in fact, the result of a Europan 9 competition winning project by the studio UEK. The articles in the monograph publication entitled "An urban strategy for a housing project", explicitly address the cross-scale challenge for any debate on urban connectivity. "From the very beginning the team focused on interdisciplinary methods which brought new focus of cooperation to the project". The team explicitly mentions that "by involving new actors into the project, extra ideas, like the participative activation process could pursue" (from Europan Austria website)

In fact, this project's implementation process mobilized at least fifteen different actors to assist the passage from the ideas competition to the implementation phase. The Europan collective urban design platform, a generative ideas device, has gone hand-in-hand with the Viennese welfare culture of city making, to produce a porous, well connected housing project.

The Vienna Europan project is one of many winning projects in the Europan sessions that undergo the passage from the ideas to the implementation stage. Some of them are more

successful than others. A few get built and others become master plans for future development. Most of them struggle with urban porosity challenges. The winning project teams state initially their images of the possible on porosity matters. Their projects become vehicles for re-allying urban actors around challenges of connectivity.

The question raised in regards to the third story, is as a matter of fact, the main problematic of the article: What alternative urban design practices to support such actors' alliances beyond private driven NIMBY politics and State driven WIMBY ones?

### 2.3 Cross-bordering practices for urban porosity

Considering the urban environment as a "patchwork", could the art of urban "knitting" oppose.to that of enclaving? Building on this metaphor, we could refer to Sennett who introduces two kinds of limits of the patches, where the knitting may need to take place. In his short article in the Venice Biennale of Architecture Catalogue 2006, he distinguishes the borders from the boundaries. He sees borders, on the one hand, as devices which allow infiltrations that generate all sorts of urban dynamics between parts of the contemporary city, enhancing the possibilities of coexistence. Boundaries, on the other hand, are impenetrable urban features that segregate entire areas within the city.

The porous nature of borders attributes them a paradoxical interface character since borders could both channel and block urban flows. The cross-bordering practice may have a multiscalar dimension involving a multiplicity of public agents.

We will focus on three public agents such as mobility networks, public program and that of public ground. We will examine the multiscalar dimension of cross-bordering practice at the urban interfaces of the Urban Design project perimeter, that of the urban block, that of the building perimeter and that of the housing unit, (fig 01)

The aim is to go beyond simplistic assumptions of a generalized need of physical connectivity to resist segregation and to introduce a complex association of urban porosities in physical, temporal and pragmatic contexts (Stratis 2001), demonstrating the need for collective urban design practices.

We will see further on, the pertinence of Europan to the urban porosity debate. How the objectives of this article profit from the Europan context and from the author's engagement into such European Urban Design platform from an architectural approach.

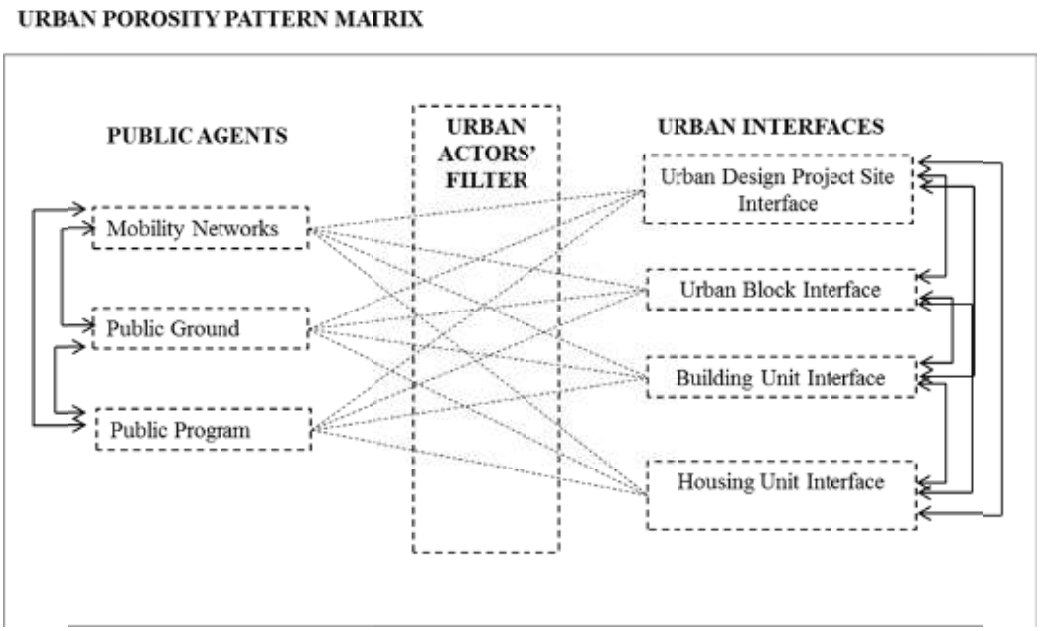


Fig 01

**3. Europan's relevance to the urban porosity debate.**

In this part, we will address the relevance of Europan to a broader aspect of urban porosity, emphasizing its passage through "actorial" filters. We will firstly introduce the reader to Europan and its activities. We will then refer to the literature produced by Europan in regards to urban porosity. Further on, we will allude to two kinds of fuzziness that make Europan even more relevant to the article's problematics.

**3.1**. **About Europan**

Europan is actually a European network of urban design competitions open to young professionals (architects, landscape architects, planners), under 40 years old. It takes place every two years approximately with 45-60 European cities participating in each session.

Looking back to the 25 years of Europan activities, we could see a diversity of agents and interfaces through which an exchange between urban actors takes place in regards to the role of architecture in the city. As a matter of fact, issues of urban porosity have been in the heart of the

Europan project both on physical and temporal contexts as well as on pragmatic ones (Stratis 2001).

It's true that the challenges for urban design have changed considerably since the 1980s when Europan emerged from the French PAN (Progressive Architectures Nouvelles). Following the winning projects over the various sessions we could as a matter of fact, witness the shift on both the definition of porosity by the teams as well as by the Europan literature itself. We could sense in fact, a similar shift like the one taking place in the architectural discourse outside Europan, that from the object oriented proposals where the built form was offered by the architects for all urban problems, to process oriented projects, where multidisciplinary teams enriched with landscape architects and planners, acknowledge the limitations of the built form vis-à-vis urban porosity challenges by employing much more sophisticated tools to address challenges of connectivity in much larger competition sites.

### 3.2. Europan's practice as part of urban porosity strategies

The practice of Europan reveals all sorts of strategies relating to patterns of urban porosity, not only with regard to the physical space of the city, but also in relation to "cross-bordering" practices amongst the actors involved. Such strategies are reflected in the winning projects and extensively described in the Europan Results and Implementation catalogues. For example, the 1999 Catalogue, "From Ideas to Realization", introduced the notion of the open block (schotsen in Dutch) in a discussion between Didier Rebois and the S333 team for the Groningen project. Further on, Chris Younès referred to the crucial role of nature in the in-between spaces of the built environment in the 2004 Catalogue "Europan 1-6 Negotiated Projects". In the Europan 10 Catalogue of Results alone, there are three articles by Bonzani, Franco and Amphoux about agents of urban porosity, such as ground treatment, building morphologies or walking practice. In addition, there is an article on actors' "cross-bordering" practices by Vlay and the author, (Vlay, Stratis, 2010).

### 3.3. Mobilizing ideas for porosity: a hybrid urban design practice between network and centralized Europan's character.

The paradoxal aspects of the pan-european urban design practice platform create a diversity of additional porosities in regards to the processes of formulation of the urban design projects.

Firstly, we are talking about its fuzziness between ideas and implementation competition. Ideas are devices that mobilize urban politics. Consequently, the innovative approaches of the winning projects reassemble the projects actors by facilitating collective visions. Their processes of implementation become platforms for negotiating potential urban connectivities, and they attribute value to the public dimension of Urban Design practice. Both, target to increase the habitat alternatives for inhabitants who may be willing to abandon the comfort of neoliberal enclaving habitats.

The second paradox lies in the simultaneous networked and centralized nature of Europan organization. Thematic concepts are introduced thanks to the Europan's centralized nature supported by a Scientific Committee. Then, those concepts are challenged through the organization's feedback network consisting of urban actors across Europe. The three forums of each session (forum of sites, of cities & juries and that of results) assure physical contact between the network members, both old ones and newcomers. Consequently, the participating urban actors find themselves quite often in unlikely associations across Europe, with cities, sites and projects inscribed in similar conditions as their project site.

We will focus on the recent Europan sessions, profiting from the Europan Forum of Results of May 2012 in Vienna where some of the sessions were devoted to the processes of the Europan winning projects' implementations. One of the sessions explicitly addressed the challenge of "creating urban fluidity through a porous urban fabric". The author wrote a relevant article for the Europan Implementations Publication (Stratis, 2012), used as food for thought for a debate he co-animated with Pascal Amphoux. The session consisted of two circles of participants. The first one included the clients and architectural teams of the Europan projects under implementation in Gembloux, Belgium and Saintes, France. The second circle consisted of sites representatives, winning teams from the following session, that of Europan 11. The winners who came to the Forum of Results to celebrate their victory, found themselves in working sessions, getting insights from colleagues of former Europan practices. In this case, the theme itself of porous urban connectivities operated as a common concern of the project actors coming from 17 cities from 10 European countries. As a matter of fact, the participants' contribution to the theme enriched the debate on the role of collective urban design practices in regards to urban porosity.

## 4. Methodological Approach

The author studies the transition from competition to implementation of 12 winning projects, located on 10 Europan sites from Europan 7 to Europan 10 in 7 countries. The study in fact, explores the tolerance of project actors involved in this transition, to urban porosity. The existing sites are mostly urban voids either enclosed between urban development and transport infrastructures (Vienna (AT), Villeurbanne (FR), Montreux (CH), Halle (DE), Dietikon (CH) or situated mostly at urban peripheries between urban land and agricultural or common land (Córdoba (ES), Isle d'Abeaux (FR), Carouge-Bachet (CH). In the case of Gembloux (BE) and Augustenborg (DK), the sites are potential interfaces between existing urban fabric and public spaces.

The author has combined several qualitative methods to study the urban porosity aspect of the selected Europan projects: a careful study of drawings, images and texts of the projects, a series of questionnaires filled-in by the winning teams and the Europan national secretariats, and participation in a debate with some of the Europan actors discussing about the same issues. The

combination of these methods reduces the risk of false observations. However, we have to admit that the very small number of sampling does not allow us to make any generalizations. Nevertheless, some important specific remarks emerged regarding the "urban porosity friendliness" of the projects' actors under study.

### 4.1 Mapping the filtering performance of urban interfaces

The first part of the study refers to the paradoxical performance of urban porosity: that of simultaneously opening-up and closing-down in regards to public flows (Public Agents). The author studied the drawings, images and texts of the 12 selected projects in terms of four performative elements: a. The opening-up agent that connects the project site to the rest of the city, b. the closing-down agent that promotes privacy for the site's inhabitants, c. the smallest urban unit whose interface manages urban porosity, d. the mode of multiplication of such unit into the project's site.

### 4.2 Questionnaires about the change of the projects' actors' "urban porosity friendliness" during the implementation process

The questionnaires were divided in two parts. In the first one, the project teams were invited to name the actors involved in their projects and their "urban porosity friendliness" in regards to regulations, priorities and mentalities. Then, they had to explain how their "urban porosity friendliness" changed between the ideas competition stage and that of implementation. Which urban actors had disappeared and who had appeared during the implementation process.

The second part of the questionnaire consists of three questions. The first one is about the specific kinds of urban porosity in their projects. The second one is about the change of such urban porosities during the implementation process. Finally, the third question was about the kinds of negotiation employed to sustain the projects' urban porosities into the implementation stage.

The author processed the findings into a "cloud" of urban porosities arranging them in a spectrum ranging from translocal interfaces (regional) to very local ones (collective). In fact, the urban porosities were produced by the three Public Agents of mobility networks, of public program and of public ground. The next step was to overlay on the "cloud", some implementation factors such as safety, market feasibility, financial priorities that challenged as a matter of fact, the degree of urban porosity.

## 5. Findings regarding the Europan's Urban Porosity Patterns and their transformation through the projects' implementation stage

The findings are divided in two parts. The first one relates to the specific examples of Urban Porosity Patterns emerging from the studied projects. The second one is about the change of such patterns through the implementation stage.

### 5.1. Selected Europan projects' Urban Porosity Patterns

We mentioned already the emergence of urban porosity patterns through an interrelationship of Public Agents and Urban Interfaces through an "actorial" filter. The public agents that manage public flows are: the mobility networks, the public ground, and the public program. The Urban Interfaces where the Public Agents are manipulated consist of: the urban design competition project site interface, the urban block interface, the building unit and that of the individual housing unit. The "actorial" filter is formulated by the urban actors with their specific policy making and the embedded urban culture of the city in which the urban design project is proposed for, (see figure 01). We will firstly present the findings regarding the Public Agents and then those regarding the Urban Interfaces.

**-Public Agents.**

**Mobility Networks:** they create translocal porosities and their WIMBY opportunities depend on their type. Secondary car roads selectively infiltrate most of the project sites, creating access to the building blocks or buildings. In other cases they serve the project peripherally (Isle d'Abeau, E10; Vienna, E9, Montreux, E10). Pedestrian and bike networks are more welcome where high-speed transport such as rail and highways are distanced by parks (Córdoba, E8; Dietikon, E10) or topographic interventions (Carouge-Bachet, E9).

**Public Ground:** it infiltrates the project's site in the form of parks with set geometries (Villeurbanne, Isle d'Abeau) or in the form of landscaped fields (CarougeBachet, Montreux, Dietikon, Halle). Its 24hr accessibility is a challenge during the implementation process.

**Public Programme:** ground floor public services in fact, activate in-between open spaces. They attract the rest of the city into the project site via networks. In most of the projects, such programmes either shrink during the implementation phase because of market restrictions (Montreaux, E10; Vienna, E9) or they are displaced to the project site's periphery (Córdoba, E8; Carouge-Bachet, E9). Sometimes the attractiveness of the proposed public programme creates additional centralities in the project's site (e.g. a new municipal hall in Gembloux, E10; an urban centre in Augustenborg, E10).

**-Urban Interfaces**

Borders/interfaces have qualities of both infiltration and resistance. In order to establish urban-porosity acceptable for site developers, the project teams embody strategies for opening up the site to public flows and simultaneously strategies for enclosing it to protect the privacy of residents. Most of the projects become a matrix of multiscalar processes for filtering urban flows, using as their interfaces the perimeter of the project site or those of the urban or the building blocks or even that of the housing unit, but usually most of them. Each project chooses the interface to "fight" for the most. Creating a thick threshold between public and private, becomes the challenge of the projects' teams. They in fact, keep a critical spread between public and collective spaces to allow fuzziness in the use of open spaces.

Fig 2

Fig 3

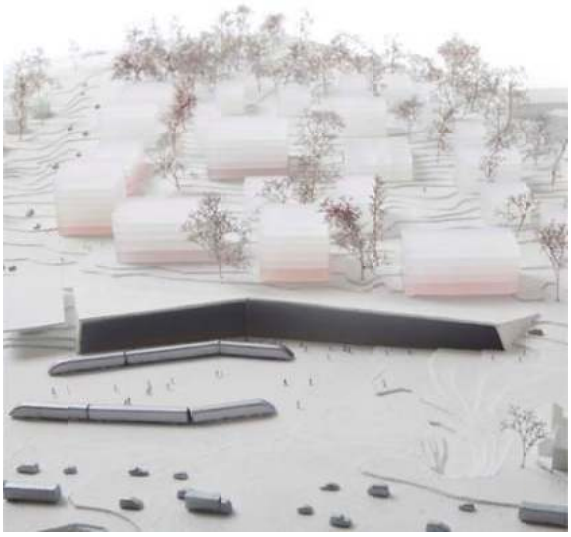

Fig 4

Fig 5

**Project Site Interface.** Since many of the sites are close to transport infrastructures such as highways and railways, the first thing to do is to block the noise. This is sometimes done with buffer vegetation (Córdoba, E8, fig. 2) combined with building features such as window gardens (Dietikon E10, fig. 3). In other cases, a noise barrier is created with topographic formations occupied by a public programme (shops and offices – Geneva, Carouge-Bachet E9, fig. 4).

Situating a public programme on the edge of the project site, encourages connections with the adjacent neighborhoods. Nevertheless, the tendency at the implementation phase is to displace any kind of public programme to the periphery, creating homogeneous residential areas in the rest of the site (Córdoba, E8; Geneva, Carouge Bachet, E9).

**Urban Block Interface.** Choosing the urban block as the main urban porosity interface, allows for connections with the adjacent context. The three projects at the implementation phase in Villeurbanne, E7 show how, on the one hand, public networks and grounds infiltrate the project site within the framework of a joint masterplan. On the other hand, the treatment of the urban block interface varies in each case. The Muoto team project (fig. 5) achieves the most openness by establishing the relevant urban porosity interface at the level of the building unit and at the same time elevating the collective open spaces. The Nakache-Orihuela team's urban blocks (fig. 6) complement the existing fabric, introducing a sort of a 3D striation of public passages, private and open built collective spaces. The W14 team's urban blocks (fig. 7) are more introverted, relying on the diversity of residential and collective spaces. In the case of Córdoba, E8 (fig. 2), the interface of the superblocks, made of 6 smaller residential blocks, resists the intrusion of the main car network, allowing public spaces for pedestrians and plantings to thrive. In the case of Dietikon E10 (fig. 3), the loose definition and mosaic like character of the heterogeneous urban blocks, accentuates the qualities of urban porosity in the in-between spaces and the ground in the form of a publicly activated field. A "multicheck" strategy sets the long-term framework for staged operations. In the case of Vienna, E9 (fig. 8), a loose block opens up to the rest of the city by creating public spaces at its perimeter with part of the block set back. In addition, the introduction of public services at ground level by elevating the residential programme, allows for connections with the neighboring sites. At the same time, the block operates as an agent to protect communal life within it. During the implementation process, the public programme on the ground was reduced. However, a legal framework was created for "cross-border" use of shared spaces.

Fig 6

Fig 7

Fig 8

Fig 9

**Building Unit Interface.** Pushing the interface for generating urban porosity down to the level of the building unit creates all sorts of complex building types that incorporate both the private enclosed and the collective open space. In Gembloux, E10 (fig. 9), a fragmented municipal programme allowed public passages in the competition phase, but for functional reasons accepted only porosity of a visual kind at implementation. As regards programmes, the "Uhouse" explicitly mentioned by the Muoto team in Villeurbanne, E7 (fig. 5) is one example. As already mentioned, the "U-house" (U-section) becomes an agent that protects communal life by means of elevation.

Fig 10

Fig 11

Fig 12

Fig 13

The Isle d'Abeau, E10 (fig. 10) project takes a similar approach, but in this case there is more blurring between collective and public space along the planted open backyard spaces. In Augustenborg, E10 (fig. 11), the elevated residential collective spaces form the roof of a 3D programmatic base, allowing public flows to dominate the city level. In the case of the Montreux project, E10 (fig. 12), it is the grouping of three-armed buildings in a shared landscaped space that filters urban porosity. The shrinking of the public programme at ground level during the implementation phase will probably reduce the project's "urban porosity friendliness". This also seems to be the case for the project at Carouge-Bachet, E9 (fig.4). However, the proximity to the new multimodal train station creates a translocal programmatic porosity for this project site, since the catchment area for potential residents will increase significantly. In the project in Halle, E7 (fig.13), it is the ground as sort of a park that infiltrates between the individual houses, with the hedges providing the only interface between public and private. The question by the authors, who seem to have no control over how the project involves, of how public these planting areas really are, is legitimate.

## 5.2 From ideas to implementation: a rite of passage to re-ally project actors

The implementation stage has a sort of a liminal character, a rite of passage from one condition to another. The initial condition, the competition phase, is the construction of "images of the possible", a sort of imaginative enrichment of perceptions of urban living amongst the stakeholders concerned. The final condition, the post-rite stage, is the transformation of the built environment, here in 10 sites across Europe. What we have from the 12 teams are "blueprints" for such a transformation. Both the above conditions actually operate as devices for reshuffling the project actors, adjusting their relations, shifting them a little and for a while from their everyday routine. Such liminal rituals require support, and in this case it is the existing urban institutions behind city making that play this role. There is undoubtedly an extensive mobilization of actors arising from the project-for-implementation. As we know, European cities are Europan's most important clients and make the implementation of the winning Europan projects part of their modus operandi (municipal urban and planning agencies that are in contact with higher scale territorial administrations). At the scale of the developing site, it is the property developers and building promoters, municipal and/or private. When a residential programme is involved, you get subsidized housing agencies and cooperatives, as well as neighborhood associations.

The case of the Vienna, E9 project (fig.8) is an example, with at least 15 urban agencies involved in the implementation of the UEK studio project (Europan jury, City Real Estate Management, NGO-social services provider). It is quite evident that there is a whole embedded landscape of urban porosity policies are associated with people involved in projects for the Europan cities we are talking about. It seems that "urban porosity friendliness" decreases as the territorial scale from which the project actors come gets smaller.

### 5.3 Manipulate the tolerance of project actors to open up the project site to the city

Establishing urban porosities means increasing the degree of coexistence in open spaces and the degree of sharing of infrastructures such as mobility networks, parks, public services. So how tolerant are site developers and future users /inhabitants of such an opening up process? "The constitution and sustainment of a community and its network relations to a larger territory demand a critical mass of future users that enjoy the diverse possibilities the project offers to them…"(studio UEK, Vienna, E9). In some interviews, it emerges that the majority of the project actors on these 12 projects were public bodies with a commercial interest in selling their project. Here are some sample views by project actors cited by Bernd Vlay (Europan Austria).

"… if porosity helps to sell the site, fine; if we need to shut it in – that's fine too"; "Porosity as a politically correct quality, but depending on what conflicts actually happen "

"… accepts porosity which does not affect the privacy of the living units. Depending on typological intelligence: if the type offers porosity without annoying the residents: FINE"

In other words the urban players, protagonists in the implementation of winning Europan projects, are "urban porosity friendly" provided that it increases the market value of the projects. And provided that incoming translocal flows do not negatively affect the living conditions of the residents. Otherwise, they are ready to shut off any undesirable connections with the surrounding city… This suggests that space has active agent characteristics. So the teams behind the winning Europan projects are very valuable in that they keep proving that such "urban porosity-value-for-money" is possible and the built environment can handle it because of the way it is designed. In addition, such practices bring us to examine the design of the fine grain of the contemporary city, as Thomas Sieverts mentions in his book "Cities without cities: an interpretation of Zwischenstadt" (2001). If we look at all the projects under consideration, the proposed ideas are indeed based on the multiplication of a sort of a fine-grained urban environment, rather than the choice of a one-off mega gesture to make their mark.

## 6. Conclusion: from intolerant enclaves to porosity friendly urban patches

The concluding remarks are divided in three parts. The first one is in regards to urban design references that may produce alternatives to intolerant urban enclaves. The second part is about the Urban Porosity Pattern Matrix from Europan practices and the third part is about using such matrix to resist to the dominance of intolerant enclaves onto the contemporary urban environment

### 6.1 An "actorial" dimension of urban design to establish urban porosity

The art of urban enclaving seems to be gaining over other kinds of arts for urban active coexistence, due to its backing up by the globalized neoliberal economies. We should keep in mind the increasing intolerance of such enclaves' populations that eminently could affect our everydayness. The author referred to specific "actorial" urban design approaches that may engender new actors' alliances to support sharing in a complex urban environment, in other words to adhere into "urban porosity friendly" postures when the welfare State is weakening across Europe. The challenge would be to sustain such actors' alliances within the actual globalized neoliberal context by challenging the disciplinary limits of urban design.

Issues of urban connectivity as a reflection of social cohesion are as diverse as the contexts in which the Europan urban design projects are embedded. Privatized forces backed up by the neoliberal global economy may be on the doorstep of all European countries. However, the peripheral countries with weaker heritage of a welfare state urban culture (southern Mediterranean countries), or in state of denial of their State past, (former eastern European countries), seem to be much more exposed to social segregation, thus urban fragmentation.

### 6.2 From envisioned Urban Porosity Patterns to implemented ones

Europan still operates within a western welfare state heritage. The porous urban practice of the French PAN and in continuation that of EuroPAN has enabled a considerable number of young talented groups, usually architects, to become part of the best European practices. This is true of course, where Europan goes hand-in-hand with other urban apparatus inherited from the welfare state, usually in the Northern Western European countries. This is not true in countries such as the UK, or Eastern and South European countries.

The "cloud" of urban porosities produced by the author, through the study of the selected Europan projects, showed an arrangement of urban porosities in a spectrum ranging from translocal interfaces (regional) and very local ones (collective). In fact, the urban porosities were instigated by the Public Agents (those of mobility networks, of public program and of public ground) and were managed by the Urban Interfaces. The overlay on the "cloud" with the implementation factors that challenge the degree of the urban porosities, showed how the actors' urban porosity friendliness changed due to safety, market feasibility, financial priorities etc.

We may conclude that in spite of the decreasing degree of urban porosity from the competition to the implementation phase, urban porosity is still clearly present and multifaceted. Such process may increase the critical mass of users who would prefer to live in such urban conditions rather than in "safe", gated environments. It is true that post-occupancy evaluation of the completed projects will show whether such objectives are met.

### 6.3 Europan as a fertile ground for research on Urban Porosity practices

The author has developed an Urban Porosity Pattern Matrix through which he studied how urban design projects relate Public Agents (catalysateurs for public flows) with Urban Interfaces (multiscalar edges of urban patches and enclaves), through an urban actors' filter, to envision a porous connective urban environment. In fact, the analysis has focused on the passage from the Europan ideas competition stage to that of implementation and it showed the transformation of the project actors' degree of tolerance.

Further on, the author proposes to use the Urban Porosity Pattern matrix as facilitator in reframing the relationship of collective urban design practice to urban politics. It could become in other words, a negotiating framework as an alternative to the art of enclaving that is backed up by the overwhelming capacities of the neoliberal global economy through its spatial products (Easterling, 2005).

The Europan platform could be very useful for such endeavor, by reconnecting practiced based theory with the practice itself. Despite the fact that the research on Europan as a collective urban design network platform has remained limited within national boundaries, there is a substantial archive of best practices of collective urban design that could help us to establish an international research on "urban porosity friendliness".

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# PUBLIC SPACES AS THE FACTOR OF URBAN IDENTITY, CASE STUDY OF BRATISLAVA

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## Abstract

*Appertain to the place has several dimensions – identification with the state, region, area, city (town), village, district, neighbourhood. Character of the place defines the urban fabric, the urban space, its importance, location, history, economical prosperity and, naturally, people, their memory, manners, experiences, actions and nature.*
*The basic elements of identification with a place can be stable, either with long period fixed character, or they can be changing with the dynamic evolution. Also our sensibility is changing according to the character of the place, its elements during the evolution. There are periods, when we are less sensitive to the value of the environment; even arrogant. Sometimes we are calculative when the commercial effect from otherness is more important for us than human or spiritual aspect.*
*Urban resident and occupant identifies himself with the city and urban environment via arrangement of spaces. Identification with urban space and its characteristic elements is linked to good orientation, accessibility, functions, activities, people... Also details of public spaces create memorable places.*
*The paper is focused on evaluation of public spaces in Bratislava with the emphasis on squares in the central city area. The study is aimed at problems and potential of the squares. Based on the complex research, a strategy and concept of squares development and transformation in the scale of the whole area is presented. The concept is consists of prioritization and differentiation of spaces, which should support their identity and good legibility.*
*Study presents applied research supported by city council of Bratislava.*

## 1. Introduction

Spatial structure of places on has gone through significant changes in last 70 years, caused by modernistic approach towards urban design. This approach has brought retraction from traditional spatial form and has started introducing free form design of urban spaces since the 1960´s. Tighter urban structure has started to be applied since the 1980´s, but in a less significant way than in other developed european countries, as a result of starting mass-housing period. However modernistic approach legacy is quite heavily maintained and present in our cities. Single-use commercal areas and family-house "landscapes" located mostly on the outside of city border represent the mentioned system. In those structures, a man usually identifies himself with his own house or appartment rather than with space that commonly surrounds him. Therefor the role of spaces, their image perceived by men and their character is more and more important. Supporting the distinctive individual character of a city and its places and the identification with districts is fundamental.

Bratislava is becoming recognized as a city without properties. This nickname was given by Tijs van den Boon in his publication Bratislava - city of peace. Moravčíkova sees this name as *"provoking, but according to the fact of permanent change as appropriate"* [Moravčíková, H., 2010, p.34]. The reason is that Bratislava has gone through a set of modifications in last hundred years and *"is open to transition yet too much, mostly the urban fabric"* [Vitková, Ľ., 2013, p. 20]. Architectonic tracks are erased after each fundamental political change. Bratislava is carelessly getting rid of its typical buildings, even whole complexes. Mostly those industrial ones; Podhradie (area under the medieval castle), typical rural settlements... Nowadays modern 20th century architecture is endangered. This approach is reflected into the image of public spaces of Bratislava. By losing areas, public spaces with unique identity are getting lost as well.

Cultural and social meaning of public spaces has been underestimated in Slovakia for a long time. Their role has changed from a stage for public life into a role of traffic corridors or crossroads. Traffic swallows the public space and so degrades the perception and identification with place. This is another problem of public spaces in Bratislava.

The report is focused on characteristic parts, elements and places in Bratislava. In the first phase the emphases is given on squares of central district of Bratislava.

Research objective is to analyze individualities and utility of nodal public spaces in Bratislava.
Spatial structure of acity was focused on evaluation of acharacter:

- System of nodal public spaces in the city strcture (location, hierarchy, significance, distance, use...) and their mutual relations and connections.
- System of nodal public spaces in the city district structure (location, hierarchy, significance, distance, use...)
- City spatial structure analysis within the frame of historical development, development of site use, location of main nodal spaces and development axis.
- Arrangement of nodal public spaces within city structure in linkage with important public buildings, city entrances - railway stations, bus stations, high-rise buildings.
- Arrangement of nodal public spaces within city structure in linkage with development axis (boulevards, city streets, pedestrian areas...)
- Character and way of defining the selected public spaces, intensity of connections and building entrances.
- Use of public spaces and their surrounding structure (character of parterre, buildings entry strength)
- Type of nodal and linear public spaces use.
- Size parameters of nodal public spaces.

Research was focused on the quality of public life in public spaces from these aspects:

- Quality and intensity of public life (degree in use of public space) compared to the evalutaion level of quality of public space (by residents, professionals) by exact methods.
- Quality and intensity of public life compared to the use of surrounding structure of public spaces

The objective of the research was to review the qualitative level of public spaces in Bratislava as a whole and its single districts with accent put on their individuality and utility.

Public spaces of Bratislava are the research subject studied as a whole since there is no such complex material about the issue of public spaces and still the capital of Slovakia misses this kind of document. Considering the difficulty of a problem and a need for a somplex solution, the research is studying mainly the nodal public spaces of central city area. Individual types of spaces were characterized and classified on the base of formerly defined criteria. Character and structure of spatial raster, quality of spaces, their type and intensity of use were evaluated.

Special attention was given to the analysis of readability of main public spaces from the aspect of outer image of a city and to the analysis of readability of public spaces within the urban city structure - readability of their individuality and singularity.

Essential part of the research has taken a look at a review of relation between spatial quality of a public space, use of enclosing structure and parterre, use of the area of place and quality, character and intensity of use.

There was an assume that a place claerly spatially defined, used in different ways, operationally well organized would be more attractive and more intensely used and more lively.

## 2. Definitions of urban space

Traditional basic spatial elements of a city - streets and squares have been forming the growing city framework and gave the city an image. Hierarchy of elements forming cities is fundamental for the city development, for contemporary growth and transformation. In his theory of an image of a city, Kevin Lynch considers nodes and lines, borders, areas and orientation spots being the most essential.

### 2.1. Definitions of public space

Spatial urban structure can be characterized from several aspects, e.g. spatial definition. Carmona defines two basic types of urban space: *"first where space is defined by buildings, second where the buildings are objects in space"* [Carmona, M., 2010, p. 77]. Others simplify the definition even more, for example Jan Gehl uses the term *"space between buildings*" [Gehl, J., 2010, p.15].
According to the accessibility, the public space can be divided to public, semi-public and private. The relation between owner right principles and the degree of its communal use is getting less and less unambiguous. Several authors pay higher attention to this question. [Madanipour, A., 2003]. Manuel Delgado characterizes a public space as: *"A space, that public has rights to use."* [Gausa, M., 2003, p. 563] Frederico Soriano points out that: *"private spaces are used by public (shopping malls, airports) and vice versa, a public space is taken by private use."* [Gausa, M., 2003, p. 563]
However, the urban fabric is associated with other features; economy, owner-rights, intensity of public use. Thus public space is a space intensely used by public, citizens. This part as a social and cultural layer is inevitable for living city. *"Public spaces are kind of a mirror to the city culture, to the city life... undoubtedly it is a medium influencing and completing the cultural profile of a man and society."* [Melková, P., 2014, p.4]

### 2.1. Definitions of squares

A square definition from Edward White highlights the social and cultural meaning of these places: *"Squares are a place for sharing, living and befit." ..."While the streets encourage us to go, portals to pass through, squares invite us to stay, sit down and take part in public life."* [White, E., 2007]
Jan Gehl underlines the difference between a street and a square in the same sense: *"Streets reflect the linear move formula, a square matches the field of view." ..."While streets symbolize the movement: ""go on please"", squares encourage to stay. If a place says: ""go, go, go"", the square means: ""stop and look at what is happening""*. [White, E., 2012, p.38] Pavla Melková and her collective highlight the social dimension: *"A square is a place of an identification and a permanent community confirmation, a place for national, urban, local and communal representation, a place for meeting, a city saloon." ..."it is an orientation spot in the mental city map."* [Melková, P., 2014]

## 3. Identification through public spaces

### 3.1. Identification with space via form, system of unique places

The study of public spaces in an analytical phase is focused on data collection and evaluation. The type of data collected is led by already realized studies from Copenhagen [Gehl, J., 2004] and Prague [Melková, P., 2014] and partly affected by the environment already known. In the chapter *Identification with place via form* basic volumetric elements sensed in space will be discussed. We chose schemes of several characteristics in site plans to describe the city - dominating, present, absent. Partial conclusions bearing the information about a place, locality, area are to be made; conclusions about the identity, even about the unfinished /unspoken identity, a violated identity.

### 3.1.1 Characteristics

For the needs of this study, **constriction** is taken for a degree of secretiveness of space. All the publicly accessible spaces will be processed: streets, squares, other corridors. These will be stylized and simplified, capturing the estimated height of surrounding buildings and the "floor" bordered. Bearing in minds the basic compositional principles [Sitte, 1995] [Krier,1975] only corridors where the "walls" exceed half the width of the horizontal surface will be rendered (Figure 1). In the already analyzed part of a city we can see places where the streets are getting lost somehow. For example places hit by vast reconstructions in past decades (solitary construction, traffic linear structures). Although a different region can be identified by wide open spaces, it should be well considered whether this is a case of a city getting lost and whether it should be further completed and subdivided. We cannot assume any close identity support from current development plans, speaking of zones, localities.
meaning: understanding the city structure and its inner subdivision to smaller segments.

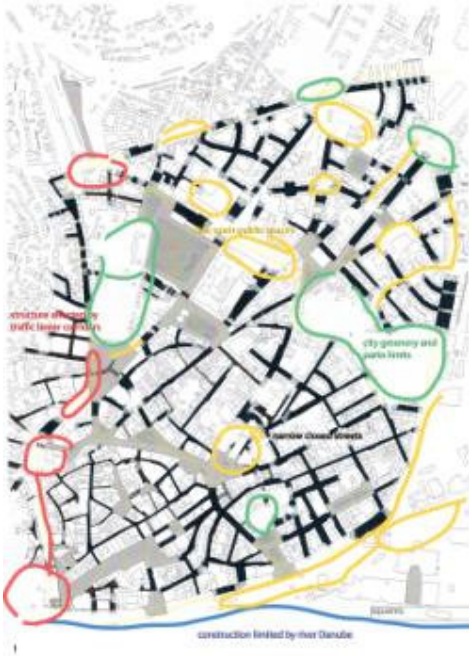

Figure 1. Street constriction in city centre plan

**Connectivity** describes a frequency of nodes in the city structure where the pedestrian can decide what route to take next, it bears the information of how intense is the freedom to choose. The frequency can be higher or lower when the nodes are closer or more distant. Interestingly, this characteristic bears information about how is the built structure used by residents and visitors actually.
Node and line is the basic pair of analytic elements. The node or point is place where three or more routes meet. A line is a real connection between any two points that can be taken by a man. (Figure 2) Bold black lines are highlighting those short connections, creating the blue zones where it is quite a frequent situation for a user to stop on his way and choose how to go on. The pink bold lines mark those long paths that can often be boring.
We found out that passages meliorate the connectivity of a city. On the picture we can see a mesh of bold black lines within squares. It is caused by a solitair put in the middle (as a result of socialist and mass-housing construction period). This phenomenon should be called connectivity of lower level because the moment of option is multiplied by solitairs and by fact that nodes put in a map does not join streets or defined corridors, but pavings, roads, areas and stripes defined superficially by material only.

In the Figure 2. we can see four named blue zones. A zone is historical area with narrow houses forming short streets with passages leading to another short streets. In the B zone, there is an emerging east-west longitudinal system of longer and shorter streets. Those shorter lead from north to south. However, there are many spots where it is violated by irregularities. The C and D zone (famiy houses and city villas; appartment houses and section panel houses) could by described as a bit twisted gridiron structure of a modified square shape where the irregularities are found, too. Even though, we consider the presence of the above mentioned irregularities as elements orienting the person inside the place.

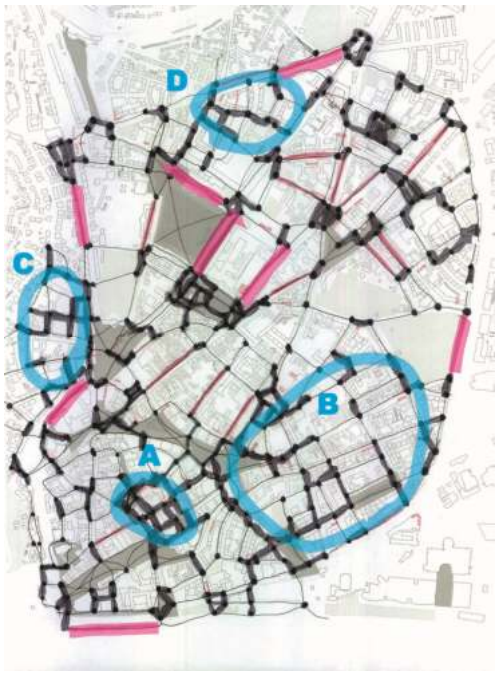


Figure 2. Connectivity of pedestrain routes in urban structure as a factor of identity

**Volume interaction** describes the act of space entering the mass vice versa (walkway, cantilever, arcade). This accent is most often found on individual objects. However, few localities with passages or overcast arcades, colonnades are emerging. These places are favourite to pass through and sit in, they are analyzed from the sociological aspect, also.
meaning: shortcut, curiosity /interest, hideaway from sun, rain, from views.

**Perceived roof shape**, excluding extremely narrow spaces, can be basically divided into flat and sloping; or other shapes, arcs, combinations. Once again, it must be reminded that this is not a pure qualitative feature where one category is always taken for the positive or negative. Anyway, the phenomenon of one kind prevailing over the other enhances the identity of a place will be important for the study. The historical expression of the building facade could be studied further, this is what we consider for quite detailed features, more planar than volumetric; it is even bearing the information on the origin.
meaning: prevailing type supports the identity; from the visual aspect, the saddleback mellows the view and its flow through the space

**Greenery** in the corridor and in front of facades will be mapped because of the uniqueness and related consequences inflicted by its presence. Whereas the greenery in the corridor stands for accessible and touchable trees and lawns from around and the greenery in front of facades, understood as the front gardens usually without direct access serving as a visual sensation.
meaning: (corridor greenery) orienting and guiding, subdividing, covering and hiding, completing and adjusting the character of a place (in the sense of a typology)
meaning: (front garden) isolate, protect

The aim of this analysis is to point out a way how the greenery is placed in city, how does it complete the identity if a locality and how does the identity exceed the place boundary (for example crossing the square´s border to streets). Moreover, there are some other features associated with greenery, but less concerned with the issue of identity, the image of a city and with the urban psychology.
Facade and corridor greenery were studied in their posistion when some basic qualitities were met. Facade greenery is meant to be a stripe of a lawn wider than 1,5 meter with trees in a row (explained below). This strip makes up a kind of buffer zone for the building offering a visual contact. Greenery in acorridor is accessible and touchable row of trees that can be combined with lawn of different widths. The trees in row have to be in fourths at least and the distance between them has to be less than 6 meters. These trees create "a ceiling", "a hideaway" for the users, for pedestrians; they divide the space also. Lawns with short bushes but without trees in a row were not mapped.

*Results*

Applying this approach, several facts were found. The greenery is usually placed without concept and order; the system of organizing into alleys, green streets, boulevards has typically got weak parts that threaten the readability and simplicity of a corridor. Smaller groups of trees and bushes remind rather a spot element. Pairs, triplets and solitairs were found most often; they float in a non-structured space, without clear composition and therefor understanding of a man. These solitairs are placed individually, by chance, additionally. Furthermore, they are not of typical solitair features - of an accent: colour, specie, meaning).
To sum up, few localities with prevailing identity associated with the greenery were identified. Areas where the lawn, bushes and trees flank the building, a kind of garden neighbourhoods are circled in the figure below. (Figure 3) There are also areas with absolutely no green element in the corridor, they are circled in the dark blue shapes. The yellow lines represent emerging green streets, linear urban greenery functioning as a ceiling from the top and a partition on the sides. Grey areas are squaares in the central district of Bratislava.

Figure 3. Urban greenery forms creating typical areas.

### 3.1.2 Characteristics exceeding the issue of volume

**Typical materials** are other basic features of a place perceived by a user /passer-by easing the orientation (Lynch: The Image of the City). Repeated facade material, smaller or bigger cobblestones

with tall or low cross-section, comfortable walk through street segments, facade cladding pleasant to look at and to touch, varied historical stucco, stem large-scale plates, vegetation walls.

**Communicating parterre** is more and more taken for a great asset to city life. Although sometimes a little less in a reality, including the idea of a city effectiveness on different scale. If we still want to talk about volumetric features, the material, shape and service provided make us understand the types of activity in public /private spaces in the floor at the ground level. This characteristic stands on the borderline of the volume, flat and function.

**Accessibility** of the building favours pedestrians to move slower move and stay, consecrating the place to walk without threats. Buildings and residents should not be cut apart. Pedestrian localities are spots with calm transport or traffic excluded, within the 5-meter offset from the building. The aim is to identify areas with potential to bring the life back, which can be easy or difficult to do. Interesting but at the same time dangerous spaces are expected to be found as well as places with good accessibility but no activities taken.

*Results*

The study aims at the relation figure-background (square-area). The question is: Is it a A-B relation while talking of some characteristics or is it a A-AB-B relation? Within the A-B we talk about a contextual greenery (Figure 4) (Jakubovo námestie with front garden continuing as a part of the square into the street), about a contextual constriction (Main square, Komenského námestie with enclosed corridor with proportions over 1:1) or about the contrast constriction (Kamenné náemstie, Námestie SNP, Kollárovo náemstie with constricted street corridors leading to wide and open space of a square). The A-AB-B relation gives an opportunity to describe the double contrast. For example the great openness of a place is accentuated by narrow street walkways entering the open volumes (Námestie slobody and surrounding area). It is not our goal to decide which paradigm is appropriate, but to highlight the importance of relativity of scale when analyzing the city; to work with the scale of a zone, area, city part; identities and their structure.

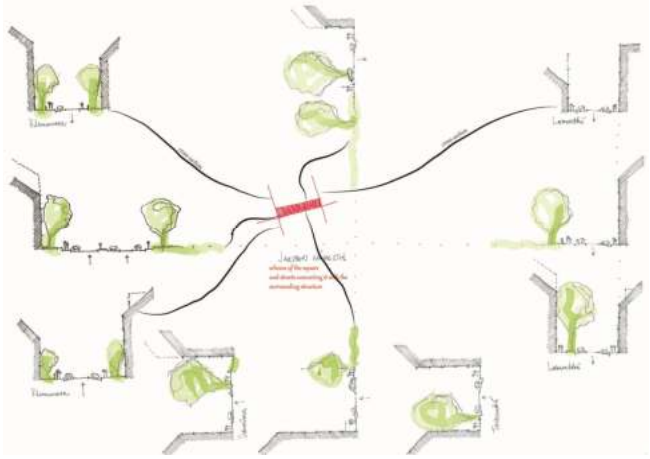

Figure 4. Contextual greenery

### 3.2 Identifications with space via dominants, important objects (monuments)

Significant buildings are important for the readability of public spaces. Not only with the role of orientation points, landmarks. They are a message of a period, remind significant historical events, prosperous times, importance and role of a place.

Thanks to the natural features, terrain configuration support natural dominants that highlight the position and importance of public spaces, the central areas most of all. Bratislava castle reef, Slavín (war memorial and cemetery), Bôrik... hanging over the city, places in contact with the river Danube, spots raising their importance. Natural features enhance the uniqueness.

Dominants, historical or contemporary, are the city symbols easy to identify in the urban fabric creating the solid orientation spots in public spaces. Some of them are symbols of the city overcoming its borders. Once again, this affects the identity of a town. It was partly realized by foreign architects. For example the Riverpark project (Erick van Egeraat´s concept), a set of dominants Panorama City under the construction from Ricardo Bofill and the complex of dominants from architectural studio Zaha Hadid Architects in starting point of the realization process. Like many other big cities, Bratislava is trying to get known thanks to the big names and iconic architecture.

Figure 5 Dominants and hierarchy of public spaces according to their importance
Authors: Ľubica Vitková, Katarína Boháčová

### 3.3 Identification with space via use

Activity - life is the basic feature of a place - a square we realize in a public space. What is happening in the square? What attracts pepole to come to a square? Use of surrounding structure, active and pleasing parterre and activities taking place in the sqaure area. Finally, it is also people occupying the place who attract the others to come.
Atmoshpere of a square consists of a character and a form of architectonic space as well as activities and energy, symbolism... a church, a museum, town hall, a theatre, pleasant caffees...
A way of organizing the services is essential for utility of a square. What is the relation between the traffic and the pedestrians? What is the ratio of them? To what amount is the dynamic and static traffic and the pedestrian move divided? A square surface adjustment plays a great role: is it a lawn or paving with solid subsurface? Is the square surface walkable enough? These are the aspects influencing the atmosphere and ease in the sqaure as well as relations to the place.

For the system of evaluation, the use of space was considered as one of main criteria; including the use of surrounding buildings, use of parterre and the square surface itself (Table 1). During history, some squares have kept and developed gradually some particular functions: commercial, traffic,

representative, cultural... Although the use of buildings and square area changes in time, there still is a maintenance of a character based on the locality, importance and character of structures. Regular and irregular events and activities taking place in here are negligible.

Table 1. Use and potential evaluation of selected squares of Bratislava

| Square | Use | Parterre | Current use. (Potential) |
|---|---|---|---|
| Namestie A. Dubceka | Parliament, government buildings | Passive | Greenery, public space, traffic, **Representative**, public |
| Namestie F. Liszta | Railway station | Passive | Greenery, public space, traffic **Traffic, shopping, public** |
| Namestie E. Suchona | Cultural buildings, hotel | Active | Greenery, public space, traffic **Cultural, public, relax** |
| Namestie L. Štúra | Cultural buildings, government buildings | Active, passive | Public space, traffic **Cultural** |
| Námestie M. Benku | Mixed use fabric | Active, passive | Greenery **Public, relax** |
| Námestie slobody | Government buildings, university buildings | Passive, partly active | Greenery, public space, traffic, **Representative, public, relax use** |
| Námestie SNP | Mixed use fabric, churches, hospital, bank, department house | Active | Greenery, public space, traffic **Public, shopping, relax** |
| Primaciálne námestie | Municipality buildings | Passive | Pedestrian zone **Representative, public, cultural** |
| Rudnayovo námestie | Mixed use fabric, cathedral | Active, passive | Pedestrian **Public, cultural, relax** |
| Rybné námestie | Mixed use fabric, disrupted | Active, passive | **Public, relax** |
| Šafárikovo námestie | Mixed use fabric, university | Passive, partly active | Traffic, greenery **Public, relax** |
| Odborarske námestie | Mixed use fabric, university building | Active, passive | Traffic, greenery **Traffic** |

Evaluation of selected squares from the aspect of social and cultural use is following:

8 squares are part of a pedestrian area, social character with varied intensity of use
2 squares social - commercial
2 squares social - rest
2 squares traffic - walk
5 squares traffic
3 squares traffic - "vegetation" with low degree of stay /rest character
4 squares "vegetation" with lower degree of stay /rest character

Surprisingly, while considering the use and the character of surrounding structure, historical context and location, the potential of analyzed square is far greater. Whether from the qualitative or quantitative aspect, squares of Bratislava are nowhere as used and lively as they could be. Different prevailing use of these spaces could be considered in the future - not in the way of single use but in the sense of supporting particular identity and readability as well.

### 3.4 Identifications with space via importance and history

Historical meaning of a public space in not sensible superficially, but acts like an important factor affecting the atmosphere. Historical forming of a square, development process along the events, important personalities, groups. We have tracked the following:

- what was the role od a place in the history of a city?
- how has the use of a place changed during the development?
- what important pesronalities lived in the square?
- what important events took place in the square?
- what historically important events happened in the square?

History strongly enhances the value of a place. White points out this in his works. [White, E. W., 2007] It can be associated with a building, a balcony, a tree, with the sqaure area itself... A symbol, an importance of a plce is present, it acts as its part.

In our research we took a look into the history of analyzed squares. Some of them are presented in the study.

**Hviezdoslavovo námestie** (bearing its name since 1879)
*"Spacious square with beautifull alley and representative buildings"* [Ortvay, T., 2005, p.22] this is a characterstic by Tivadar Ortvay proceeding with: *"It is one of the most beautiful publi open space in the city. Surrounded by macadamia roadway with granite cube paving."* In past, there was a water ditch and river Danube branch. This was a popular place to walk and it was a main city promenade. It bore name of important personalities of Austria-Hungary, it was called Radeckého námestie, Kossuthovo námestie, today it bears name of a distinguished slovak poet. Placing significant urban activities was always typical in here. After filling up the river ditch and the river Danube branch, famous noble and bourgeois families started to build their residences in the western and southern side of the square. The old theatre is standing there from year 1776 and the city theatre since 1886. Both have played important role in the cultural life of Bratislava. Medical and naturalistic guilds were based in Ján Palffy´s residence. There were two hotels in the square - the National and Palugyay´s Green tree. The latter have become recognized far beyond the city borders. Ľudovit Kossuth has declared the Hungarian renaissance from the balcony of a Green tree hotel in 1848. In the square, there were caffees, renowned bakery with famous "Bratislava rolls", there were statues: a bust of Hummel, Petöfi... [Ortvay, T., 2005, p.22-43]

**Námestie Ľudovíta Štúra**
Also called The Coronoation square after a coronation hill placed in the square for 96 years. Later a statue of Maria Theresawas placed here to remind of a coronation. The Coronation square was defined by palaces, "granary" - later Reduta (building for cultural performances and meetings), eastern wing of Water barracks. There were also horse railways tracks leading through the square. After constructing the stable bridge over the river Danube, a propeler to Petržalka (city district on the opposite side of the Danube) dock was constructed. [Ortvay, T., 2005, p.58]

**Šafárikovo námestie**
It had significant position - acting as a city entrance from the side of Petržalka after constructing the Old bridge over the river Danube in the end of year 1890. There were important buildings - barracks of František Jozef, exposition palaces, office building for military command in the southern part. In the beggining of the 20th century it was transformed into a park. [Ortvay, T., 2005, p.100]

**Jakubovo námestie**
The square was named in the honor of two former reeves of Bratislava - Jakub (Jacob), a city reeve in years 1279-1286 and Jakub, a reeve in years 1326-1327 and 1338-1373. *"Prešporok has named a public open space as an eternal memory of their name."* [Ortvay, T., 2005, p.110]

**Kamenné námestie**
Townspeople were building their houses here. The title comes from mason company and stone warehouse standing in the square. [Ortvay, T., 2005]
In our research, we saw it necessary to evaluate the current importance of squares in centre of Bratislava. The squares were hierarchized according to the importance and location in the city, placement of important objects, historical events and the intensity of social activities. (Table 2) Based on the mentioned evaluation system, squares´ potential seems to be quite bigger.

The squares in central area can be divided according to the importance as follows:

- 13 squares of international and national importance
- 9 squares of regional /citywide importance
- 2 squares of city /local importance
- 2 squares of local importance

Table 2. Evaluation according to the importance and potential of selected squares of Bratislava

| **Square** | **Importance of a square /** Potential | **Location** | **Important buildings** Dominants Selected monuments | **Activities** Historical events |
|---|---|---|---|---|
| Namestie A. Dubceka | International, national /local | Inner city<br>Edge location | **SNR, Bratislava castle**<br>Monument for the politicians | Political representation<br>Public activities |
| Namestie F. Liszta | International, national | Inner city | **Main station (railway)** | |
| Namestie E. Suchona | International, national | Historical core | Reduta | Political representation |
| Namestie L. Štúra | International, national | Historical core<br>Entry to historical core | SNG, ministry<br>Monuments for activists | **Coronations** |
| Námestie M. Benku | City/local | Inner city<br>On the main aces | Palace of justice | |
| Namestie slobody | International/national | Inner city,<br>Development axis<br>On traffic axis | Government office, ministry<br>Faculties of STU<br>Former monument of a historical event | Political representation<br>Public activities<br>Cultural activities |
| Namestie SNP | International/national | Inner city<br>Edge of historical core | Postal office, churches, ministry,<br>hospital, bank, department house, monuments | **Velvet revolution**<br>Commemorative memorial Year 19 68<br>Public activities<br>Cultural activities<br>**Markets**<br>**Coronations** |
| Primaciálne námestie | International/national | Historical core<br>central | City hall<br>Primatial palace | Political representation<br>Cultural activities |
| Rudnayovo namestie | International/national | Historical core<br>Edge location | St. Martin´s Cathedral | Political, church representation<br>Coronations |
| Rybne namestie | International/national | Historical core<br>Entry to historical core | | |
| Šafárikovo námestie | Regional/national | Inner city<br>Entry to city center<br>On axis | Comenius University | Memorial place, r. 68 |
| Odborarske namestie | Regional/national | Inner city<br>On the main axis | | |

## Conclusion

This paper presents results of a research focused on evaluation of current state of squares in Bratislava central area. The research includes character and the quality of spatial and structural definition, use, affection and quality of services, location and intensity of usage and public life. Degree of identification of residents with public spaces in Bratislava. Analyzed features have important role in this process and for keeping the genius loci.

A more detailed analysis has been focused on reviewing all nodal spaces in central city district. The research was conducted in the following sites: Americké námestie, Floriánske námestie, Františkánske námestie, Hlavné námestie, Hodžovo námestie, Hurbanovo námestie, Hviezdoslavovo námestie, Jakubovo námestie, Kamenné námestie, Kmeťovo námestie, Kollárovo námestie, Komenského námestie, Námestie 1. mája, Námestie Alexandra Dubčeka, Námestie Eugena Suchoňa, Námestie Ľudovíta Štúra, Námestie Martina Benku, Námestie slobody, Námestie SNP, Primaciálne námestie, Rudnayovo námestie, Rybné námestie, Šafárikove námestie, Franza Liszta, Odboráske námestie, Župné námestie.

Based on the research, the following can be stated:
A hypothesis saying that spatially clearly defined public spaces, their functional complexity and appropriate services and aesthetical expression is fundamental presumption to more intense use and identification of residents with mentioned place was proven.

Places missing (or nearly missing) any of these features have turned out to be problematic.
Even places with strong historical message or associated with significant historical events or with residences of important governmental or cutlural institutions and monuments were found in this category of public spaces.

Particularly Námestie SNP which used to be a market square, place of cornation selebrations, "Velvet revolution" venue. It is clearly defined and creates main historical centre round. Factors decreasing its importance and degree of use are the following:

- bad service oranization (area subdivision into dynamic and static transport, allocating unused green area) - generating operational barriers.
- decline of surrounding building use
- great amount of "deaf" facades
- missing areas for spreading the activities
- very low quality of architecture

Analyzed nodal public spaces of Bratisalva can be divided according to the study to following:

- Squares in the need of complex solution - spatial definition (only bearing the title square), appropriate use and architectonic-urban design
- Squares with inappropriate use (that moved to the outer city)
- Squares where the operational and spatial barriers have to be removed
- Squares missing only an impulse in a form of activities (events, week markets, quality mobiliary and street furniture)

Users and residents themselves can play abig role in the process of identification with mentioned place. Usually local residents and activists bring new life and new meanings here.

There are good examples of the mentioned phenomenon. Several squares in the historical centre have been reconstructed to achieve aesthetical and qualitative goals, although the use of surrounding structures and the social dimension of the parterre is left behind. This level does not support the quality of public spaces, even though they are of national and international character and of great potential.

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# Gated communities. Case study of Wrocław, Poland

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## Abstract

Nowadays modern cities experience emergence of new urban forms. One of those forms are gated communities. The aim of the paper is to discuss the phenomenon of gated communities through the lenses of the city of Wrocław (Poland), the fourth biggest city in Poland.

The phenomenon of gated communities, guarded and inaccessible for "mere mortals" developed in Poland on an unprecedented scale. Although gated communities in Europe are rather rarely, in Warsaw there are few hundreds of such settlements. People choose to live in a gated community due to the need for security and cut-off from “lower class”. However, psychologists suggest that people who feel threatened and decide to live in secured housing estates, tend to isolate themselves even more from the rest of society, so that their fears and insecurity may even deepen (the so-called “circle of fear" ).

The purpose of the paper is to discuss the issue of gated communities in the city of Wroclaw. Starting from the theoretical discussion on definitions, the paper will move towards the selected cases located in Wrocław in order to analyse profile of their residents. Results of surveys on the perception of gated-communities will be presented. Additionally, influence on the society and urban space as well as legal aspect of those settlements will be discussed. The paper should contribute both to the theoretical and practical knowledge on gated communities and their impact on social and urban life.

## 1. Introduction

Gated communities are socio-spatial phenomenon, which developed in Poland on an unprecedented scale never found in Europe before. Proponents of this solution mention the sense of security which is present for citizens living in such type of residential. Opponents, on the contrary, criticize them for isolation increase and distrust toward other members of the society. It would be truism to claim that equivocal evaluation of this type of housing is difficult. In this article, the authors takes the opportunity to explore the idea of gated communities by the citizens opinions recognition.

The aim of this work is to find the answer for the question “Who lives in gated communities in Wroclaw ?” The answer will let us to create the profile of a person who decided to live in such a kind of housing. This way we extend the knowledge in the area of modern settlement processes and sociology of the city.

There are four hypotheses stated and verified in this article:

1. People living in gated communities are in working age and have higher education.
2. The household of these people is characterized by the income, which is higher than average household income in dolnośląskie voivodeship.
3. Their choice of living in gated communities was based on sense of security and prestige.
4. The occupiers are satisfied of living in this type of housing.

The article was divided into two main parts. The first, theoretical, concentrates characteristics of gated community. Describes also current state of research on this subject. In the second part, there is methodology proposed and the results of questionnaire. Finally in summary there is a conclusion of performed research.

## 2. Gated community in theoretical approach

Urban space is continuously changing, more or less dynamically (Spyra, 2011). These changes are caused by exo- and endogenous factor series, which determine the urban area development. Examples of such factors are socio-economical conditions, spatial planning and architecture trends or political influence. This transformation refers also to housing development, where gated community is one of possible form of evolution. It is worthy to mention that the idea of separating the houses but also whole cities with high walls and deep moat is very old and comes from ancient and medieval times. In this approach, the gated communities are the step back in settlement evolution. There are some kind of retrospection in housing complex planning. Judd (1995) and Morris (1994) describe it as "return of ancient forms of urbanization". In previous epochs, such urban isolated enclaves had usually military reasons and let the citizens to feel safe from external dangers. What are the causes of supply and demand trend of gated communities observed today, which has started in the last decades of 20th century in USA (Blakely, Snyder, 1997)? It is caused by two significant reasons: improvement of security and prestige (Brodowski, 2013), which are correlated with living in gated housing complex.

According to Grant and Mittelstead (2004), gated housing is remedy against the fear of "enemies" who could theoretically disturb the order and harmony. The problem seems to be more complex. In the cities, criminal behaviors and pathology reach such extremes that ordinary people can not feel safe walking on the streets or sending children to the kindergartens. Is it only false belief? Does high wall, bodyguard, CCTV cameras improve security? One may take the risk and claim that there is no such guarantee. Well prepared and trained burglar is able to break all forms of protection. According to Blakely and Snyder (1998) research results, analyzed form of housing doesn't improve safety and the crime level in these places is similar to open communities. Moreover, various systems of protection may even trigger criminal behaviors, following the stereotype: "Where there are sophisticated methods of protection, there are sensible reasons to break into".

Living in gated community may be commonly treated by the occupiers as the manifestation of wealth and high social status (Grant, Mittelsteadt, 2004). There is popular conviction, that having luxury products such as a house in gated estate, raise the respect in surrounding. The wall, apart from defensive function, has also symbolic meaning and expresses the message about the uniqueness and inaccessibility. Cesarski (2010) takes the attention on the other aspect of prestige. The decision of buying the property in such a place can be caused by the urgent need to live with "better" companion. It means that separated houses concentrate groups of the same status, education, etc.

Gądecki (2007) noticed that explanation of gated housing complexes by safety and prestige arguments is not sufficient and require to raise issues of neoliberalism influence on the city. Grant and Mittelstead (2004) explain that creating such a kind of urban space is the response for privacy, highly demanded by citizens.

Probably, there are much more factors responsible for this modern phenomenon. However, equally important are the consequences of its existence. Jałowiecki and Łukowski (2007) noticed the most significant problem, which is society segregation. It happens when rich areas such as gated communities are created while other areas become gradually the place of poverty. The authors call this process "ghettoisation of urban space". This metaphor doesn't seem to be exact description due to the historical context. Ghettos were usually places where people were forced to live. Such areas isolated specific ethnic groups regarding race, nationality or religion. The similarity between ghettos and gated areas are only in the fact that both are usually surrounded by the walls. The gated houses occupants decide to live in there freely. Additionally, occupants of poor areas also don't describe the places where they live as ghettos. It seems that the illness of modern cities is not actually ghettoisation. It rather should be named "socio-spacial fragmentation".

There is a significant difference in dynamics of gated houses development between east, middle and west Europe. Such solutions are very rare in west Europe cities on the contrary to post

socialist countries where this model of urban space is currently very popular (Polańska 2010, Csizmady, 2011). Initial symptoms of gated communities appeared in Poland on the beginning of '90s (Brodawski, 2013). First such a housing complex was built in Warsaw just after regime transformation. On the beginning of second decade of 21st century its number exceeded 300. For comparison, there is one left in Berlin. Gąsior-Niemiec and other (2007) explain this phenomenon as reproduction of voluntary isolation patterns, significant for communist and socialist nomenclature. Polański (2010) mentioned more prosaic evidence, responsible for isolated housing complexes success in middle-east part of Europe. He noticed the reasons in vast range developers offers in situation of lack municipal flats and defective legal system, creation of new social structure and fear of high criminality. Additionally, Szczepańska (2011) found them in the need to have own property ("stand on own feet") which was not fulfilled in communism times. Although these reasons, gated communities expansion in the urban space of post communist countries is ongoing. It also influence the space of Wrocław with population of 600 000 people, the main city of dolnośląskie voivodeship.

Unfortunately, there was no scientific literature, which would identify the subject of isolated housing complexes in urban space of this city. Even though it is not possible to omit their existence in the municipal space. They are created in various parts from the city center to suburbs. They have different forms of protection - from complexes surrounded only by short fence to castle shaped buildings with high walls, CCTV and guards. According to Brzeziński's (2010) typology of gated communities, there are two types of them in Wroclaw: "islands" (one isolated complex inside open architecture) and "archipelagos" (many isolated settlements in neighborhood).

## 3. Methodology

There were occupants from three gated communities in Wroclaw considered in the research: "Zielona Wyspa" (Strońska St), "Atrium-Geo" (Raclawicka St) and "Zielona Etriuda" (Turniejowa St). The choice of the settlements was based on a number of reasons. Firstly, all of them were located in the same district of Wroclaw - Krzyki, close to each other, which means that occupiers can utilize the same social infrastructure. Secondly, chosen settlements were erected in comparable time and are in the similar distance and travel time to the city center (Table 1). Three housing estates are in diverse size, concerning the number of flats: from 72 („Zielona Etiuda") to 248 („Zielona Wyspa"). Moreover, all of them were created in the same urbanization process. They were integrated in existing municipal body instead of city development in urban sprawling process.

Table 1. Characteristic of settlements in context of location, the time of erection and number of occupants.

| | Zielona Wyspa | Atrium-Geo | Zielona Etiuda |
|---|---|---|---|
| Travel time (min) at 13:00 | 11 | 10 | 12 |
| Travel time (min) without traffic jam | 8 | 8 | 10 |
| Distance from city center (km) | 4,4 | 4,9 | 4,9 |
| Year of erection | 2008 | 2009 | 2008 |
| Number of flats | 248 | 96 | 72 |

*source: data based on Google Maps TM.*

Described group of common features makes possible to hypothesize that occupiers of selected settlements could have similar reasons and personal values when decided to join to gated communities that makes possible to treat all of them as one, uniform statistical population.

There are a few definitions of research methods in available literature. Kaminski (1974) claims that the method is “a group of theoretically justified conceptual and instrumental actions, generally covering the entire researchers proceedings, aiming to solve specific scientific problem”. Okoń (1975) describes the method as "systematically applied procedure, leading to defined result. Conducted operations are mental and physical activities, properly selected and implemented in a fixed order.” In submitted research, authors decided to utilize diagnostic opinion poll, because in exact and precise way describes behaviors, preferences and personal values - specific for gated communities members. T. Pilch and T. Bauman (2001) write about opinion poll as „it is the way of collecting knowledge about structural and functional attributes, social phenomenon dynamics, opinions, views, intensification and directions of phenomenon development, which have educational value, based on a specially selected group, representing the general population, in which examined phenomenon occurs". Therefore, one can say that opinion poll is useful during social phenomenon research and lets get the insight into opinion, behavior and respondents motives. In effect, it makes possible to widen view of gated settlement society.

The term “research technique” can be understood as “the way of data collecting, based on a carefully elaborated directives (exact, clear, scientific), verified in studies of various sciences and thus having interdisciplinary values (Kaminski, 1974). In diagnostic poll, the most popular techniques are questionnaire, interview and observation. In described research the questionnaire was applied. This is a method of data collecting, which is based on filling in especially prepared form, personally by respondents, with the high level of standardization, in pollster presence or absence (Pilch, 1977).

Research tool, used to perform the poll is a questionnaire form. T. Pilch and T. Wujek (1974) define the research tool as „the object used to accomplish chosen research technique”. While the research technique means all activities, such as observation or conducting the interview, it is a research tool which is technical instrument for data collection. In this sense, a research tool is a questionnaire, observation sheet, and even pencil" (Pilch and Wujek 1974). Authors define the questionnaire as "a set of questions, built according to special rules". For research purpose, created questionnaire consists of 16 questions of multiple and single choice as well as free response type queries. There are seven general questions on the beginning, referring to sex, age, education, occupation, salary, time of living in gated community, and the number and relations to people living in the same household. The rest of questions are more specific. Six of them ask about preferences and personal values of occupiers (reasons for choosing gated estates as the place to live - positive and negative sides, neighborhood relations, wish to moving out, spending the leisure time inside the housing estate. Another two questions refer to satisfaction of living in gated community comparing to the previous place of living. Finally the last query refer to general satisfaction of living in this type of urban space. The questionnaire was anonymous, respondents were asked to fill in the form personally, The results are presented in the following chapter. The questionnaire form is attached to the article in appendix.

## 4. Results of the survey

The study was conducted on 20-24 April 2015, between 4-8 p.m. Interviewers were standing next to entrances (wickets) to the selected gated communities. 180 people were asked to fill the questionnaire of which 86 agreed to do so. The rest refused due to lack of time and / or rush (68 persons), tiredness (12 people); 14 persons did not give a reason. The authors were unable to carry out the research with residents of the housing estate "Zielona Etiuda" (Turniejowa St) due to lack of contact. The interviewers noticed that the inhabitants of the “Zielona Etiuda” estate enter its area with cars through underground parking and they do not use pedestrian entrances (gates). The estate

manager was asked to inform the residents about the research during a settlement council meeting and to obtain (on behalf of the authors) a permission to send questionnaires via mail or e-mail. Unfortunately, no positive response was obtained and the authors were unable to conduct the survey with the inhabitants of the "Zielona Etiuda" settlement. Therefore, only inhabitants of two gated communities "Zielona Wyspa" and "Atrium-Geo" participated in the research. The overall number of inhabitants of three selected areas was estimated on the basis of the available number of flats in them and the average number of persons per household (in Lower Silesia in 2013 it is 2.5 people per household by the Central Statistical Office (CSO) and 2.3 persons according to calculations made on the basis of this research, as it is discussed later in the paper). This means that the selected three gated communities are inhabited by about 1,000 people (957 people with an average of 2.3 persons/household, and 1040 with an average of 2.5 persons by CSO). The group of respondents (86 people) accounts for 8.6% of the population of these three settlements.

The study involved slightly more men (44 persons) than women (42 persons). In terms of age the research group could be named "young people", since 87% of respondents are under 35 years of age. No one declared age higher than 55 years (Figure 1)

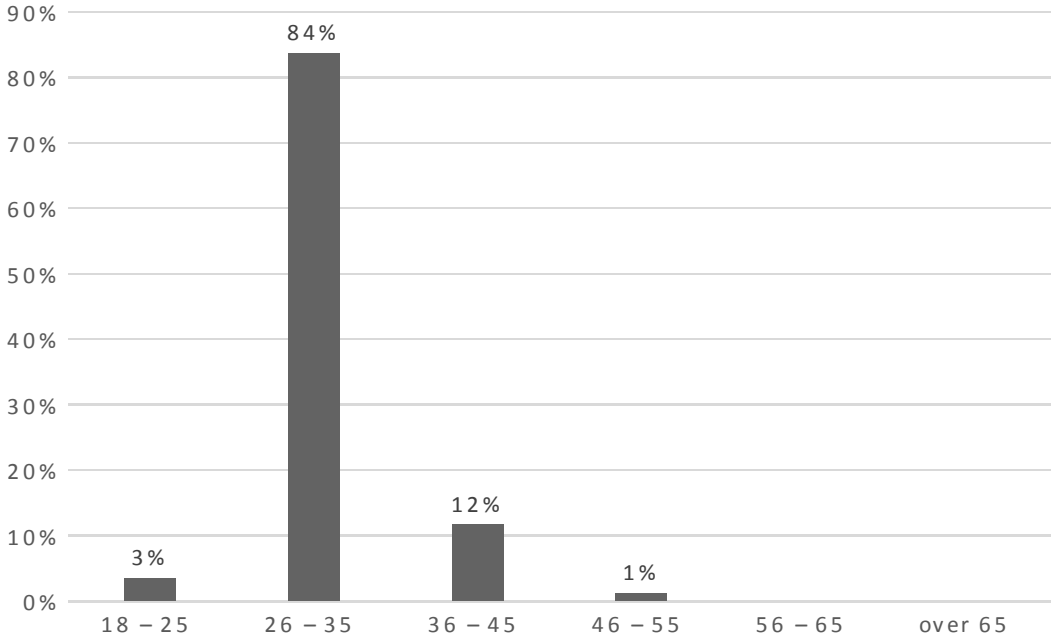


Figure 1. Respondents age profile
source: self-reported

Noteworthy is the education of the respondents, as 95% of them declared higher education, and the remaining 5% declared secondary education.

Taking into account occupation of the respondents, the research group can be divided into four subgroups. Nearly half of respondents (48%) are corporate employees, mostly associated with the IT, finances, etc. The second largest group (23%) are employees of the public sector: teachers, civil servants, doctors, etc. Businesses/firms are carried by 16% of respondents, while 13% of people declared to be so-called freelancers (artists, designers, etc.) (Figure 2).

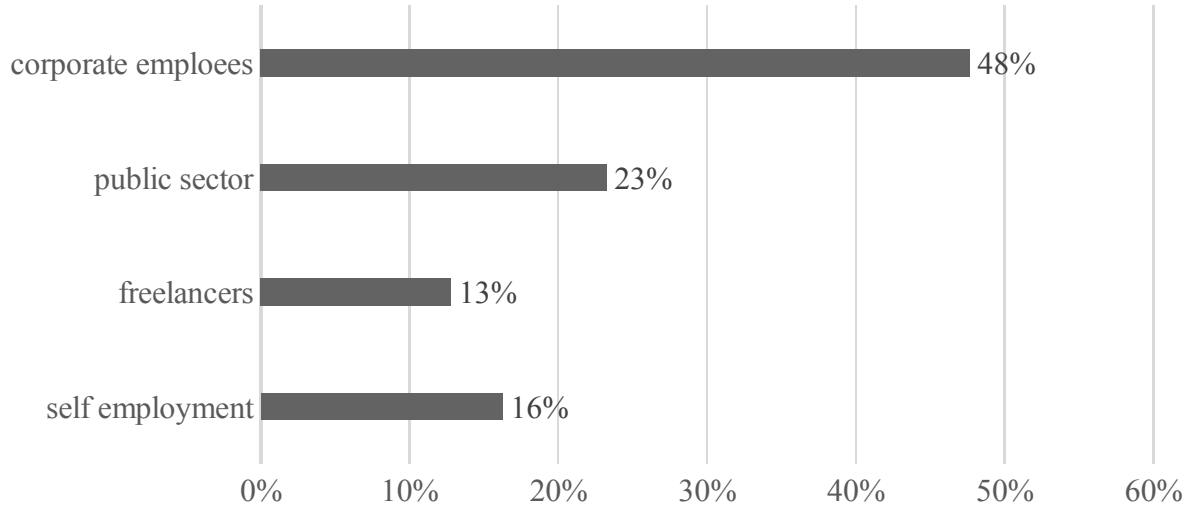


Figure 2. Respondents employment profile
source: self-reported

The research group has also been analyzed in terms of declared incomes. As a basis for the analysis, the following data taken from the Local Data Bank CSO:

- the average number of persons per household in Lower Silesia in 2013 is 2.5 persons/household;
- average monthly disposable income per 1 person in a household in Lower Silesia in 2013 is 1,344.79 PLN.

Given these data, it is possible to calculate the average monthly disposable income of a household of 2.5 peoples which is 3,361.98 PLN. Due to the research hypothesis: "residents of gated communities have higher incomes than the average households by CSO, the first income threshold was set at 3,500 PLN. It turned out that 87% of respondents exceed this level, while 56% percent of people say that their household disposable income is between 3,500 – 6000 PLN. Another 16% of people declare income of 6,000 – 10,000 PLN and 15% of respondents say that they have a monthly income of more than 10,000 PLN. Household disposable income below 3500 PLN is declared only by 13% of the respondents (Figure 3).

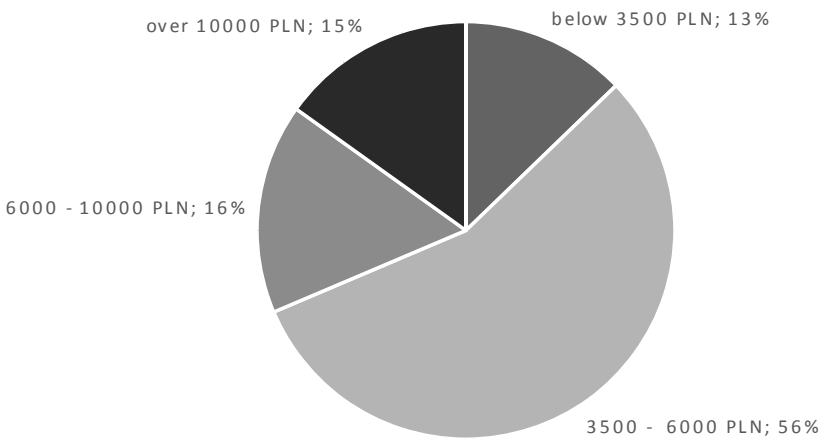


Figure 3. Income profile
source: self-reported

Next question asked about members of households and each respondent was allowed to give more than one answer. 10% of respondents answered "I live alone", while 85% of respondents live with a partner or a husband/wife. 3% of respondents declared that they live with other people (grandparents, roommates, etc.). 43% of respondents live with children and this means that 2% of respondents are single parents (Figure 4). These data also allow for the calculation of the average number of persons per household, which is 2.3 persons / household, so only slightly less than the data provided by the Central Statistical Office (2.5 persons).

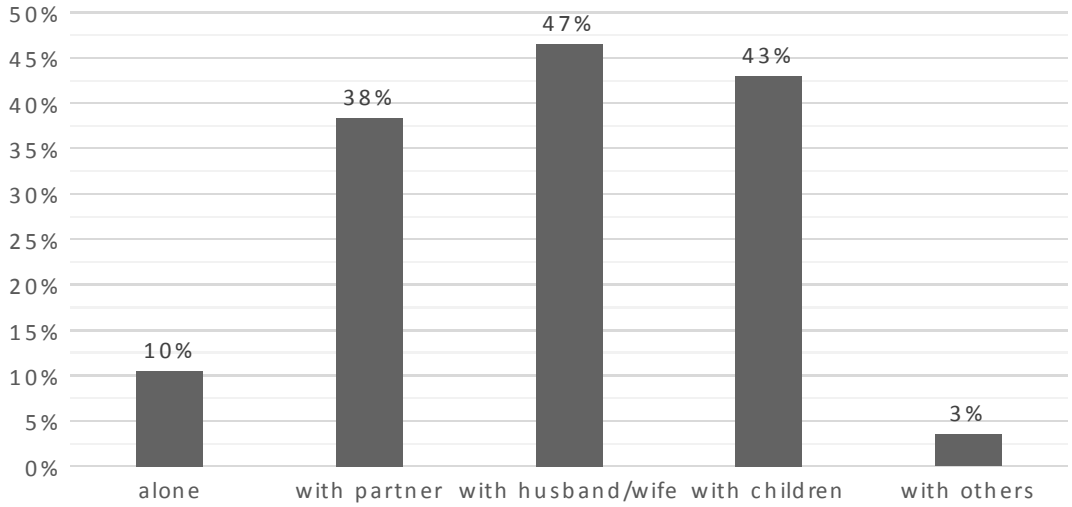


Fig. 4. Members of the household
source: self-reported

Next question was checking how long people live in the selected gated communities (Figure 5) The largest group are people living in a fenced housing estate from 4 to 6 years (41%). The second largest group are people who live there more than 6 years (27%), which probably means that they live there since the construction of settlements, which took place in 2008/09. 14% of respondents live in the gated community for less than 1 year. 9% of respondents replied "1 year – 2 years" and also 9% replied "2 years – 4 years".

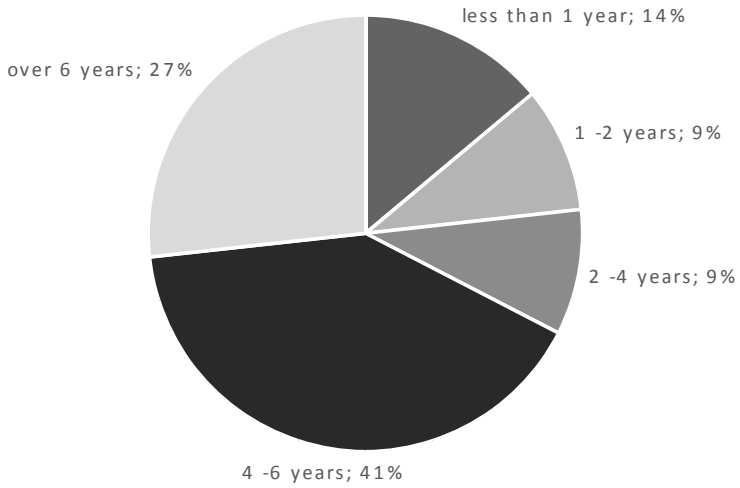


Figure 5. The length of occupation time
source: self-reported

Question no. 8 investigated reasons for moving into a gated community. Respondents could give up to four answers. Most people (66%) pointed to peaceful surroundings. Next causes are: nice architecture (56%), security concerns (55%), and lots of green areas (44%). Less than 30% of people gave following answers: high standard of buildings (27%), recreation facilities (22%), closed form of settlement (20%). 10% of respondents pointed to the favorable price and 5% of respondents reported other causes (i.e. availability on the market). Nobody pointed to the prestige as the reason for selecting the gated community for a place to live (Figure 6).

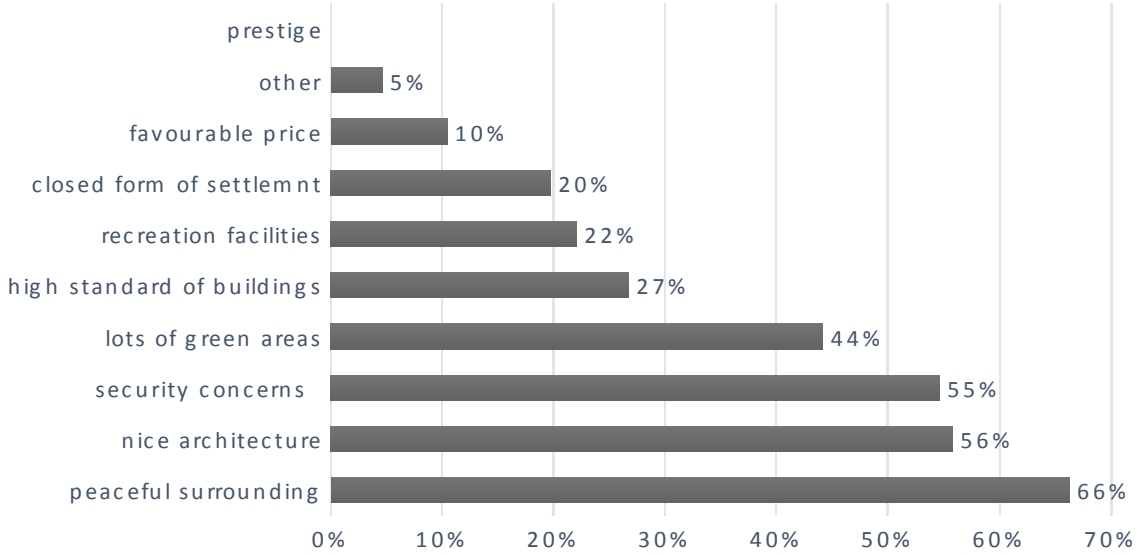


Figure 6. The reasons for moving into a gated community
source: self-reported

The research group was also asked to identify advantages and disadvantages of living in a gated community. Respondents could also give up to four answers. Most frequently mentioned positive aspects were: suitable/convenient location in the city (72%), safety (53%), lots of greener areas (52%), peaceful surroundings (49%), and monitoring and/or the presence of the security guards (42% ). Less respondents indicated such factors as: high standard of buildings (31%), recreation facilities (20%), closed form of settlement (16%), good relations with neighbors (14%), nice

architecture (10%). Only 3% of respondents appreciated isolation and anonymity (Figure 7).

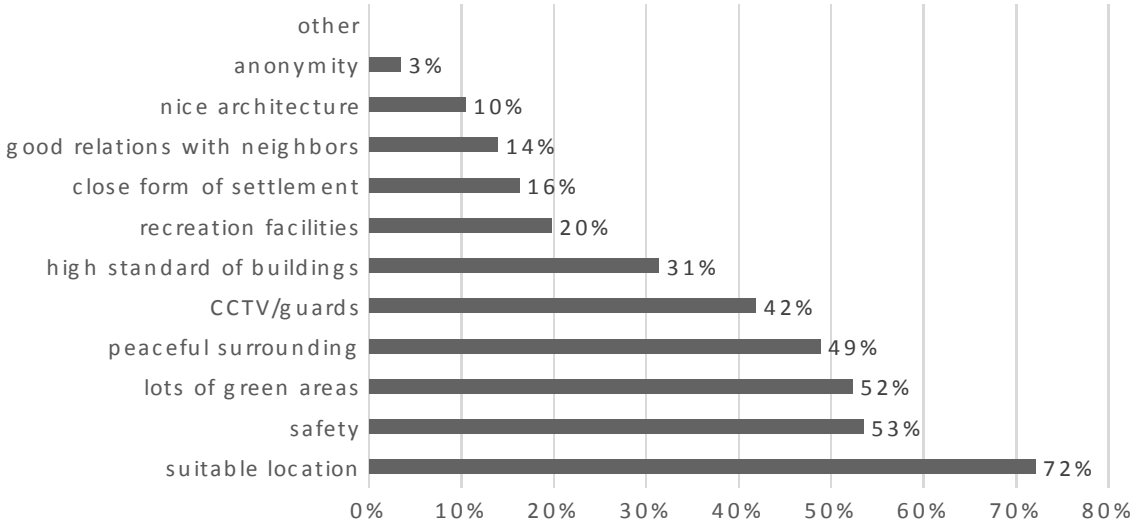


Figure 7. Advantages of living in a gated community
source: self-reported

Among negative aspects of living in a gated community the most important factor is lack of parking spaces (66%). The respondents complained also about: high development intensity (43%), isolation and anonymity (34%) and limited access to services (29%). Further positions were occupied by answers: no/bad relations with neighbors (22%), unsafe area (15%), lack/poor condition of green areas (12%) and recreation places/facilities (8%). Only 1% of respondents rated location in the city as unfavorable, but no one recognized the fenced form of the settlement as an disadvantage (Figure 8).

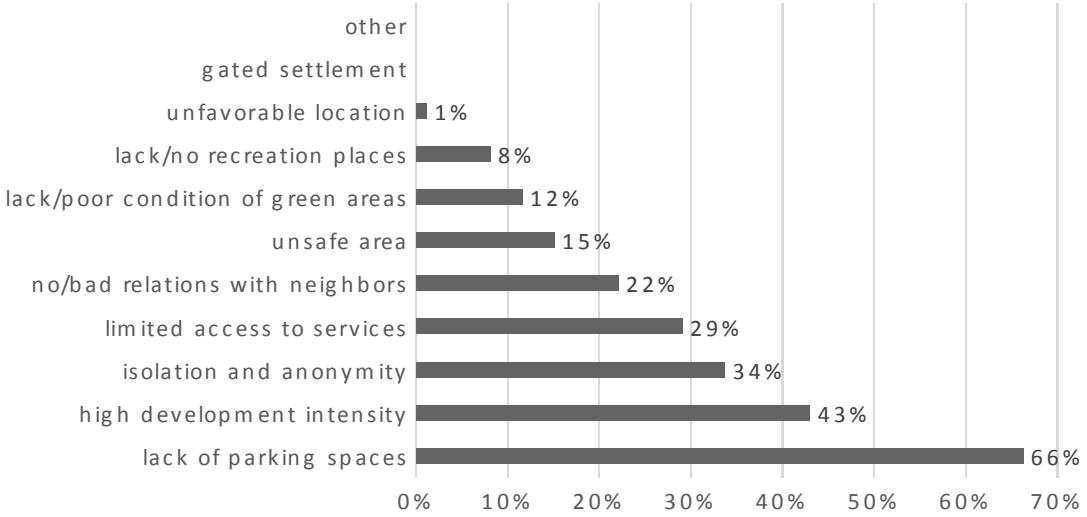


Figure 8. Disadvantages of living in a gated community
source: self-reported

Social relations between residents can be described according to the classification provided by Kryczka (1981), who takes into account a degree of involvement of inhabitants:

1. limiting neighbourhood (neighbours avoid behaviours that could be considered inappropriate, e.g. noise, littering, etc.);
2. conventional neighbourhood (neighbours exchange greetings);
3. informed neighbourhood (neighbours have some knowledge about each other, e.g. where they work, whether they have children, etc.);
4. providing neighbourhood (neighbours exchange small favours);
5. solidarity neighbourhood (neighbours have sense of unity and they conduct joint actions as a community);
6. friendly neighbourhood (neighbours visit each other and spend time together; they establish peer relationships or even friendships).

Most of the respondents (51%) can be classified as "conventional neighbours", i.e. they exchange pleasantries. The second largest group (31%) are respondents creating "informed neighbourhood". 15% of respondents are "friendly neighbours", and the remaining 2% of people are building "providing neighbourhood". No one chose responses indicating affiliation to "solidarity neighbourhood" or "limiting neighbourhood" (Figure 9).

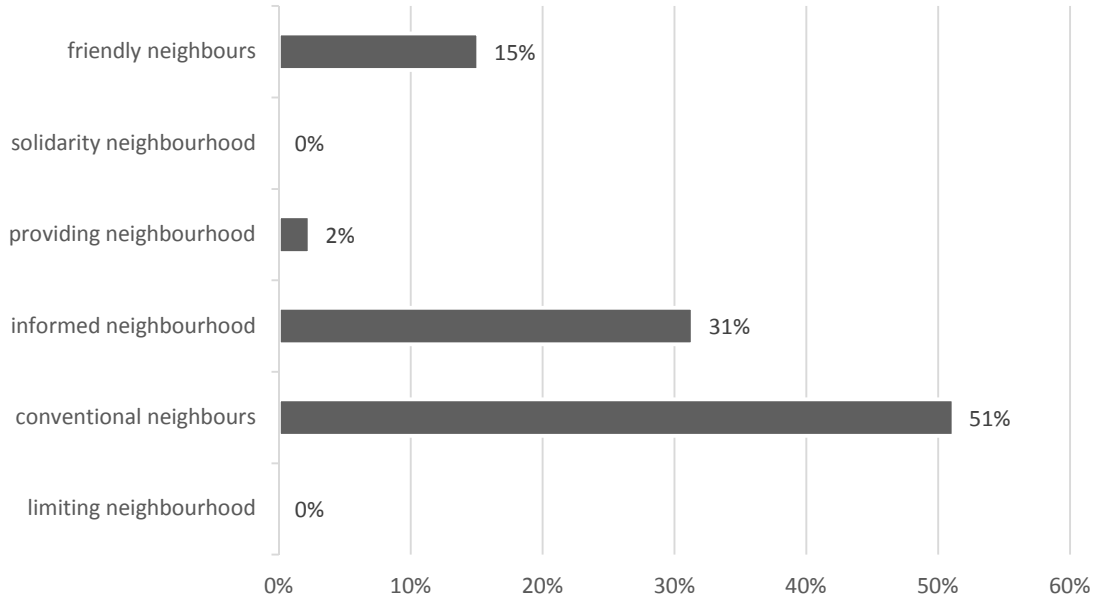


Figure 9. Social relations between residents in a gated community
source: self-reported

The research group was asked if they are willing to move out from the gated community. Positive answer was given by 36% of respondents, giving such reasons as: a larger size of an apartment (16%) or building a house (20%). 64% of respondents are willing to stay in the settlement. Another issue examined in the study was spending time inside within a gated community area. Positive answer was given by 22% of respondents, listing activities such as sitting on the benches (8%) or playing with children (14%). The vast majority of respondents (78%) does not spend free time within their gated communities

The research group of residents was also asked to evaluate their gated communities and compare them with their previous places of residence. The vast majority evaluated gated community

"much better" or "better" (45% and 30%) than the previous place. 22% of respondents said that those places are “similar” and just 2% of respondents gave answer "worse". Nobody has evaluated their gated community as "much worse" than the previous place of residence.

While examining respondents’ previous places of residence, it can be noticed that the vast majority (89%) moved to gated communities from multifamily housing estates: so-called Paneláks (panel buildings constructed of pre-fabricated, pre-stressed concrete) (30%), townhouses (30%) or modern settlements (29%). From single-family building (semi-detached/terraced and cottage) moved out 8% of respondents; 2% of the respondents previously lived in a dorm.

Next question was dealing with “openness” of previous place of residence. It can be noted that the majority of respondents (86%) moved from the open estates. 13% of respondents previously lived in a gated community, and 1% of the respondents lived in an open settlement with monitoring/security guards.

It also turned out that for 65% of respondents gated community is the next step of their "wandering" in the city of Wroclaw, and 30% of respondents chose a gated community as a place for living while moving to Wroclaw from other cities. Just 5% of respondents moved into a gated community from a village/rural area.

The last question in the questionnaire referred to the general satisfaction with living in the gated communities. It turned out that 88% of people are satisfied with their settlements and 12% is not satisfied with living there.

## 5. Conclusion

The results of conducted survey verify the hypotheses posed in the work. Residents of gated communities in Wroclaw, as alleged, turned out to be people of working age and with higher education. The assumption that household incomes of the residents are higher than the average household income in the province of Lower Silesia was also correct. The presumption that residents are in general satisfied with living in the gated communities is right. The hypothesis saying that main reasons for moving into a gated community are security and prestige is just partially true. While the survey confirmed security and safety were ones of the most important reasons for choosing a gated community, prestige was a less significant cause. As it was already discussed in the work, prestige is considered to be one of the main factors contributing to the spread of gated communities in the cities. However, the conducted survey has not confirmed this statement, on the contrary, it was denied. Nevertheless, it should be taken into account that respondents could have avoided giving the answer “prestige” on purpose, as they may be aware of the fact that gated communities are often perceived as a manifestation of snobbery.

The study provided data that allows for sketching a profile of a gated community resident in Wroclaw. This seems to be a person 26-36 years old, with higher education, living with a partner or a wife / husband and children, employed in a corporation, or in the public sector. The resident does not establish close social relationships with their neighbours, but exchanges greetings only. However, it should be taken into account that examined settlements were built ca. 7-8 year ago, therefore, the residents have not been given a chance to establish strong and long-lasting connections. Nevertheless, observations and impressions from the survey conduction allows for an assumption that these relations will probably not change with time. The question remains whether the connections between residents of gated communities differ from the bonds established by people living in unfenced housing estates. Of course, giving an answer to this question requires additional research, but literature reveals that these relations in both cases are rather similar.

Moreover, a resident of a gated community in Wroclaw is satisfied with the housing estate and rarely mentions any disadvantages. He/she does not plan to move out in the nearest future. A key factor for living in a gated community is safety. Most of the respondents moved into gated communities from open (not fenced) settlements located in Wroclaw. This may lead to a conclusions

that people move into gated communities as soon as they have financial capabilities to do so. A question arises whether improvement of safety among unfenced settlements would prevent the spread of gated communities in Wroclaw. It seems fair to say, that greater safety in open housing estates would reduce the number of such investments. Improving security (among other factors affecting the quality of life) in the open settlements may protect Wroclaw from transformation into a giant zoo, where you can watch people behind a fence instead of animals.

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# TRACK 07

# Dealing with Urban and Rural Decline: Interplay of Actors and Responsibilities

## Track description

Co-chairs: **Martina Schretzenmayr**, **Wim van der Knaap**

Planning as profession and institution was established as a means how to manage growth. Now the dwindling population growth and stagnating economies in many of urban and rural regions make planning to cope with decline. To manage and, possibly, to reverse the decline, a collective action of various public and private actors is recommended. Which actors should be involved in dealing with urban and rural decline, which roles they should play and which competences and responsibilities they should regain and what should be their good response?

# Planning and Democratic Structure in Oil Related Development Areas on Norway's West Coast

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## Abstract:

This paper describes how changes in civil society, economic development, communication systems and related changes in the localisation of economic activities and jobs can influence regional structures and integration. The development processes increases the differences between the urban core and the rural periphery, which appears to be changing into three major regional structures with different planning challenges:

1. The large-town belt in the South West, from Stavanger to Bergen that has almost 700.000 inhabitants and 2/3 of all jobs in Western Norway.
2. The small-town belt in the North West, dominant clusters are marine industries related to fisheries, shipbuilding and support services to oil and gas activities.
3. The marginal rural area, comprising fjords, mountains and islands with ¾ of the land, but with less than 1/5 of jobs and population. This area is divided into a lot of small job markets due to the geographical structure.

There is no clear "best" alternative for regional political and administrative organisation in Western Norway that can build on an existing "total" integration, mainly due to a lack of infrastructure, networks and intra-regional flows. The region has a lot of conflict lines and differences of interests between coast and inland, urban and rural areas, south and north and maybe only a strong common enemy (the capital Oslo) can unite the area. I have tried to illustrate structures that are possible in the future; the challenge is that they do not exist today but they can be developed by heavy investments and involvement. Instead of establishing political/administrative structures that "fit" existing social and economic patterns, political/administrative reorganisation would be an "instrument" and part of the strategies for the creation of new intra-connected regions, regions that will be relational and geographically dynamic. If so, new models of geographical political and administrative organisation are needed.

## 1. Introduction

In Norway a political process is currently taking place in respect of how to reform sub-national political and administrative structures. At present Norway, with a population of 5 million, holds direct elections to 426 municipalities, in Norwegian termed *kommune,* and 19 counties (in Norwegian *fylkeskommune*). The last major reform of the local political structure was made in the 1960's which saw a 30% reduction in the number of municipalities from, approximately, 700 to 450. The county structure has however remained unchanged for over 100 years (Selstad 2003), though directly elected councils were first initiated in 1974.

From the 1960s onwards, urbanisation, better communications, internationalisation, the construction of the welfare state, and the emergence of new politico-administrative approaches such as New Public Management etc., began to fundamentally alter the political and territorial landscape to such an extent that government (KMD 2014 a, b) now sees a discrepancy between functional and political regions. While most municipalities in the 1960s contained a common job- and housing market, new roads, more cars, urbanisation and the acceptance of longer travel distances from home to work have helped produce a new structure of approximately 160 residential and labour market regions, 60 of which have such a difficult or constrained geographical make up that they exist as single remote municipalities,

most often with a population below 5000 inhabitants and with a low population density (Juvkam 2002, Gundersen & Juvkam 2013). Similarly Norway's few metropolitan regions should be seen as being special cases as regards their urban structure. Excluding these metropolitan and peripheral regions, there are about 90 residential and labour market regions in Norway with an average population of 30 000 inhabitants divided between 2 to 10 municipalities. These are the municipalities that represent the biggest structural challenge to the success of the reform process. Typical arguments from politicians and/or researchers who favour a reduction in the number of municipalities include the following (Amdam *et al* 2004):

- Small municipalities (below 5000 inhabitants) are simply not capable of efficient welfare production and able to solve responsibilities transferred from state to municipality level. A state expert committee concluded that a municipality needs 15.000 inhabitants (KMD 2014 a, b) to take care of advanced responsibilities. A lot of public partnerships have evolved and have developed challenges regarding political control.
- It is not possible to develop sustainable and self-developing residential and labour market regions because of the lack of political empowerment at this level.

The same types of arguments have also emerged at the county level. The challenge here is that the functional boundaries of the metropolitan and other larger urban regions do not correspond well with the old county structure (Amdam et al 2014). There is also a growing need to coordinate activities on a level below that of the state but above the existing counties. As such, and in line with this observation, responsibility for hospitals was transferred from the counties to five state owned regional health companies in 2002. A similar approach to territorial reorganisation has now, moreover, been developed by more than 30 other state authorities (Amdam et al 2014).

While the strategy in the 1980 and -90s was to utilise county and municipality borders to provide the basis for the allocation and provision of all kinds of public activities, the last 20 years has seen a process of territorial reorganisation and state centralisation, in relation to a number of activities, both 'up' and 'down' the administrative scale to new levels between state and county and county and municipality. The need for greater coordination at the labour and residential region level and on the K-region level (communication and knowledge, university regions) can, for instance, be seen as the driving force behind such a change in approach. The problem remains however that each state sector has its own borders and territories and faces inter-sector coordination challenges. In effect we have public activities and administrations on five separate levels below that of the state.

Municipalities and counties are according to planning law supposed to coordinate all kinds of public activities in their territory, which is very difficult in this situation. A further challenge moreover is that the counties in particular have lost legitimacy as political authorities, while two of Norway's major political parties have stated in their programme's their desire to eliminate the county-municipal level along with its directly elected county councils.

The focus here is on both local and regional politics, development and planning - the role of the municipalities and counties as 'leading partners' and responsible planners and the role that municipalities and counties have as important welfare producers in Norway. Structural changes will certainly have an influence and on the role of local and regional politicians and administrators. What then are the alternatives, and what are the likely consequences of such a change for local and regional development and planning, as well as for welfare production? Such questions are typically representative of those we often receive from local and regional politicians and administrators and are discussed in part 1. Western Norway is used in part 2 and 3 as an example on how model structural alternatives can be problematic when applied in specific regions..

In this article the challenges and alternatives we can see emerging in respect of these questions will be discussed, as well as the types of important consequences likely to emerge in the context of this type of planning process with possible political conflicts between the state, regional and local levels (Amdam *et al* 2003, 2005 a, b, Amdam et al 2014).

## 2. Part 1. Challenges on the local and regional level

Any local or regional community exists within a specific context and situation and faces challenges both from other parts of the world, and from within, which inevitably vary from community to community. How inhabitants, companies, organizations etc., react to such challenges – how they cooperate and compete - to a large extent influences the capacity such actors have to develop efficient responses to these challenges (Amdam 2000, Amdam and Veggeland 2011, Bennet and McCoshan 1993, Healey *et. al.* 1999, Putnam 1993, Stöhr 1990, Vigar *et al* 2000). For practical reasons the notion of community has been divided into three areas; public activity (both political and administrative), private industries and the civil society. The focus of this paper is on public activity at the local and regional levels in addition to cooperation with the private sector and on public activity at the national level.

If we look at the current list of municipal (and county) responsibilities of both as a community and as a political and administrative organization they can be divided into three areas as in figure 1 (Amdam and Veggeland 2011):

- **Public administration and the allocation of rights**. The municipality issues building permits etc., to inhabitants and companies in accordance with national laws and local and regional plans, while also providing economic support to inhabitants and families who fall outside the national welfare scheme or other labour insurance systems – 'help for self help' - which was one of the first responsibilities the new political municipalities adopted in the 1840s (Teigen 1999, 2000, Amdam et al 2014). Usually there is little participation from inhabitants in respect of such activities, illustrated as a one way arrow in figure 1.
- **Public production of services** such as education, kindergartens, hospitals and the care of the elderly and infirm etc. The modern Norwegian welfare state is more of a 'welfare municipality' than a 'state' since most of these activities are organised and produced by the municipality, within the context of economic support from the state and where services are provided in accordance with state regulations. Some activities in this area compete with private sector providers while in monopoly situations some 'user participation' exists, illustrated here by weak back arrows in figure 1.
- **Development of the 'good society'.** Politically this has been the most important activity on the local and regional level since the emergence of a local political system in the 1840s until, approximately, 1960 when most of the rebuilding after the war was over and the construction of the welfare state began in earnest. A municipality or a county cannot however develop a society by itself, participation and partnership with the private sector as well as with civil society and nongovernmental organisations (the municipality as a community) more generally is also required as illustrated by arrows from both sides in figure 1.

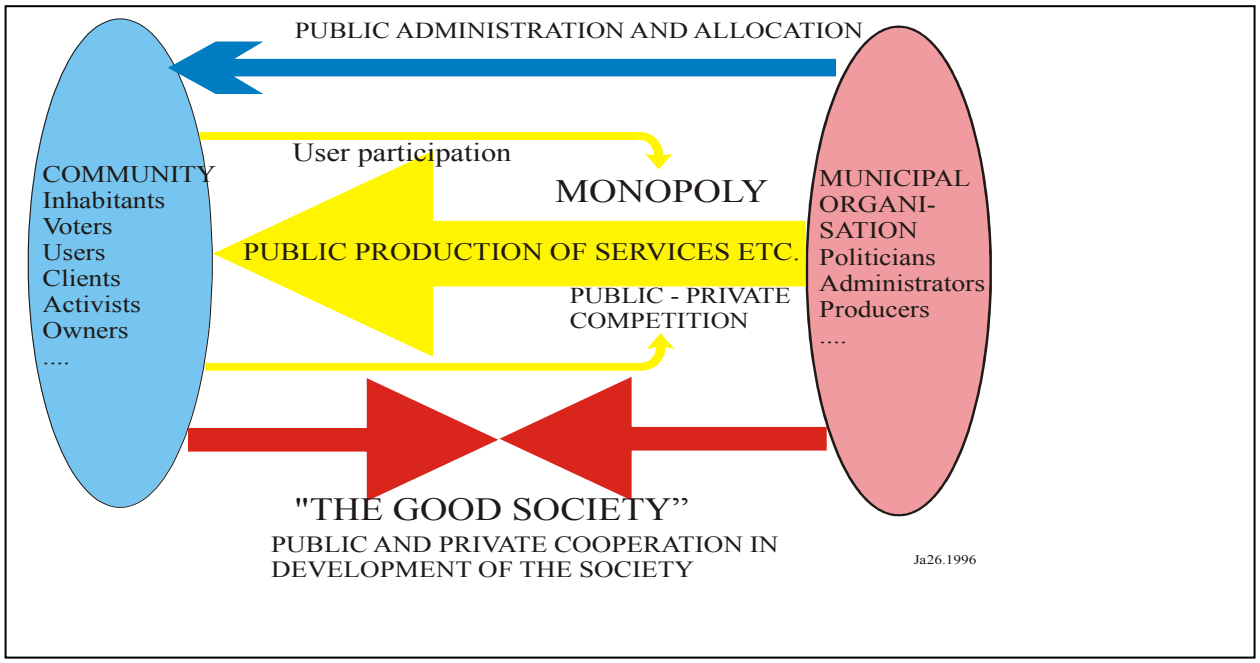
To lead and coordinate these activities a **democratic authority** is needed and in Norway we have direct elections to municipal and county parliaments. A change of municipal structure could have some, though probably small, consequences for the administration of rights and welfare state activities. In most municipalities the prevalence of such activities is small as compared to welfare and service activities or production, or to the nature and scale of the challenges related to the further development of the specific society in question. As such then this paper focuses on production and development activities as well as democratic planning activity.

### *2.1 Welfare production*

The production of welfare services mainly relates to public activity and to civil society as outlined above. Individuals and families are the main recipients of this production and thus any proposed changes will directly influence both the recipients themselves and 'voters' more generally as many are employed by the municipality to produce services (over 10% of inhabitants are full or part time employees in this production and approximately 50% are recipients, mainly children and the old and infirm). We have then to focus on the impact on these groups if we are to understand the consequences of any proposed change.

As shown by Myrvold and Thorsen (2003) and others (KS 2003, KMD 2014 a, b) there are few, if any, economies of scale to be had for kindergartens and primary schools in municipalities larger than 3000 inhabitants. For home-based care and homes for the elderly there are almost no economies of scale at all, and the same is true for health-care facilities for the elderly with more than 30 to 40 patients. In small, rural municipalities with an aging population this is often the number of people who need such attention in a general population of 3 – 4 000 inhabitants. These activities can be termed basic welfare production activities and typically take 75 to 80 % of the municipal budget. Thus the question emerges why should municipalities that are already larger than this merge when it is clear that no economies of scale will result?

Figure 1. Different kinds of 'cooperation' between public organizations and communities.




One reason often forwarded for this is that small municipalities often do not have what central politicians and administrators believe is an 'optimal and efficient' production structure. Instead of one school, one kindergarten, one hospital for old people etc., there are many spread over different local communities that fight politically to preserve themselves while in some places, for instance, private schools are established when public schools are forced to close. These institutions are important to local inhabitants, particularly for their identity, where it is often perceived that there is benefit in having common institutions and activities in a small remote community.

Local politicians, moreover, usually accept this even if it implies greater costs than a more centralized structure. So to reduce costs the municipality has to be merged so that the larger and stronger unit can fight more efficiently against local interests. What is interesting here is that alternative solutions are seldom forwarded. Why not accept the idea of having local kindergartens and schools if local inhabitants themselves are willing to cover the extra costs and organize the activity? Why not let parents take control of local schools in partnership with the municipality where they, by contract, are bound to national standards and curricula? This approach is likely to be as least as cost efficient as any general centralization process and may even increase local activities and promote a positive local identity.

A further reason for the desire for mergers is the savings they can deliver in respect of the centralization of activities that automatically produce economies of scale, such as administration, culture and sport facilities, health care, technical infrastructure and activities that need specialization (KS 2003, KMD 2014 a, b), ie are on the regional level as illustrated on table 1.

The Norwegian concept here is that of the 'general municipality' i.e., that all municipalities have the same responsibilities and activities regardless of scale. Small and remote municipalities however continue to experience difficulties in recruiting specialists such as doctors, planners, technicians, and administrators. Some cooperation with neighboring municipalities is possible and is undertaken (Sanda 2000, KMD 2014 a, b), but often only on a single project or functional basis. Since research has shown that large 'merged' municipalities produce such services more efficiently and often to a higher standard then small municipalities, this is deployed as the main argument for merging municipalities in spite of the fact that this usually concerns only 20% of budget thus producing a cost reduction that is often is no more than 10 to 20% (2 – 4 % of total budget, Amdam *et al* 2004, 2014).

Table 1 Responsibilities of welfare production and development and planning at the municipal and regional level

| Territory | Welfare production | Development and planning |
|---|---|---|
| Regional level – job and housing markets<br>> 5000 inhabitants | Administrative systems<br>Secondary education<br>Health care<br>Homes and hospitals for inhabitants with significant handicaps<br>Technical infrastructure<br>Culture and sporting activities and facilities<br>Education and retraining of employees | Regional development and planning of the region as an integrated entity<br>Activities for, and support to, industries and entrepreneurs<br>Nature and environment preservation and use<br>Influence on national politics concerning the region<br>Regional partnerships and projects for development |
| Local level – basic living space<br>< 5000 inhabitants | Kindergartens<br>Primary schools<br>Home care and homes for the elderly<br>Hospitals for the elderly<br>Other local public services such as libraries, information access etc. | Development of the local community – identity and relation- building activities in respect of culture, sport, hobbies, the environment etc.<br>Partnerships for local projects and activities |

*2.2 Development and planning*

Local and regional development and planning focuses on all activities in a municipality or region, as well as on individual inhabitants, private companies and NGO's. Typically, before 1960, local politics was tasked with organizing and implementing improvements in an area's infrastructure, organizations and institutions, while autonomous and stakeholder-owned organizations were made responsible for continuous activities such as the running of the cooperative bank, diary, shop etc. – the development of which we would today term as 'partnerships' or 'collaborations' based on social networks and territorial 'belonging' (Friedmann 1992, Healey 1997, 1999, Storper 1997). The municipality and county were arenas for the development of common visions and initiatives – 'meaning-making-processes' based on negotiation and cooperation – which today we try to 'reproduce' in strategic and mobilizing communicative planning processes (Amdam and Amdam 2000, Amdam R. 2005).

This part of local political activity has however been neglected in Norway because of the challenges local and regional politicians face in respect of the way in which welfare production is allocated 'on contract from the state'. Instead of being entrepreneurial and problem-solving, most of that which passes for local political activity has degenerated into conflict prevention since such allocation conflicts, where resources are too small to produce 'win – win' situations, are never solved.

*2.3 Possible municipal and regional structures*

We have made a study for the *Norwegian ministry for municipalities and modernization* regarding possible municipal and regional political-administrative structures in Norway, see table 2 (Amdam et al 2014). A voluntary amalgamation process among municipalities started in 2014 and is supposed to end in 2020 and we have identified four possible outcomes. Without commando from state level we think that the number of municipalities will be refused from 426 to approximately 300 in 2020 and with a structure not unlike the situation today, over 100 of these will have under 5000 inhabitant compared to over 200 today.

Expert advice, like Rattsø (2014) and the Expert group (KMD 2014 a, b), is to organize municipalities according to regional daily life regions (focusing on tasks in the upper group on table 1). Two alternatives will reduce the number of municipalities to: a) approximately 150, accepting 70 regions/municipalities with less than 15.000 inhabitants or b) demanding that all must municipalities must have over 15.000 inhabitants and approximately 80 local/regional political-administrative units, over 30 of these very big in land, long distances and low population. A forth alternative with a flexible organization of responsibilities between municipal and county level is also discussed (Selstad et al 2012, Amdam et al 2014), but is not politically acceptable today. On national level political support for using national commanding power to change municipal structure is not present, but can be possible after the coming election to parliament.

Counties are also invited to participate in the restructuring process ending in 2020, but not with the same enthusiastic government support as on local level. One reason is that our blue-blue government would like to abolish the county level and have a two layer political system, but have not support for this strategy in parliament. Another reason is the view that a change on municipal level will promote change also of the county structure.

Norway has 19 counties, one of these the capital Oslo is both a county and a municipal. Regarding county responsibilities like college level education, public communications etc. expert groups have advised that counties should have more than 200.000 inhabitants. Today 5 counties have fewer inhabitants and voluntary amalgamation processes have been tried without success. One county Finnmark has only 70.000 inhabitants but localized next to the North Pole and with a tremendous land area and long distances this is a special situation, see map 1.

On county level we (Amdam 2014 a, b) have described five possible alternatives including the 0-alternative, see table 2. The county structure is and will be dependent of the changes of municipal structure and we have identified 5 combinations what is more or less possible or acceptable. I will use these alternatives in my discussion regarding the restructuring of Western Norway in part three of this paper.

**0-alternative** – the existing county structure is combined with 300 municipalities. As shown in table 3 this alternative is possible but also problematic due to small population counties will have problems regarding cooperation and responsibilities with bigger and fewer municipalities.

**Alternative 1. Amalgamation.** The number of counties is reduced to 10-15 by voluntary processes so that all of them have more than 200.000 inhabitants maybe except Finnmark/Troms. Responsibilities as today but increased population and land area can increase possibilities for transfer of responsibilities from national level and increased political power. If the number of municipalities is reduced to maybe 300 we would advice this change and have evaluated it in our analysis.

**Alternative 2. Big regions.** Regional structure is decided on national level base don moderen communications and geographic structure and not bound by county borders. Seven new regions are established with increased responsibilities compared to counties like hospitals, universities, communications, regional development and planning etc. This change have low possibility on the short term but if introduced we believe it will be in a combination with 80 – 100 municipalities.

**Alternative 3. Big city** and flexible regional organization. Like Selstad et al (2012) propose municipalities are divided into four groups according to size and the (4 – 6) biggest are given responsibilities like Oslo, they are both municipality and county. Outside cities municipalities cooperates and develop partnerships also with counties in a structure where responsibilities are related to the number of inhabitants, the principle that all municipalities have the same responsibilities is abolished. This alternative has been proposed by Rattsø (2014) but have little political support outside the bigger cities. We have evaluated this alternative with 150 – 170 municipalities.

**Alternative 4. Flexible political organization.** As in alternative 3 the general principle is abolished but municipalities have responsibilities according to their expertise and recourses in near cooperation with neighbors and the county. The county and its municipalities are together responsible for tasks given by the welfare state and local/regional challenges, in fact have an almost total responsibility for planning, development and welfare production according to local and regional needs and challenges. This idea was proposed by Selstad et al (2012). We analyses this alternative with 150 – 170 municipalities and 10 to 15 regions, but we recognize that this is a challenging alternative regarding political-administrative traditions in Norway.

On table 2 our summative evaluation of these alternatives is presented, see Amdam et al (2014). The criteria used are built on the proposal from the municipal amalgamation expert group (KMD 2014 a, b) and the discussion above.

Table 2. Alternatives and consequenses (Amdam et al 2014)

| Alternative<br><br><br><br>Criterion | 0-alternative<br>19 counties<br>ca. 300<br>municipals | Alt. 1.<br>Amalgamasjon<br>10 - 15 regions<br>ca. 300<br>municipasl | Alt. 2<br>Big regions<br>7 regions and<br>ca. 80<br>municipasl | Alt. 3.<br>Big city<br>Flexible<br>organization<br>ca. 150<br>municipals | Alt. 4.<br>Flexible<br>organization<br>10 – 15<br>regions and<br>150 – 170<br>municipals |
|---|---|---|---|---|---|
| Democracy | Unchanged | Positive | Positive | Negative | Strong positive |
| Production of welfare | Negative | Positive | Positive | Negative | Positive |
| Public administration | Unchanged | Positive | Strong positive | Strong negative | Positive |
| Planning and development | Unchanged | Positive | Positive | Negative | Positive |
| Total | Negative | Positive | Positive | Negative | Positive |

## 3. Part 2. Regional structure and innovation

The term region can have many meanings. In our context here, it primarily refers to a geographical area between state and municipal level that appears as a homogeneous economic area in which business, industry, civil society and public sector activities are facing more or less the same challenges. The capability of a region to meet challenges is particularly dependent on how the various actors manage to produce and exploit competitive knowledge (Diez 2000). At the same time, challenges must be answered with strategies and measures in which the whole community involves itself and which are adapted to suit the situation and meet the challenges in the region in question (Stöhr 1990). The establishment and development of regional innovation systems requires certain conditions to be met (Nilsson & Uhlin 2002). There needs to be an active business and industry with a high degree of co-location and co-operation, plus active co-operation between various actors and organisations with competence in the field of developing and dispersing knowledge (Lagendijk & Cornford 2000, Storper 1997).

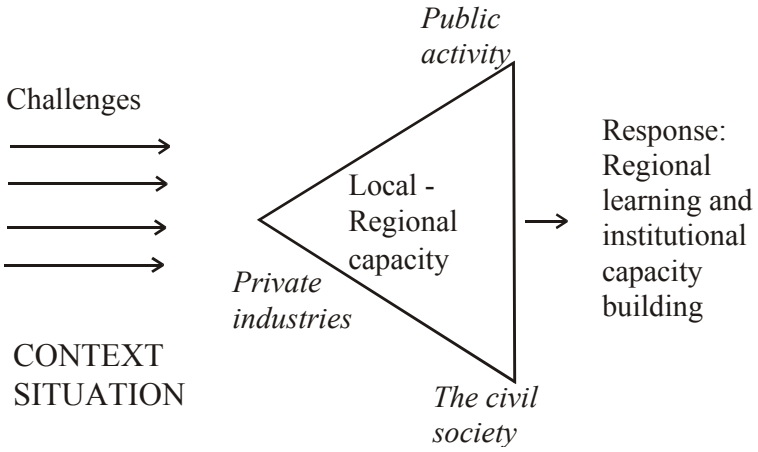



Figure 2. Regional capacity building (Amdam 2003).

In this article where the interconnection between economic and political-administrative structure is focus, the starting-point is that the ability of a region's business and industry for innovation and change is dependent on the conditions and changes in civil *society*, in public activity *(the public sector)* and in *business and industry* (see figure 2). If one transfers this perspective to competence and capacity development – to develop "learning regions" (Asheim 1996) or "clusters" (Porter 1990) - the challenges to the system can be illustrated as in figure 2. At regional level, there are three sub-systems which have to be made to function as well as possible as a collective unit: business and industry itself, public sector activity aimed at competence and capacity building, and the civil community. Each of these sub-systems is linked together with both larger (national and international) and smaller (local suppliers, etc.) systems that form the framework of conditions, challenges and changes (Stöhr 1990). In this perspective a region is a set of dynamic relations with a geographical concentration and the development capacity of a region can be changed by changing sub-systems. The basic question will be how to change the sub-system public activity by political and administrative reorganisation so that the regional capacity increases. How will the alternatives described in part one her function on the West Coast of Norway regarding this objective.

Co-operation, joint development work, the building of networks, interactive learning etc. seem today to be the main strategies in use to get such systems to function together and to further regional development (Asheim 1996, Asheim & Isaksen 1997, Healey *et al.* 1999, Koschatzky & Sternberg 2000). But basic to the whole process is the fact that it is human beings who develop, communicate, use and are bearers of knowledge and competence. Knowledge gathered in libraries, on the Internet, etc. is passive and does nothing to further regional development unless it is activated and integrated in social processes (Amdam 2000, 2003a, 2014), i.e. the development of human resources and competence. Even though it is possible for individuals to develop new knowledge, the recognition, further development, dissemination and use of such knowledge is linked to co-operation and networks

between people and organisations - to social processes that require nearness (Törnquist 1997). This is another perspective for the understanding of figure 2; the spatial integration of the three sub-systems will provide better opportunities for social processes and a higher intensity of intra-regional flows that will increase the abilities to cope with challenges. A political-administrative structure that is as identical as possible with the economic and social spatial structure can be an advantage with regard to development and competition. This perspective can be called "total integration" (Cornett in Bengs 2002). It can be necessary to use strong economic, social and political power to influence all three subsystems to "create" such a region and also to maintain it.

My focus is regional planning and development from a communicative viewpoint: whether it is possible politically and by using tools like political and administrative reorganisation to change structures and institutions and to get systems to produce other and better results for society than has been the case? According to both the perspectives presented above; what are the major changes and challenges in Western Norway and how can and should these influence the decisions on new administrative regions? The focus is Western Norway, which from the north comprises the four counties of Møre and Romsdal with Ålesund as the biggest town, Sogn and Fjordane, Hordaland (Bergen) and Rogaland (Stavanger). Based on figure 2 I will first present and discuss the structure and changes of the three sub-systems before discussing possibilities for geographical integration and change that can stimulate future development.

### *3.1 An overview of structural change in Western Norway*

Looking at details regarding population and employment structure and change in Western Norway after the Second World War, some general characteristics are dominant (Amdam 2005):

- the South is growing while the North is stable or declining.
- the Coast is growing while the fjord and mountain areas are declining
- urban areas are growing and rural areas are declining

In post-industrial urban society there is a large difference between communities that are or can be integrated into these urban structures and communities on the outside. Almost all job and population growth is now taking place in these urban zones, while the rural communities on the outside show stagnation or decline. Selstad (2004) also reveals a strong geographical correlation between level of urbanity and population growth.

The process that increases the differences between the urban core and the rural periphery also influences Western Norway, which in my opinion is changing into three major structures, see figure 3:

a. The large-town belt from Stavanger to Bergen that has over 700.000 inhabitants and 2/3 of all jobs in Western Norway. The area is still not well integrated due to fjord crossings, but in the near future it will be possible to travel by car from Stavanger to Bergen in approximately 2 hours. Oil and related industries is the dominant cluster.
b. The small-town belt in the North West that includes Kristiansund, Molde and Ålesund and due to a new undersea car tunnel opened in 2008 also Ulsteinvik and Ørsta/Volda as the fourth region with more than 10.000 jobs. This area organise approximately 1/5 of the jobs in Western Norway, some of them related to oil supply and fishing abroad, and a population of approximately 200.000. It is less dynamic than the south and dominant clusters are marine industries related to fisheries, shipbuilding and support services to oil and gas activities.
c. The marginal rural area, comprising fjords, mountains and islands, inland of and between the urban structures with ¾ of the land, but with less than 1/5 of jobs and population. This area is divided into a lot of small job markets due to the geographical structure, and faces the same kind of challenges as the eastern mountain areas of Norway, see figure 3. Welfare production as well as primary production and tourism are the dominant industries.

In 1942 Inge Krokann (1982) gave the name "Det store hamskiftet" (literally, "the great shedding of skin") to Norway's industrial revolution, the change from traditional agriculture into modern industrial

production that started around 1860 in most rural areas in Norway. A corresponding change has been ongoing after the Second World War, from the modern to the post-modern society. In Western Norway this change is somehow different than in other parts of Norway. While primary production has been reduced on the same scale as the rest of Norway, secondary production (manufacturing industries) is still important and even small peripheral job regions are less dependent on public funding than corresponding regions in other parts of Norway (NOU 2004:2, Onsager & Selstad 2004).

## CIVIL SOCIETY

An important task in local and regional capacity building is to increase social capital. Healey *et al.* (1999) define this task as influencing the three dimensions of institutional capital; knowledge resources, relational resources and mobilisation capability. A region with a high local openness combined with strong local capacity usually copes better than regions with strong local capacity but a local closure strategy or a region with high local openness but weak local capacity. Traditional rural regions typically have a combination of local closure (strategic focus on traditional activities) and weak local capacity due to class struggles and internal conflicts, while flexible rural regions are both open and have high local capacity – a common strategy for development that includes all important local shareholders. Important factors are nearness and identity. As illustrated by the authors of the history of Western Norway (Helle ed. 2006) the area has a strong common identity due to its common history, the combination of agriculture and fisheries, high equality, a sea-based system of transport and communications etc., but also strong local identities due to the difficult communications.

Maybe the major change in modern times is the shift in transport and communications from sea to land, from boat to car, which is still going on and will certainly have a strong influence on identity and social proximity. A strong indicator is the change in geographical labour markets. These changes are illustrated in figure 3, which shows labour market regions (municipalities where the centre is within commuting distance of the centre of the region) with more than 10.000 jobs in 2001 and compares these with (approximately) the corresponding commuting area in 1960 (Sandal 1977). Comparable changes are taking place in smaller labour markets.

Before the Second World War the sea and fjords were the dominant systems of transport and communications in Western Norway. Only Bergen, Stavanger and Åndalsnes (Møre and Romsdal) had railroads to Oslo and no north-south connection due to the high cost of fjord and mountain crossing. Also proper roads were rare and found mostly near the bigger towns. Ferries for fjord crossings were extremely scarce before 1960 (Nerheim 2006).

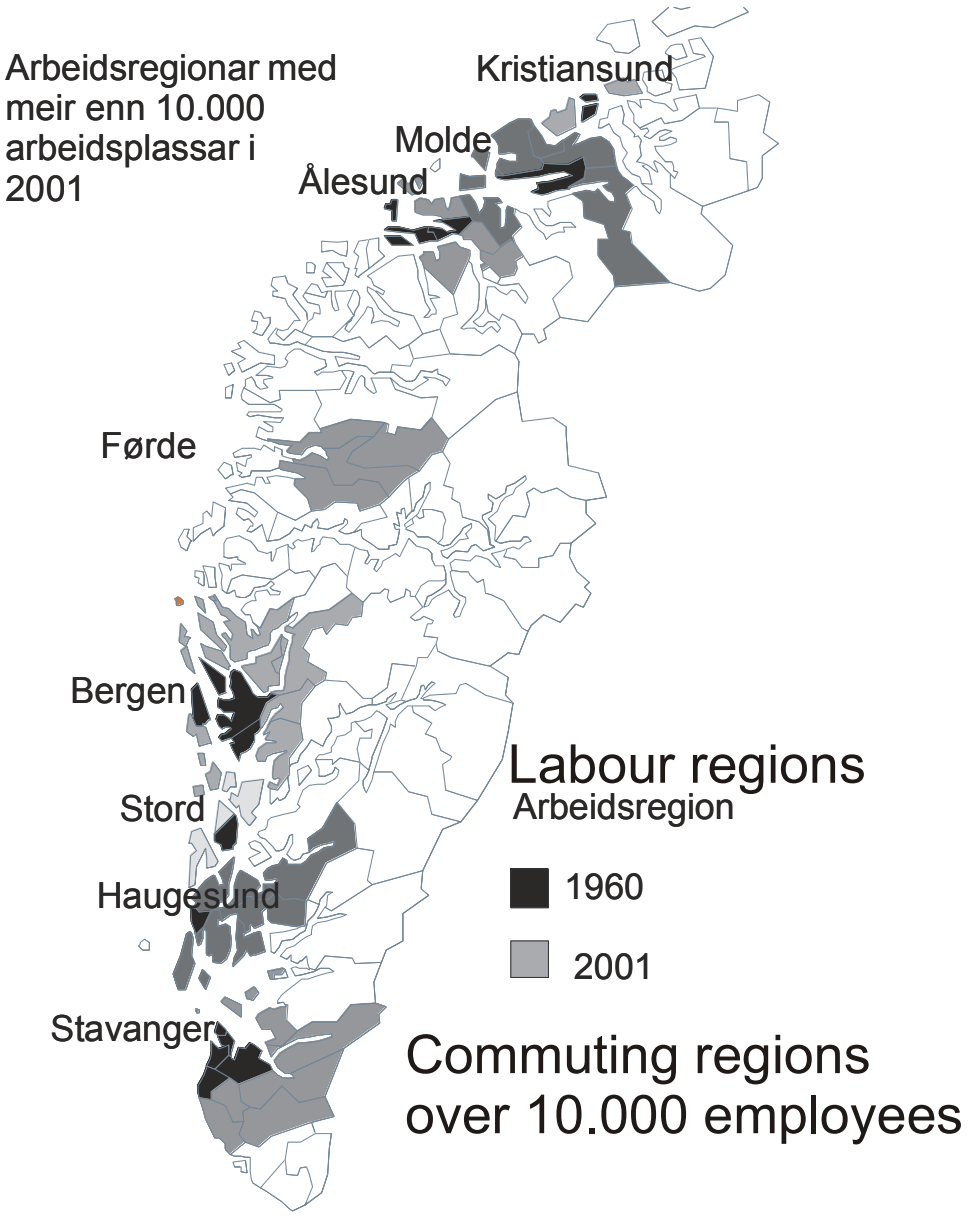



Figure 2. Labour market regions, over 10.000 employees in 2001 (Amdam 2005).

From 1960 onwards there has been a continuous political effort to change the transport system from boats to roads and cars, but Western Norway is still lagging well behind the eastern and central part of Norway. To go by car from Stavanger to Kristiansund using the road system in the four counties will take approximately 12 hours and involve 6 fjord crossings using ferries. Nevertheless, this still represents a tremendous change from the situation before 1960, when only boat transport was possible. Some regions implemented the shift from sea to land transport earlier than others, particularly the urban regions. But still the commuting regions were small in 1960 due to the lack of proper road systems and the fact that cars were scarce, even around cities (at least in the Norwegian context) like Bergen and Stavanger (see figure 3). In fact Sandal (1977) has shown that in 1960 the commuting areas in practice were a lot smaller than the theoretical area.

The most profound structural change in Western Norway after 1960 is the tremendous geographical growth of the commuting areas. But as shown by Gammelsæter *et al.* (2004) and Amdam *et al.* (2000), fjords and mountains still act as borders and result in labour regions that are a lot smaller than the direct distance as the crow flies. Especially in the fjord and island areas the change from boat/ferry to car is still a thing of the distant future due to a lack of proper investments and political priority.

Some integration processes are ongoing due to changes in transport and communication patterns. The most dominant one is the Main Coast Road project from Stavanger to Kristiansund (south-north). The plan is to make this road "ferry free" (6 ferries today) and have two-lane standard (only 40% today), a process that can take 20 to 30 years dependent on national priorities of infrastructure investment. But if plans are fulfilled the road between Bergen and Stavanger can be ferry-free in 10 years' time, reducing the travel time by car from over 4 to close on 2 hours. This process will strengthen the coast and the south even more and can create a very strong urban belt from Bergen to Stavanger. This will also increase the need for common strategies for development and planning and an administrative integration to meet such challenges. A corresponding integration process in the north is more difficult, due to lower population and higher costs.

The other process is better communications along the fjords – east-west, to integrate the fjords into the more dynamic coastal areas and to integrate small town labour markets, like Kristiansund/Molde, Førde/Florø and Ulstein/Volda. But these changes will mainly have local effects. The challenge is that over 70% of the land areas of Western Norway have less than 20% of the population. These rural areas are so distant from major towns and town belts that major commuting integration is very unlikely in the near and distant future because the political power is now predominantly in the urban areas illustrated in figure 3.

In 2002 Western Norway had 40 labour market regions, 14 of these were single peripheral municipalities and 18 consisted of less than 4 municipalities. New infrastructure as well as population change will certainly reduce the number of real labour market regions and the expansion of the dominant urban regions will continue as illustrated in figure 3. But this will mainly lead to a better opportunity for integration in the urban areas in the south and north, while the rural areas "in between" can be left behind.

Local and regional newspaper structure is another indicator of the integration of civil society. Both Bergen and Stavanger have strong regional newspapers that dominate their corresponding counties and also the southern part of Sogn and Fjordane (Bergens Tidende). In the northern part three regional newspapers share the market, each based in a small town (Kristiansund, Molde and Ålesund), the biggest Sunnmørsposten in Ålesund is also dominant in the northern part of Sogn and Fjordane. The north-eastern part of Møre and Romsdal is dominated by the regional newspaper in Trondheim. At the local level there are a tremendous number of small newspapers covering one to a couple of municipalities, especially in the North West. This is a strong indicator of the lack of social integration in Western Norway and also of counties like Møre and Romsdal and Sogn and Fjordane.

On the other hand the regional structure of the state broadcasting company NRK adheres strictly to county borders and acts as a strong integrator in a county like Sogn and Fjordane. Looking at the media as an indicator of integration, Western Norway has no common structure that links information flows spatially. In reality Western Norway can be divided into 6 regional newspaper regions, two large and one small in the south and three small in the north corresponding to the urban structure (see figure 3), and maybe an emerging small region in the middle with Førde as the core. A lot of private services are also structured in this way since they use these newspapers as important parts of their marketing.

## 4. Part 3. Future structure and integration

Real spatial integration of economic, political and civil regions is a major challenge. As shown in figure 2, a possible integration that can increase the capacity for regional development must also include a social integration (common identity etc.) and a political/administrative integration into a region where all actors work together to meet challenges and respond to opportunities. A spatial "political" integration is not enough; for example, according to Cornett (in Bengs 2002) a "total" integration is characterised by:

- The development of specific geographically defined systems of production such as industrial districts, clusters of industries, or systems of innovation.
- A system of urban networks defined according to specific functional links.
- The availability of a relevant regional infrastructure linking the analysed areas together.
- Last but not least, the intensity of intra-regional flows relative to outside flows can be considered the "conditio sine qua non" when we talk of a spatially integrated area.

In short and according to Healey *et al.* (1999) the internal knowledge structure, relations and mobilisation activities must be stronger in the region than between the region and the outside, and the region must not include sub-regions that are stronger on their own than as a part of the whole. A common commuting area that has functioned over a long period is typically one such integrated region, but can these characteristics also include a band of partly overlapping commuting regions, since there will be demands both in the south and north to create real "town belt regions"? Can territorially distant areas like the north and south of Western Norway be integrated in the future by better communications etc. in spite of the dominance of Oslo as the capital and communication node? And can such an economic integration lead to a common understanding of the situation and the challenges faced by all involved and in that way lead to social, political and administrative change that can empower the area?

Based on the arguments above and the pattern shown in figure 3 I will analytically divide Western Norway into three zones regarding situation and challenges and also discuss whether and how it can be possible to meet the characteristics of a "total integration" as described by Cornett. The three zones are a) the south-west; the urban belt from Stavanger to Bergen, b) the north-west; the small town belt from Kristiansund to Ørsta/Volda and c) the "rural remainder".

### *4.1 From small-scale manufacturing to a diversified "metropolitan" region – the South-West?*

One type of region and a regional development that maybe is historically characteristic for Western Norway as a whole is "Small-scale manufacturing" (Nilsson 1997), also called "Flexible rural areas". Typical is production on a small scale, flexibility, labour intensive production, small cooperating companies, etc. – often "Third Italy" is used as a model for areas like Sunnmøre (north) and Jæren (south) in Western Norway (Asheim & Isaksen 1997). With regard to manufacturing, the difference between the factory and the workshop is often used as an illustration of the difference between "English" and "French" industrialisation. Except for the metal and textile factories, most of the industries in Western Norway have grown out of workshops and in tight cooperation with demanding customers (fishermen etc.) (Wicken 1997). The "clusters" (Porter 1990) we have today are the result of such processes (Reve *et al.* 1992). But some regions are more "dynamic" than others and maybe also more lucky regarding specialisations, which also explains some of the dynamics of regional concentration (Selstad 2004).

Jæren (South-west) is an example of demands for new equipment from agriculture that leads to new industries and national dominance in the production of such equipment (Asheim & Isaksen 1997). But it is also the history of "English" localisation of oil industries and a flexibility regarding new markets and challenges that has created an impressive cluster of maritime oil activities. In the region around Stavanger there are today 600 large and small companies with approximately 33.000 jobs in the petroleum cluster. In a Norwegian context the Stavanger region is a large-scale manufacturing region

with a high proportion of foreign ownership, but still with a lot of the characteristics of a flexible and dynamic rural region.

Above I have shown that changes in transport and communications in the near future will integrate the commuting areas from Stavanger to Bergen. It will be difficult to live in Stavanger and commute daily to Bergen, but by living in the middle of the area it can marginally be possible to commute both to Bergen and Stavanger and not spend more time than in many metropolitan areas. But not only must the ferry-free road system be built, road taxes must also be reduced to an acceptable level.

One important demand regarding integration is the intensity of intra-regional flows, networks and infrastructure and this kind of integration has not been achieved today. For example, air transport is a lot more intensive between Bergen and Oslo or Stavanger and Oslo than between Bergen and Stavanger and this is not compensated by land or sea transport. What are common to both Bergen and Stavanger are of course services but also oil related and marine activities (Selstad 2004). Stavanger dominates the oil cluster, but on the coast companies in Bergen, Sunnhordaland, Haugesund and Stavanger are cooperating and competing when it comes to production and services to both the oil industry and other North Sea activities. Shipbuilding has to some extent changed into oil rig building. Fish farming is integrated into large international companies etc. The universities and other knowledge and research organisations in the area compete internally but to a lesser extent than with Oslo and Trondheim and internationally. To increase economic growth a stronger regional cooperation and integration as well as specialisation in activities that have a strong regional environment, such as oil and maritime activities, should be promoted.

Western Norway has no diversified metropolitan core like Boston that can function as a growth centre (Nilsson 1998), but is that possible in the future? Bergen may have ambitions, has a good university environment, but to a great extent functions as a campus for youth from Western Norway before getting work in the Oslo area.

What are the possibilities that Western Norway can meet the challenges of the post-industrial society and change into a knowledge-based diversified metropolitan region? In fact the term metropolitan will be an exaggeration, since the total population of Western Norway is only 1.1 million and as mentioned above, only South-Western Norway with its approximately 700.000 inhabitants can be integrated into a region that possibly can function as a diversified urban region. To do so, two strategies must be implemented, a) regional enlargement with the development of an integrated polycentric core, and b) knowledge growth. This means tremendous investments in communications, especially road and tunnel building, and universities; education and research. The area already has a high knowledge base when it comes to both petroleum activities and marine and maritime activities.

Since economic integration is possible in the future, can a political/administrative change promote this development? In reality the major challenge to the area comes from the capital Oslo and overseas regions; an integrated South-West region may be the only region nationally that can compete with Oslo. But to do so the region must develop a common strategy and also have common means to achieve goals and tasks and this can most easily be organised by a joint political/administrative structure. But a common “enemy” is maybe not enough in an area with strong local and regional identity that from days of old has been “organised” around the fjord systems and where Bergen and Stavanger from time immemorial have competed economically and politically. Still the area is split into two by regional newspapers, based in Bergen and Stavanger, which very much create their own political agendas and “internal” conflicts. An amalgamation “from above” before the area has been integrated with regard to transport systems, economic activity as well as socially can easily increase the level of conflict between the different identity regions, between the two large towns and between urban and rural areas.

*4.2 Growing self –developing urbanised rural areas in the North-West?*

So what about the North-West? Is this a stagnating, formerly flexible, rural area with little dynamics in the small towns? While the South-West has scale and is already growing, the North West's lack of scale and growth is a profound challenge. The geography also makes it difficult and very expensive to expand labour markets and to integrate the urban areas. While the South-West is still growing when it comes to advanced services, Oslo functions as the service provider for the North-West and with small local growth in advanced services and jobs. The North-West is even among the most difficult regions in Norway with regard to communications (Selstad 2004). The change in the pattern of communications from sea to land is still going on and will do so for a long time. The area is also very fragmented with regard to identity, dialects, newspapers, commuting areas etc. (Gammelsæter *et al.* 2004).

Fisheries, maritime and oil related activities integrate the small town band from Kristiansund to Ørsta/Volda and also most of the coast in Sogn and Fjordane. The Kristiansund region is enjoying a "fresh start" related to oil and gas activities, the Ålesund and Ulstein regions are dominant in fisheries as well as in the building, equipping and use of supply boats for the oil industry. Ownership is a challenge in the area since a lot of the dominant companies have been taken over by international companies like Rolls Royce (who have their maritime headquarters in Ulsteinvik), Aker Group etc. The region is an important international cluster when it comes to specialised boats and equipment for fisheries and oil activities in climatically challenging areas. The major challenges for this cluster/area are to achieve an increase in competence, knowledge, research, economic support etc. so as to be dynamic on the international market in the future and in that way create conditions for stability and growth in the region – to become a flexible and dynamic "rural" area in the future. The demands and challenges are greater than in the South-West, as is the need for the support of regional and national policies.

With proper investments in communications it should be possible to better integrate the area from Kristiansund, Molde, Ålesund, Ulstein to Volda (see figure 3). By road building and tunnels under fjords to get rid of ferries it can be possible to reduce travel time to maybe less than 3 hours compared to over 4 today. The required investment is possibly 30.000 mill NOK and the population that can be integrated into this zone only numbers 200.000. It is not possible to finance this kind of investment without heavy national investments. And the integration of transport in itself gives no guarantee for growth and dynamics. Interestingly the North-West town belt is already politically integrated as a County, but has a lot of political conflicts between the three fjord and town systems. Economically one could argue that the coastline of Sogn and Fjordane also is integrated into such a unit. On the other hand the fjord- and mountainous eastern part of Møre and Romsdal has a lot in common with the small regions in Sogn and Fjordane and the inner part of the South-West.

Gammelsæter *et al.* (2004) argue for an amalgamation of the North-West into one region due to the many common challenges that especially are different from those facing the large urban area in the south. Such a region will be dominated by rural small and medium-size municipalities and commuting regions. Of a total population of approximately 360.000 inhabitants, only approximately 150.000 live in the commuting areas of the three towns (see figure 3). If one focuses on common interests, the small town belt on the coast may have other interests in the future than the rural periphery, especially in a possible future where globalisation and economic development is more dependent on what is happening in the commuting area than in the marginal rural surroundings.

*4.3 What about the traditional rural areas in Western Norway?*

The areas outside the South and North town belts, what do they have in common apart from challenges involving stagnation and decline? The area consists of two economic (commuting) regions in the north, Sunndalsøra and Surnadal, that in the future can be integrated into the Trondheim region due to changes in transport and communications (see figure 3). In the middle are 7 economic regions from Odda in the south to Nordfjord in the north, or the County of Sogn and Fjordane together with two

economic regions in Hordaland, with a total population of approximately 150.000 inhabitants. This area has from days of old been dominated by Bergen as the service and administrative town and connections are still strong. Each of these 7 economic regions even has areas that are outside commuting distance from "local region centre", the lack of an integrated transport network is profound.

Employment structure and challenges also vary and one can point to the fact that the only feature they have in common is that they are all outside commuting distance of a town with at least 10.000 inhabitants in the urban area! But this characteristic is something these regions have in common with most of the mountain area of South Norway. Compared to remote regions in the east of Norway the marginal regions in Western Norway have a strong tradition of manufacturing industries. As shown above and exemplified by Sogn and Fjordane County the primary industries have been reduced as in the rest of Norway, but even in these small regions manufacturing industries are still important.
While the opportunities for integration that can stimulate growth are high for the urban South-West, and maybe for the urban-rural North West, the marginal rural areas of the South Coast face even greater challenges. The area is very fragmented with regard to dialects, identities, local newspapers etc., has a lot of commuting regions with few possibilities for integration into bigger urban regions, large in land and sea area and small in population. Some of these regions like Årdal, Sunndal, Odda are dominated by large-scale metal production that is going through downscaling processes. Other regions are very dependent on agriculture and/or fisheries. Since the population is small, even minor changes in employment can lead to significant growth or decline.

Further decline in primary industries will continue; also a decline in the established "English" pattern of manufacturing industries will certainly happen and with few possibilities for new manufacturing jobs as compensation. But small scale and a tradition of social equality and flexibility, the will to live in a certain region, are maybe the most important means for development. The national change from a rather young population focused on manufacturing to an older population focused on welfare and dependent on oil incomes, combined with growing social conflicts in the rest of the world, maybe offers new opportunities for small "safe" rural communities.

Rural communities in Western Norway have historically few of the social differences of the typical big farmer – land worker communities of most of inland Scandinavia. Farms were small, all inhabitants equally poor, but also open to the wider community since the sea transport system was perfect for jobs as seamen, fishermen etc. (Gammelsæter *et al.* 2004, Kolle & Haaland 2006). Healey *et al.* (1999) characterise such communities as having strong local social capacity combined with local openness. This is an advantage also with regard to the integration of "differences", as we see few challenges involving foreign workers in industry etc. As the number of old people will double in the coming 30 years, social unrest maybe will increase in the typical "old town areas" in the south – perhaps the very socially secure fjord and island communities in Western Norway can be places to escape from a turbulent world? Can care, tourism etc. become growth industries for at least some rural regions?

What is clear is that a "total" integration of this area according to Cornett's demands is not possible, but some of these areas can possibly be integrated into the more dynamic urban areas in the south and the north.

## 5. Conclusion. Possible regional organisation in the future

Due to the spatial structure of Western Norway the area can be divided into three zones with different situations and challenges now and in the future. A political structure that corresponds fully to this structure is not realistic or even advisable, mainly due to the geographical structure of the "rural remainder", see figure 3. But the spatial structure shown above can be used to discuss pros and cons regarding proposals for a new political-administrative structure see part 1. The 0-alternative is also a possibility if the ongoing voluntary municipal restructuring process ends by small changes in 2020.

**Western Norway as one region**. This alternative is called "Big regions" in part 1 and is based on proposals in Selstad (2004) and his alternative with 7 regions in Norway, and an integration of all of the 4 counties on the West Coast. This political structure will be dominated by the south west town belt that will have more than 2/3 of the population. It is very uncertain that the northern part of Møre and Romsdal will join such a construction due to its proximity to Trondheim. The large western region will be a strong region nationally with over 1 mill inhabitants, but if no proper understanding is developed between south and north, coast and inland, town and country, there can be a lot of conflicts that will reduce the external and internal political power of the region. The major challenge is a lack of integration south-north, for a lot of areas Oslo is closer in travel time than Bergen or Stavanger. The potential power struggle between Bergen and Stavanger can easily reduce the necessary political focus on the rural area and the north-west. Using Cornett's criteria the region fulfils the requirement of a geographically defined system of production, but the three other demands are not fulfilled now, nor can they be in the near future. Looking at the demands for a coordinated economic development a political region for most of Western Norway should be positive; the challenges will be the lack of intra-regional flows, of integrated urban networks and of a linking infrastructure.

**Two regions; South and North**. This alternative correspond to alternative 1 (Amalgamation) in part one, but with flexible change of borders. The south will consist of Rogaland and Hordaland and parts or all of Sogn and Fjordane. The population will be approximately 800.000 inhabitants. The two cities of Bergen and Stavanger will dominate the region and if they can cooperate and integrate activities as well as plans into a functional polycentric structure, this can be a rich and dynamic region that can even stimulate the marginal areas and integrate them more fully than today. A full integration of the most distant areas north, east and south will need at lot of investments in infrastructure and also a policy concerning decentralisation, cooperation and the expansion of urban networks that will be very demanding.

The north will include the rest of Sogn and Fjordane and Møre and Romsdal, maybe apart from the Sunndal and Surnadal regions – and have a population of 250.000 to 350.000 inhabitants. The small towns of the northern region do not have the dynamics today to stimulate the area and an integrated transport network will be difficult to establish. The area has more in common as a political empowerment structure with regard to national and maybe international policy than with economic and social integration. While Sunnmøre and Ålesund traditionally have been "on their own" (Gammelsæter at al 2004), the northern part of the area is closely linked to Trondheim, while the southern part has close links with Bergen and most of the area has stronger flows to Oslo than to these two cities. The region can be full of internal conflicts that can result in passivity and a lack of political focus on economic and social development. Only by heavy investment in infrastructure and coordinated polycentric development can it be possible to establish an urban core that can stimulate regional integration and development.

**Three regions**; This alternative correspond to alternative 1 (Amalgamation) in part one. Møre and Romsdal and Rogaland as they are now, and an amalgamation of Hordaland and Sogn and Fjordane – maybe with some border corrections. This alternative will separate Bergen and Stavanger and can reduce the synergic effects of a polycentric integration as shown above. Both Møre and Romsdal and the new "mid-region" will have internal conflicts between town and country, coast and fjord and in the north also between the small towns. The positive effects of this structure can be a clearer structure regarding town and hinterland and can stimulate that integration.

Also other alternatives like a two-layer system with large municipalities that correspond to economic regions as well as division between cities and rural areas (alternative Big cities in part 1) have been discussed (Amdam *et al.* 2000), but these are today politically unrealistic. The challenge is of course that while economic integration is a continuous and ongoing process in an area like Western Norway, where major changes in transport and communications are still taking place, where international competition results in activities being clustered geographically and strengthens urban areas, the social integration in particular is lagging behind. Due to the continuous economic and social changes, any political integration into stable spatial governing units is difficult. This is also apparent in the

fragmented state sectors' own spatial organisation processes. Using Cornett's criteria the possible alternatives for integrated political-administrative regions are not fulfilled now, nor can they be in the near future.

There is no clear "best" alternative for regional political and administrative organisation in Western Norway that can build on an existing "total" integration, mainly due to a lack of infrastructure, networks and intra-regional flows. The region has a lot of conflict lines and differences of interests between coast and inland, urban and rural areas, south and north and maybe only a strong common enemy (the capital Oslo) can unite the area. I have tried to illustrate structures that are possible in the future; the challenge is that they do not exist today but they can be developed by heavy investments and involvement. Instead of establishing political/administrative structures that "fit" existing social and economic patterns, political/administrative reorganisation would be an "instrument" and part of the strategies for the creation of new intra-connected regions, regions that will be relational and geographically dynamic. If so, new models of geographical political and administrative organisation are needed (Farsund *et al.* 2002). Particularly the possibilities for polycentric cooperation and organisation as promoted by the EU system (Bengs 2002, Selstad 2004), can provide new opportunities but will also inevitably create new challenges.

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# Using quality indicators to assess urban regeneration in residential areas

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## Abstract:

*Urban regeneration programs play a dominant role in improving declined areas and inject new life into cities, neighborhoods and urban centers. They can be long term and costly projects and therefore evaluating them is a key issue for both urban policy makers and academic scholars. Although urban regeneration efforts have many similarities, they differ significantly in terms of their outcomes and the level of success across neighborhoods and regions. Detecting a successful regeneration depends on the set of factors such as the development potential of the location, the socio- economic context of the area and the commitment of all involved actors and authorities. Hence, to measure the success of such a complicated process it is necessary to consider all these factors and also the consequences of the implementation on residents' life.*

*In this article, the chief argument is to explore the main approaches in evaluating urban regeneration programs and then to propose a model to assess the implemented interventions in residential areas. The model contains a method, which quantifies different aspects of a regeneration program through sets of measurable indicators. It also addresses a survey from the residents, asking them to compare and evaluate their quality of life before and after the regeneration. In this method, measurable indicators are translated into survey questions and connected to physical aspects of the environment*
.

**Keywords:** Urban regeneration, planning, evaluation method

## 1. Introduction

Urban spaces are diverse and dynamic places where different activities and events take place. The diversities and changing characteristic of urban places have always been influenced by macro developments, such as globalization and economic situations and, as a consequence, new visions and methods are needed to manage these multi – scale issues in the existing urban environments. Urban regeneration programs are the tools to face diversities, inequalities and major challenges in urban areas across the world. In the last two decades, many towns and regions have been involved with regeneration programs to eliminate deprivation and improve the individual spaces as well as the collective ones (Roberts & Sykes, 2000). The primary goal of these programs has been mostly economic, but in recent years it has shifted toward concepts such as vitality and human development.

Urban regeneration processes have been regarded as a key element of urban policy to promoting land values and environmental qualities (Adams & Hastings, 2001). It contains various approaches to tackle economic, social and physical issues of urban centers and therefore involves different planning

actions and stakeholders (Couch, Sykes & Boerstinghaus, 2011).

In recent decades, many of implemented actions regarding regeneration program emphasize on human development rather than economic growth of the regions. Thus, the reflections of the link between regeneration and these aspects bring out new questions whether the components of regeneration activities have been characterized with respect to human development indicators (Wei *et al.*, 2015). It is therefore crucial for planners to develop an evaluative tool to monitor the effectiveness of regeneration programs. This tool contains indicators, which demonstrate the regeneration initiatives for resident's interests.

Urban regeneration requires time consuming approach, dealing with various urban problems related to the built environment, such as urban decline, unbalanced urban growth etc. Therefore, its intervention in urban space is through sets of physical, social, economic and environmental domains. In this regard, this study aims to develop a model to evaluate the outcome of urban regeneration and empirically test whether those projects were successful in terms of enhancing indicators of resident's life quality. These indicators will be measured using objective and subjective methods in the context of neighbourhood. The findings will allow us to have a better understanding of urban development projects and the real impacts of physical interventions on residents. This can lead to improved design guidelines for the practitioners and will bring insights to both theory and practice of urban regeneration.

## 2. Background

From the earliest human settlements to modern globalized cities, urban regeneration has played a vital role in the world history. The concept of urban regeneration has gained a lot of attention especially after the Second World War due to the large damages and became part of urban policies. Cities have been rebuilt in response to the problems of economic decline, environmental demolition and social dereliction (e.g. Hulsbergen & Stouten, 2001; Stouten, 2010). It is possible to classify different strategies under the flag of urban regeneration depending on the implementation scale, time interval and location of the project. These strategies are known as urban revitalization, urban renewal and urban development (Dempsey *et al.,* 2011). All of these strategies make a direct link to the communities living in the areas where regeneration is planned. As a consequence community and its demands are an integral part of any urban regeneration program. Urban regeneration is multi-dimensional action, which contains different aspects of human life, and it should help the cities to become viable, vibrant and sustainable communities.

Although urban regeneration efforts have many similarities but they differ significantly in terms of their outcomes and the level of success across neighbourhoods in response to unique historical, social and economic realities of the area (Evans & Jones, 2011) Detecting a successful regeneration depends on the set of factors such as the development potential of the location, the attitude of the local authorities and the commitment of all involved actors. Hence, to measure the success of such a complicated process it is necessary to pay attention to all those factors and also the fact that urban regeneration involves in injection of new life into cities, neighbourhoods and urban centres. Since urban regeneration is multi - conditional and context related process, evaluation of urban regeneration projects should place emphasise on both the outcomes and the planning process. In summary, Roberts & Sykes (2000) explain urban regeneration in the Handbook of urban regeneration as: "Comprehensive an integrated vision and action which leads to the resolution of urban problems and which seeks to bring about lasting improvements in the economic, physical, social and environmental condition of an area that has been subject to change".

As figure 1 represents, urban regeneration performance at different scales from macro to micro aims to improve different indicators of social, environmental and physical aspects of urban system.

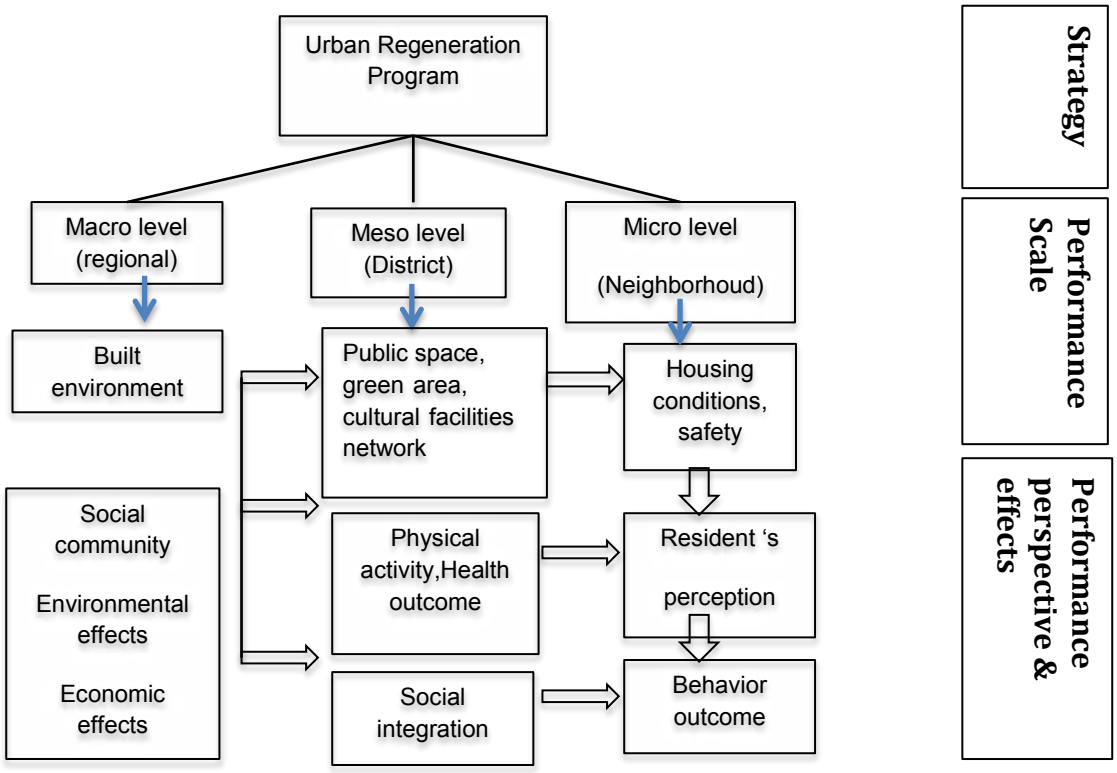



Figure 1. Regeneration performance scale

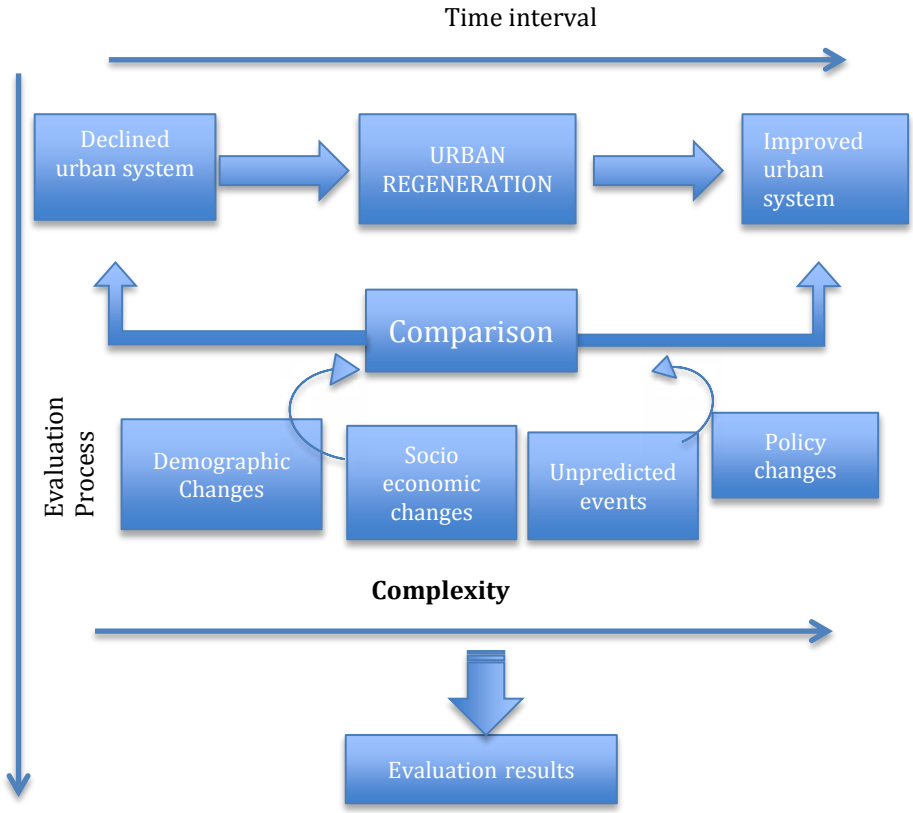
## 3. Evaluation of urban regeneration

There is consensus among authors and urban scholars that evaluating urban regeneration is necessary and enables planners and designers to see the areas of weakness and strength, thereby preventing them to repeat the same mistakes in future plans (Boyko *et al*., 2012; Cahantimur *et al*., 2010; Cheng & Lin, 2011). Assessment of urban regeneration is complex and according to Tyler (2001) there is no accepted method among researchers to evaluate and monitor the outcome of urban regeneration operations since they contains both short terms and long terms effects (figure 2). Due to temporal effects on the interventions, what appears successful at the beginning can lead to ineffective long-term results. In addition, changes in socio economic situation and demographic composition of area can also increase the complexity of assessment during and after the implementation. To tackle these issues, researchers propose different methods and approaches namely, Hemphill et al. (2004) developed an indicator-based approach for assessment of urban regeneration, although the use of indicators is not new and dates back to mid-1960s (Wong, 1995), they proposed indicators and weighting system as evaluative tools for regeneration activities and interventions. This method can employ different sets of indicators or frameworks, and includes both qualitative discussion and quantitative assessment of urban regeneration. The application of this approach is mostly on the

district levels where different indicators of land use, transportation and buildings are interrelated and measurable.

Figure 2. Complexity of urban regeneration evaluation

However, there is still ambiguity about what indicators should be used, Coombes *et al*. (1992) mentioned that indicators selection is not an easy job while the economy that provides the resources




for regeneration usually rooted far beyond the designated areas. This consequently makes indicators sensitive to locations and contextual factors. Taig (2002) suggests using of experts and people opinions as means of identifying the list of main criteria and their significance. Coombes & Wong (1994) suggest a four-step method for determination of indicators: conceptual consolidation, analytical structuring, identification of indicators and creation of an index.

Moreover, to evaluate the actual operation of urban regeneration, it's important to determine the physical changes in the area which ranges from housing renovation, public and green space development to urban fabric improvement. Each of these interventions can affect urban system and residential quality of life in different ways and to different degrees. Therefore, it is essential to identify the exact changes implemented through urban regeneration process in the neighbourhood in order to choose, collect, analysis and interpret indicators for the study. This will ensure that the most relevant indicators would be used during the study. A good Indicator must be relevant, valid, meaningful, measurable and sensitive to changes in the urban environment. Hollander (2002) also adds consistency, cost effectiveness and comparability to the criteria of indicator selection.

Although it is difficult to define and measure urban regeneration effectiveness, it is possible to conceptualize it through sets of key performance indicators such as length and cost of the program.

Example of measurable indicators for evaluating urban regeneration:

- The length of the program
- The cost of the program
- Number of buildings renovated
- Number of streets redesigned
- The amount of public spaces created
- Ratio of green space
- The number of new jobs created
- The number of bus, metro, tram added
- The number of retail business
- The value of properties

In addition to indicator-based approach, recognizing the underlying causes of regeneration process can help to monitor the outcomes and evaluate the effects of the process based on the problem-oriented approach. Figure 3 briefly shows the process of urban regeneration, from identifying the challenge to evaluating the success. It demonstrates the numerous reasons for regenerating an area, which covers physical, social, economic and environmental issues.

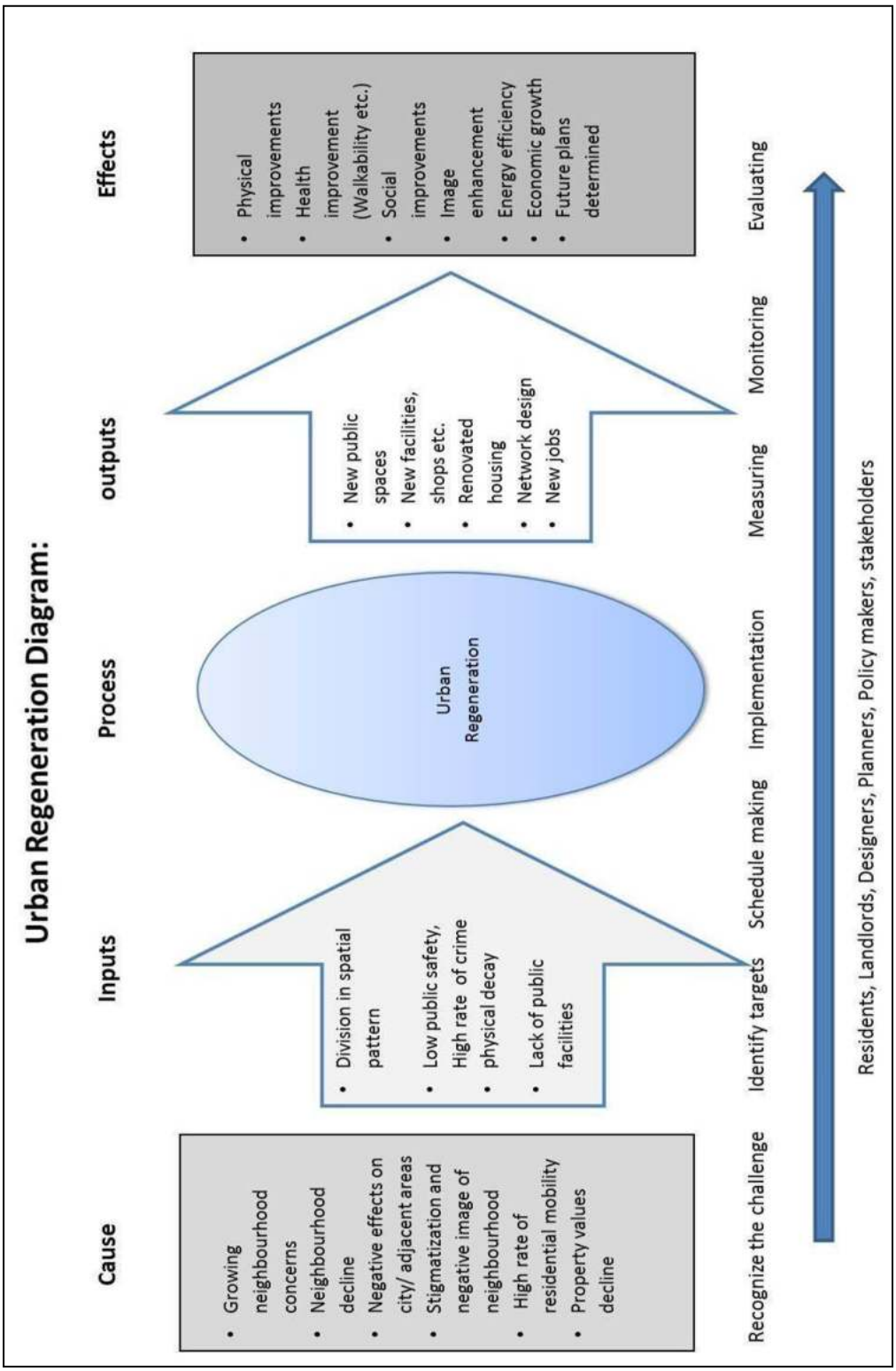



Figure 3. Urban regeneration diagram

## 4. Survey approach

Urban regeneration is a multi-faceted process that affects residential liveability of space and therefore survey and exploratory interviews should be an integrated part of the evaluation. Interviews with residents and stakeholders should contains:

(1) Comparison of the situation with similar size projects in the city

(2) Changes over time

(3) Future perspective and capacity of project to deal with coming issues

(4) Evaluation of projects in terms of defined sets of indicators

Collecting information for subjective assessments of residents' quality of life (QOL) has been usually conducted through social survey methods. In such survey, it has been common to ask residents to evaluate different aspects of their QOL (McCrea *et al.*, 2011). In this type of research, similar type of the questions can be asked from the residents who has seen the urban regeneration process and/or used to live in the intervention area before urban regeneration implementation. Therefore, they can compare the quality of their lives and whether it has been improved or not. The survey samples also should be spread out in a way that respondents are representative of the cultural diversity within the organization. Furthermore, statistical method will be used on the results of subjective QOL for further analysis and interpretations. These questionnaires and questions aimed to measure indicators designed in the previous step. Table 1 illustrates different indicators that might affects resident's satisfaction after regeneration implementation and can be translated into questions in survey-based approach.

| **Physical condition** | **Social condition, Civic behaviour** | **Economical Satisfaction** |
|---|---|---|
| • Landscape quality<br>• Housing quality<br>• Street design<br>• Network and accessibility<br>• Traffic-noise-pollution<br>• Air and water quality<br>• Public facilities<br>• Cultural amenities | • Satisfaction with people who live in the area<br>• Social interactions<br>• Safety/crime<br>• Privacy<br>• Ties with people in the community | • Living cost<br>• Housing price<br>• Socioeconomic status of neighbourhood (Unemployment rate, etc. )<br>• Neighbourhood improvement |

Table 1. Key performance Indicators

## 5. Integrative method

In recent years, assessing the effectiveness of regeneration practice has been gained a lot of attention among policy makers. Following this path, both "good" and "bad" practices need to be evaluated and deeply studied. The current financial situation and unemployment rate affect safety, housing quality and bring poor environmental conditions, which highlight the major challenges to improve quality of life through both top-down and bottom-up approaches. Increasingly, key performance indicators enable a range of measures to evaluate the achievement of regeneration through four main categories

of physical, environmental, social and economic. Figure 4 presents number of key factors to evaluate regeneration policy and practice.

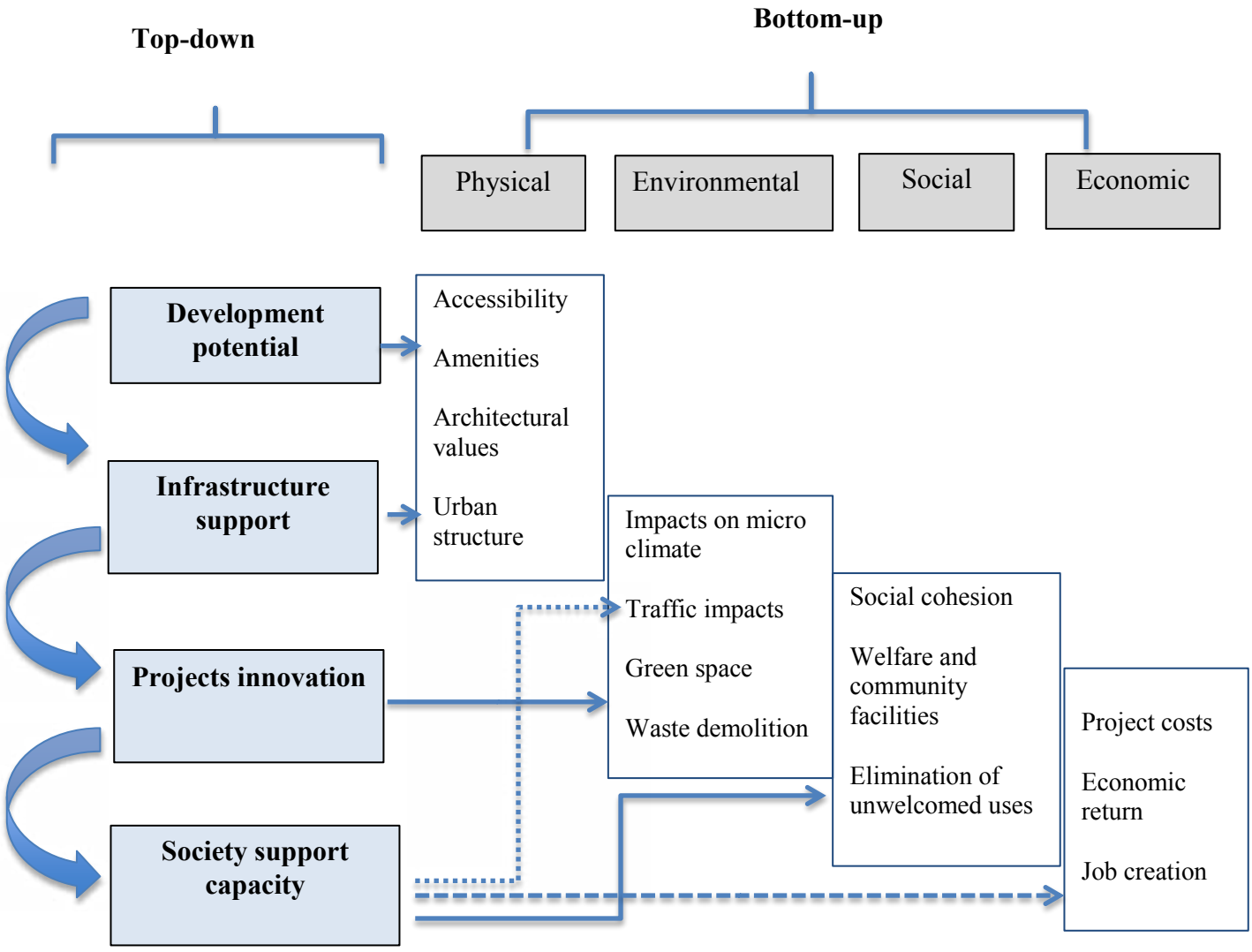



Figure 4. Key factors to evaluate regeneration process

## 6. Discussion

The above study provides insights into the complexity of urban regeneration process and discusses different approaches to assess regeneration policy and practice. In general, it is to say that four main factors play dominant role in the success of regeneration program; the development potential of the area, infrastructure support, projects innovation and society support capacity.

Despite the great emphasize on evaluating regeneration projects among researchers, there is still a huge gap in this field. Considering regeneration process as a long term and costly program highlights the necessity to deeply study the role of various planning factors and reach to an agreement on what to measure, why and how to measure it.

Evaluation of urban regeneration programs contains three distinct phases; Monitoring the current performance capabilities, assessing the future potentials and proposing corresponding solutions. Therefore, future-based approaches are also applicable to assess these programs and enrich their functionality in remarkable ways. Future scenarios can bring in depth insights for decision makers and protect the investments on existing and potential plans. In summary, to gain a better understanding of the urban regeneration mechanism, it is necessary to study every single element that contributes to the process and also interrelated to other elements.

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# Monitoring planning compliance. Assessment of land use changes in Lezíria do Tejo region, Portugal

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## Abstract

*Planning enforcement is "probably…the weakest link" in the planning system (Dobry 1975 in Mckay & Ellis, 2005). Detection of breaches of planning control can profit from analysis of aerial photography or aerial imagery (Harris, 2011). Despite its limitations systematic monitoring of land use changes provides an important valuation in planning compliance.*

*This paper analyses the land use/cover data dynamics in three municipalities of Lezíria do Tejo region (Almeirim, Benavente and Santarém) and aims to support a reflection on the effectiveness of the main development restrictions foreseen in the Portuguese planning system: the National Agricultural Reserve and the National Environmental Reserve. A quantitative analysis of the recently-converted areas will be given, based on the comparison of land-use cartography, COS-1990 and COS-2007.*

*Official data on unauthorized development (and information on the characteristics and motivation of private actors) is nonexistent. Therefore, the paper provides an important diagnosis and an overall perspective of the built-up increase during two important decades in which the planning system was implemented. Numbers indicate that farmland and environmentally sensitive areas are being reduced, due to land use changes in areas where guidelines and specific rules have been drawn up to guarantee their preservation. These outline the links of compliance and the very rationale of planning law which can aid planners, scholars and administration officers.*

## 1. Introduction

Planning enforcement is "probably…the weakest link" in the planning system (Dobry 1975 in Mckay & Ellis, 2005). The chance of breaches of control being detected is one of the key aspects of effective enforcement (Mckay and Ellis, 2005). Traditional monitoring tasks are based on the labour of enforcement officers 'on the ground', either (1) screening the built environment for detection of unauthorized development, (2) visiting sites to certify compliance with conditions of planning permissions or (3) investigating complaints made by third parties. Such tasks encounter several limitations, one of which relates the legal powers to enter private premises. Evidences of unauthorized development may not be visible from public roads and additional problems arise when entering private property becomes necessary.

Lack of staff and resources is often pointed out as a reason for the absence of active monitoring by public bodies. This is one of the reasons why various municipalities in Portugal (especially small ones) tend to adopt a 'reactionary" enforcement system, in which actions are initiated primarily by reports or complaints made by private citizens (Harris, 2011). Among the three traditional enforcement tasks, screening the built environment for detection of unauthorized development is the one that requires most resources and brings fewer results, as location is uncertain, detections are based on circumstances and offenders usually do not cooperate. Despite its limitations, systematic monitoring of land use changes using Geographic Information System (GIS) to compare land-use imagery offers an important valuation of planning compliance. Although information provided by a "view from above" does not allow

identification of some type of hidden development, it can assist the most difficult of enforcement tasks. The use of such technology does not displace traditional methods but complements "ground" enforcement (Lai, 1998 in Harris, 2011).

Portugal, like other South European countries (where public administration and trust in government are not as high as in northern European countries) has a "tradition" of unauthorized development in privately owned property. On this topic, international literature can be found in Italy (Zoppi, 200; Zanfi, 2013), Greece (Potsiou & Ioannidis, 2006; Potsiou, 2010), and Turkey (Unsal, 2009; Balamir, 2002). Surprisingly, in Portugal, official data on unauthorized development is nonexistent and academic literature is meagre (focusing almost exclusively on illegal settlements in the Lisbon region). Little is known about this phenomenon and even less about the socio-demographic characteristics of those disobeying the law. Individual actions of private actors, either acting intentionally or unaware of regulation, promote deep changes in the territory. Pre-existent urban sprawl, permission to build on agro-forest zones, and exceptions to development restrictions makes it difficult to identify breaches of control to the naked eye. Nevertheless, current leniency of planning and enforcement bodies (both on local and national level) carries shared responsibilities in the malfunction of the planning system. As our research shows, in the previous two decades, extensive development has occurred in rural zones and in areas where guidelines and specific rules have been drawn up to guarantee their preservation. Due to the impact of successive breaches of control, important questions arise for planners and enforcement bodies. What kind of breaches of control are most frequent? What are the characteristics in terms of severity and location? How extensive is noncompliance with development restrictions?

The object of this paper is to estimate location and the extent of built-up areas in National Reserves during the initial period of municipal master plans. Conclusions are supported on quantitative data of transition from agricultural and forest areas to built-up areas in three municipalities of the Lezíria do Tejo territorial sub-unit: Almeirim, Benavente and Santarém. Information was extracted using GIS to compare land-use cartography from the years 1990 and 2007, analyzing national-wide development in restricted areas: National Agricultural Reserve (RAN) and in the National Environmental Reserve (REN).

The paper assesses mostly the responsibilities of planning agencies on plan design, building permits and enforcement (or lack of it). The next section introduces observations on land-use cover-cartography in Portugal, and explores definitions necessary in understanding results, e.g. of development in built-up areas. In section 3, we explain the methodology regarding selection of case-studies, technical specifications to obtain quantitative data, limitations and expected results. Section 4 introduces the main features of the Portuguese planning system, starting with brief notes on administrative organization, characteristics of municipal master plans, development requiring a permit, and diagnosis of unauthorized development. Section 5 presents data on case-study municipalities and results of comparative land-use cartography, which show the incidence of built-up areas according to National Reserves zoning.

## 2. Monitoring planning compliance

### 2.1 The use of land use/cover cartography for plan monitoring

Extensive photographic survey requires appropriate data, technology and expert staff, which may be an impediment for wide implementation. At a local level, none of the municipalities in Lezíria do Tejo uses COS or even aerial photography to monitor breaches of control. Reasons are probably related to aerial imagery cost (still high and beyond small municipalities' budgets), lack of geographic information system staff, and enforcement leniency.

Systematic monitoring through aerial imagery can probably be found in more developed countries. However, in Portugal there is little tradition in using aerial imagery to monitor planning compliance. The sole (and probably isolated) example we encountered was a project undertaken by the Geographic

Portuguese Institute (today Territory General Direction), that created an interactive information system directed "to support the planning and management of the coast, allowing a global vision and locally supported by geographic information, which promotes integration of bodies and users, and promotes continuous updating of knowledge on coastal dynamics" (CCDR-LVT, 2014, pp. 120). This project, initially called "Support system to restore compliance" (Sistema de Apoio à Reposição da Legalidade) had its name changed in 2012 for a designation with less enforcement tone: "Support system of administration of coastal resources" (Sistema de Administração do Recurso Litoral). One of the initial aims of this project was to report on the methodology used to identify alleged breaches of control in coastal areas, by the analysis of aerial imagery and master plans zoning Barbeiro (2011). Despite several cases identified, no direct consequences were published. However, information may have been used by government bodies to support the future demolition of noncompliant development in the coast, announced on the media (see section 4.4.).

Cartography analysis for land-use changes monitoring is used today more intensively in academic environments. As such, the methodology and results presented in this paper is an outcome from a combination of different academic researches.

### 2.2 Definitions

"Unauthorized development" definition is diverse, and international readers should be aware that planning control may be different in different countries. We have adopted the expression "unauthorized development" (not "illegal development") as it is more commonly used in planning enforcement literature in Europe (Mackay and Ellis, 2005) and America (Burby *et al*. 1998). The term "illegal" may also be found in planning texts, but usually referring to "illegal settlements", which are either named "squatter settlements" (when built with no landowner permission on private or public land) or "semi-unauthorized settlements" (when they had their origin in the division of agricultural/non-urban plots). We also make a distinction between "noncompliant" and "unauthorized" development to differentiate situations that fail to meet planning compliance (and therefore cannot be legalized through retrospective applications) from general breaches of control, undertaken without a permit or not in accordance with a building permit (that may or may not be legalized in the future).

As for development, the British planning system operates on the basis of a definition of development that includes series of activities, including "building, engineering, mining and other operations, as well as material changes of use" (Harris, 2011). Similarly, Hong Kong Planning Department (2015) interprets development as "carrying out building, engineering, mining or other operations in, on, over or under land, or making a material change in the use of land or buildings". The Portuguese Building Control Law[1] defines the corresponding "operação urbanistica" as a "material urbanization, building, use of buildings or land, as long as, in the latter case, not exclusively for agricultural, livestock farming, forestry, mining or public water supply purposes". Additionally, "building", it is regarded as "the activity or the result of the construction, reconstruction, extension, alteration or maintenance of a building for human use as well as any other construction that incorporates ground on a continuing character".

In Britain certain activities that can be excluded from building control are hard to define, such as the one captured in the illustrative phrase of "use incidental to the enjoyment of a dwelling house" (Harris, 2011). In the same way, in Portugal the expression "construction that incorporate ground on a continuing character" feeds debate on how long and which characteristics are acceptable for a construction to be considered of "no continuing character". The discussion reveals the complexity of day-to-day planning enforcement.

"Built-up areas" considered in our research is less extensive than "development" definition. Buildings use changes, increase of height or floors to existing buildings, under land development and isolated

[1] Decree-Law no. 555/99 OJ (PT) December 16 [legal framework for urban development and construction works] with amendments.

detached buildings were not monitored in the GIS comparison of land-use cartography. With a minimal cartographic unit of 1 hectare, "built-up areas" should be regarded as "large areas of buildings, pavements and any other construction works that cause a visible transformation of the soil (i.e. highways and railway infrastructures)".

## 3. Methodology

### 3.1 Selection of the case-study municipalities

Selection of the case-study municipalities was based on several factors, such as: geographic association, master plans date, incidence of development restrictions and availability of information. Almeirim, Benavente and Santarém are municipalities connected by the Tagus River and belong to one of the most productive agricultural administrative sub-territorial units in Portugal, Lezíria do Tejo. Away from the coast, in the third ring of the Lisbon metropolitan area, municipalities comprise a large area of rural land, scattered with small-to-medium urban areas. Agriculture is strongly connected to the large floodable areas in the Tagus Valley, and urban areas development is influenced by the main transportation connections to Lisbon.

Due to its agricultural potential and environmental sensitivity, this sub-territorial unit is largely covered by the main Portuguese planning development restrictions: the National Environmental Reserve and the National Agricultural Reserve. As such, it provides an interesting field of observation on location of land-use changes.

The Municipal Master Plans of the case-study municipalities came in force either in 1993 (Almeirim) or 1995 (Benavente and Santarém), which provides that results are close in the matter of years of implementation. In these three municipalities, master plan information is already incorporated in Geographic Information Systems, and was made available by the administrative body of the Inter-municipal Community of Lezíria do Tejo with the academic projects AGRIMET-MOD (PTDC/ATP-EUR/4910/2012) and DAUME (ANR-10-STRA-0007) in view.

### 3.2 Land-use database specifications

We use the official Portuguese maps of land use/cover for 1990 and 2007 (called COS1990 and COS2007) at the scale of 1:25,000 and with a minimal cartographic unit of 1 hectare. No official COS is available between these dates, but the time-frame suits the purpose of this research as it allows an assessment of the land situation in 1990 (before any Municipal Master Plan was approved) and later, 12/14 years after its implementation.

The maps were produced by the Territory General Direction based on orthophotomaps with four spectral bands (blue, green red and near red). These datasets were photo-interpreted with an average interpretative accuracy of 95%. The Land-Use Cover was divided in hierarchical levels, from level one containing five primary types (artificial areas; agricultural areas and agroforestry; forests and natural and semi-natural areas; wetland; waterbodies) to level five containing up to 190 classes. For the purpose of this study we use level one, extracting three major Land-Use Cover classes: artificial, agricultural and forest and semi-natural areas. The master plan zoning was produced at the same spatial scale of the Land-Use Cover maps, e.g. 1:25,000, thus allowing overlay and comparative analysis.

RAN and REN zoning works as independent "layers", from soil classification zoning and from each other. This means National Reserves zoning overlap soil classes and also overlaps each other. Other "public utility restrictions" were not considered in the analysis because they have local specifications and we were looking for a transversal methodology that could be duplicated in other municipalities. So that results are clear, we defined the total area in the RAN, the total area in REN, and the overlap quantity (that should be deducted for assessment of area exclusively in either RAN or REN).

### 3.3 Methodology limitations and expected results

Land-use cartography has limitations that should be considered in monitoring and planning enforcement. On the one hand it depends on the correct interpretation of the images and/or reliability of automatic remote detection methods. On the other, one cannot assume directly that these are breaches of planning control, because plan implementation and restrictions have a time gap (previous-to-plan approved development may take a few years to show on aerial imagery) and, also, planning restrictions have exemptions and thus may not be an impediment for specific land use changes.

In this research, both these considerations are relevant. Time gap effect exists because between the first land-use database (1990) and Municipal Master Plans approval (1993 and 1995), increase of built-up area has certainly occurred. Second, as explained in the next section, RAN and REN regulation law allows certain type of land use changes, under specific conditions. So, land use changes identified in RAN and REN areas should be considered as alleged illegalities (that merit further analysis on more detailed aerial imagery and on the "ground") but are not necessarily unauthorized. Furthermore, the research does not make a distinction between private development and public construction (i.e. roads, railways and other public amenities). Closer analysis shows that the number concerning public roads is not very relevant, except in the case of Benavente municipality, where a highway was constructed during the time-frame of this research.

Nevertheless, the paper provides an important diagnosis and an overall perspective on the location of the built-up increase during two important decades, in which the planning system was implemented in the case-study municipalities (as in the rest of Portugal). Results allow a quantitative analysis that can support an assessment of the efficiency of the main development restrictions in Portugal. Numbers reflect the extensive increase of built-up areas between 1990 and 2007, in urban but also in rural and development-restricted areas, evidencing the decline of environmental, agriculture and forest uses. Besides providing support for the conclusions of this research, this data outlines the links of compliance and the very rationale of planning law which can aid planners, scholars and administration officers.

## 4. Overview of the Portuguese planning system

### 4.1 Administrative organization

The 1976 Portuguese Constitution establishes a three-tier structure of sub-national government: regional, municipal and civil parishes. Each of the 308 municipalities is responsible for plan design, planning control, enforcement and post-enforcement administrative legal tasks. Certain government bodies also have enforcement powers, i.e. in coastal areas, national parks and heritage sites. There are no regionally elected administrations on the mainland, although regional planning governmental structures do exist. Regional Coordination and Development Commissions (CCDR) are composed of regional representatives of the Central Administration, and overall revision of zone changes in master plans are subject to theirs opinions. Geographically, they correspond to the five EU's nomenclature of territorial units.

### 4.2 Characteristics of municipal master plans

Municipal master plans cover the entire municipal area and were enacted all over the country, mostly in the decade of the 1990's. They carry legal-regulatory powers - this means building permits must accord with these planning instruments and authorities are usually obliged to issue the permit if the plans allow. Permits may be issued directly from them as lower-level detailed plans are not mandatory, neither frequent. Accordingly to Campos (2007), during the previous decade there was an annual rate of 7 Urbanization Plans, and 24 Detail Plans in 224 municipalities.
"Soil classification" zoning provides general rules for building permits, such as indexes and height limits. Setbacks and other specific location determinations are not common. Small settlements may have only a couple of soil classifications; medium cities, several classes and sub-classes. Zoning may relate to roads and other geographic boundaries (not always clear) but are detached from plot configuration.

As such, a small plot may be covered with two or three different classes and building rights may be ambiguous.

Municipal master plans also integrate several "public utility restrictions", related, for example, to water resources, heritage conservation, infrastructures protection (i.e. roads and railways), preservation of forest, environmentally sensitive and agricultural land. These last two matters correspond to the legal figure of National Environmental Reserve (REN) and National Agriculture Reserve (RAN), being the two most extensive public utility restrictions in Portugal, and covering major areas of its land. Environmentally sensitive areas are always covered by REN and may have a double "protection", which means additional restrictions, i.e. in those integrated in *Rede Natura*, Natural Parks and the Coastal Zone. Public utility restriction oblige owners or municipalities to request an external opinion on permit applications. Despite a general interdiction on development for National Reserves, exceptions are defined in specific laws[2] and certain land-use changes can be allowed under a positive external opinion of the corresponding administrative body[3]. Greenhouses, warehouses, infrastructures tourism facilities (under specific conditions) and "projects of national interest" are examples. In general, conditions for positive external opinion for land-use changes in RAN tend to be "softer" that in REN. In rural areas with no public utility restriction, building permits depend exclusively on compliance with master plans and municipality powers.

Case-study municipalities had their municipal master plan approved either in 1993 or 1995, and have made several amendments (five in Almeirim, seven in Benavente and 13 in Santarém) but no overall revision. Initially, in agricultural or agro-forest classes (corresponding to rural areas) construction of new buildings, including dwellings, was allowed with a minimum plot-size of 3.000m2 or 5.000m2. After 2010, the situation changed. To prevent further urban sprawl, the Regional Plan for the West and Tejo Valley Region "forced" municipalities to increase the minimum plot-size to 40.000m2 for new dwellings. However, the previous minimum plot size still stands for other uses, such as tourism, warehouses, farming and industry facilities.

Despite a 10-year updating requirement, more than 2/3 of Portuguese municipal master plans have not yet accomplished their overall revision (Campos, 2011). Many of the 1990's master plans and reserves zoning in force today seem "out of place" when compared to aerial imagery.

### 4.3 Building control and exemptions

Building control was initiated in Lisbon and Porto in 1864[4], and was unevenly implemented in the rest of the country between 1951 and the 1970's[5]. Since then building and occupancy permits are required for every use. Currently, the Legal Framework for Urban Development and Construction Works[6] defines which development requires permission. After 1999 (when it was first enacted) several of its 13 amendments introduced, changes the scope of development control. The most relevant was the 2007 one[7], which introduced a building-certificate procedure to simplify and accelerate the building permit procedure and amplified construction works exemptions from building control (for details on building procedures see Pedro *et al*., 2009). Today, permanent structures of less than 10m2, greenhouses up to 20m2, changes inside existing buildings (unless it affects structure), exterior paving inside a plot, fences up to 1,80m away from public roads and other simple construction works, do not require a permit or certificate. On the other hand, changes to a roof, painting a façade on a heritage site and other use-

[2] Exceptions for development in National Agriculture Reserve are established in Ordinance no. 162/2011 OJ (PT) April 18 and for National Environmental Reserve in Ordinance no. 419/2012 OJ (PT) December 20.
[3] Regional Body of Agricultural Reserve for RAN and Regional Coordination and Development Commissions for REN.
[4] Royal Decree OJ (PT) December 31.
[5] Decree-Law no. 38382 OJ (PT) August 7, 1951 made building permits mandatory for the main urban areas and later each municipal council decided building control commencement outside the main urban areas.
[6] Decree-Law no. 555/99 OJ (PT) December 16 with amendments.
[7] Decree-Law no. 555/99 OJ (PT) December 16 amended by Law no. 60/2007, OJ (PT) September 4.

changes, do require permission. Any construction work (even a major one) undertaken by public bodies is also exempt from building permits.

All these forms of development must comply with existing plans and restrictions, regardless of the need to obtain a building permit. This means that even the above mentioned greenhouses, fences or small structures, when located in national reserves, still require positive external opinion of the corresponding administration body.

**4.4 Diagnosis of unauthorized development**

As mentioned before, official data on unauthorized development is nonexistent. Nonetheless, some sense of the scale can be provided by literature and other items from the authors' research. Among all forms of different unauthorized development, semi-unauthorized settlements in the Lisbon metropolitan area have had the most interest from scholars. During the 1960s and 70s – the years of quick urban expansion – illegal settlements (both squatter and semi-unauthorized) appeared on the fringes of a few Portuguese cities. The appearance of semi-unauthorized settlements was most rampant in the Lisbon area, where farmland was subdivided into small plots and sold thorough the dubious systems of "avos" and jointly-owned property (Cardoso, 1983; Rolo, 2006). Although this phenomenon has ceased and special laws[8] were enacted to deal with the complex urban situation, authorities are still challenged with how to deal with extensive unauthorized development in the past. However, in most municipalities across the country, as in our case-study municipalities, these kind of settlements are not common.

Squatter settlements on public land are also rare in Portugal but, besides Lisbon, they also exist in the Lezíria do Tejo sub-region. In the 1950's, a few settlements appeared in Tejo river margins/banks, where Avieiros (fishermen) started building their wooden stilted houses on public and floodable land (Gaspar and Palla, 2009). Some of these have become permanent houses, and grown into small villages, such as Caneiras in Santarém, Palhota in Cartaxo and Escaroupim in Salvaterra de Magos. Due to their small size and lack of any administrative solutions, they remain disregarded by local and national authorities.

Building and land-use changes on privately-owned property are the most frequent pattern of unauthorized development in the majority of Portuguese municipalities, as it occurs in our case-studies. However, very little has been written about. Around the city of Porto and the center of the country, "property was already quite divided (rural plots with smaller areas) and therefore subdivision of plots was not as significant [as in Lisbon], existing mainly detached unauthorized buildings on plots already registered properly" (Matos, 1990: 195). Back in 1986, the article on the Municipality of Évora (1986), presented in the "New Conference on Illegal Settlements", revealed that in the historic center of Évora and the rest of the municipality, 32% of the total development had no permit. Regarding new buildings it would correspond to 23%, and additions and other changes to existing buildings more than 50%.

From the beginning of the 1990s the literature on unauthorized development is even scarcer. Nonetheless, some numbers of non-compliant development can be found on the media. In 2005, the Institute for the Conservation of Nature reported 3241, unauthorized buildings in protected areas (Diário de Notícias, 23/02/2005). One year later, the Director of the North Coast Natural Park announced the demolition of more than 200 noncompliant buildings in the town of Apulia, in Esposende municipality, "including 97 storage rooms, 78 houses, (56 of which were second residence) and seven commercial buildings, including restaurants" (Diário de Notícias, 22/06/2006). Recently, in 2014, the "Government promises to demolish 835 unauthorized buildings on the coast this year" (Público e Lusa, 12/03/2014). Despite non-compliance with planning standards, many of these buildings were erected in the 1970-1990's and are "old problems" of enforcement.

Today, while cases where entire new buildings are raised without a permit are not frequent, smaller infringements are common, in the form of construction not in full accordance with a building permit,

[8] Decree law no. 804/76 OJ (PT) November 6 and later, Law no. 91/95, OJ (PT) September 2 with the amendments introduced by the Law no. 10/2008, OJ (PT) February 20.

unauthorized additions to existing buildings, or unauthorized conversion of an otherwise legal building. An insight of the use of noncompliant development can be provided by partial results of an (unpublished) survey of one of the authors, on the attributes of noncompliant buildings for which a retrospective application has been submitted (and denied) by Santarém municipality. According to the survey undertaken in 2013, 89 retrospective applications were denied by the Santarém land management department between 1995 and 2012. Since an application may be for more than one construction (i.e. house, swimming pool or warehouse), they regard 122 construction activities. The survey reveals that single houses' building activities were the most frequent, corresponding to 68% of the total number (84 cases). Of this, the construction of entire houses in vacant plots show the lowest number (16 houses) and house extensions and "outbuildings" (i.e. sheds, barns, or garages) were more frequent (respectively 30 and 38). Fences - most of them related to housing - are also common and represent 12% of the total activity (15 cases). Industry, warehouses and commerce were not as frequent: each show results of between 6 and 7 cases. Rare are noncompliant development activity such as quarries' support facilities, swimming pools and farm buildings (1 to 2 cases). The absence of noncompliant multi-family dwellings should be noticed. This survey provides an example of developments activity in a "sample" Portuguese municipality that encompasses both urban and large rural areas.

## 5. Case-study municipalities

### 5.1 Socio-economic and geographic characteristics

Image 1 – Leziría do Tejo location and administrative organization
Source : Abrantes, P., from CAOP, 2010

Almeirim, Benavente and Santarém are municipalities in the third ring of "Greater Lisbon" and belong to the same sub-territorial unit entitled Lezíria do Tejo (Figure 1). It extends over 4,275 km², comprises 11 municipalities and about 250,000 inhabitants. Santarém is the main city, where 25% of the Lezíria do Tejo population is concentrated (as well as commerce, services and public amenities). It plays a major role in the organisation of the territory, together with the municipalities of Almeirim (23,403 inhabitants) and Cartaxo (24,574 inhabitants). Benavente (29,388 inhabitants) is part of another urban axis, together with Salvaterra de Magos (22,053 inhabitants) and Coruche (19,931 inhabitants), which, due to expansion of highways, are now integrated in the logistical and business structure of Lisbon.

Table 1. Data on population in 1991 and 2007 in Almeirim, Benavente and Santarém.

| Municipality | Surface ($km^2$) | Population 1991 | Population 2007 | Population increase |
|---|---|---|---|---|
| Almeirim | 222 | 21 505 | 22 998 | 1493 |
| Benavente | 521 | 18 871 | 27 376 | 8505 |
| Santarém | 557 | 62 980 | 63 023 | 43 |
| **Total** | 1300 | 103356 | 113397 | 10041 |

Source: Nacional Statistic Institute

The axis Santarém-Rio Maior is an important link to the West coast. Extensive commuting dynamics with Lisbon metropolitan areas is indicative of current urban development (Sá Marques and Alves, 2010). According to the Census data regarding daily trips, in 1991, five to 15% of students / work force of the municipalities of Cartaxo, Salvaterra de Magos and Benavente, commuted to Lisbon. In 2001, Santarém and Almeirim joined the preceding municipalities. They all recorded daily commuting of about 15 to 25% (Abrantes, 2013). According to Portuguese Census the region gained 25,000 new residents between 1960 and 2011, and from 1991 to 2001 the region recorded a population growth of 14,500 people. Population dynamic is reflected in an increasing soil sealing.

Among case-studies, Benavente and Santarém municipalities have approximately the same area (521 and 557Km2[9]), and Almeirim about half that (222km). Table 1 shows population variation for the years for which statistics are available, and closer to the land-use cartography dates used in our comparison: 1991 and 2007. Santarém remains the municipality with more people (more than 62 000 inhabitants) but Almeirim and Benavente changed positions: in 1991 population was higher in Almeirim and lower in Benavente (21,505 and 18,871 inhabitants), but in 2007 it was the other way around (22,998 and 27,376). Population increase was more significant in Benavente (8505 inhabitants), low in Almeirim (1493 inhabitants) and minimal in Santarém (only 43 inhabitants).

The axis Santarém-Rio Maior is an important link to the West coast. Extensive commuting dynamics with Lisbon metropolitan areas is indicative of current urban development (Sá Marques and Alves, 2010). According to the Census data regarding daily trips, in 1991, five to 15% of students / work force of the municipalities of Cartaxo, Salvaterra de Magos and Benavente, commuted to Lisbon. In 2001, Santarém and Almeirim joined the preceding municipalities. They all recorded daily commuting of about 15 to 25% (Abrantes, 2013). According to Portuguese Census the region gained 25,000 new residents between 1960 and 2011, and from 1991 to 2001 the region recorded a population growth of 14,500 people. Population dynamic is reflected in an increasing soil sealing.

### 5.2 Municipal Master Plan data

Municipalities land size is 221km2 in Almeirim and about the double in Benavente and Santarém (521 and 556 km2). Concerning soil classification in municipal master plan, each of all three municipalities have about the same proportion of rural zones (87-89%) and non-rural zones (11-13%). However urban

[9] Municipality surface in 2007, previously to administration limit changes in 2013.

and developable zones are distributed differently: Santarém has a large urban zone (9%) but the lowest developable zone (2%) and Benavente the opposite, with 5% of urban zone and 7% of developable zone. Almeirim has the same approximated proportion of urban and developable zones (7 and 6%). This difference reveals differences in plan design and, as a consequence, in strategies of land management.

Table 2. Data on Municipal Master Plan of Almeirim, Benavente and Santarém.

| Municipality | Almeirim | | Benavente | | Santarém | |
|---|---|---|---|---|---|---|
| Year of Master Plan | 1993 | | 1995 | | 1995 | |
| | Area ($Km^2$) | | Area ($Km^2$) | | Area ($Km^2$) | |
| Master Plan Zonning | | | | | | |
| Soil Classification | | | | | | |
| Urban zones | 16,12 | 7% | 28,41 | 5% | 48,46 | 9% |
| Developable zones | 13,62 | 6% | 36,68 | 7% | 9,74 | 2% |
| Agricultural or agro-forest zones | 191,93 | 87% | 456,10 | 88% | 498,64 | 89% |
| National Reserves | | | | | | |
| Areas in the RAN | 105,26 | 48% | 138,09 | 27% | 150,96 | 27% |
| Areas in the REN | 112,04 | 51% | 315,17 | 61% | 208,56 | 38% |
| (Areas in the RAN + REN) | 95,85 | 43% | 132,01 | 25% | 88,89 | 16% |
| Areas with no RAN or REN | 100,21 | 45% | 199,94 | 38% | 286,21 | 51% |
| Total area with National Reserves | 121,45 | 55% | 321,25 | 62% | 270,63 | 49% |
| Total area outside National Reserves | 100,21 | 45% | 199.94 | 38% | 286.21 | 51% |
| Total municipality surface | 221,66 | | 521,19 | | 556,84 | |

Source: Project AGRIMET and CIMLT, 2014

National Reserves cover a large portion of total municipalities land, ranging from 49% in Santarém to 62% in Benavente. Analysing each national reserve total: area in the RAN is higher in Almeirim (47%) and lower in Benavente and Santarém (26% and 27%); and as for area in the REN, restrictions are more stringent in Benavente (60%), Almeirim (51%) than in Santarém (37%). Note that numbers concerning to RAN and REN should not be added, because there is land covered by both national reserves. Overlap of RAN and REN occurs 43% of the total land in Almeirim, 25% in Benavente and 16% in Santarém.

The high incidence of REN in Benavente is explained due to the existence of large protected area of Tajo Estuary, which is additionally protected by NATURA 2000 network. In the Northwest of Santarém municipality there is also a large area of REN interconnected to the Natural Park of Serras de Aires e Candeeiros.

### 5.3 Results of comparative land-use cartography (1990-2007)

Our research findings (Table 3) demonstrate the impact of forest and agriculture transformation, into built-areas in development-restricted areas such as the National Agriculture Reserve (RAN) and National Environmental Reserve (REN). From the total of transitional land-use changes between 1990 and 2007, a large percentage (43%) of Almeirim's built-up areas occurred on land covered by National Reserves. The ratio is lower in Santarém (33%) and in Benavente (27%), however, corresponding to much more built-up land: 5,57km2 and 5,10km2 respectively. These sound "big numbers", even taking into account the time-gap between 1990 and master plans' dates, legal exceptions and highway construction. It should be noticed that in Almeirim and Benavente, numbers in National Reserves are higher than agricultural or agro-forest areas not classified by RAN, where development was allowed with a (rather small) minimum plot-size.

Our survey also demonstrates that built-up areas affect REN more than they do RAN, which is also unanticipated, as positive external opinion on development is more difficult to obtain in REN than in RAN. In Almeirim the difference between the two reserves is not significant (1%), probably because of a larger overlap of both national reserves. Results are more revealing in Benavente and Santarém:

differences between 1990 and 2007 show that the large majority of built-up areas in reserves occurred in REN (25 and 24%) and just a small percentage in RAN (4% and 12%).

Table 3. Built-up areas by National Reserves zoning in Almeirim, Benavente and Santarém

| Municipality | Almeirim Area ($Km^2$) | | Benavente Area ($Km^2$) | | Santarém Area ($Km^2$) | |
|---|---|---|---|---|---|---|
| Built-up areas transitions (COS 2007 - COS 1990) | | | | | | |
| Forest + agriculture areas > Built-up areas in agricultural or agro-forest areas not classified as RAN | 0,19 | 5% | 3,71 | 19% | 6,48 | 38% |
| Forest + agriculture area > Built-up areas in RAN | 1,59 | 40% | 0,83 | 4% | 2,03 | 12% |
| Forest + agriculture areas > Built-up areas in REN | 1,64 | 41% | 4,84 | 25% | 4,18 | 24% |
| Forest + agriculture areas > Built-up areas in RAN+REN | 1,51 | 38% | 0,57 | 3% | 0,63 | 4% |
| Total Forest + agriculture areas > Built-up areas in National Reserves | 1,71 | 43% | 5,10 | 27% | 5,57 | 33% |
| Total Forest + agricultural areas > Built-up areas | 4,01 | | 19,19 | | 17,09 | |

Source: Own elaboration based on project AGRIMET and CIMLT data

These results show that development restrictions in master plans may have either encountered too many breaches of control or exceptions in granting building permits, and that the current planning system may not be effective in the protection of environmental and agricultural land.

## 6. Conclusions

In this research we aim to provide an overall perspective of land-use changes and efficiency of master plans restrictions, based on the comparison of land-use cartography in three Portuguese municipalities: Almeirim, Benavente and Santarém. The adopted methodology may become an important tool to complement traditional enforcement methods for detection of breaches of control, to be used by Portuguese municipalities.

Research demonstrated a high incidence of built-up areas on National Agriculture Reserve (RAN) and National Environmental Reserve (REN). Numbers may disquiet planners, as development seem to have occurred "out of place" – built-up areas in National Reserves corresponds to 27 to 43% of total agricultural and forest land transformed into built-up areas. Between 1990 and 2007 in two of the case-studies, more built-up areas occurred in Natural Reserves than in agro-forest areas with no RAN (where development was allowed with a minimum plot-size). Despite development restrictions, a total of 12,38km2 was transformed into built-area in the three case-study municipalities. Analysis of data also revealed that built-up areas tend to occur more often in REN than in RAN, which is contradictory to the degree of restrictions. Population dynamics in these three municipalities had positive (but moderated) growth which does not justify the high numbers for built-up area increase. Farmland and environmentally sensitive areas are being reduced, due to land use changes in areas where guidelines and specific rules have been drawn up to guarantee their preservation. These results meet the criticism of Pardal (2006:27) of this "sectorial" vision of the planning system. "The body of laws on spatial planning which prevailed the previous four decades fostered easy business in the real estate sector, increased clandestine, rewarded development and construction of poor quality (…)".

Much research on unauthorized development in Portugal has yet to be done. Future research using GIS can provide more detailed information on new built-up areas (according to master plan classes) and types/uses of development (using other hierarchical levels of Land-Use Cover cartography). Methodology can also be sharpened to identify solely unauthorized development in private plots and hence become a more precise tool in the detection of breaches of control.

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Urban planning pressures on "Zwischennutzungen"/ "temporary uses" with special reference to Tempelhof airport. AESOP – Prague

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Keywords: Urban decline, temporary uses, governance

## INTRODUCTION

On the 25th may 2014, a referendum proposed by the organization 100% Tempelhofer Feld stopped the official development plan intended by Berlin's Senat on the former Tempelhof Airport. The huge space of 380 hectares located in the heart of Berlin became a "no building land zone". This situation is a good illustration of pressures, tensions and conflicts about vacant spaces and their uses in a period of transition between shrinking and growth in the new capital of Germany. This presentation seeks to analyse critically the use of ZN made by the local authorities to manage vacant spaces. The first part of the presentation provides a brief discussion about the urban context in Berlin, between shrinkage and growth. The second part will focus on vacant spaces in shrinking cities with the pragmatic tool called *Zwischennutzungen* (ZN), which we will translate as "temporary uses" for the moment. In the final section we will discuss this Tempelhof case study, which illustrates these divergences about vacant spaces and ZN in Berlin. In the conclusion we will propose certain questions for future research about urban planning and vacant space in times of crisis.

## 1. From shrinkage to growth.

After reunification, Berlin experienced a big rise of its population. Expectation was at its peak.

> "The hype around an emerging "new Berlin" raised high expectations about anticipated population growth (up to 5 million over the next ten years), the settlement of headquarters of large international corporations, and the overall opportunities for the investment and economic development. Overoptimistic growth forecasts by many urban and economic research institutes decisively influenced public discourses and urban planning processes. A strategic

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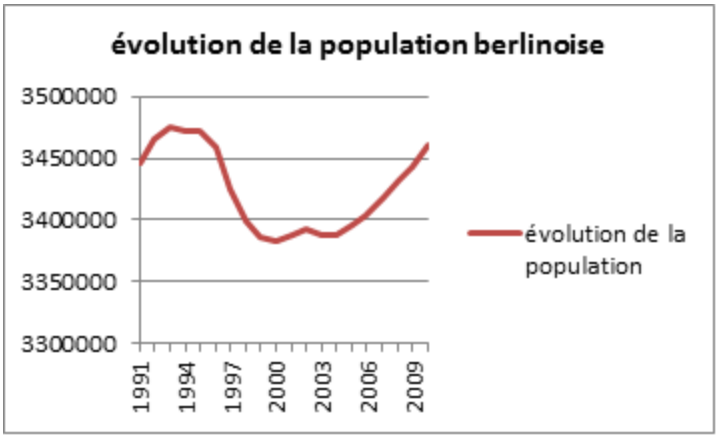
> study "on the way to the commercial capital Berlin," launched by the local government in 1992, predicted that Berlin would soon play in the same league as London, Paris or even New York, and rise to a global city status." (Bernt, Grell, & Holm, 2013, p. 23)

However the population increase was very brief. Since 1993 Berlin has become an obvious example of a shrinking city, "an urban area — a city, part of a city, an entire metropolitan area or a town — that has experienced population loss, economic downturn, employment decline and social problems as symptoms of a structural crisis." (Martinez-Fernandez, Audirac, Fol, & Cunningham-Sabot, 2012). The population began to shrink. Economically , Berlin remained very weak after the Reunification, and suffered from a "de ökonomisierung" (Hannemann, 2003) like GDR as a whole.




This situation was reinforced with the administrative dismantling of GDR and the will to erase the GDR administration within the city. At the same time, with a rising number of ownership-transfers added to a financial crisis of the city…It became difficult for Berlin to put in place a land strategy. At this time vacant spaces proliferated and their duration extended. They took a huge place in Berlin and became part of the daily landscape of the city. A lot of spontaneous and grassroots uses, today very famous, appeared, for eg. the beach bar YAAM on the banks of the river Spree.

By the turn of the 2000s, we can observe a small improvement in the city population. This regrowth of population was a result of an urban policy, which promoted the attractiveness of the city and its underground culture. This growth is essentially based on tourism (Novy, 2013) and the capacity of the city to become a "creative city" through certain Zwischennutzungen / temporary uses. Colomb notes a "gradual integration of temporary uses of space in Berlin's official place marketing discourse and in the economic development policies set up to promote Berlin as "creative city" post-2000"(Colomb, 2012, pp. 146–147). Nevertheless Berlin's situation is still weak: the bank scandal in 2001 ruined the city, and according to Bernt (2013, 16) "Berlin is until today not only the German city with the highest unemployment but is also on a European scale the only capital whose GDP lies below the national average".

**2. Vacant spaces in Shrinking Cities, an opportunity materialised by the pragmatic tool "ZN"?**

As said previously, one of the spatial results of the phenomenon of shrinking cities is the growth of vacant open spaces; this constitutes a common denominator to Shrinking Cities. In a way, "less is more" Bauhaus Dessau (i.e. being a shrinking city means less inhabitants, less economy, and more and more vacant spaces within the city), but this saying "less is more" also means more space for alternatives or informality and a paradigm shift in urban planning, from consumption to production. Nowadays, vacant spaces are no more seen as a disease in the city, but are eventually opportunities (Andres, 2006; Janin & Andres, 2008) in an era where ideas of recycling-land appear with for instance the "second hand space project" (Ziehl, Oßwald, Hasemann, & Schnier, 2012), or "do-it-yourself" urban design (Douglas, 2014), or "urbanism light" (Urban Catalyst, 2003).

In this way, at the turn of the century, scholars (Bürgin & Cabane, 1999; Freitag & Werner, 1999; Mellauner, 1998; Seidemann, 1998) developed research about a pragmatic tool called "*Zwischennutzung"* which allows/permits the management of the vacancy and the time gap between different uses. The concept of ZN did not originate in Berlin, but, rapidly, the German government embraced it as a possible solution for shrinkage (BBSR, 2004). At the same time, with the help of a European fund, a study focused on *Zwischennutzungen* in five European countries; **Germany**, Finland, Denmark, Austria, and Italy and give ZN a European visibility. (Urban Catalyst, 2003). This was followed by a a study by Berlin State which adopted the concept for Berlin and its municipality under the term of "pioneers" (Stadtentwicklung, 2007).

The expression of *Zwischennutzung* is constructed from *Zwischen* which means « between » and *Nutzungen* for « use(s) », it is characterized by informal uses (like mini-golfs, pedagogical areas, community gardens, theatres, bars…) in vacant spaces, by ownership-property which stays in the same hands, by users, who are usually informally organized local inhabitants. However, behind this simple definition lies hidden tensions and conflicts about different conceptual aspects of temporality, informality and spontaneity, and future plans for the area. In relation to this last point, according to Urban Catalyst' study (2003), there are 8 different types of ZN depending on the relationship with the next use: stand in, impulse, consolidation, coexistence, parasite, subversion, pioneer, displacement. This detailed and comprehensive typology is interesting, because we can observe some specific aspects carefully selected in the definition of ZNs by the different authorities. For instance, it is obvious that the Berlin Senate is focusing more on pioneer ones in order that they impulse new uses or strategies. The definition given by the German government is also very focused on temporality and preservation of next use: ZN are "A new means of designing and utilizing blighted urban sites that does not require a change of owner or additional planning permits. This preserves long-term options

for building out the site while permitting temporary uses that improve the quality of urban amenities." (BBSR, 2004)

Colomb (2011) explains this divergence because "From the early 2000s onwards, however, the creative, unplanned, multifaceted, and dynamic diversity of such « temporary uses of space » was gradually harnessed into urban development policies and city marketing campaigns. New images and narratives began to be integrated into Berlin's official promotional discourse – including sites, places, activities, and people which had been left out of the promotional imagery of the 1990s." (Colomb, 2012, p. 132). She links this focus on the Senate with the emergence of theories about the creative class (Florida, 2004). At this time, Berlin developed a political discourse on creativity in the city and promoted ZN to a comparative advantage in the international competition. It is also interesting to note, that the Senate's definition of ZN mentioned them as a new tool, whereas in reality this kind of uses was already existing since the 90s.

At the same time, we can observe a tension in the term itself, and also in the translation usually proposed ; "temporary uses" (Oswalt, Overmeyer, & Misselwitz, 2013). Indeed, translating ZN as temporary use(s) not only dilutes its meaning, it results in the concept losing its meaning. Gstach (2006, p.16) explains that the border between a permanent use and temporary use cannot be the characteristic to define ZN because the time gap can be very different and the border between the two uses can be very unclear. Also, the situation is more complex: according to Haydn and Temel 2006 "Temporary uses are those that planned from the outset to be impermanent. We understand the idea of temporality to be determined not, as its literal meaning would suggest, by the duration of use: temporary uses are those that **seek to derive unique qualities from the idea of temporality. That is why they differ from lasting uses, not because they want to prepare their location for something other that will last longer**." (Haydn & Temel, 2006, p. 17) Following this idea, Till goes one step further and proposes another semantic with the term "interim-use";

> "Rather than focus on temporary *land use* per se (*Zwischennutzung*), a planning concept that designates parcels of property according to zoning codes and development strategies, I argue that a more appropriate concept is *interim spaces*. First, the concept of interim spaces recognizes space as relational rather than seeks to stabilize urban space through boundaries (...). Second, it spaces are understood as relational, then the German term *zwischen* is more accurately translated as "interim" for my purposes than the English "temporary" (land use, in the sense of technical planning). The notion of interim allows for the dynamic and open-ended sense of in-betweeness, interventions, and unexpected possibilities. Interim suggests a fluidity of temporality, rather than an understanding of time measured and designated as insignificant or as located between the "real" times of before development and after development. Urban

> appropriations of "wastelands" enliven public space and offer new possibilities to imagine a neighborhood." (Till, 2011, p. 106)

Inspite of this discordance, one group of scholars and studies about ZN wants to see this tool as a way to manage vacant spaces. For urban catalyst “In the context of the research of Urban Catalyst it becomes crucial to integrate the informal and the formal more effectively. This means on the one hand to formalize the informal: to analyze and understand the unplanned patterns behind self-organized activities, deduct prototypes, models and tools from these investigation, formalize them and make them available to all stakeholders. One the other hand, formal procedures of planning, administration, management etc. have to be critically examined and ways and strategies to be found, how existing practices can be de-formalized, de-institutionalized, adapted and changed.” (Urban Catalyst, 2004, p25) The role of local authorities seems very important at this point. In this context, the closure in 2008 of the Tempelhof Airport located in the heart of the city can be the very first large experimentation of the use of ZN by the Senate to manage transition and promote Berlin as a leading creative city. Tempelhof became the test and the showcase of the creativity in Berlin. The slogan “Tempelhof Freiheit”, Tempelhof Freedom is in this way, also significant.

## 3. The case of Tempelhof; an illustration of divergences and contradictions about vacant spaces and ZN in Berlin.

The airport closed in 2008 because of the creation of a new airport; Berlin Brandenburg international (BBI) in Schönfeld. This closure created de facto a huge vacant area of 380 hectares, located in the heart of Berlin, right in the middle, bordered by several districts: Neukölln, Tempelhof-Schöneberg and Friedrichshain-Kreuzberg which were very marginalized and considered as deprived areas during the Wall period. All these districts were shrinking. This airport was also famous, being used for the vital Berlin Air lift during the 2nd world war.

Considering this historical and challenging urban context in the neighborhood of TP, ZNs seemed at first glance a good way to encourage and organize community participation, and a way to create community capacity building within the surrounding areas.

At the start, the opening of Tempelhof with different ZNs, was based on a big participative program. Within this context, the ZN was a way to encourage the appropriation of urban landscapes, a way to create community capacity building. Indeed, we can read on the official website of Tempelhof: “The spontaneous and unplanned use of open spaces is characteristic of Berlin. Until now, these informal intermediate and pioneer uses were not involved in the formal planning process to any great extent. The State of Berlin is looking to change this status with its new “pioneer process” – an open process

that, if successful, will transform TempelhoferFreiheit into a model location for participative urban development. » http://www.thf-berlin.de/en/get-involved/

In this large space, 3 areas have been specifically dedicated to ZNs.

*Source: www.berlin.de*

All kinds of people can get involved: there is a webpage for the submission of projects and a large variety of uses emerge in the field with the ZNs; an educational garden for children, community gardens, mini golfs…

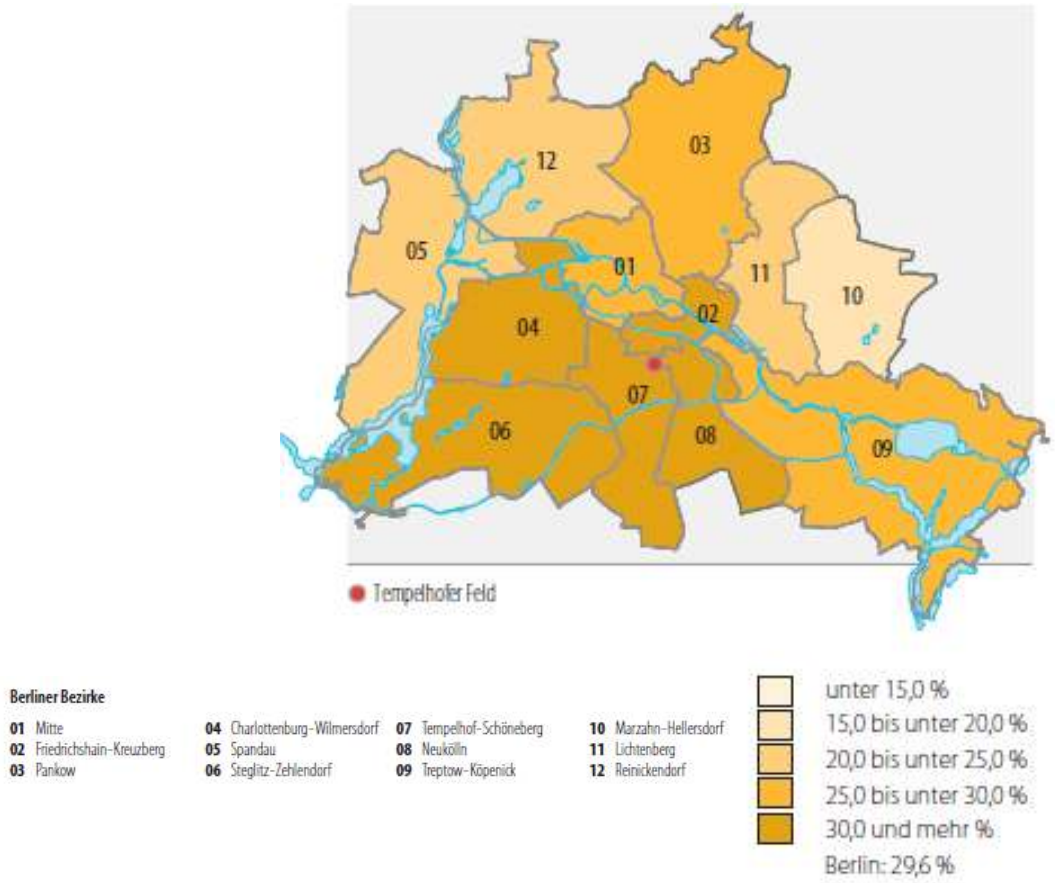
However, in the particular case of TP ZNs, they seem to be a way for the local authority to gain and keep control of the area, while waiting for a major project for investors. Indeed, we can observe that the ZNs are spatially very strictly and tightly bounded with a strict zoning of the field, and each ZN is allocated a specific area. There is also a very strict time restriction imposed on each project. . The different possible uses are also highly regulated and defined.

In fact, the ZNs are entirely determined and regulated by the development plan made by the local authorities. For the local authorities, they are not really a tool for a coproduction with the inhabitants or a way to think about the future of the site, they are just temporary uses. For the local communities these temporary uses are not a stepping board for planning what could be next.

At the end of the day, for the local authorities the ZNs seem more a way to occupy the place during a strictly limited time frame, waiting for a major permanent project. Indeed, Rosskamm (2014) notes that between the closure and the opening of the field « it became obvious that the perception of the

Tempelhofer Feld had changed completely. Suddenly the area no longer possessed a 'huge potential' for Berlin urban development (as it was posted in the debate before the closure of the airport), but a place at risk of getting out of control." (Roskamm, 2014, p. 66) As a result, for the local government, the area is no longer viewed as an opportunity but a source of fear. Fear of a permanent appropriation for good by the local community.

However, the future development plan of the local authority was stopped by an organization of citizens called 100% TPHFeld. With the law system in Berlin and Germany, the organization was able to call for a referendum about the future of this area and put forward a draft law, which would prohibit any construction on this field. After several stages the referendum was organized on 25th May 2014. The draft law of the 100%TPFeld organization won by a huge margin.




*Source ; Amt für Statistik Berlin Brandenburg, 2014*

The red point on the map is the former airport of TP. All of Berlin's districts voted in favor of the law.

In the debate during the setting up of the referendum, the local authority failed to use ZNs as a means to promote the official development plan. On the contrary, there has been a close proximity between the organization 100%TPFeld and ZNs that we can for example observe with the sign on the photo.

*Source : private photo*

CONCLUSION

As we can see in this very particular case, the ZNs were set up by the local authorities while waiting for a big project according to a development plan. However, they encountered some resistance. The local communities found a way to reject the local authorities' plans, which stuck to the very limited definition of the ZN (just a "temporary use"). The inhabitants, with their vote, brought back the ZN to its larger definition. They made it clear that they want to be involved in the decision making process deciding the future of the area, the field. And they want it to stay as an open space, with informal uses, according to the larger definition. They are against the development plan which promotes new commercial and residential buildings.

This case study is a good illustration of the articulation between grassroots empowerment and local governance, and the conflicts that arise from having two different visions of a city. On one side for the local authorities, a growing and compact city minimising vacant and open spaces, to shape the capital city of the country, and ensure its position in Europe; and, on the other side, for its inhabitants, to keep the identity of Berlin as a city with lots of vacant and open spaces with spontaneous uses and informal users. The multifaceted aspects of ZNs and the different acceptations of their definitions studied in this paper reveal these tensions, as well as point out the failure of local governments to engage in the long term with bottom-up planning in a growth paradigm context.

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## Sitography

http://www.thf-berlin.de/

http://www.thf100.de/

www.berlin.de

# Dodging decline: the post-industrial landscape of Niagara Falls, Canada

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**Keywords:** Niagara, cities, post-industrial

*Abstract:*
The two Niagara regions, one in Canada and one in the United States, facing across both a river and an international border, provide a case study of contrasts. Both were developed as energy and industrial centres in the late 19th and early 20th centuries, but over the past fifty years their paths have diverged substantially. Through the period of de-industrialisation, the city of Niagara Falls, New York, since 1960, has lost over half its population. For various reasons, American initiatives to combat decline have been largely unsuccessful.

In contrast, Niagara Falls, Ontario, has experienced ongoing, if modest growth. This can be attributed to a number of factors, some geographical, however each has been subject to very different forms of government involvement, with the differences extending back more than a century.

The paper argues that very specific focused interventions, by the provincial government, have been of major importance in the development of the non-industrial economic activities that have enabled the Canadian Niagara to survive de-industrialisation better than its American neighbour. In particular, these have included the creation of the Niagara Parks Commission, and support for Niagara casino enterprises. There have also been various policies to encourage agri-business - specifically the wine industry; to leverage the historical legacy of the area, and to develop other forms of heritage tourism. The Canadian side has successfully tapped the economic opportunities, while the pro-industrial attitudes on the American side have restricted their ability to adapt to changing circumstances.

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## 1.0 INTRODUCTION: THE QUANDARY

The issues associated with de-industrialisation have been frequently observed and documented. In many areas of the developed world, this has been associated with the disappearance of well-paid employment in manufacturing. The study of twins of any sort can be revealing, and worthy of consideration in this respect, are the areas bordering on the Niagara River - one part in Canada, and one in the United States. Over the past five decades these two areas have followed markedly different paths, although in many ways they are similar in geography, transportation, resources, climate and the origins of their populations. Strand (2008) summarised the matter: “Niagara Falls, New York, is by general agreement a mess.”

Why? What happened? What lessons can be learned?

This paper examines Niagara Falls, Ontario, Canada in comparison to the less-successful Niagara Falls, New York, United States, and identifies reasons for their divergence. Reference will be made to the larger areas in which they are situated, being the Canadian Regional Municipality of Niagara, which has a number of centres, the largest being the cities of Niagara Falls, Ontario, and St.Catharines, and Niagara County, in the United States.

## 2.0 HISTORICAL BACKGROUND

The Niagara area has been populated for about 12,000 years. As the area warmed after the last ice-age, successive cultures occupied the area. The first Europeans to visit Niagara Falls were French, in the 1670s, who shortly after built the first military installations, and maintained them until the Seven Years War, with Fort Niagara (now on the American side) falling to the British in 1759.

Settlement of both sides of the Niagara River occurred in the late 1700s, subsequent to the establishment of the international border after the American revolution. Significant settlements included Queenston on the Canadian side, from which an ancient portage route led to the upper river and Lake Erie, around the Falls.

Settlement of the Canadian area was initially by 'Loyalists' who moved into Canada after 1783, after the American Revolution. The first census was undertaken in 1782, and found that there were 84 people living in the Niagara area, "...eleven of which were in the two families who first located in Stamford Township." (*Niagara Falls Review*, 1978), Stamford Township is now part of the City of Niagara Falls, Ontario. A year later, there were ten families in Stamford, and 790 acres cleared. In 1786, the first mills had been built next to the Niagara River, and were using it as a power source.

Government involvement in Niagara lands came with settlement, and the first capital of 'Upper Canada', now Ontario, was at Niagara-on-the-Lake: it was subsequently moved further from the border to Toronto. In 1791 a linear reserve one chain (20 metres) wide along the Canadian side of the river was established by the colonial government for military purposes, linking the border forts. The military role of the region in the defence of Canada became important in the War of 1812-14, and numerous small battles were vigorously fought in Niagara.

After the war, immigration from the United States diminished (Black, 2014, p.195), and the population was augmented by succeeding waves of Scottish and Irish immigrants through the 19th century; ex-slaves; the English in the decades before the First War; and ongoing immigration from various European countries. On both sides of the border, growth was slow until technological innovation allowed full exploitation of the energy potential of the Falls, beginning in the late 19$^{th}$ century.

In both Canada and the US, development was spurred by the construction of canals and railways, beginning with the Erie Canal - completed in 1825 - connecting the Hudson River with Lake Erie at Buffalo. The first transit of the Welland Canal, between Lakes Ontario and Erie, occurred in 1829. These pieces of infrastructure were of great significance in stimulating growth. The Welland Canal has been successively rebuilt, and now allows access by ships of up to 225 metres into the upper lakes. In the 19th century the canals enhanced the growth of the Niagara area, however, increasingly, with larger canals and larger ships "... commerce tended to pass through the Peninsula on its way to the Atlantic or Great Lakes cities rather than creating Canal ports as such" (Young, 1981, p.82). The completion of the St.Lawrence Seaway, an initiative of the Canadian government, in 1959, enabled large ocean-going ships to enter Lake Ontario.

Rail connections to major centres on both sides of the border were developed through the late 1800s, with the first cross-river bridge being completed in 1848. Bridge linkages became an integral part of Canada/United States cross-border trade.

With critical transportation links and abundant waterpower, both sides of Niagara became a centre for industry. Photographs of the American side prior to electrification show numerous factories using

water power directly, diverting it around the Falls through canals and, after use, directing it into the Niagara Gorge below the Falls.

Commercial hydro-power arrived in the Canadian Niagara area in 1896 with installations at Niagara Falls and St.Catharines. Electrification allowed industry to move away from the immediate area of the Falls, and on the American side this led to substantial development along the upper river.

Young (1981, p.81-82) noted "...the 'gateway' mentality' and other geographical factors, tended to structure industry to serve inter-regional rather than regional needs. This caused development to occur primarily on the perimeters..." This meant, on the Canadian side, along the shores of Lake Ontario and along the Niagara River, and on the American side, along Lake Erie and the Niagara River.

The area is crossed by the Niagara Escarpment, a geological feature running through central Canada and the United States. In the Niagara area this manifests itself as a vertical height of up to 100 metres, and is the geological formation over which Niagara Falls flows. This results in a zone of excellent agricultural land, an asset on both sides of the border. In the earliest days this was used for general farming, but through the 20th century it came to be dominated by soft fruit orchards and vineyards – for which the climatic and soil conditions were found to be ideal, with the accompanying canneries and wineries.

Being on a national border was of consequence. Although there was always a considerable amount of cross-border trade, Canada's need for development and economic growth led to a high tariff policy through the late 1800s. The resulting customs duties and regulations encouraged companies, primarily American, to set up branch manufacturing operations on both sides of the border. Hence, the appearance, in Niagara Falls, Ontario, of subsidiary factories of American companies. These companies could thereby exploit both Canadian markets, and, utilising imperial trade preferences, access the rest of the British Empire and Commonwealth.

Transportation routes were developed on an ongoing basis with the 138 km long Queen Elizabeth Way linking Niagara to Toronto. This was built through the 1930s as a make-work provincial initiative and opened in 1939. Based on the design of the German autobahns, it was the first major divided highway in North America.

Tourism has been a part of Niagara since the French era. The Falls have been variously seen as curiosity, and as a sublime natural wonder. Tourism unfolded in conjunction with transportation, as canals and railways in the 19th century, and cars in the 20th, gave better access. Through the 19th century, on both sides of the border, the areas around the Falls filled with the expected Victorian tourist emporiums - including those offering views of freaks and oddities (shrunken heads, miniature violins...). Some of these, in particular the Niagara Falls (Ontario) Museum, survived into the later part of the 20th century. Clifton Hill, on the Canadian side, still offers to the discerning visitor such things as 'Elvis Niagara Falls', dinosaur mini-golf, and wax museums, one being located in a replica of the Empire State Building on its side, with a giant gorilla perched on the end.

## Decline of Manufacturing:

The decline of manufacturing unfolded over a number of decades. Manufacturing employment on the Canadian side decreased from 46.5% of the employed population in 1951 to 38% by 1961, 32% by 1971, and 30% in 1981. In the same period, service sector employment rose from 38% to 60% (Fischer, pp.91-95). On the American side, there has also been a ongoing decline in manufacturing

employment, continuing to the present – in the Buffalo/Niagara Falls areas in 1990 there were 91,900 employed in manufacturing – this had declined to 49,000 by 2010 (Bureau of Labor Statistics).

## NAFTA

A major factor in the decline of the Canadian Niagara-area manufacturing was NAFTA (the North American Free Trade Agreement), which came into effect on 1 January, 1994, establishing a free trade area between Canada, Mexico and the United States. This evolved from earlier agreements between the United States and Canada, including the Canada-U.S. Free Trade Agreement of 1989, and the 'Auto Pact' (Canada-US Automotive Products Agreement) of 1965.

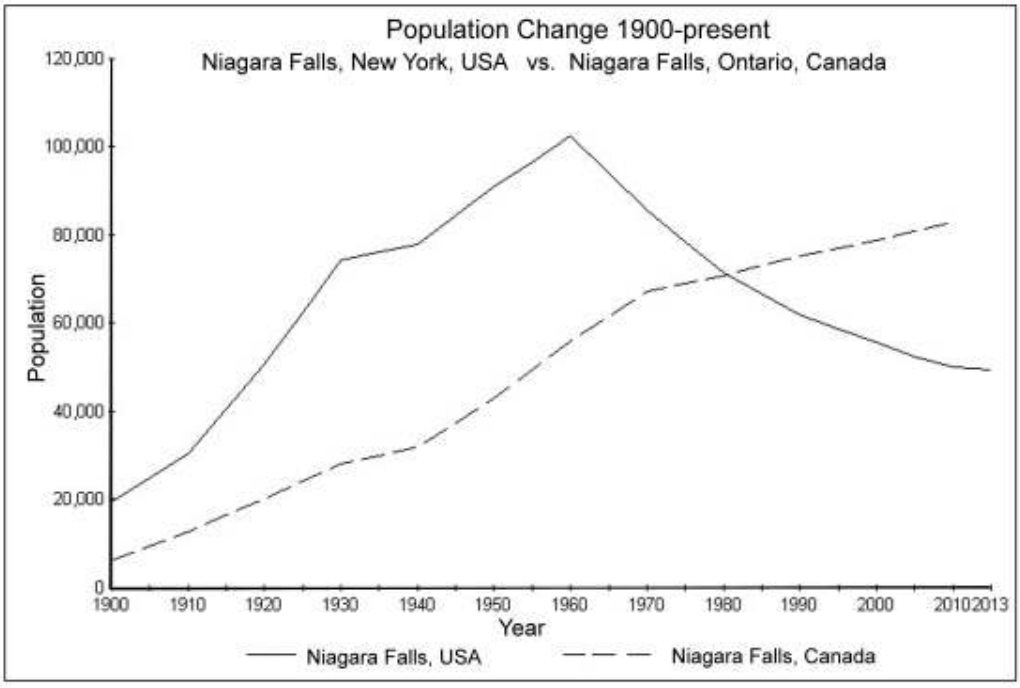
While NAFTA had a generally positive effect on the three countries, the need for American companies to manufacture in Canada ended. This led to the disappearance of many of the American subsidiary production facilities, but not all: for example, the Nabisco (now Post) Shredded Wheat factory in Niagara Falls, New York was closed while that in Canada remained open (Eck, 2014).

In spite of free trade policies, some Canadian Federal and Provincial policies do slow the flow of imports. These include requirements for French language on packaging and instructions, the use of metric measures, and protection of certain agricultural sectors.

## Indicators

Figure 1 compares the populations of the two cities of Niagara Falls. In 1960 Niagara Falls, NY had a population of 102,394, while that of Niagara Falls, Ontario (including the former Township of Stamford) was 56,110 in 1961. Since then the population of Niagara Falls, NY has fallen to less than half its level of fifty years before, while that of Niagara Falls, Ontario has grown to 82,997 (2011 census) - showing ongoing, if not spectacular, growth.

Figure 1 - Population Change (US and Canadian Census data)



On the Ontario side new houses are being constructed, while a drive through Niagara Falls, NY.reveals many streets on which houses have been abandoned or have disappeared entirely.

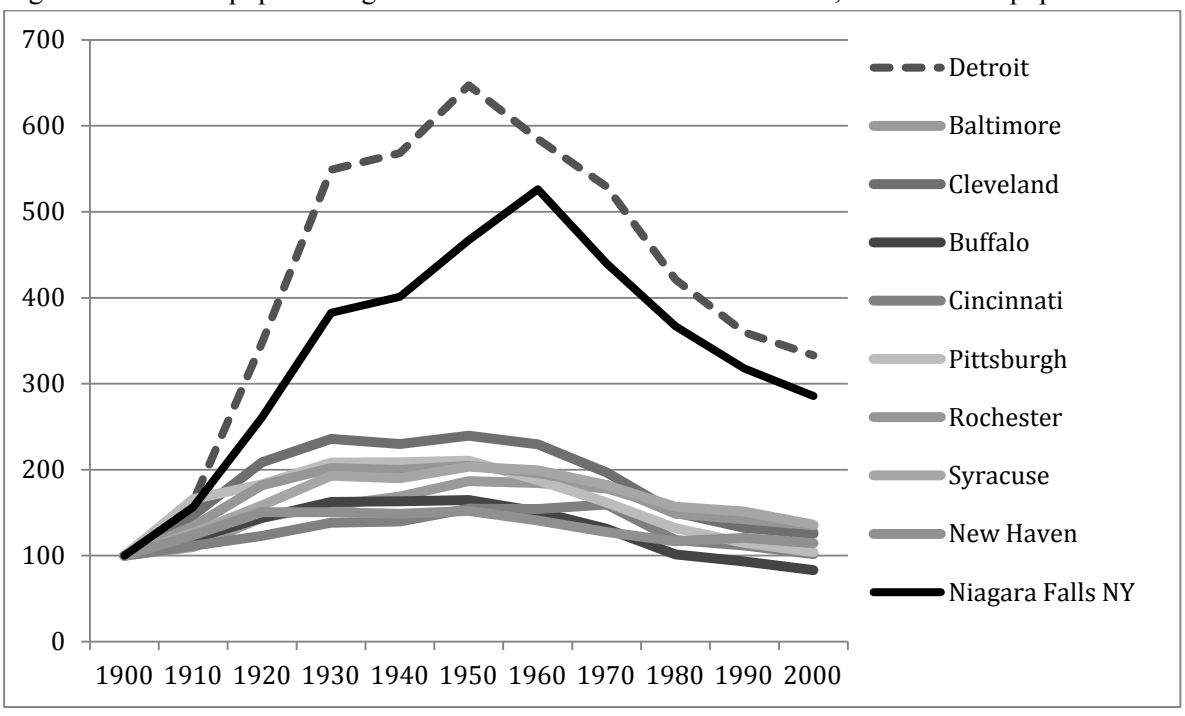
Meanwhile, in the surrounding American area, the population of Niagara County (excluding the City of Niagara Falls, NY) has increased slowly over the decades. The largest communities (after the City of Niagara Falls) being North Tonawanda with a 2013 population of 31,097, itself being a manufacturing centre on the Niagara River, and Lockport, the county seat, with 20,870. Both of these communities have lost 6.5% of their populations since 2000, while the rural areas have grown.

## 3.0 IMPLICATIONS

Shrinking populations are not unusual. There are many communities that were built around resources that were eventually fully extracted or became economically redundant. People quietly pack up and leave, with the community returning to nature - Europe is full of abandoned medieval villages.

However, it appears that this phenomenon is becoming more prevalent throughout the world, and most particularly in industrialized countries (Oswalt and Rieniets 2006). Beauregard (2013) tracked population figures for the 50 largest US cities by decade from 1790-2000. He found the decline greatest in the decades after WWII: two-thirds of the sample cities declined in population during the 1970s. This evolution appears most typical in the manufacturing centres of the Northeast and upper Midwest – the region dubbed the Rustbelt - with population loss apparently moving westward within this region over time.

Figure 2. Chart of population growth and decline of selected US cities, as % of 1900 population.



The prevalence of this pattern within the Rustbelt, for each time period in Beauregard's study, suggests "urban population loss might be as much a regional problem as an industrial one" (Beauregard 2013, p.39).

As Figure 2 shows, this pattern has been particularly acute in Niagara Falls, NY. Its growth in the early 20th century and precipitous decline from the 60s onwards is almost as dramatic, in percentage terms, as that of the much larger (and more infamous) Detroit.

The tourism and renewable energy base of Niagara should provide a sustainable common economic base for both Niagaras. The problem is that Niagara Falls, NY has become generally unattractive, and although numerous attempts have been made to increase tourism they have been largely unsuccessful. One indicator might be that the Evel Knievel Museum (and pawnshop), with its stars-and-stripes logo, is located in Niagara Falls, Canada.

This decline has imposed financial stress on Niagara Falls, NY. This is expressed by the bond rating. On 9 January, 2013, Moody's downgraded its rating on city debt to Baa1 from A2 and placed the rating under review for further downgrade. Their concerns include the ongoing dispute over the city's share of casino revenue, and the diminishing tax base (Moody's Investor Services, 2013). A shrinking city has difficulties in reducing its costs fast enough to match the taxation loss.

The lack of attractiveness of Niagara Falls, NY is indicated by a comparison of crime rates on the two sides of the border. Again, although the data collection is different on the two sides of the border, the message is clear (Figure 3).

Figure 3: Crime in Niagara

| | St.Catharines/ Niagara CMA | Niagara Falls, NY |
|---|---|---|
| Violent Crime: | 1,229 / 100,000 | 5,952 / 100,000 |
| Property Crime | 814 / 100,000 | 3,228 / 100,000 |

Sources:
St.Catharines/Niagara: www4.hrsdc.gc.ca/.3ndic.1t.4r@-eng.gsp?11d=57
Niagara Falls, NY: www.city-data.com/city/Niagara-Falls-New-York.html

Even in comparison with New York State, Niagara Falls, NY comes out badly - with an index of double that of the US as a whole (CityData crime rate factor = 605.7 vs. 299.4 average for US ).

Perhaps even more important than the crime itself, relative to economic growth, is the image of a crime-infested city. Among the comments heard were those that suggested that one had to be very careful where one went in Niagara Falls, NY. Others suggested that the entire local government and much of business had been infiltrated by organised crime, something supported by past history. Indeed, Hartt and Warkentin (2014, p.17) noted "Between 1991 and 2007, no standing mayor had been re-elected due to allegations of corruption (some of which led to federal charges), mismanagement,..."

This is not to say that all is well in Niagara Falls, Ontario. One instance is the old 'main street' - Queen Street, which since the 1960s has experienced massive decline, and is largely vacant. Attempts to revitalise it have met with limited success. This problem is not unique, and is shared by many older 'main streets', where suburban malls have been developed and thrived.

## 4.0 CROSS-BORDER DIFFERENCES:

### 4.1 Fundamental Differences

There are various reasons why Niagara Falls Ontario has survived de-industrialisation and has had ongoing success in exploiting tourism and as a retirement destination. Some are independent of specific government activities. These include:

View of the Falls:

The orientation of the Falls themselves is such that the Canadian side has a better view, which has encouraged development since the tourist industry began in the early 1800s. This gives the Canadian side better access to what Wurst (2011) described as "the world's largest industry" - tourism.

Border Implications:

The border has significant implications to Canadians. Niagara and south-west British Columbia are the locations in Canada with the most benign climate - and access to the government-based Canadian health care system. Between US tax regulations and the health care system, Canadian seniors are limited in their ability to move to warmer places, unlike American seniors. Elderly Canadian 'snowbirds' who spend substantial amounts of time in places such as Florida or Arizona, concern themselves with possible U.S. tax entanglements.

Geographical:

Each relates to a larger city – Niagara Falls, Ontario to Toronto, and Niagara Falls, NY to Buffalo. Toronto has thrived through last part of 20th century, while Buffalo has languished (population peaked in 1950 at 580,132 - then shrinking to 261,310 in 2010). Toronto in contrast has grown: (Toronto: 1951: 1,262,000, 2011: 5,583,064). Niagara Falls, Ontario has benefited from Toronto's massive and ongoing growth, even though, the lack of train connections, makes commuting to Toronto unattractive.

Images of Niagara:

Images are important to Niagara. Schneekloth and Shibley (2005, p.105) note: "Those of us who live in Niagara know that this is a powerful place if only because of the presence of the Falls and the magnitude of fresh water that flows through the region, generating settlement, power, and a legacy of rich livelihood." McGreevey (1994, p.1) called it "a strange place".

Yet this image continually changes. Through the 19th century Niagara was seen as place of power and technological innovation. Through the later part of the 20th century, this image became less inspiring, and faded as factories moved away. Without this particular shade of image, other image factors can dominate.

The development of industry along the American side of the Niagara River blighted the area. The website of the City of Niagara Falls, NY notes "The famous Mill District located one mile downstream of the Falls and two miles upstream of the Falls had become an unsightly blight upon the landscape. Pollution once again was a common sight. Smoke and smog hung in the air causing a foul smelling odor. Tall red chimneys were commonplace, each spewing smoke and soot into the air above the falls. The industries and mills were unkempt for the most part. Trash and waste piles littered the landscape. ...Niagara Falls had become an unpleasant place to visit and live" (NiagaraFallsInfo, 2015). Most of those industries have disappeared - usually leaving vacant sites.

The image of Niagara Falls, NY has also suffered from disasters associated with its industrial past.

- The Love Canal problem was "one of the most appalling environmental tragedies in American history" (Beck, 1979), and has been well documented and publicised. In 1910 a short canal was abandoned before construction. It was turned into a chemical dumpsite in the 1920s, being ultimately covered with earth, and sold by Hooker Chemical to the city in 1953, with houses and a school built on the lands. In the 1970s problems became apparent as chemicals percolated to the surface and into basements, and health problems multiplied. After denial from industry and local government, in 1978 it became an international scandal, the problems recognised, and the schools and closest houses demolished. References continue to appear in the media as an example of the wrong way of disposing of chemicals, and the wrong way to react to environmental disaster.
- In 1976 a chlorine rail tank car exploded at the Hooker Chemical plant, killing four, and injuring 87 more - up to three miles from the explosion (Beitler, 1975).
- In 1956 the Schoellkopf Power Station collapsed. As a result of numerous canals built to supply water to the power stations, and originally to water-powered factories, cracks appeared in the gorge face and two-thirds of the power station dramatically collapsed into the river. As significant generating capacity was lost, it was replaced by 1961 by a new plant at Lewiston. In the five years before the new plant came on stream, many businesses relocated to obtain the power supply they needed, kick-starting population loss.

The image of Niagara in Canada differs from the American: economically and geographically the area is more important to Canada than to the United States. It is a short drive from Toronto, Canada's largest city, so more familiar to a greater proportion of the population. "The region is often referred to as the Gateway to Ontario, Canada." (Jayawardena, 2008, p.364). Again, this is not uniform; older residents will often reminisce about how wonderful things were when factory jobs were plentiful, hence the article 'From Garden City to Garbage City' (Reinhart, 2005) appearing in a national newspaper based on interviews with a few disgruntled people.

Structure of the cities:

Niagara Falls, Ontario has the advantage, not shared by the American city, that its decayed city centre is located well away from the tourist areas. It is possible to visit, or even live in the city, and never need to encounter that area. As of 2015, the area has an unfortunate distressed appearance, with its many empty or under-utilised shops. The wealthier parts of the city are in the north-west: for many people it is more convenient to shop in the major enclosed regional mall in St.Catharines.

## 4.2 Non-Fundamental Differences: Initiatives of Government

In Canada, higher levels of government involvement over more than a century, in particular the Province of Ontario, have made significant successful policy interventions assisting the Niagara economy.

It is worth considering the various actions undertaken by the various levels of government in Canada, and their relative levels of success, especially in contrast to those on the American side, where outcomes have been very mixed.

### 4.2.1. Provincial Initiatives

Niagara Parks Commission (NPC)

A key action by the Province of Ontario has kept industry away from the river. It established the Niagara Parks Commission in 1885, on the recommendations of famous railway engineer Sir Casimir Gzowski (1813-1898). The NPC was mandated to preserve and enhance the lands along the Niagara River and develop it as a public resource. This orientation towards the preservation of natural beauty and the encouragement of tourism has been in distinct contrast to many policies in the United States that encouraged industrial development along the river.

The NPC addresses what Healy (2006, p.525) pointed out as a common problem for the management of 'tourism destination resources': that they are subject "...to both overuse and underinvestment." For example, they illuminate the Falls, something no individual entrepreneur would be likely to undertake.

The Niagara Parks Commission has regulated development in the areas it controls along the river. One example relates to the older power stations near the Falls, built on land the NPC leased to the generating companies. Carr (1981, p.27) noted of the Canadian Niagara Power Company's Rankine Power Station building completed in 1905: "It is a very large building, but its overhanging pitched roof and a terrace running the full length of its front make it appear long and low. It is built of rough-cut limestone with a roof of green-glazed Mediterranean-style clay tiles." The Toronto Power Generating Station, opened in 1906, was designed in a neo-classical Ionic style, by one of Canada's foremost architects. This building, closed since 1973, has been designated as a Canadian National Historic Site. Both buildings have reverted to the Niagara Parks Commission, and are expected to be converted to new uses.

A similar initiative to the NPC did unfold on the American side, termed 'Free Niagara', leading to the formation of the 'Niagara Falls State Park' in 1885, although it took fifteen years of significant effort. However, while New York State gained power to acquire private lands, it was limited to the area immediately around the Falls. Moreover, conflicts of interest were rampant, with industrialists pressuring government to keep the protected area to a minimum (Strand, 2008, pp.148-151). Hartt and Warkentin (2014) note that the structure of the New York parks system leads to chronic underfunding, and that there is a lack of integration between the city and state that also compromises the success or the parks.

Support for wine industry.

The wine industry has offered diversification, attracting more sophisticated tourists than the casinos and wax museums - thereby adding another dimension to the tourist industry, as by 1968, Niagara was seen as having become a "low-brow tourist trap" (Wurst, 2011).

Grapes are indigenous to the Niagara area, and the earlier settlers developed vineyards based on varieties that could withstand cold winters - these were used for juice and wines of dubious quality. Gaylor (2010, p.196) discussed the industry and its no-frills product, "...delivered in metal-capped gallon jugs. For almost 100 years it was an industry going nowhere." Furthermore, the wine industry was handicapped with respect to domestic sales by the policies of the Liquor Control Board of Ontario - a provincial monopoly on the sales of wines and liquors. The policies of the LCBO were to make purchases as unappealing as possible: until the late 1960s the customer selected from a list - and was not able to see the final product. In Ontario between 1920 and 1970 there were only seven wine producers with no new licenses issued until 1975, when Inniskillen

Wines was created. Since then there has been a rapid growth of competitive estate and boutique wineries. This has been aided by significant action on the part of government.

Starting in 1989, the Federal-Provincial Grape Acreage Reduction Program funded grape growers with $CAN 50 million to remove many of the old 'traditional' labrusca vines. Legislation was passed that effectively eliminated the use of labrusca grapes in commercial wines.

Another provincial initiative was the creation of VQA Ontario in 2000, "a regulatory agency responsible for maintaining the integrity of local wine appellations and enforcing winemaking and labelling standards" (VQA, 2015). By establishing frameworks for the designation of VQA wines it promotes better quality Ontario wines.

A significant step in the preservation of Niagara's agricultural resources was in 2005, when the Province, in co-operation with the Regional Municipality of Niagara, created a greenbelt system (Ministry of Public Infrastructure Renewal, 2006). The intent is to preserve Niagara's agricultural lands "from urban development in perpetuity." (Gayler, 2010, p.195). While such protection remains controversial, and not necessary absolute, it is a step in safeguarding agricultural resources.

This development and promotion of the Niagara wine industry extends well beyond the production of grapes and wine - it has become a significant part of the tourism industry. Wineries are allowed to sell wine and associated products on-site, and can sell directly to restaurants. Virtually all other wine retailing still remains in the hands of the LCBO. Many wineries offer tours, tastings, and in some cases, excellent restaurants and conference facilities. Ancillary events are conducted at wineries, including Shakespeare performances, concerts, and car shows. During the summer tourist season and on pleasant week-ends, it is not unusual for the major wineries and their shops to be crammed with tourists - over half a million people visit Niagara's wineries each year (Gayler, 2010, p.207), although this represents only about five percent of the total visitors to Niagara.

Further regional benefits have resulted from this industry. Several programmes have channelled formal recognition and supportive funding through the Ministry of Colleges and Universities of Ontario. Brock University in St.Catharines founded its Cool Climate Oenology and Viticulture Institute in 1996 offering degrees and certificates. The Canadian Food and Wine Institute at Niagara College runs a two-year diploma programme educating Winery and Viticulture Technicians. A federal-provincial initiative re-established the Vineland Research and Innovation Centre in 2007, with a mandate to address agricultural issues and ensure its ongoing viability (Halseth et al, 2010).

In negotiating the North American Free Trade Agreement, the Federal government ensured the wine industry was given protection.

Casino Development:

On both sides of the border, casino development has been pursued, with markedly different outcomes.

Belford (2004) discussed the importance of casino development on the Canadian side: "Then in 1996, the Ontario government came to the rescue. Niagara Falls would get a casino on the site of what had been Maple Leaf Village, an amusement and hotel property overlooking the Rainbow Bridge. Legalized gambling became a hard-driving economic engine, lifting the city from

economic depression. Eight years later, Niagara Falls is coming off the end of a $3-billion development boom." "Hotels sprang up like mushrooms. The city says there have been 40 new projects or expansions of properties since 1998."

In contrast, casino development on the American side failed to create the same positive spiral. Their casino opened in 2002, however it did not become a catalyst for further development Byrnes (2012) commented: "...it tends to exist as an island, with vacant lots and surface parking never far from it. Ten years since its initial opening, the casino has failed to generate spin-off development..." Moreover, ongoing political entanglements between the state government and the Seneca Indian tribe who own the casino, have caused budgetary problems for the city government.

### 4.2.2 Federal Initiatives

#### Immigration Policy

It is perhaps surprising that the second most common mother language in Niagara Falls, Ontario, after the official languages, is Serbian (Statistics Canada). Locals have acknowledged this and pointed to Serbian restaurants and bars of varying qualities and repute. Serbian immigration to Canada goes back over 150 years, but the events through the twentieth century have encouraged more Serbs to come to Niagara - understandably attracted to areas in which members of their ethnic background and language were already living - and could recommend.

This Canadian policy of encouraging immigration, while it can be criticised for denuding troubled countries of their educated, entrepreneurial and professional groups, has benefited many areas, including Niagara. The result is that in 2011, 20.5 percent (Statistics Canada) of the population of Niagara Falls, Ontario was born outside of Canada, with the most common place of birth for the immigrant population being Italy (18.5%) and the U.K. (8.1%). In contrast, 5.3 percent of the population of Niagara Falls, NY were born outside of the United States - the number in New York state as a whole is 22.6%. This suggests that Niagara Falls, NY has been unsuccessful in attracting immigrants.

In contexts of negative fertility rates (both the Province of Ontario and New York State are below replacement, with Ontario at 1.52 (Statistics Canada, 2011) and New York State at 1.814 (2010, National Vital Statistics Reports, 61(1)), it is necessary for a city or region to attract people - or the population will naturally decline.

### 4.2.3 Local Policies

While it is difficult to point to notable successful initiatives of local government in Canada, it can be contrasted with the activities of local government on the American side: "It encompasses just about every mistake a city could make, ... a 1960s mayor's decision to bulldoze his quaint downtown and replace it with a bunch of modernist follies. There was a massive hangar-like convention center designed by Philip Johnson; Cesar Pelli's glassy indoor arboretum, the Wintergarden, which was finally torn down because it cost a fortune to heat through the Lake Erie winter; a shiny office building known locally as the "Flashcube," formerly the headquarters of a chemical company and now home to a trinket market." (Business Week, 2010).

Niagara Falls, New York believed its salvation to be in capital-intensive mega-projects, but the results have been disappointing due to their various failures to thrive or create further development. Niagara Falls, Ontario has flirted with numbers of similar mega-projects: perhaps fortunately most, such as the 'Maharishi Veda Land' first proposed in 1992 by magician Doug

Henning, or the 'Worlds of Jules Verne', or an 'Ancient Chinese City' have not materialised (Ricciuto, 2008).

## 5.0 THE LESSONS

### 5.1 Diversification

Wurst (2011) noted: "At the beginning of the twenty-first century, the United States is a country where many manufacturing jobs have been wrenched abroad, leaving a domestic economy dominated by service industries. Today, tourism is the world's largest industry, and many have predicted the calamities that will result from the reliance on service labor in the West." The Canadian side has, for over a hundred years, cultivated its tourist industry, - thereby reducing its reliance on manufacturing, although typically manufacturing pays more than tourism.

Furthermore, Niagara Falls, Ontario has avoided the risk, pointed out by Wurst, of becoming simply a 'low-brow tourist trap', through ongoing development of a diversity of tourist attractions. Clifton Hill with its outlandish collection of wax museums and shops selling rubber mounties remains popular, but other experiences are offered by the riverside trails, the heritage aspects of Niagara-on-the-Lake, and the wineries. There are many opportunities for golfing and cycling, family tourism includes the Marineland theme park, the Butterfly Conservatory and the Botanical Gardens (both operated by the Niagara Parks Commission), jet boats go up the river as far as the Whirlpool, and the Welland Canal can be an unexpected spectacle for the visitor. This means the local economy and the tourism infrastructure (hotels, restaurants and campgrounds) are not dependent upon any one of them.

This lack of reliance on any one company or industry, means that the sudden shock of a major closure will not occur. If an employer fails, a large portion of the population is not affected, so time is available to adjust to new circumstances.

### 5.2 Maintenance of a Positive Image of Place

The image of a city is important, especially when the natural fertility rate is lower than replacement. People have to be attracted to a city to maintain both its population and its vitality. This implies that the city/area has to be visually, culturally, and socially attractive. Visitors must not be repelled, and people living there can recommend it as a place in which to live and work. In a mobile globalised world, it must appeal to people both within the country and to those in other countries. Industry in Niagara originally grew on the basis of cheap energy and manifold transportation advantages. As these advantages have diminished, making other factors relatively more important. To make effective, central government must enable workforce mobility and offer a supportive immigration policy.

The maintenance of image on the Canadian side has even supported industry. Bagchi-Sen (2001, p.47) of the State University of New York-Buffalo noted: "However, the reversal of fortune in other sectors such as tourism and agriculture continues to encourage manufacturers: most SMEs in this study show efforts in improving their performance such as through product development, export market development, and the recognition of the importance of external service inputs and networks in enhancing business performance. Furthermore, the Niagara region SMEs show better business performance than the SMEs across the border in the Niagara–Buffalo region in the United States".

### 5.3 Balance between Public and Private Interests

The balancing of competing interests is one factor between the success of the Canadian Niagara Parks Commission and the American Niagara Falls State Park. Lord Kelvin, when visiting Niagara, offered the opinion that the primary worth of the Falls was its potential for industrial development - the spectacle was irrelevant (Hulbert, 1908, p.99).

This partially reflects the differences between the individualistic American culture and the greater collectivism found in Canada. The Canadian side was able to accommodate both interests - with the preservation of open space and the recreational use of the lands along the river, while the American side followed the shorter-term interests of commerce and allocated much of the river frontage to noxious industrial development. In Canada, the process pushed such industrial development away from the river.

This cultural difference can be found in the words of Sir James Pliny Whitney, the Premier of Ontario, who created the publicly-owned electric utility generally referred to as 'Ontario Hydro' in 1906: "The water power of Niagara should be as free as the air." (Hampton, 2003, p.35). Today one would regard it as extraordinary that Whitney was the *Conservative* party leader.

The balancing better protected the essential resource of the Falls and river in Canada, thereby preserving options for other types of development.

### 5.4 Preservation of Options

An emerging field that might give insight into the contrasts between the Niagaras is that of 'real options'. Niagara Falls, NY limited its ability to adapt to change, through its wholesale acceptance of noxious industries, which discouraged the development of other activities. The presence of such industries directly on the river undermined the potential utility of a major, and unique, asset, the Falls itself. The repeated discussions of a blighted environment along the river, and the unpleasant smells and toxic waste that found their way into the city will tend to discourage in-migration, and perhaps worse, this image undermines Niagara Falls, NY as a place to live, set up a new business, or even visit as a tourist. Was it a wise decision to follow this rapid growth route through the first part of the 20$^{th}$ century, thereby implicitly negating other forms of development – in particular those that might have been associated with the Falls? Real options analysis may offer insights into the value of retaining the ability to address alternative possibilities relative to more immediate returns.

## 6.0 CONCLUSIONS

Niagara, geographically, historically and economically is an exceedingly complex area, hence governance and management are equally complex. While there are some fundamental differences between the two sides of the Niagara border, the divergence in outcomes does offer a number of insights:

(a) Diversification is important. To improve the probability of long-term success of an area or region it should ensure it is not reliant on any one type of commercial activity.

(b) The visual/social/cultural image of a city or region may be critical in ensuring its ability to retain and attract people and businesses. This is particularly important in areas with negative fertility rates that are relying in an inflow of households to maintain a stable population or to grow.

(c) The success of a region or city may be based on policies created and implemented by different levels of government, who must also be able to balance competing interests.

(d) The relative success or failure of a region or city may be a long-term process, requiring consistent productive action on the part of numerous actors.

(e) Well-considered, key government intervention to support existing and emerging activities can be effective in ensuring the long-term viability of a city or region.

(f) There may be fundamental cultural issues facing institutional or managerial systems that are attempting to direct outcomes.

The two Niagaras offer a natural, if unique, laboratory in which adjacent cities with different cultures and regulatory regimes can be compared and contrasted in order to understand how a complex of different interrelated factors can contribute to their relative success or failure.

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# Research on NGO Community Construction Practice Dealing With Rural Decline in China

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Keywords: NGO, Rural Decline, Rural Governance

Abstract:
*Rural decline and rural hollowing has become serious problems in China's rapid urbanization. Since 2000, millions of China's villages have disappeared while the local culture and folk art traditions attached to them faded away. As a representative of civil society organizations dealing with China's rural decline, Non-Governmental Organization (NGO) have launched a series of practices. The paper summarizes and analyses the practices process in China's rural areas conducted by "Beijing Green Cross", a local NGO, comparing the experience of successful and failed projects, to explore the role and responsibilities of NGO in China's rural decline. This paper is divided into four parts. Firstly, we summarizes the characteristics of China's rural declining areas which mainly indicates the deconstruction of local culture and decay of physical space; secondly, we analysis the process of rural communities project conducted by NGO in rural hollowing areas which is based on rural conditions for development and cooperation with local government. The NGOs improve peasants' living environments by enhancing rural infrastructure, guide industrial development through establishing villagers' self-government mechanism, and enrich peasants' spiritual life by creating cultural space. The projects revitalize the rural areas by constructing democracy communities based on peasants' real demands. The third part concludes the limitation of NGO rural communities including improper methods, misunderstanding of peasants and lack of funds. Fourth, we contrast the positive and negative effects of NGO rural communities and propose the role and responsibilities while dealing with china's rural declining issues.*

## 1. Introduction

Rural decline has become a worldwide unavoidable problem in the country's development, especially in the process of rapid urbanization in China. A large number of young people move from countryside to city which have caused great damage in the physical space and cultural space in rural areas. Based on this issue, China's NGOs have launched a series of practice, aiming at the problems of different rural recession and progress have been made in recent years. However, in the process of rural community construction China's NGO also encountered some problems. This article attempts to analyze the role and responsibility of NGOs in the process of dealing with rural decline from the perspective of the practice project and realistic background.

## 2. Research backgrounds of rural decline and NGO practice in china

From the experience of developed countries, local culture structure and physical space decline in the process of urbanization, as the rural population move to cities. The problem is even

severe in China's rapid development. As a civil organization, NGO is also one of the actors aiming to dealing with the rural decline.

*2.1Experience of developed countries: the shift of population from rural areas to the cities make rural decline*

Developed countries' experience has uncovered that following the urbanization, more and more rural population move to cities. As a result, villages shrink gradually.

Take Japan, which also has dense population as China as an example. It has the highest urbanization level in Asia. In 2002, its rural population make only 7.8% of the domestic population. The agriculture labour decrease and aging problem is occurred by megalopolis led by Tokyo megalopolis. Their advantages like high-quality public service, abundant employment opportunity, better life quality has attracted many people, mostly the youth. In 2000, the population of the agriculture labour is 3.89 million, half of which is aged over 65.While many young rural people choose to work in companies without any intention to work on agriculture. As a result, the old people are the main part of the agriculture labour force who have low labour quality contributing not much to the development.

The Japan government estimates that the domestic population will drop from 127 million to 86 million in the future 40 years while the percentage of the people over 65 will increase to 40%. Meanwhile, with the rural decline, the domestic population distribution will lose balance seriously caused by the increasing population in big cities like Tokyo and Osaka, which are crowded by young people.

At present, the average age of the agriculture labour force is close to 67. Throughout the nation, 8% of the farmland have been left uncultivated. Moreover, folk culture has no longer been maintained and some temples have been disused. Furthermore, many forests and islands have also been deserted without care.

As a result, following the urbanization, the rural population decrease and the urban population increase are the main cause of the rural decline.

*2.2 Rural-decline problem in high-developing China: vicious circle of the population loss and rural life- quality decline.*

In China, urbanization is on a rather high pace which make the speed of rural areas' shifting to urban faster than that of developed countries. Although there's a great decrease of rural population, the exploitation of farmland hasn't reduced which on the contrary, has increased. The rural population decrease has also led to other problems. As the people under service decrease, some public service sites combined leading to larger service zone of each site. So people need to bear more time and traffic cost to get service. Moreover, the leaving of young people makes the inheritance of rural culture more difficult.

### 2.2.1 Rural population is decreasing

The date of State Statistics Bureau shows that in the past 20 years, the total reduction of rural population exceeds 0.2 billion (Figure 1). The date of Civil Affairs shows that, in 8 years, the number of village committees has decreased from 623669 to 588547.While the date can't cover the number of the disappeared villages as not every village has village committee(Figure 2).

The rural population decrease mainly caused by rural population shifting to urban. The annual population survey in 2000 uncovers that,13% family have outside workers. For example, in 2001,in Hunan Province, the outside workers working in other provinces is 4.87 million, while in Sichuan Province, the number is 5.6 million. Meanwhile, the possibility of them returning home doing farm work is low which also lead to the rural population decrease.

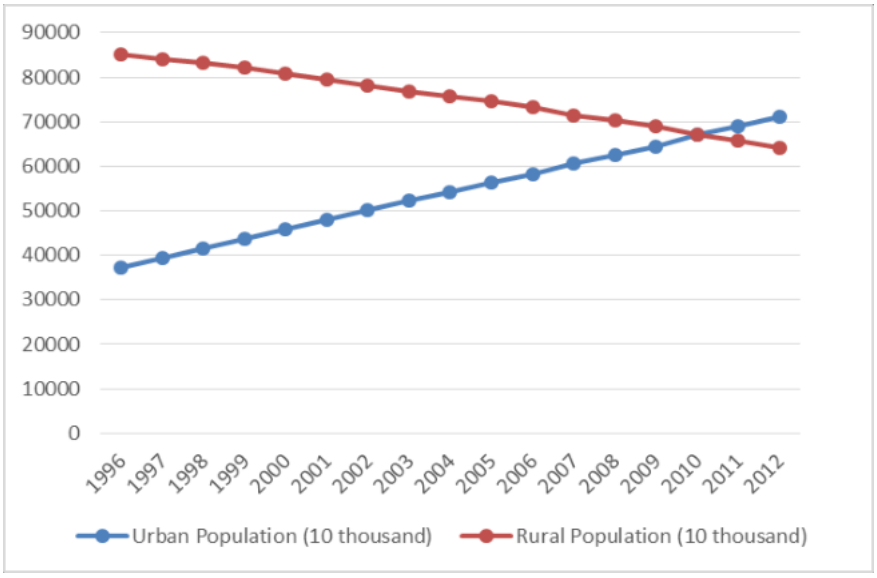


Figure 1. The dynamic variation of urban and rural population
Data sources: The official site of State Statistics Bureau

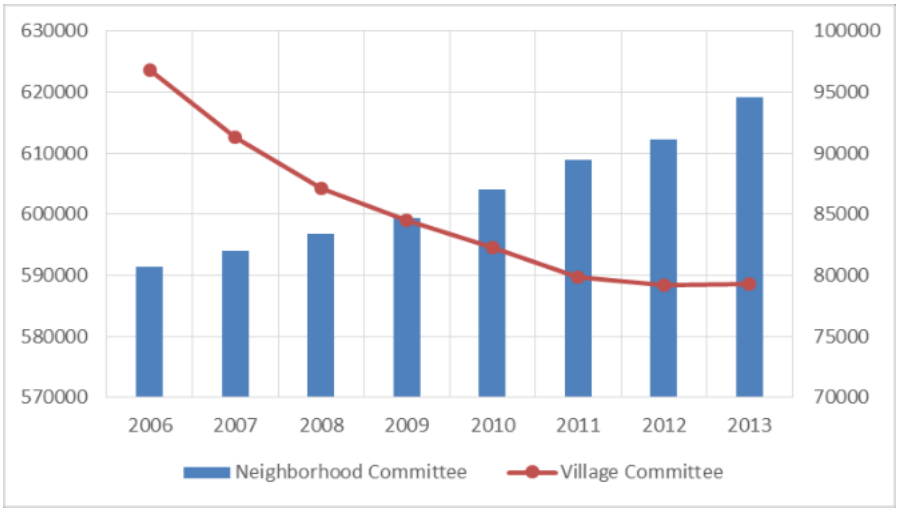


Figure 2. The dynamic variation of neighborhood committee and village committee
Data sources: The official site of Chinese Ministry of Civil Affairs

Following the main rural labour force shifting to urban, rural decline leads to the decline of physical space, the underdevelopment of service facilities, and the quick destruction of folk culture.

### 2.2.2 The quality of rural material space is declining

These years, the exploitation of land has influenced rural areas a lot. The exploitation amount hasn't decreased which in turn tends to increase. The report analysing the relationship of rural construction land and registered population tells that the amount of rural construction land increased yearly from 2007 to 2011, while the registered population per unit area decreased. The land use has presented an extensive look (Figure 3).

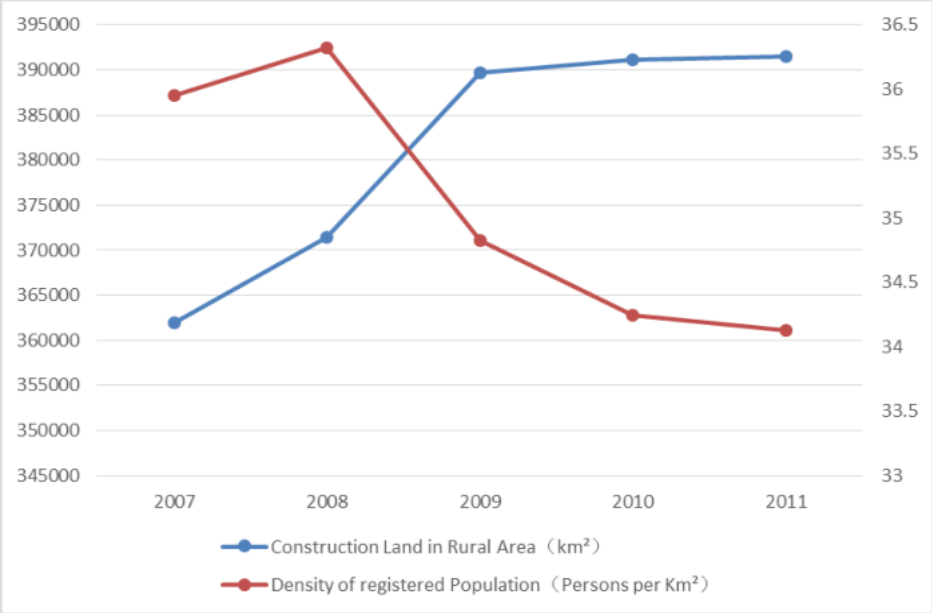


Figure 3. The dynamic variation of population and land use in Jilin Province
Data sources: The national statistical yearbook, 2007-2011

What's more, blind cancel of public service facilities caused by population decrease has also affected rural life quality. The report named "estimation on the rural schools' distribution adjustments" shows, rural primary schools have been reduced 52.1%,which is 229.4 thousand .The teaching centres have been reduced 60%,which is 111 thousand. The survey sampled by 10 provinces shows that the average distance from home to school for pupils is 10.83 miles, for middle school students is 34.93 miles. As a result, the actual and potential dropout rate increase accordingly. Relevant surveys uncover a sharp fall of dropout rate of pupils from 1990 to 2000,which fluctuates from 2001 to 2006 and rise again largely after 2007.The dropout rate raised from 5.99‰ in 2008 to 8.22‰ in 2011.That is, 800-900 thousand students drop out per year.

### 2.2.3 Folk culture is declining

Folk culture decline is inevitable. Chinese rural studies represented by "Liang zhuang village in China" have presented the collapse of the inner structure of villages. Villages are no longer set up by same family name, but set up as economy center. The agricultural transition reduces the demand of agriculture labour, as a result, many young rural people choose to work in big cities. Villages are losing their vitality and vigor while empty villages are common view. Moreover, with the least attachment to hometown, the outside workers can't inherit traditional folk culture which is at stack.

### *2.3 Research on the NGO program and village management*

Non-governmental organizations play a very important role in modern social governance. "The government is the leading role of public administration, but social public affairs management also

needs a number of supporting roles". "One of the enlightenment of the Western administrative reforms in the 1970s is that along with the social progress, especially the rapid development of science and technology, people increasingly profoundly realize that in dealing with relationship between the government and market, between the government and society, between the government and the public, the traditional government's role will change while many non-profit, non-governmental organizations will undertake some function in different forms. These organizations provide not only public products and services, but also undertake the management of social public affairs. Since the 1980s, whether in the developed countries or in developing countries, NGOs are committed to providing public service and solving various social problems as an active part in public management like local autonomy, community service, and public policy formulation and implementation.

Folk organizations rooted in rural areas have developed maturely abroad. Such as the agricultural cooperative organization in the US since 1810 which provides a platform for farmers' mutual reciprocity. And the agricultural cooperative combination in Japan since 1948 not only provides agricultural products-processing, commission sale, storage and transportation, production and living materials and other engagement in insurance, credit, culture, entertainment and so on.

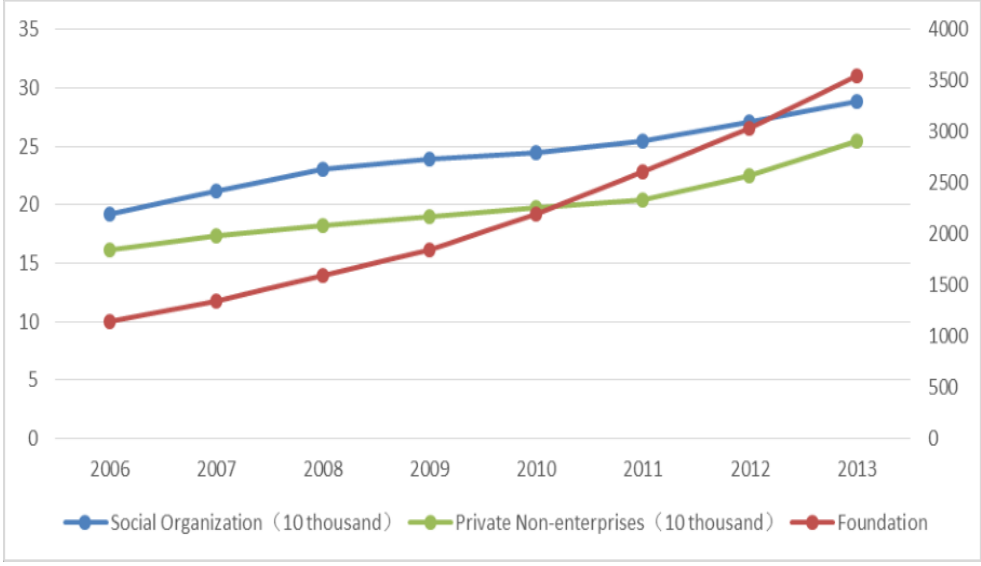


Figure 4. The developing trend of Chinese social organization
Data sources: The official site of Chinese Ministry of Civil Affairs

China's folk organizations develop fast as well. According to the date of the national civil affairs, social organizations become more and more yearly. In 2013, the number of social organizations reached 289000, while the number of foundations reached 3459, the number of the private non-enterprises reached 255000 (Figure 4). These social organizations are involved in science and technology, education, culture, health, labour, civil administration, sports, environmental protection, legal services, social intermediary services, business services, rural and agricultural development and other fields of social life. Despite China is insufficient in the social, legal, and capital conditions to develop NGO, NGO is without doubt becoming an integral new part of Chinese social and economic life.

## 3. Analysis and evaluations of the NGO community construction practice in rural declining areas in china

There exist huge differences in development conditions in Chinese rural areas as China's vast territory. The rural construction conducted by the government is much less than urban areas because of the limited budget. NGOs is making models in rural areas for other similar villages under this situation. The main measure of rural community construction conducted by NGOs is enhancing rural infrastructure, guiding industrial development through establishing villagers' self-government mechanism, and enrich peasants' spiritual life by creating cultural space cooperating with the government. The projects revitalize the rural areas by constructing democracy communities based on peasants' real demands.

### *3.1 Improving the infrastructure to enhance villagers' living quality*

The decline of rural physical space due to the life-style transformation from traditional rural life to modern life. However, the lagging of infrastructure services lead to the worst quality of rural life which mostly reflect in the environmental deterioration in the country life.

There is a long history of environment management in the city and the environment department deal with the environment problems every day. Instead, environment issues in rural areas have been ignored for a long time. Individual farming discharge wastewater and other agricultural waste to the river near peasant's home. Floating dead livestock in the river lack professional management and cause stinking smell. The rural environment issues is becoming increasingly serious.

As one of the representatives of rural NGO, "Beijing Green Cross"(hereinafter referred to as BGC) started their rural community construction with improving rural environment in Wushan Town of Xiangyang City in Hubei Province which locates in the central region of China. They organized the farmers to improve rural basic production conditions and living environment by advancing the quality of village road, drinking water system, drainage, garbage disposal facilities so that the village's image is getting clean and tidy and significant improvement have been made in rural civilization (Figure 5&6).

Transformation, construction and communication are the three keywords in the BGC's projects. They transformed the water system, kitchen, toilet and livestock shed; they constructed homes, gardens, factories and pools; they communicated the village to outside world with roads, electricity, phone and broadcast. As the living conditions, public facilities and other infrastructures greatly improved, BGC motivated the villagers' enthusiasm to build their homes. BGC have done similar projects in Haotang Village of Xinyang City in Henan Province and Wangtai Village of Xiangyang City in Hubei Province. Rural environment improvement refresh the whole village's image. The projects not only improve the quality of villagers' life, and also brought tourism revenue.

Figure 5. Wushan Town

Figure 6. Wushan Town

*3.2 Guiding industrial development through establishing villagers' self-government mechanism*

One of the most important reason of rural decline is the limited capacity of traditional agriculture absorbing rural surplus labour force which led to a huge loss of the rural population. In the process of dealing with rural industry transformation, the industry guidance conducted by government could not focus on each individual country to take appropriate measures. NGO has its own advantage in this area.

Take Wushan Town as an example. In 1980's to1990's, Wushan Town was a poor town in remote mountain area. The township enterprises under The Reform and Opening-up policy failed to make Wushan Town being rich. Relying on industrial development have been proved wrong in this area. In addition, Wushan Town was also facing is pressure of less land and more surplus labour force like other towns.

Local government and the BGC combined the development of characteristic industry with promotion of labour transfer in Wushan Town.

The project cultivated tea industry and made progress in the integration of ecological tourism of developing pastoral scenery tea art performance, tourism, leisure and entertainment based on the characteristics of mountain town. This strategy is closely rely on the location and resources condition, and it is also the current new rural construction way in Hubei Province. Rural labour

force transfer is not only made it possible to agricultural industrialization, intensification, and modernization, and bring powerful financial support to the rural economic and social construction, as well as modern civilization to rural areas.

Due to the project implementation improved the ability and independency of the villagers, when the project ends, the village made the development sustainable according to the aim of the new countryside. In 2012,there are 25 farmhouse in Yanhe village of Wushan Town making profit more than 30 million yuan; 1200 mu organic tea garden have been planted with an annual output value more than 10 million yuan; they registered trademark "Yanhe Xiang" for the production of mushrooms, cured hooves, dried chicken and other local products which led to an annual output value of nearly ten million yuan. In addition to breeding, planting medicinal herbs and other industry, a rough estimate of the village industrial and agricultural output value is nearly 100 million yuan. In 2012, the per capita net income reached 9850 yuan, which is 4.8 times comparing to 2003 before the implementation BGC project.

The transfer of rural surplus labour force not only makes it possible to develop modern agriculture, but also bring financial support to agricultural industrialization and changes in management concept. By 2009, the whole town has long-term transformation of surplus labour 6, 870, short-term transfer of surplus labour is 2, 300. Total income of labour force transformation is more than 1 billion.

*3.3Enriching peasants' spiritual life by creating cultural space*

The lack of public service facilities hinder the quality promotion of villagers, lower the quality of the rural life, and baffle the healthy rural development.

Rural public service facility construction dominated by the government more based on the population and the facilities more located in town for the whole service of countryside. Such services mostly are basic service, such as health care and education. However, due to the spatial distribution of rural fragmented, the accessibility of individual to basic services affected. In addition, the villagers' spiritual needs, such as the construction of villagers' folk cultural space and cultural entertainment space are being ignored.

In order to solve this problem, BGC established rural library and rural e-information center in Wushan Town. They formed small groups to host monthly cultural activities of laws and regulations knowledge, rural practical technology, and environmental protection knowledge to villagers who could learn the latest information from the BGC and participate in the activities. The BGC took "Tea culture" as the breakthrough point and established Yanhe Teahouse, designing and constructing the symbolic altar of "tea". The BGC built the major industry in Wushan Town and promoted the cultural taste and quality of the villagers.

According to the relevant laws and policies, the BGC made the rural regulations under the realistic situation in Wushan Town which reflected the most villagers' will and being a kind of common public rules forming the atmosphere of villagers' self-management and self-education.

## 4. Reflection of the limits in NGO rural community construction

At present, most NGOs are mainly involved in the works in traditional villages and towns, focusing on developmental cases including poverty alleviation, charity, education and entertainment, etc. In

spite of the urbanization, modernization, polarization and transition of these rural areas, many NGOs are still following the old developmental concept, staying in the stage of simple resources & information importation and Self-Assumption. Because of these points, these brought negative impacts into the development in rural areas and took disadvantages of the reputations, development and growth ability of the NGOs themselves as well.

The difficulties of governance in rural areas could be seen of which NGOs involved in. Nevertheless, BGC is suffering from the same predicament as well, that could be seen from its development by the latest decade ( Figure 7).

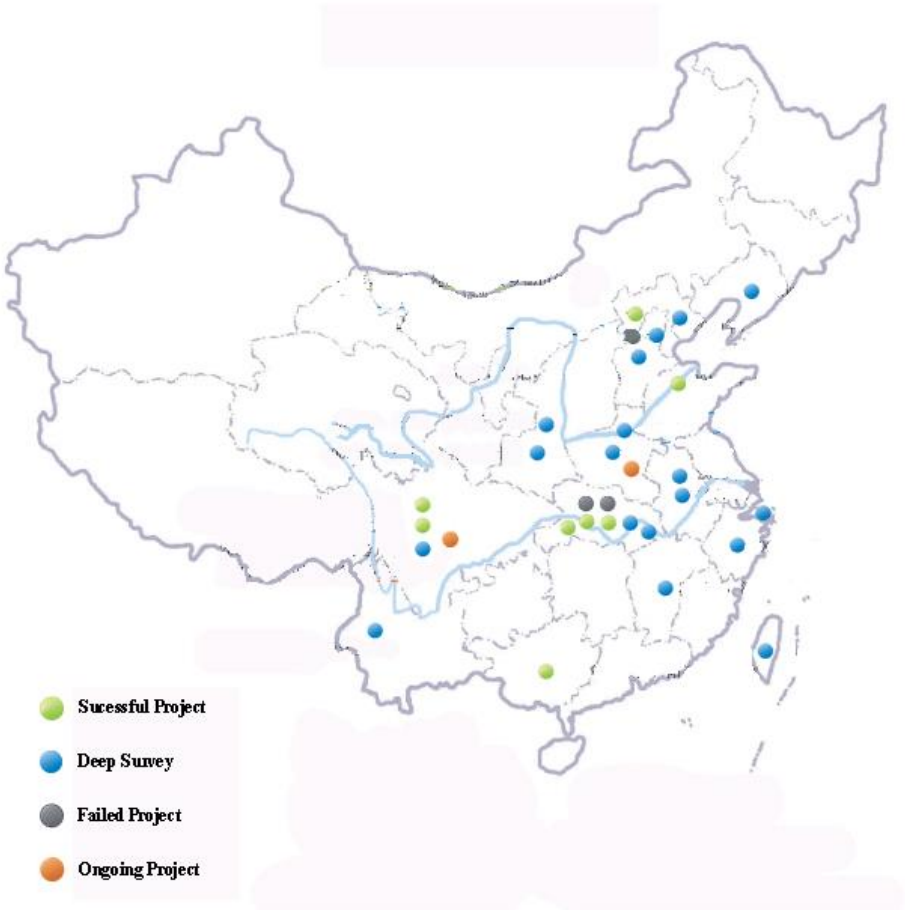


Figure 7. The BGC projects in Chinese rural areas
Data sources: The official site of BGC
http://www.bjlsz.org.cn/

According to the development of BGC and the project experiences of relevant NGOs', there are some major predicaments in the process of NGO's rural community construction (Figure 7).

*4.1Top-down authoritarian system become a burden of charity*

In the government-leading mechanism, villagers are used to accept the arrangement of the government. "waiting, relying and demanding" have become their normalcy. Thus, in this situation, the unsustainable governance inevitably causes population loss and recession. However,

NGOs brought in another options, farmers could build “new village” by their own hand and advanced concept.

However, in some extents, if it is only simply relying on the resources & information importation by administrative or authoritative measures, there would be additional burden imposed on villagers, even though it was well-meant by the NGOs. If the subjectivity of villagers wasn’t launched by NGOs, there should be meaningless of the implications that NGOs could bring in.

There are failures in the projects that BGC involved in, which were caused by excessive interventions. In 1999, in Baishi Village of Yanqing county, BGC mastermind a series of measures for the village’s environmental management and economic development. During the process of the project, the NGO kept well relationship with local villagers, who were passively following the management. Just because of BGC’s responsibility and enthusiasm, the role of local administrators were took place. Thus, when NGO left, local administrators were confused and did not know how to continue, then it was slowly turned back to the previous terrible situation. The problems were still exist.

*4.2The inconformity of the development concept and peasants’ realistic development demands*

Depending on the powerful resources, backgrounds and relationship network, NGO take part in the development of rural community, but NGO couldn’t truly integrate into it. The powerful self-confidence should response for the problem. With too much concept and technology, when facing the real rural decline, NGO couldn’t analyse problems dialectically. NGO just use the experience of other region unquestioningly, thus leading to the unfitness to the development of the local rural community, and lost the confidence in development with the consume of spiritual strength and energy.

In China, the rural management model is closely related to the rural society. The moral restriction in acquaintance society is the core part of Chinese rural management. When facing the self-contained rural society, the NGO’s practices using external experience have proved this.

Because of the regardless of basic communication, the project has difficulty to carry out. In 2007，a rural project lead by BGC in Niushou Town of Xiangyang City in Hubei Province was failed. The main reason of the failure was that NGO was not well prepared for the rural cooperation. They just made agreement with the third and fourth tiers of government, thus leading to the non-compliance of the executives.

Democratic Governance is not the master key of rural management. In 2009，after the ″5.12″ Wenchuan Earthquake, "Beijing Green Cross" won the support of foundation to set up rural cooperatives. NGO used the western democratic experience to lead economic development in rural village. The fund bypassed village committee, went directly to village group. And this caused a lot of trouble. Many issues couldn’t resolved just because of the disagreement of a single person. On account of the noncooperation of village committee, the results came out terribly, and NGO was driven out of the village. Stranger society forced legal system, and acquaintance society created morality. The rural village group is some kind of acquaintance society, a family, so it is very inappropriate to use the western democratic governance to manage Chinese rural area.

*4.3The lack of fund hinders the progress*

Compared to the Western countries, China's NGOs are weaker in raising fund while the fund structure is not totally reasonable. The US has 1.6 million NGOs whose total asset is 2 trillion dollar. And their income is 1 trillion dollar per year, on average, 625 thousand dollar for each NGO per year. Till the end of 2002, the number of charity organizations registered in the UK charity commission reach 186 thousand, and their asset is about 70 billion pound. We can judge from NGO's expenditure scale that most NGOs in China haven't an optimistic fund-raising condition. Some researchers have studied that almost 90% of NGOs spend less than 500 thousand yuan per year while the ones spend more than 1 million yuan per year are less than 2%.

In China, the main source of NGOs' fund is the financial allocation and subsidies from the government, which makes up 49.97% of all. While 21.18% of the fund is from membership fee,6% is operating income,5.63% is sponsorship and project budget from enterprises and less than 5% is from other sources. Meanwhile, the personal donation make up only 2.18% of all (Figure 8).

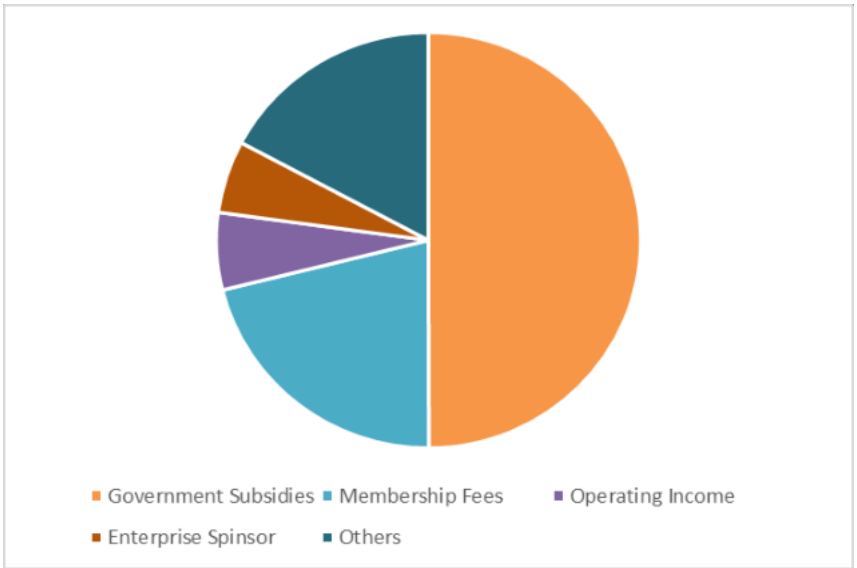


Figure 8. The capital resource of Chinese NGO
Data sources: NGO research institute, Tsinghua University, 2000

Insufficient funds also brought huge obstacle to the benign development of NGOs as many projects can't lay out. The survey of Yiyang City in Hunan province in 2000 shows that 40% of the city's communities have no activities over the past few years. And at least 100 city communities have less than 30 thousand yuan registration charge while there are 160 communities in total.

In practice, NGOs whose main fund source is from government have some difficulty in autonomy. The BGC, from 2003 to 2007, got almost 90% of the fund from foundation, while 60%, from 2007 to 2011, from the government. After 2012, the government pay almost 95% of the cost on social services according to the relevant regulations of the Civil Affairs. In the process, the design of the villages is paid by the government, the cost of the designers is paid by the design institutions which is in cooperation with the Green Cross. That is, Green cross is a platform, providing coordination.

## 5. Analyses the role of NGO dealing with declining rural areas

In response to rural decline in the tide of rapid urbanization in China, advanced ideas and methods used by NGOs have made a lot progress and NGOs are more flexible compared to government dealing with rural decline. But there are still many methods come to a dead end.

Environment management have been the most common way in dealing with the rural decline issues and been ignored for a long time in China. NGOs guide villagers to classify garbage, establish the sewer system to having a good life environment in a short time.

NGOs also help the villagers with the transformation of traditional industries, to seek local advantage in industry development. The rural industry guidance in the master plan conducted by the government is not accurate enough for each village because they usually divide industry areas with different development guidance. One of the industry division might include several towns and the villages are too small to considerate.

NGOs have created a lot of new ways of experiencing culture and folk art which have faded away as the rural decline. Such as the BGC projects, they enriched villagers' daily life by creating new local cultural space, improved the villagers' quality and happiness of life. The most important achievement is that the project have attracted more rural leisure group and backflow of farmers.

However, NGOs come across more difficulties in rural management. The management system of rural areas in China is based on the acquaintance society, and they easily take NGOs as a stranger once encountered with misunderstanding, the methods and concept from NGOs could become the burden of both villagers and NGOs. But the rural regulations combined the villagers' real needs and the developing conditions could really make a difference.

Through the analysis of NGO projects, certain advantages and disadvantages in different types of NGO projects could be summarized compared with the government projects (Table 1).

Table 1. Comparison of the positive and negative effects of NGO rural projects

| Type of NGO project | More positive effect | More negative effect |
|---|---|---|
| Rural environment management | ● | |
| Local industry system guidance | ● | |
| Folk cultural space construction | ● | |
| Rural community democratic reform | | ● |

NGO is equipped with advanced concept and implementation methods while the limits in traditional village governance still exist. If Chinese peasants need a comprehensive development in every aspect in society, they need to change the present scattered and isolated state and form citizens' group of equal right to speek. This is the role that NGOs should be and differs from the government.

## 6. Conclusion

From the development of rural NGOs in China in recent years, the folk organization in the traditional rural China constructed the rural areas more focused on the improvement of the physical space and cultural space. They helped the villagers to build a cleaner and more abundant living space making rural community back to life again. While, there might exist contradiction in the NGO development concept and the rural management system, and this will directly oriented difficulties in NGO project implementation. China is changing, so as China's farmers. And NGOs

should be a new choice for peasants in the transformation and help them to improve the awareness of autonomous management. Based on the development of the local conditions, combining with the advanced idea, the NGO projects should help the rural areas stop decline and change traditional rural society to the new rural communities.

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# MANAGING RURAL DECAY. STRATEGIES AND RESPONSIBILITIES FOR DECLINING REGIONS IN AUSTRIA.

Paper presented at the AESOP Annual Conference 2015 "Definite space – fuzzy responsibility" in Prague.

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*The Austrian population is growing, but not every region is profiting from a positive migration balance, which is the main driver for population change. Especially peripheries are suffering from constant population loss followed by cuts in infrastructure and service provision when the critical mass is not reached anymore. A decline of investments is already taking place according services and infrastructures – from the private side, as well as from the public side: schools, post offices, police stations, public transport lines, retail stores and other services of general interest have been stepwise reduced in many peripheral areas. In a response to the ongoing depletion of mainly rural or formerly industrial areas the - foremost local - political side keeps on introducing growth strategies in order to force a turnaround. Given the bunch of available instruments, program logics and chains of habit it is understandably but for some regions a catching up process will most likely not be successful unless the budgets will be constantly overspent. In the following paper we would therefore like to discuss how strategies on 'advancing backwards' could possibly work out in Austria and who would be public and private stakeholders of which level to get motivated for such ideas? Which planning and development instruments are suitable to accompany 'sustainable decline processes'? The paper will take empirical findings of Gruber et al. (2015) as a starting point. New planning document analyses and stakeholder interviews will further back this paper.*

## 1. Introduction

In total the population of Austria is growing due to a positive migration balance. Still there are areas across the country losing population. Peripheral mountainous regions, border areas or former industrial centres have been experiencing a shrinking population followed by a decline of services and infrastructures, which leads to perpetual loss of attractiveness for new inhabitants and economic stakeholders. A lot of topographically unfavoured regions have been attractive for setting up an intense tourism industry for winter sports having the effect that a lot of former agricultural regions found a different economic path. Nevertheless, there are also areas in Austria characterized by outmigration, population loss and economic `downturn.

The ongoing urbanization process and simultaneous decay of rural areas has led to the idea that withdrawal from certain areas might have to be conceived, but even though this was politically wanted – which it is not at the very moment – which strategies would actually be able to manage a sustainable decline? On the example of Austria this paper tries to bring up some ideas, as well as the perception of politics and planners, on how strategies on advancing backwards could possibly look like and work out.

## 2. Theoretical Background

Before we start to discuss on how to manage decline, we will first approach the question of what actually shrinking means in urban and regional literature. We will further discuss on a theoretical basis what planning theory may offer to address spatial shrinking by means of spatial planning. Strategic spatial planning and soft planning are offered as more appropriate means to tackle a complex socio-spatial phenomenon like regional decline; compared to the means of traditional statutory spatial planning instruments.

The discussion on urban and regional shrinkage is a comparably young problematic in planning literature. Sousa and Pinho (2015) have made an important contribution by reviewing directly and indirectly relevant literature on this special phenomenon of spatial development. They locate the most relevant discourses since the mid 1990ies within North American urban development. In European context, the problematic is best reflected in the UK and Germany. "In a broad and common sense, a shrinking city is a city that is losing population (Sousa and Pinho, 2015, 14). While Wiechmann and Bontje (2015) confirm demographic development as the key or initial driver for spatial shrinkage, they see urban and regional economic development as a complementary prime driver for potential shrinking tendencies, in case regional economics face financial shortcuts or structural changes. Demography and economy in combination are potential drivers of shrinking. Spatial consequences of shrinkage then are expressed not necessarily proportionally to demographic and economic shrinkage. It is rather a separated, or further, step if or how settlement structures, housing stocks, social and technical infrastructures shrink as well (see Ahrens, 2005). Demographic and economic decline might as well first result in lower densities, lower frequencies or fragmentation of spatial functions. A first concern is therefore, what is actually shrinking in spatial terms and how does it change spatial structures? Wiechmann (2003) identifies four types of regions within Europe that face shrinking tendencies. These are: industrial areas in economic decline (foremost in Western Europe), peripheral, depopulating areas (foremost in Northern Europe), regions in or after political transformation (foremost in Eastern Europe), and structurally weak rural regions with falling fertility rates (foremost in Southern Europe). Common consequences are overcapacities in housing and infrastructure, leading to higher costs per capita and inefficient structures. Especially heavy technical network infrastructures do have a certain spatial time lag within. Once established networks of e.g. railways, roads or canalisation cannot flexibly be adjusted to new realities. Social services of education and health care are comparably more volatile (Gruber et al., 2015). Nevertheless, individual standards of accessibility to social services may decrease due to fewer or less frequented locations.

Wiechmann and Bontje (2015, 2) argue very critically how spatial planning systems deal with shrinkage. They identify two major concerns. First, common statutory planning administrative systems and instruments are designated to the principle of spatial development as spatial growth. The supreme aim of growth in spatial development is close to a doctrine in spatial planning systems. And secondly, planning practise has so far not managed to proactively handle shrinking tendencies but the prime goal of intervention is always to counteract shrinkage and return to a growth path. So both, the statutory planning system as well as its practical interpretation follow blind a solely growth oriented path. Much of this derives from the roll out of modern planning principles that happened simultaneously with demographic and economic growth in Western Europe. These diagnosis can be seen in a wider view of unsatisfactory structures and means of recent planning systems and practices across Europe. Albrechts and Balducci (2013) are among the scholars who promote a stronger revisiting of the potentials of strategic spatial planning that is observable in many European countries since the last ca. 20 years. For them, statutory spatial planning as administrative-legal practice is no longer – or never fully has been – able to tackle

complex socio-spatial phenomena and processes. Urban and regional shrinkage can be well counted as one of these complex processes.

Statutory spatial planning in terms of local zoning and building plans however remains a decisive part of spatial planning. It secures legitimacy over land and property rights and delivers certainty. Therefore in planning practice, informal strategic planning can only be a complementary set of instruments (Mäntysalo, 2013; Mäntysalo et al., 2014). The strengths of strategic spatial planning approaches lie, according to Albrechts and Balducci (2013), in the ability of addressing spatial phenomena in a more future oriented, pro-active way that allows for integrating a wider actors sphere besides the formal authorities and for the opening up of new directions or deeper changes in spatial development. Collaborative and communicative planning practices (Healey, 2013) are in this context more appropriate than a rather rigid procedure of statutory planning. What comes together with planning complex socio-spatial phenomena, such as regional shrinking, is the fuzzy situation of their scalar manifestation. Mostly, explicit territories of local or regional administrative units do not represent the spatial expansion correctly. This is true for expanding city regions as well as for shrinking regions. Functional and fuzzy spaces are closer to the problematic of complex socio-spatial phenomena and therefore, planning practice needs to deal with, as Allmendinger and Haughton (2009) call it ‘soft spaces’ (see also Olesen, 2012). Soft spaces represent a flexible, also temporary spatial expansion in which a multitude of actors, interests and concrete problems are addressed in a comparably pragmatic way of planning. It is not the prime target to follow the statutory rules on different scalar levels but what counts more is that issues get solved. For this sake, soft spaces emerge as arena in between public authority competences, different stakeholders’ interests and statutory levels of government as a new planning level.

While soft spaces and soft planning have been mostly analysed in growth contexts, we find it worth analysing in more detail in how far strategic spatial planning in soft spaces opens up an arena for spatial planning that is also able to break with the pure quantitative growth oriented spatial development as well as to break with the refusal of traditional planning approaches in managing shrinkage. We will do so on the example of Austria, explaining the contextual background for regional shrinking, the general attitude of the Austrian spatial planning culture regarding shrinking and new approaches in soft spatial planning, exemplified at the instrument of ‘Regionale Leitplanung’ in the State of Lower Austria. The guiding research questions are: How strategies on 'advancing backwards' could possibly work out in Austria and who would be public and private stakeholders of which level to get motivated for such ideas? Which planning and development instruments are suitable to accompany 'sustainable decline processes'?

## 3. Shrinking regions in Austria

### *3.1. The context of politics and planning*

The Austrian political system is based on a highly federal structure. The state is divided in nine ‘Bundesländer’ (Federal States), which are responsible for certain political fields, as for example the organization of spatial planning. Initially installed as a democracy securing system, the decentralized, counter-checking structure of the federal system today means a tremendous apparatus of administration and concurrence between the federal states. Especially for the spatial organization there are difficulties occurring concerning cooperation across internal borders or introducing national-wide goals or policies.

Besides the ‘Bundesländer’, where the general framework of spatial planning is set in the form of the federal spatial planning laws, the municipalities enjoy a lot of power concerning spatial planning in

Austria. The municipalities are responsible to decide on zoning plans and thus new settlements and growth. This might not be unique in the European context, since also other countries give a strong power to the municipalities in planning agendas (which is also reasonable, since plans can be developed close to the population), but Austria shows a very small-patterned structure of municipalities (Fassmann and Humer, 2013). In total Austria counts 2,102 municipality (2015) on a total area of around 83,879 square kilometres. On average this makes around 4000 inhabitants per municipality (and around 3,200 when the city of Vienna is excluded of the calculation). The smallest municipalities show population sizes lower than 100 inhabitants. Until 2014 Austria counted even 2,354 municipalities. The Federal State of Styria decided in a long lasting process to merge the municipal structure, triggering resistance of local politicians and inhabitants. Although further consolidations seem to be inevitable in the long run, the protest of local population and stakeholders makes further steps of territorial reforms very unlikely to happen in the rest of Austria in the near future.

The municipalities are competing with each other, since for the redistribution of public budgets the size of population is decisive. A growth in population is thus rewarded with a higher allocation of tax money. Additionally the municipalities are competitors concerning the location of industry and businesses, since the according tax in Austria has to be paid at the municipal location of the headquarters.

The highly federal organized structure, the small-patterned municipal landscape and the missing national level of spatial planning make regionally shrinking population a particular challenge. So far regional development policies have received high attention on policy agendas across Austria; not only since the European structural funds have been introduced in Austria, with the accession to the European Union in 1995. Since the 1970s regional development has been performed in the Austrian regions on different levels, with different instruments and paradigms; from heavy infrastructure investments via alpine farming funding to endogenous regional development settings. From a political point of view it seems unlikely that regional development can once be replaced by a withdrawal of the public hand from certain regions, but the constant overspending of budgets makes it extremely difficult to further invest in regions that show a continuous economic downturn and outmigration. Although not strategically coordinated there has been cuts in investments for example in traffic infrastructure, police stations, schools and child care and so on. The decisions for these changes was under responsibility of different actors like the ministry of education, the national railway and so forth. To a serious extent, these measures were rolled-out during a conservative-right government and in a phase of (EU-driven) liberalisation efforts in several public sector domains around the year 2000. In order to have a more integrative and general policy on where investments should go to and where to make cuts, it seems that there has to be a more cooperative structure to be able to take these decisions.

Cooperation in planning has gained more attention in the last years. Especially for regions with declining population, solutions with municipalities working together in order to safe costs, have been introduced in rural areas in the last years. Also initiatives to organize planning on a comprehensive level are of course existing in Austria. On a national level the Austrian Conference on Spatial Planning (‘ÖROK’) is responsible for coordination and developing strategies for spatial development. On a regional basis different initiatives try to collaborate on common topics of spatial planning, which is very important for a thematic basis, not only concerning shrinking, but also other topics in fields of society, economy and ecology.

### *3.2. The spatial dimension*

As already stated in the introduction the population of Austria shows a population growth in total. Between 2004 and 2014 the Austrian population grew by 365,213 people – 92% of the growth can be explained by in-migration (Statistik Austria 2015, 18). Especially urban areas, primarily the capital city region, Vienna, shows a fast population expansion due to international migration, but also a positive internal migration balance. Between 2002 and 2013 the population in Vienna has been growing on average by around 16,300 people each year – 14,700 of it by in-migration (see Statistik Austria). The attractive urban and suburban areas are having consequences for rural and peripheral regions. Not only the missing opportunities for labour and education are leading to an ongoing outmigration mainly of young inhabitants, also lifestyle decisions and educational and labour market preferences are leading to the disregard of some regions. Although shrinking regions in Austria are showing a rather moderate decline compared to peripheries in Eastern European countries, it is still a challenge for example when it comes to the provision with services and infrastructures (Gruber et al., 2015; Machold, 2010). Regional development have not been showing a sustainable effect everywhere and with a continuous low fertility and selective migration patterns population decline to some areas is becoming a permanent status.

In line with the four types of shrinking regions in Europe shown by Wiechmann and Bontje (2003) for the Austrian case there are several types applicable. Comparable to the typology, the following types of shrinking regions can be identified in Austria:

- rural emigration areas with (rapid) decrease of births;
- industrial agglomerations in economic decline.

The most common type in Austria can be described as rural emigration area with decrease of births. Still, in the case of Austria two sub-types can be described, which can be characterised as causes for the population loss. On the one hand inner peripheries and mountainous areas with difficult accessibility and without major tourism industry are suffering most from population decline. On the other hand border areas along the former Iron Curtain still show a declining population, as for example the South of the Burgenland or the North and East of Lower Austria. Although Austria doesn't have a big industrial history (within the today's territory) there is still a small agglomeration of heavy industry found in the Federal State of Styria. The area has lost a major part of its population – in case of the municipality of Eisenerz more than half of the population since the 1950s (from 12,948 inhabitants in 1951 to 4,520 in 2014, a loss of 65% (Statistik Austria)and the decline still continues.

## 4. Managing urban and rural decline in Austria

After having described the dimension of shrinking regions in Austria, as well as the political context of spatial planning we will finally discuss how to manage urban and rural decline in Austria. The content of this chapter is mainly based on interviews conducted during April and May 2015 with stakeholders from politics and planning from different administrative levels on which spatial planning is performed. Additionally a review of planning documents and instruments was conducted in order to reflect on ways to possibly manage population decline. In the second sub-chapter we will bring forward a new planning instrument that has been introduced in one of the Austrian federal states in the last year of which we believe it holds potential for managing rural and urban decay.

### *4.1. Research questions and methods*

As already presented in the introduction we had three guiding research questions for our empirical observations:

- How strategies on 'advancing backwards' could possibly work out in Austria?
- Who would be public and private stakeholders of which level to get motivated for such ideas?
- Which planning and development instruments are suitable to accompany 'sustainable decline processes'?

Four qualitative interviews have been realized with stakeholders of the three statutory levels, where spatial planning is carried out in Austria. In awareness of the differing planning laws and practices within the nine federal states, the interviews have been focused on one case study: the Federal State of Lower Austria. To get a comparable view there has been one additional interview realized with a representative from another federal state: Burgenland. So far the results can only be presented as results of a pilot study; further research and a bigger sample size are intended. While conducting the interviews additional themes around the research topic raised our interest: the priority of the topic as well as the acceptance and awareness. In the following chapters the results will be presented.

### *4.2. Case study: shrinking regions in Lower Austria*

For the case study analysis the Federal State of Lower Austria was chosen to approach how the phenomena of shrinking is dealt with in Austria. Since spatial planning in Austria is a federal concern and there is no national authority with a legal appointment it is necessary to have a look on policies on the federal level. On the national level the Austrian Conference on Spatial Planning (ÖROK) plays nevertheless an important role especially for strategic development and represents in a way a consented opinion at national level. Table 1 gives an overview of the results that will be now described further.

#### *4.2.1. Perception of shrinking*

As already stated in the beginning, Austria's population size is growing and population decline can be observed only regionally. Lower Austria is a good example on how differently population develops within Austria. Certain regions of Lower Austria have experienced a shrinking population since the 1950s and have experienced decline of more than 50% since then. Regions with good accessibility and especially the suburban areas in the vicinity to Vienna have experienced a major growth of inhabitants – for some municipalities this meant more than a doubling of their population. Regions losing population are generally those in peripheral areas, for example in mountainous regions or border regions of the former Iron Curtain. Until the year 2000 one focused on regional development strategies that in some ways had effect on population decline to some regions. Also the opening of the borders had effected the federal state in a positive way.

Still, in the early 2000s for the first time shrinking as a long-standing scenario came onto the agenda of spatial planning. Back then for the first time there it was recognized that at some point (with an ongoing fertility decline) there will be regions of permanent decline in population. This cognition has been perceived by the operating administrative department for spatial planning. From the political side until today dealing with the topic 'shrinking' is challenging, since it is spotted as a possible abandonment by the population. While strategies for shrinking and growing are developed equally from the operating department, the political implementation is more difficult when it comes to the implementation of strategies and instruments to manage shrinking since they are generally connected

to unpopular decisions. But the missing political will is not solely connected to policies of population decline. In general the long-term decisions of spatial planning conflict with the short periods of political activity of certain actors.

The multitude of spatial challenges across Austria give some restriction to the importance of shrinking. From a national perspective, there are many urgent issues to deal with. Among topics of regional competitiveness, social progress and ecological concerns, the phenomenon of shrinking settlements or regions is not of prime interest in Austria but it is more of a regional problem in some parts of the country. However, there have been efforts within the Austrian Conference on Spatial Planning ÖROK to address the issue of shrinking regions, foremost in rural context and in context of demographic change, in the past years; documented in e.g. ÖROK Series No. 171 on the functioning of public services in rural areas (2006), No. 176 on spatial scenarios (2008), or No. 181 on opportunities for peripheral areas (2009) (see ÖROK).

Not only strategies and instruments are important but also sensitization for the topic, common understanding, the collection of apparent fears as well as knowledge of the different interests on the different levels. The interviews showed that although there is a lot of skepticism between the different levels, there are common objectives. Also the local level is interested to have efficient structures but has of course more understanding of the necessity of a local context. While the national level sees the number of small municipalities as inefficient there are other ways in the eyes of the municipalities to save money and to keep alive the close interaction with the local population. Still the topic is given different priority to, as it can be seen in table 1. During the interviews it also became clear that not every region within the federal state that is experiencing population decline is dealing equally with the topic of shrinking. First of all this can be explained by the fact that not every region is equally effected by it and thus not have equal priorities, but to a certain extent this can be also explained by different mentalities in regions and of regional stakeholders. The interaction between the different levels and moderation in order to develop common ideas have been already advanced in the last decades but it seems further steps must be taken.

#### *4.2.2. Strategies and responsibilities*

In order to have more precise ideas on how shrinking and population decline can be managed the following section will present strategies and instruments that are currently implemented or conducted by the different levels. Additionally, potential instruments have been compiled, that are not yet implemented but might be thought of in the future or just are imagined by the different stakeholders. The interview partners of the different levels have furthermore been asked about potential stakeholders that – in their opinion – are able to implement strategies and instruments in the first place.

On a local level strategies for decline are clearly seen to come from the side of regional development policy. Our interview partners have told us that there is a further need to bring in certain innovations to peripheries in order to make the regions attractive again, as for example new job opportunities or educational innovations. Other instruments to tackle population change in peripheries in Lower Austria are those to increase the (physical) accessibility: There are ideas to re-install train tracks to give alternatives to the individual transport. The local level furthermore also sees its own population as an important factor for managing population decline. The inhabitants do have a certain responsibility themselves and need to be involved in managing the withdrawal of public and private services and infrastructures. Being integrated in the process of shaping one's own living environment is not to be seen negative though but more as a chance. Additionally the municipalities are trying to focus activities in order to become a more livable places, e.g. for families, but also for older inhabitants. In both interviews with mayors was a clear message that population decline has to be

handled also on the local level. Although the interplay of higher levels has been described as equally important and the communication between the different stakeholders was said to be essential. There was a strong statement that only the local level is able to deal with sensitive topics and to create acceptance since it is closest to the citizens.

On the federal level regional depopulation certainly was a concern by the planning department of Lower Austria already since years. The federal state has developed strategies in the last years that should help dealing with population decline and its effects in certain areas. Mainly the strategies are trying to implement the ideas of 'decentralized concentration' and 'inner-development' in order to bundle strengths and potentials (see table 1). Despite the planning department's effort in developing strategies the political will is not always strong enough to implement them consequently. Therefore we were told that the implementation might be easier if it was of national concern. The responsibility on a higher level than the federal one was imagined to be more efficient than it is now. So far several pilot studies were performed with quite successful results but not consequently followed up later on. One of the pilot study projects was the regional strategic planning ('Regionale Leitplanung') of the northern suburban area of the capital city of Vienna. This initiative will be presented in the next section since it appears to be a possible strategic planning instrument to deal also with decline. So far it has been only conducted in regions with population growth but it might be a fruitful approach for integrated regional strategic planning also in declining regions.

The national level is missing a formal competence for spatial planning. Accordingly, strategies and instruments express in rather informal, co-operative studies in which best practices are exchanged and communicated; e.g. strengthening small and medium-sized towns and fostering urban-rural partnerships as outlined in the Austrian Spatial Development Concept ÖREK 2011(see ÖROK Series No. 185). An important support for the operative regional and local levels is the provision of background data and research. Small-scaled population prognosis and thematic scenarios belong to the pool of instruments that should help the regional and local levels identifying development paths and setting appropriate policy measures. For the upcoming agenda 2015-2018, the ÖROK will install a respective so-called 'partnership'; a temporary discussion platform that brings together a wide range of actors who have a potential stake in managing shrinkage and secure service provision in foremost rural areas. From a broad perspective, also EU driven instruments may tackle the issue of urban and regional shrinking. ERDF-funded projects under Objective 2 or EAFRD-funded LEADER initiatives are close to the citizens (referring to CLLD-approach) and allow for innovative pilot studies.

The strategies and instruments for managing rural and urban decay, as well as the priority of the topic and possible responsibilities have been summarized in table 1. So far implemented strategies and instruments are generally ones that have been described above. It is still necessary to make clear the different as well as the common points of view within the federal state and on the national level. In the federal state of Burgenland where another interview was conducted, strategies and instruments are generally still very growth orientated. Population decline is perceived as a result of structural weakness that has to be abolished with regional development instruments. Lower Austria seems to have already a different view on the topic so that structural weaknesses can't be eliminated everywhere. The different perception in different regions as well as different instruments that are seen as successful tackling of population decline detect a certain need for the development of a common strategy as well as further communication and cooperation. A way of bringing together the different stakeholders and levels will be exampled in the following chapter.

Table 1. Selective list of strategies and responsibilities concerning shrinking – results of stakeholder analysis in Lower Austria

| **Level** | **Priority** | **Responsibility / Stakeholder** | **Strategies and instruments** |
|---|---|---|---|
| Municipality (LAU-level) | high | local/ regional | • reduction of shrinking (regional development)<br>  ○ innovations<br>• accessibility and mobility<br>• social activities (family-friendly infrastructures and services)<br>• civic engagement |
| Federal State (NUTS2-level) | high | national/ regional | • targeting general principles<br>  ○ decentralized concentration<br>  ○ strengthen potentials (central places)<br>  ○ inner-development<br>• strategic planning |
| National State (NUTS0-level) | low | national/EU | • ERDF and EAFRD investments;<br>  ○ LEADER; CLLD<br>  ○ EU Objective 2<br>• strengthen small towns;<br>• sustain local services<br>• ÖREK partnership<br>• Small-regional population and labour market prognoses |

#### *4.2.3. Strategic regional planning – an instrument for decline?*

Dealing with different implications and consequences of population growth and decline in municipalities in Lower Austria has been realized in the frame of the so called 'Regionale Leitplanung' (see Leitplanung Nordraum Wien), a new strategic regional planning instrument in the Federal State of Lower Austria. The idea behind the instrument was to coordinate population development on a regional level in order to regulate the settlement structure. The concept of Regionale Leitplanung partly fulfills Albrechts' and Balducci's criteria of strategic planning, Allmendinger's and Haughton's criteria of soft spaces as well as Healey's criteria of communicative planning. Its main idea is a collaboratively decided strategy for a certain tailor-made supra-municipal region between formal holders of competence (i.e. municipalities and federal state) as well as representatives and intermediary actors (such as regional management bureau etc.). A direct or pro-active involvement of citizens is not part of the concept which delimits the participatory aspect. However, information on the process is provided to the interested public.

In chapter 3.1 we already described that the Austrian municipalities hold the competence on zoning and settlement development. Municipalities are furthermore competitors when it comes to attract new inhabitants and businesses. Until today municipalities are generally able to decide autarchic – with some juridical restriction for example regarding shopping centers – on the development of new settlement areas or business parks. As a consequence areas are often chosen as settlement areas or business areas that are not appropriate (creating new costs in the exploration and maintenance, increasing traffic, and so on). The necessity of a regional agreement seems obvious, especially when it

comes to handling growth that is expected for example for the areas surrounding Vienna. Despite growth, also for other planning goals a regional strategic planning seems to be reasonable.

Proposed by the Federal State of Lower Austria, 25 municipalities bordering Vienna on the North decided to take part in the regional strategic planning initiative in order to create a structured settlement area. There has been 3 categories decided on to play a key role in the planning process:

- Settlement development
- Development of green spaces
- Development of business areas

Topics like traffic, although of great importance has been laid aside, in awareness that this might be a too conflicting issue to deal with. Within different stakeholder groups discussions and talks took place with the aim to determine statements and principles by all municipalities and federal state together.

According the settlement structure the big question was if there can be guidelines developed on where the expected population growth will be able to settle in the future and where working places should be concentrated. All municipalities together decided on all villages taking part in the process to be categorized in one of the following 3 categories:

- Regional Development Center
- Additional Center
- Village with internal development only

Population growth was determined to take place up to 90% only in the first 2 categories, as well as the development of businesses. The categories has been created with the help of statistical analysis, mainly based on accessibility and the provision of services and facilities. Strategies of focusing on inner-development and decentralized concentration have been thus realized with the regional strategic planning.

Since spatial development mostly unfolds in a diffuse pattern with some areas of growth or concentration and others with decline the instrument of Regionale Leitplanung would also be a feasible option for shrinking regions. Not only has the process led to a sensitization and acceptance of the municipalities through different discussion groups and workshops but also a regional understanding was developed and a comprehensive perspective on the topics of growth and decline was realized. In the region where the planning process took place not all municipalities are experiencing growth but still they have been able to understand that settlement development makes more sense at some certain places than at others. The successful operation of the strategic planning was not expected and was probably also fortune to some extent. Still it is probably worth to give it a try to also moderate sustainable decline in Austrian regions with the described instrument.

The instrument at least seems to be what has been required already – a tailor-made regional development strategy that is able to consider the characteristics and specifics of particular (rural) regions with all structural challenges, its regional history and cultural features (Leber and Kunzmann, 2006, 64). It therefore is able to tackle more complex socio-spatial phenomena, such as shrinking. In Lower Austria great interest was shown by regions with shrinking population to start the process of regional strategic planning. Unfortunately, so far, there is no budget to further elaborate these strategies, so the financial feasibility is again a constraining dimension. The general idea of Regionale Leitplanung would be worth discussing more in-depth in the upcoming respective ÖREK partnership (see chapter 4.2.2). If key stakeholders participating in the partnership get convinced, the instrument

of Reginale Leitplanung and similar approaches will have a future field of application in context of shrinking regions.

## 5. Discussion and conclusion

Although Austria's population is growing, processes of concentration towards urban agglomerations lead to regions with shrinking population and decline. Not only rural areas, also old industrial zones are showing decreasing population sizes, less economic activity as well as a thinning out in terms of infrastructure and services. In this paper we asked the question what planning can offer for those regions: which strategies and instruments can help to manage the decay and which stakeholders can possibly handle the situation in the context of the Austrian planning practice. During our research the question also appeared on the acceptance and awareness of the topic of shrinking among stakeholders and further more we wanted to know which role strategic spatial planning can take over around the issue of regional shrinking.

From the few interviews conducted it appears as if the topic of shrinking has been increasingly discussed in the last years, although achieving (population) growth is still the prime agenda concerning Austria's spatial development. Still, the awareness is rising and also the cognition that shrinking cannot be countered by regional development strategies everywhere is getting more established. For the planners and politicians that are directly confronted within shrinking in their own municipality it is difficult to acknowledge a decreasing population size as a lasting process. Especially since in-migration and integration for small-scale villages in an amount that would keep the population stable does not seem to be an option for many municipalities, coming back on the growth path appears to be difficult. It will be further necessary to work on sensitization and acceptance in order to create understanding of the process of decline. Cooperation of the different planning levels will has to be intensified. A further knowledge on demographic processes seems to be necessary on the local level in order to make clear how the population can possibly develop in the future.

Accomplishing acceptance will be most feasible on local level, close to the citizens. For the execution of greater political reforms as for example structural reforms our interview partners (except for the local level) have seen the national or even the level of the European Union as possible stakeholder, since the federal level (which is in charge of spatial planning in Austria) seems to be too little assertive due to political rationalities. From our perspective the regional level – i.e. between the federal state and the municipalities – is most appropriate to handle population decline. There is no statutory level of spatial planning at this scale but in sense of soft planning, it may be also an opportunity to do plan-making on such an informal, intermediary scale. Regional strategic planning has been performed in our case study region already, as described in chapter 4.2.3. This instrument holds promise to be also useful for developing strategies of decline; respectively for thinking growth and decline jointly. Additionally the interviews made clear that there are similar ideas on the different levels that need to be connected.

Before consolidated spatial consequences due to shrinking tendencies find entry into the statutory planning instruments like zoning plans, the strategic management and communicative preparation of solutions is better be organized within more strategic planning instruments first. The regionally divers coexistence of growth and decline within Austria may be an additional complexity for planning practice but at the same time holds much potential in terms of testing and applying various planning instruments under different conditions. This can foster the set of planning instruments and approaches. Shrinking and growth should be treated comprehensively since it is a question of both phenomena on where to invest and where to draw back.

Strategic regional planning offers further the common decision on focusing on central places to channel investments and to prevent the thinning out. Decentralized concentration as a planning principal is held up high in the Federal State of Lower Austria and which we see as important also in terms of social fairness. Social transfers will also in the future be necessary to cushion tendencies of shrinking. Further it must be recognized that spatial shrinking costs money. It needs public investment – sometimes more than managing regional growth – but efficient spatial structures will pay off in the long run. When it comes to physical consequences of shrinking, so far there is very little experience for conversion or reconstruction in the Austrian context. For handling population decline, socio-politically sensitive procedures must accompany the loss of services and infrastructures over time. Individual solutions will have to be found for small municipalities, as well as the encouragement of civic engagement will play a more pronounced role in the future.

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**WHEN NORMATIVE PLANNING FAILS SMALL TOWNS**

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**Abstract**: *Small towns, with populations amounting to less than 20,000 inhabitants, pose a disconcerting challenge to normative planning practices, mainly because of their dwindling financial resources and increasing democratic deficits. However, there are very few recent works that explicitly combine these two phenomena into simple conceptual models, useful for problem-oriented regional management. Against this background, we feel that there is a strong need for experimental approaches, aimed at developing supplemental instruments to normative planning.*

*Hence, our idea is simple: to develop an experimental, problem-oriented regional management model, aimed at replacing currently ineffectual normative planning practices for Romanian small towns. Therefore, we have constructed a model that links land resources available to municipalities to a more direct community involvement in matters related to public finance.*

*The model works in three stages, using a combination of local and regional scales. Thus, within a first stage, municipalities pool unincorporated areas at their disposal for joint projects, aimed at increasing budgetary revenues. In a second stage, each municipality uses these revenues for reforming their respective tax collection systems. After this financial exercise, municipalities then negotiate a set of regional amenities, which cannot be covered by direct local expenses.*

*The research behind this paper rests partly on an on-going background study, concerned with updating the section examining the settlement network within the Romanian National Spatial Plan. In addition, we have undertaken an extensive empirical study of 221 small towns in Romania, focusing on demographic, budgetary and land use analysis.*

**Keywords**: Problem-Oriented Regional Management Model, Public Finance, Negotiating Platform for Tax Reform

## 1. Introduction

Although more than 38% of Europe's population lives in small towns (DG Regio, 2011 *apud* Servillo *et al*., 2014), they are very rarely considered to be worthy subjects of research (Bell and Jayne, 2009). Unaided by continuous scholarly efforts, small towns generally need to focus on local solutions and capitalise upon their endogenous potential, mainly through strengthening their social and cultural networks (Austrian Institute for Regional Studies and Spatial Planning *et al*., 2005; Engel and Harteisen, 2012).

### 1.1 Policy Support for Small Towns

Governments generally consider supporting smaller towns as a necessary effort, for reasons related to efficiency, to equity, and to the failure of trickle-down mechanisms, especially within the countries facing a process of transition from a totalitarian regime to a democratic government, and from a

centrally planned economy to a functional market economy. In addition, some studies have unearthed a strong link between urban and rural development (Rondinelli, 1983). Against this background, small towns can work as focal points for rural development (Leeuwen, 2010).

Nevertheless, social and economic changes in recent years, along with the changes in agriculture and the reduction of transport costs, has led to a weakening of the links between small towns and adjacent rural areas, which tend to become better connected to larger cities situated at greater distances (Courtney and Errington, 2003).

Public policies targeting the development of small towns can be diverse and specifically tailored to different types of small towns, ranging from the ones located in less developed rural areas to the ones located in strongly urbanised and industrialised areas (Tacoli, 2004). Local development in small towns tends to be best served by two options: First, by policies focusing on slightly larger towns, with populations reaching or surpassing the 20,000 limit, in areas where employment in agriculture is above the national average. The second option is a set of policies stimulating the growth of service-based industries, accompanied by an active promotion of residential and business development and fostering locally grown business start-ups (Mayfield *et al*., 2005).

## 1.2 Aims and Scope of the Paper

Aim of this paper is to develop an experimental, problem-oriented regional management model, closely linked to possible public policy and spatial planning measures, that can aid the development of small towns in countries with rather obsolete, normative planning systems. This is the case of Romania's planning system, whose legislative flaws relate mainly to a lack of operationalization of the law's provisions and the lack of a coherent law on property rights (Ianăşi, 2008). The task of Romania's spatial planning field is thus harder than in developed countries, with the legal, regulatory and institutional framework evolving continuously during the past 20 years, struggling to redefine a new aim of spatial planning functions (Ionescu-Heroiu *et al.*, 2013).

Small towns are known to have a reduced resilience as they face economic decline (Austrian Institute for Regional Studies and Spatial Planning *et al.*, 2005). In the case of Romania, small towns have often been the result of a process of forced urbanization during the socialist regime, with a host of rural communities being declared towns between the years of 1945 and 1989. Centrally-planned industrialization was directly related to urbanization in the communist era, with small towns often considered to be mono-industrial and suffering from important economic decline (Dumitrescu, 2008). After the fall of the communist regime, public authorities continued conferring the urban status upon a wide array of communal seats (Săgeată, 2006).

Within the Romanian dedicated literature, small towns are widely considered to be the urban territorial administrative units with a population of a maximum of 20,000 people (Cucu, 1984). In theory, they can either act as a relay between middle-sized towns and rural areas, thus being a strong link between rural and urban communities. In reality however, most of them stagnate or face decline, as a result of their fragile socio-economic structures. There is a small proportion of small towns that fare better, mostly due to their location in peri-urban areas. In such instances, they have the option of enhancing either their touristic or their industrial functions (Zamfir *et al*., 2009).

While the structural problems of small towns in Romania are most evident, the current planning system lacks operational instruments for dealing with these issues. Consequently, there is a need for devising new models of intervention in small towns, besides the mostly ineffectual, building and

zoning ordinances, such as the General Urban Plans, and the local development strategies, which often propose development projects that require a great amount of co-financing from the local public authorities.

## 2. Methodology

This paper emerged out of a background study, commissioned by the Romanian Ministry for Regional Development and Public Administration in the summer of 2013. Following from the call for tenders, the study forms the basis for a future update of the fourth section of the National Spatial Plan, concerned with the settlement network.

### 2.1 Research strategy

While working on the background study, we noticed that most small towns do not really deserve the town status, as they lack most amenities necessary for an urban lifestyle. Pragmatically, Romanian legislation sets minimal standards for determining whether a given municipality deserves its urban status. If these standards are not met, the municipality is rural in character. This simple observation is most disconcerting, as most small towns, especially the new towns appearing after the fall of the communist regime, have not really earned their urban status. This implies a not very transparent political decision. Nonetheless, most small towns have ceased to fulfill their functions because of structural changes, i.e. the end of the industrialisation process and the subsequent declines in populations and income levels.

Hence, after a perusal of the dedicated literature, we started looking at the structural changes over the past quarter of a century. We then checked whether normative planning took these changes into account. Unfortunately, this was not the case. This was the final argument in convincing us of the need for a problem-oriented regional management model, which we present in this paper (*cf.* Löb, 2006; Janssen-Jansen *et al*., 2008; Alterman, 2010; Hoffmann-Axthelm, 2010).

### 2.2 Data Collection and Quality

We mainly worked with datasets provided by the National Institute of Statistics (NIS) and its online database. We obtained the relevant information on municipal budgets through the official briefings of the Ministry for Regional Development and Public Administration.

We have taken all datasets at face value, since a coherence and consistency check was nearly impossible, given their levels of aggregation. However, we did notice some inconsistencies, especially in demographic data, which we corrected whenever possible.

### 2.3 Data Processing

In order to assess the current social and economic situation in small towns in Romania, we concentrated on analysing population dynamics, the change in the average number of employees and the number of functional public hospitals, during the period between 1990 and 2012.

Furthermore, we undertook a budget analysis for the year 2013, taking into account the following elements: total revenue, total expenditure, revenue from own sources, pre-financing (EU funds), co-

financing and public investment. As a result, the overall profit, percent of revenue from own sources, percent of pre-financing from total revenue, percent of co-financing from total expenditure and percent of investment from total expenditure was determined.

Subsequently, we determined the likely impact of normative urban plans, by comparing the increase in built-up areas from 1993 to 2012. We then compared this data to the rise in number of dwellings between the same years, in order to determine whether the increase in built-up areas was justified.

We then focused on analysing available land, i.e. unincorporated surfaces, within the territorial administrative units of small towns (LAU 2). We accompanied this exercise with identifying the main categories of unincoroporated land under public property, at the national level.

## 3. Findings

There are currently 221 small towns in Romania, with a combined population totaling 2,195,038 inhabitants, i.e. about 70% of the total number of towns and cities, and housing approximately 10% of the total population.

However, the total population residing in small towns has diminished over the last two decades by about 8%, with individual values ranging from 52% to 141%, while the entire population of Romania dropped from 23,211,395 inhabitants in 1990, to 21,355,849 inhabitants in 2012 – a total decline of 7.99 %.

Thus, the decline in the populations residing in small towns accurately mirrors the national decline. Of the 221 small towns, only 34 have had a positive evolution in population of over 5% since 1990, most of them being located near large urban centres, especially around the capital.

Furthermore, between 1992 and 2012 the average number of employees in Romania's small towns has decreased by about 54%. Only 19 towns have had a positive evolution in this timeframe, with most of them having either a touristical function, or being located near larger urban cetres. Besides the economic decline, there has also been an important decline in the provision of social and health services provided: thus, between 2002 and 2012, 35 public hospitals have been closed in small towns, mainly due to under-financing from the central government, following the 2008 economic crisis.

Regarding the local authorities' budget analysis, an overall value of approximately 47% of the total revenue of these small towns comes from own revenues, i.e. local taxes (*cf.* Figure 1). The rest comes from state financing, under various guises, accompanied by a meagre share, of about 7%, of EU pre-financing revenues. However, individual values for state financing ranging between 8.11% and 91.16%.

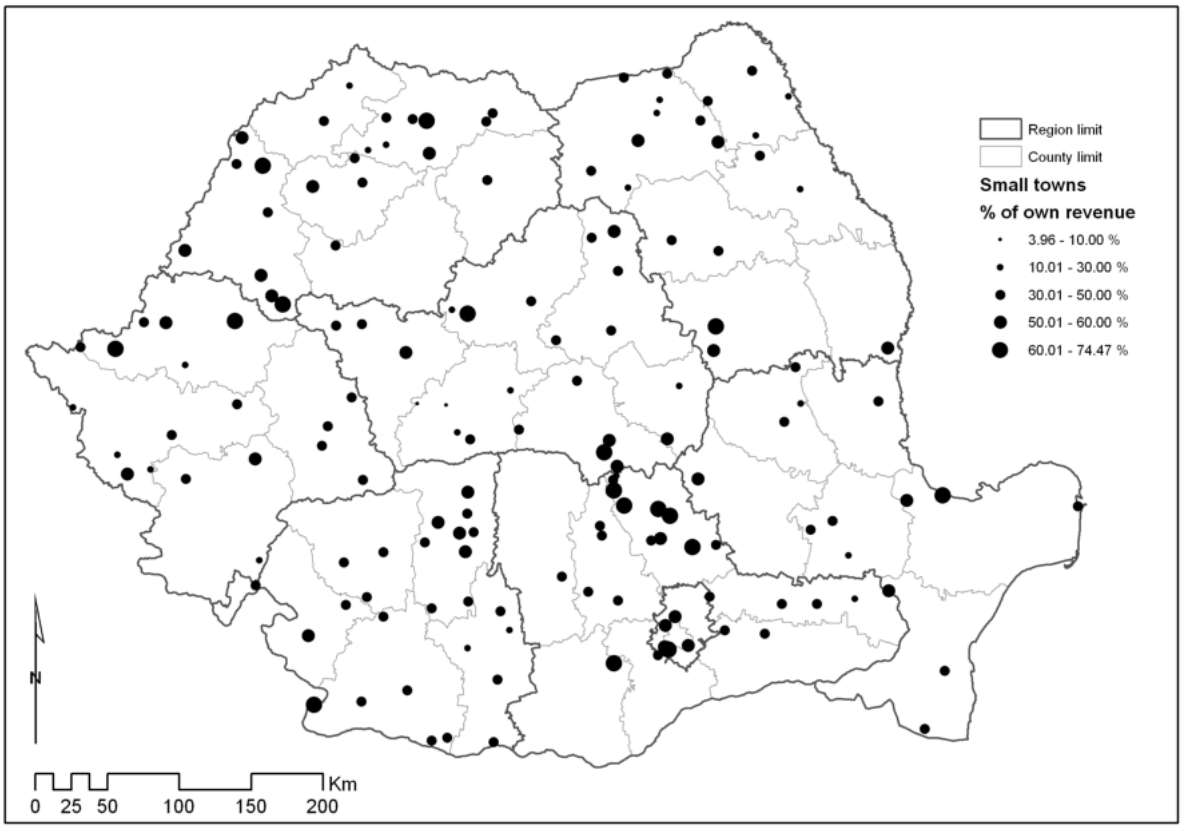


**Figure 1**. The Share of Own Revenues within the Budget of Small Towns
*Source:* The Authors.

As far as the expenditures are concerned, an overall value of approximately 14% are made of public investments, while about 10% represent co-financing of EU funded projects. These values illustrate the rather low expenditure of small towns in development areas and the fact that large amounts of funds are directed into areas such as education, healthcare, social services or public administration personnel costs (*cf.* Figure 2).

Table 1 provides a synthetic review of the main findings, with 93.67 % of the small towns in Romania having under 30 % of their expenditure dedicated to public investment.

**Table 1.** A Budget Analysis for Romanian Small Towns

| | **Percent of Own Revenue from Total Revenue** | **Percent of Public Investment from Total Expenditure** |
|---|---|---|
| **Total Value** | 47.36 % | 14.04 % |
| **Maximum Value** | 91. 89 % - Otopeni | 0 % - Calafat |
| **Minimum Value** | 3.96 % - Negreşti | 70.34 % - Călan |
| **Values under 10%** | 2 small towns | 115 small towns |
| **Values between 11 and 30%** | 28 small towns | 92 small towns |
| **Values between 31 and 50%** | 107 small towns | 8 small towns |
| **Values between 51 and 60%** | 54 small towns | 5 small towns |
| **Values over 61%** | 30 small towns | 1 small town |

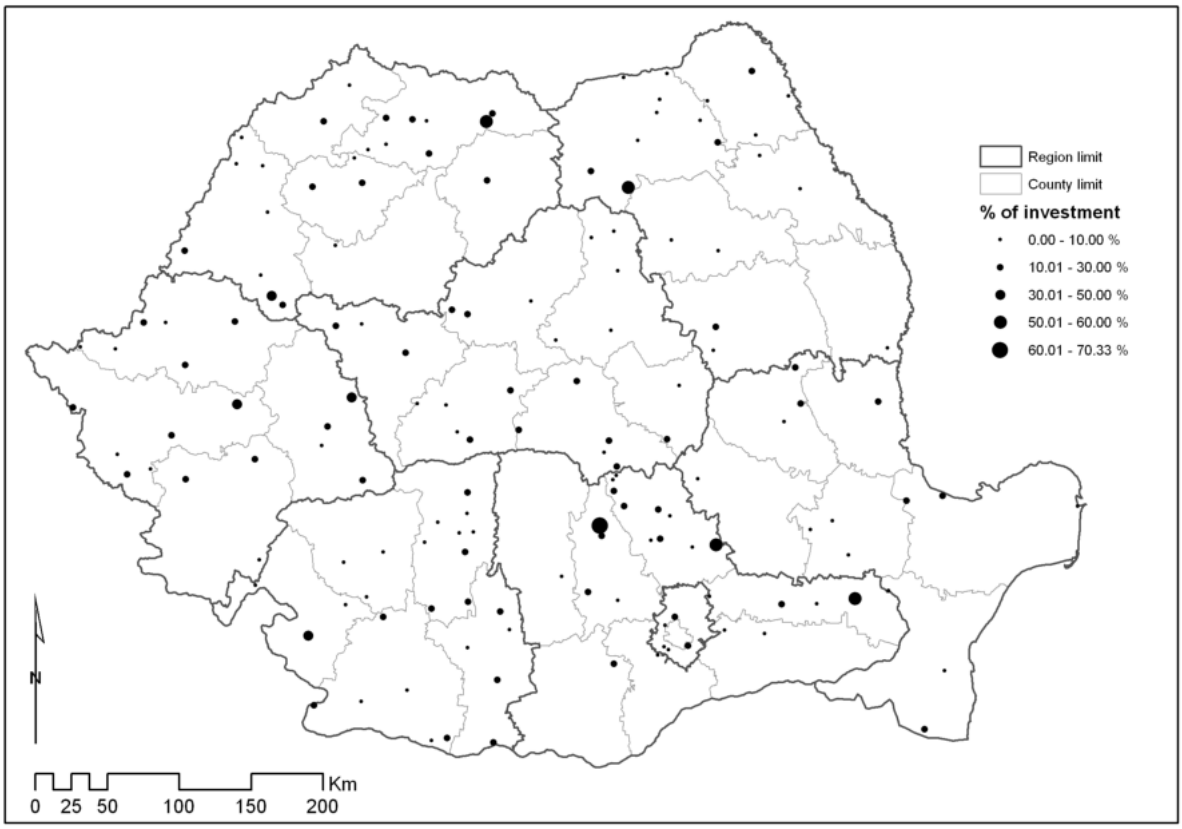


**Figure 2**. The Share of Investment Out of the Total Revenues
*Source:* The Authors.

The reliance of small towns on own revenues has very often determined the gradual incorporation of more and more lands in the built-up areas, in the hope of increasing the taxes collected by the municipality.

This is reflected by the fact that normative urban plans in the last twenty years have produced an average expanse in the regulated built area surface of small towns of approximately 115%, which was meant to be dedicated to real estate investors. However, these investors failed to materialise, since the overall increase in the number of dweelings between 1990 and 2012 amounts to only 14%. Nonetheless, repeatedly increasing the built-up area essentially means that the scope for extensive growth has been exhausted.

## 3.1 Two Types of Planning Responses to the Question of Small Towns

Basically, there are only two types of response that the planning system can offer to this state of affairs described above: firstly, planning authorities can establish land use patterns through normative plans, and secondly, the ministry can attach financial mechanisms to the spatial development strategies it produces.

The first type of response is in line with the orthodox perception of the role of planning. Within this perspective, planning is regarded to be a set of procedures, a process of determining future actions

through a sequence of choices (Davidoff and Reiner, 1962). Spatial planning has, on the one hand, a regulating function, as government authorities need to authorise some activities, and, on the other hand, a development function, as different structures need to develop instruments for providing services and infrastructure, determining directions for urban development or protecting natural resources (United Nations, 2008). These planning instruments can be further divided into four categories: national policy instruments, strategic instruments, framework instruments and regulation instruments (European Commission, 1997).

The second type of response revolves around financial mechansisms. These, in turn, are financed by structural funds, which yield to the priorities of the European Commission.

However, neither approach has yielded significant results with regard the development of small towns. This is evident from the data regarding the decline in the average number of employees. Moreover, normative planning has been used mainly as an instrument to increase built-up surfaces in order to increase tax revenue, while the financial instruments set in place for strategic planning have often failed because of issues related to the amount of co-financing the cities can afford.

However, small towns still have valuable land resources, with 91.56% of their territorial administrative surface consisting of arable land, forests, pastures, vineyards etc. As a result, if we take into account the available pool of unincorporated areas in public ownership at national level, it amounts to 6.37% agricultural lands, 50.43% forests and 27.32% unproductive lands. Thus there is ample room for leasing land to development projects.

## 3.2 A Third Type of Response: The Management Model

Following from these findings we have constructed the conceptual model presented in Figure 3. It consists of three stages, which work as follows:

- The first stage implies a financially determined co-operation between municipalities. This co-operation seeks to involve municipalities either in common projects yielding high returns or, if this option does not prove feasible, their integration within existing commercial micro-financial cycles. Within this first stage, municipalities pool some of their available unincorporated areas for larger-scale projects, such as bio-energy production;

- Within a second stage, the initial capital thus formed is transformed into a negotiating platform for tax reforms, between administrations and their communities. A simplified tax collection system should revolve around an inclusive tax based on the concept of the urbanised area consumed by users. The urbanised area should contain all costs incurred by the municipality in the process of urbanisation. Repeated rounds of public negotiations ensure community involvement;

- The third stage implies a reactivation of the regional dimension. Thus, based on the previous negotiations, municipalities decide upon how many amenities can be provided from local taxes, and how many need regional co-operation or applications for state financing.

The most important point to be stressed however is that a problem-oriented management is logically possible, and, furthermore, that it can partially compensate for failures within spatial planning practices, at least until the planning system adjusts.

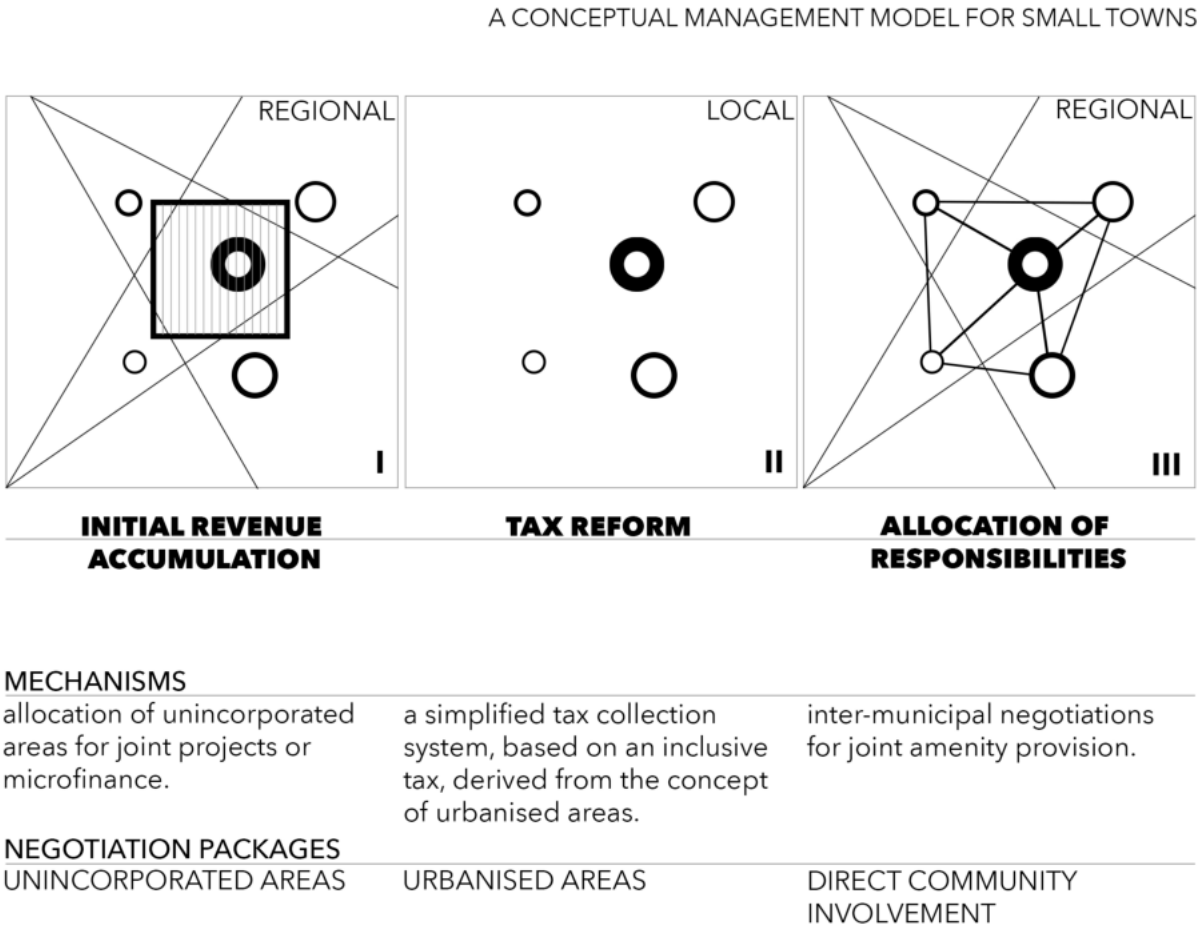


**Figure 3**. A Conceptual Management Model for Small Towns
*Source:* The Authors.

## 4. Conclusions and Open Questions

We set out to construct our model on a very simple question: How should municipalities react in times when money is scarce? The exercise proved highly rewarding, as it resulted in some new perspectives:

- First, by perusing the literature on the subject, we learned that there are very few authors who systematically engage with the relationship between spatial planning and municipal taxing systems, especially in the case of small towns;

- Second, by trying to construct a planning model centred around budgets, we found out that there is very little detailed data to support a complex model. This means, on the one hand, that there is little academic interest in such data, and on the other, that all current models should limit themselves to general assumptions, thus making them understandable to the public administration and to the general public alike;

- Finally, we became aware of the explicit ways in which the regional dimension becomes indispensable to local development, in the case of small towns.

Generally, questions regarding small towns have been addressed either in terms of demographic and economic profiles, or in terms of urban functions. However, there is little detailed research available on the topic of municipal finance in small towns. Similar to other European countries, municipal finance in Romania is subject to equalisation payments. The stated rationale for these payments is an offset of regional imbalance. However, when this dependence is significant, municipalities tend to become vulnerable to political pressure. Therefore, a higher degree of political immunity works as a strong incentive for municipalities to increase the share of their own revenues within their budgets.

This is essentially a question of tax reform. But given the fact that very few municipalities have the initial capital to start such a negotiation with their respective communities, there is a need for co-operation at the regional level within projects with high returns on investment. Thus, when viewed from this angle, the regional dimension to local development is determined financially.

There is, however, an additional local dimension to it: the need for a simplified tax collection system, which should link urban users to the public administration, via an inclusive tax on urbanised areas (*cf.* Hoffmann-Axthelm, 2010). In principle, this solution is possible. However, the following questions will need to be addressed:

- How much of the traditional tax collection system can be streamlined, in order to produce a single, transparent tax on urbanised areas?

- What is the degree of non-financial compensations that has to be allowed for in such a management model?

- And, most importantly, how open are normative planning systems to such experiments?

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# MIGRATION AND DISPERSION: TERRITORIAL PATTERNS CHANGE IN THE URBAN - RURAL FRINGE IN SANTA CATARINA STATE, BRAZIL

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Keywords: disperse urbanization, urban-rural fringe, regional policies

**Abstract**

*In 2003, the State Government of Santa Catarina State, Brazil, launched a new decentralized administrative network, aiming to balance development in different regions of the state and to avoid a significant decrease of population in small and medium cities of the hinterland with a strong migration towards the seaboard's cities. Nevertheless this action was not followed by an appropriate political and institutional framework linked to strategic goals for the vitality in most regions of the State. Those strategies should involve the creation of structures: to reproduce the local workforce, to improve the capital circulation system, to improve the quality of people's livelihood, for the sustainable use of the environment, to inter institutional cooperation, among other things. Within this context, this work sought to follow the development of the Far West Region of the Santa Catarina State in the last twenty years, marked by a complexity of urban-rural interactions, an important urban dispersion process and slight population shrinkage. In this region a "periurbanization" process arose creating newly dispersed urban settlements within the rural environment, with an unplanned and diffuse morphology developed by unconnected stakeholders. This paper's aim is to analyze the change in territorial patterns and its effects due to both political and socioeconomic factors, and point out weakness and gaps that make the regional balance difficult (in terms of population density, infrastructure and economic issues) and its socioeconomic equity.*

## 1. Introduction

The urban and rural are constant objects of study in the social sciences due to contemporary social changes. Consequently, the rural and urban concepts have had a mutant character in the last fifty years. If in the 1950s agricultural activity was needed in the countryside and the city was characterized by the existence of industrial activities and services; in the 1960s and 1970s the rural appears as the territory which will house an irreversible urbanization, confirming the fate of an urban-rural continuum (Mathieu *apud* Bernieri, 2002, p. 23). In the 1980s, the economic paradigm shifted due to globalization and brought ambiguity to urban and rural concepts. On the one hand it reinforced the concept of the rural through their productive and environmental characteristics and the local/global debate encouraged an endogenous development, while the rural concept seeks to mitigate differences with the city within a "productive liberalism" (Bernieri, 2002).

In this context, this article seeks a reinterpretation of the concepts of the urban and rural, trying to characterize the process of territorial occupation and structuring of the urban network of the Far West of the State of Santa Catarina region, Brazil. This study may provide an opportunity to

discuss topics of more general scope as the "urban sprawl" and the "demographic mobility" in its different manifestations and scales.

The Far West of Santa Catarina houses an economic dynamism focused in agriculture and agribusiness (swine, poultry and dairy cattle) and their related productive chains, as well as an increasing expansion of the tertiary sector, especially polarized by cities such as São Miguel do Oeste and Dionisio Cerqueira (Figure 1). The dynamics of economic output in this region are characterized by the interdependence between the urban and rural, and between family farms and agribusiness. Here we will report specifically the case of the city of São Miguel do Oeste and municipalities polarized by it. The effects of the intensification of the urban-rural interaction are seen on the reorganization of activities and its consequence on both, on the urban spatial restructuration and on the composition of the regional network of cities, causing structural changes in the intra-urban and interurban scale as well in the rural environment.

Figure 1 Urban-Rural diffuse landscape in São Miguel do Oeste, Santa Catarina, Brazil. Foto: Max Zuffo, Panoramio Google

## 2. Diffuse Periurbanization: building a concept

Nowadays, regional planning science overpasses the urban-rural divide. One of the most obvious aspects of this bridge in contemporary capitalist society are the landscapes of urban and metropolitan edges, marked by the unbounded extension of the urban-rural territory developed as a model that combines functions and is able to reorganize the territory, producing these different territorial contexts within the globalization and economic neo-liberalism logic (Baldini, 2008).

Apart from this dichotomy, the center-periphery model no longer meets the dynamic construction of the territories that unfold nowadays in urban fringes. Today, heterogeneous, expansive and diffuse territorial structures that go beyond legal urban perimeters are driven by an economic policy that facilitates industrial dispersion and the strengthening of a higher tertiary beyond the urbanized territory. In this context the urban, periurban or metropolitan landscape becomes dominated by large enterprises that will structure the main socio-spatial relationships, many times overwhelming actions of State and local solidarity networks (Queiroga, 2004).

Thus, the construction of an analytical structure of space "extra-urban" (peripheral, "rural-urban" or even metropolitan) requires an understanding of both the multiple connections that insert the different territories within the context of a globalized world, and the understanding of different forms

that stakeholders build and establish their dialogues with the natural, rural and urban world. Specifically, the marks of the contemporary processes of change in urban networks in Southern Brazil arouse particular interest, since its conformation results from a peculiar way as the urban agglomerations and productive structures have been built in the region.

The extensive study of Reis Filho (2006) on the characteristics of urban sprawl in São Paulo can be a starting point for an understanding of the political-economic and infrastructural conditions that have defined the territorial profile of the cities of south-central Brazil and in particular the southern region, which includes the micro-region of São Miguel do Oeste. In that study, Reis Filho shows that the expansion of areas "perimetropolitanas" have been reorganized on the basis of communication networks, especially the mobility system with the creation of new automotive arteries as well as increasing the efficiency of those already existing.

The new urban networks settings are no longer only guided by the periphery-center duality, but also between "peripheries", which allows "inter-regional" accessibility. The immediate consequence is the regionalization of the labor market and the decentralization of industrial plants, followed by residential and tertiary decentralization. This model also implies a mix and fusion of economic functions and activities in the related reorganization of the rural and urban (Baldini, 2008). Although traditionally the city is moving forward and penetrating the rural territory, modifying its original agricultural vocation, cases should be noted where depopulation induced a resumption of urban areas with agricultural functions[1].

Another important approach needed in this argumentation are the concepts of "diffused city" and "urban sprawl". The notion of "diffuse city" was defined to qualify peri-urban areas of the Italian region of Veneto by Francesco Indovina in 1990. Since then, the term has been appropriated by various authors to characterize different situations (Grosjean, 2010). Grosjean (2010) proposes possible and significant territorial characteristics that can suit link the use of the terms "dispersion and diffusion" to the complex structures that define them.

A first aspect noted by the same author relates to the exponential spread of mobility and communication in the regional space, which takes away the dominant aspect of polarization of the urban centers. The second point is the lack of planning on this scale (which can also indicate the absence of the State) and the great spatial fragmentation, resulting in a territory built according to different and competitive rationales. The third important feature highlighted in the "urban diffuse territories" is the absence of centrality able to organize displacements and infrastructure. This leads to the fourth point, which is the isotropy of the network with multidirectional relationships. Finally, the character of low density on land use, showed by different configurations and functional accommodation expressed on territory by the urban-rural mix (Grosjean, 2010).

## 3. Santa Catarina – between urban sprawl, rural shrinkage and rural industrialization

Regarding its process of colonization, the State of Santa Catarina State is unique in Brazil, showing a balanced net of cities and well shared spatial distribution of the population up until the last decades of the last century. Mainly due its fragmented geography, the State of Santa Catarina had an occupation pattern characterized by a “small proprieties rural structure” and by an absence of an

[1] Flaminia Paddeu (Encouraging urban agriculture: land-use planning innovations in Detroit) and Joe Schilling (Emerging Networks of Urban Greening NGOs in Shrinking Cities) papers presented at City Futures, Paris, 2014, showing as new urban agriculture movements are taking care of shrinking areas in USA.

"urban pole" with a broader coverage. Within this structure, independent and diversified economic regions emerged through the State territory (Siebert, 1996).

Despite this welcome economic diversification, the lack of roads infrastructure and the geo-economics fragmentation kept the Santa Catarina cities isolated from the more dynamic centers of the country until the middle of the 20th century. By this date the development of the road system in the State had increased the connection between West and East, including in the State's economic flows areas previously excluded, and also facilitating the population flows. Road improvements along the coast also changed the economic State trends, pushing city developments by a reinforcement of the tertiary economic sector (Pereira, 2003) and increasing the tourist flow to the seaboard, impacting the cultural and behavioral local patterns.

The significant migration towards the seaboard also caused an important decay of small scale agriculture in the centre-west (Pereira, 2003) and expanded the coastal cities periphery towards rural areas. On the other hand, it allowed a good diversification of productive activities that embraced several successful local productive arrangements within the State (Turnes, 2008).

Due to concerns about the migration towards the seaboard, in 2003, the State Government launched a new decentralized administrative network, aiming to balance development in different regions of the state and to avoid the significant decrease of population in small and medium cities in the hinterland. However this action was not followed by an appropriate political and institutional framework able to link economic strategic goals to spatial aims that would rebalance territorial occupation, increasing the economic vitality of the region with a better share of educational, cultural, leisure and basic health services (Moraes, 2006).

In this context, different processes promoted by both the private sector and the State, led to the expansion of the cities network, and metropolization process occurred in Santa Catarina regions. Near the Atlantic Coast, where the economic dynamic was stronger, the process was characterized by a socio-spatial structure with the emergence of bigger urban poles, and with more complex urban-rural interactions, contrasting dynamic economic regions and shrinking rural regions. Away from the coast in the west of the State, economic issues delayed urban development while maintaining the primarily rural economic base, reducing population growth and increasing migrations index (Siqueira, 2010).

In spite of this delay, the less dynamic regions such as those in the west, displayed in the last three decades a steady economic performance, due mainly to the major agro-industries of the State. Since the 1980s, the neoliberal national policies have changed the economic scenario for the small and familiar agricultural producers of Santa Catarina. , since they were not prepared for the new productivity levels (Rodolfo and Teixeira, 2011). At the same time, the growth of the agro-industries had a positive economic performance.

Those economic changes due to a "productive modernization" have induced important changes in the populational index in the west. Singer (1990) relates strong migration flows due to new capitalist order, where a share of the inhabitants has their capital influx lost and migrate to new opportunities in more dynamic regions. This process was observed clearly in the west of Santa Catarina, where many authors identified a populational shrinkage due to the relationship between family agriculture and agro industrial complexes (Silva *et al*, 2003 and Mattei e Alves *apud* Rodolfo and Teixeira, 2011).

This scenario changed the previous well-structured network of cities, creating new urban settlements close to large cities, in its limits and near major roads, as a transition border between the urban and rural environment. Within this context, a new environment emerged transforming the urban-rural edge in an unplanned and diffuse urban territory, disconnected from basic infrastructure offer, and developed by disconnected stakeholders. The new developments had several impacts (social, economic and environmental) on the previous rural and urban (peripheral) communities due to the lack

of a spatial restructuration able to promote better tertiary activities, which could be polarized by basic urban services.

## 4. The Far West of Santa Catarina: a peculiar region

The Far West of Santa Catarina is a peculiar region in the country due to its colonization process, its current economy and to its urban network configuration. This urban network consists of 19 small towns (under 40,000 inhabitants) and low levels of urbanization (Figure 2 and 3). According to the IBGE (2010), 13 of these municipalities have the majority of the population in rural areas. The industrial and service sectors have significant importance in some cities, and the predominance of small plots in rural areas differentiates this agricultural region from others in the country dominated by extensive land proprieties.

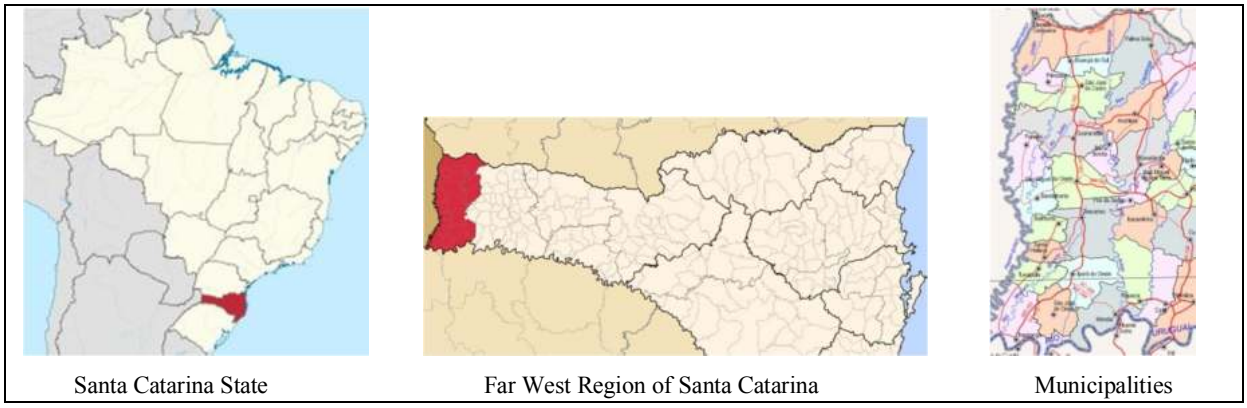


Figure 2 – Far West Region of Santa Catarina State. Source: fecam.org.br

Figure 3 – São Miguel do Oeste City and satellites cities.
Google Earth, 2015

Until the 1940s, the region was predominantly used as farms for livestock that supplied the regions of Paraná, Minas Gerais and São Paulo. In that decade, subdivisions and big estates appeared due to a land granting process started in the nineteenth century to farmers willing to promote the occupation of this region of the country. Also, in that decade, a "corporate colonization" began with the installation of small farms, modifying the peasant way of life in the region (Bavaresco et al, 2013).

Moreira and Medeiros (2006) report that colonizing corporations of that period created a land structure in which each property was usually composed of lots sized at most thirty hectares and counting on the participation of members of the family of settlers in territorial planning. The production process was carried out by settler, itinerant or nomadic agriculture (a land rotation system). Production for family subsistence was the priority; later the production surplus was exchanged with local home business for other products unable to be produced on the farm, thus creating a dependency with the urban merchant. As the exchanges were not paid in money, the farmer had a system of credit or debit sales, with prices dictated by the merchant. So began the dependency between the farmer and the merchant, between the rural and the urban.

At the end of the 1960s, agribusiness multinationals (seeds, pesticides and machines) began to be present in the countryside, marking the start of a modernization process in the Far West of Santa Catarina State. The date is also marked by the indebtedness of small producers seeking to follow this modernization investing in inputs. In the following decade agribusiness created a small producer dependency system (called "integration system") where the costs of the inputs from big enterprises was deducted from the sale of the final raw products (pigs, wheat and soy) for the same enterprises, dissolving the self-sufficient mode of production adopted in colonization (CEAG / SC, 1980, p. 74 *apud* Bavaresco, 2003).

So, in this period began a gradual change that brought settlers of small properties close to so called "modern industries," a new, more urban, reality, with technological, mechanical and informational innovations, and waged labor. (Saquet, 2010). Abramovay refers to this reality as the "New Rural", where many non-traditional activities are carried out in the countryside, such as industries producing new agricultural inputs, services and entertainment activities. Thus, the countryside is no longer linked only to agriculture, and more and more inhabitants are binding on the tertiary activities (Abramovay *apud* Endlich, 2010), breaking the countryside traditional features linked to specific productive relationships, industry at artisanal stage, incipient division of labor, population dispersion, neighborly relations and identity in the villages and districts.

Nevertheless, it is important to note that the development of agribusiness played an important role in the regional working force development and on the cities network organization (Fujita et al, 2002), because they have articulated a productive chain that includes several branches: logistics, mechanical engineering, furniture, packaging, cold rooms, biotechnology, equipment and others. On the other hand, nowadays the relationship between the small producer and agribusiness is that this is the only access to the international market. As this is a very limited access, the producer has become a hostage of the internal market. Their alternative for overcoming this economic insecurity is looking to the urban market where they will find more dynamic labor conditions.

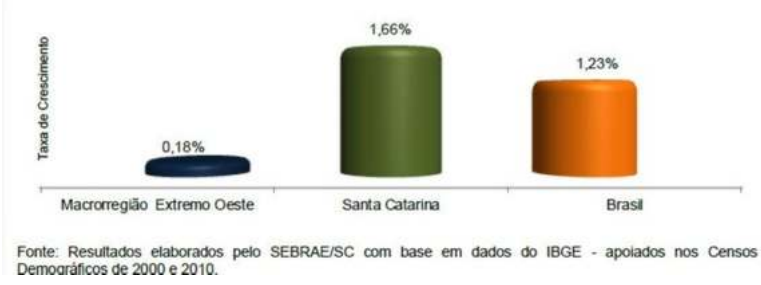


Figure 4 – average population growth index.
Source: SEBRAE, 2013

This may explain the population reduction in the region, where the population growth index is quite below the national and State average. In the last fifteen years, many municipalities have lost population or stagnate. Between 2000 and 2010, while the population in Santa Catarina State grew 1.66%, in the Far West of the State growth was only 0.18% (Figure 4) (IBGE, 2010). The mechanization of agriculture, added to the loss of rural land to urban areas are possible reasons for the population stagnation in the region. In spite of not many new enterprises are created between 2006 and 2011, the number of jobs growth significantly. At the same time, data from 2010 shows a bigger participation of rural dwellers in the regional economy (Figure 5 and 6). These observations may indicate also that a share of rural dwellers is actually working in urban (transformation industry, services or commerce) jobs or indicate that urban workers have been seeking the countryside for housing.

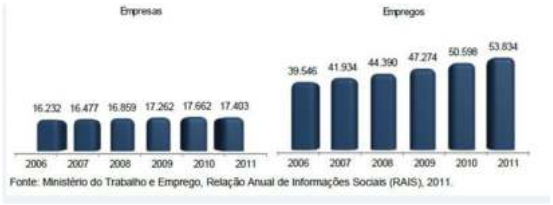


Figure 5 – Evolution of Jobs and Companies

Source: SEBRAE, 2013

Figure 6 – IGP participation related to housing localization –Urban-Rural

Source: SEBRAE, 2013

## 5. The Current Urban-Rural Relationship in Far West Region of Santa Catarina

In the last half century there were important changes in Brazilian cities, at the intra-urban level as well as in the urban network, with an expansion in the growth rate and the number of cities. This reality promoted the redefinition of some roles, since there is a concentration of functions in some cities while others have lost functions due a new technical, social and territorial division of labor within a diverse and complex urban network (Bernadelli, 2010).

Specifically in the Far West of Santa Catarina, some cities have had a gradual increase in industrial activities as well as a diversification of trade, boosting the consolidation of urban centers as São Miguel do Oeste, the largest city in the region with 88.31% of its 36,306 inhabitants in urban areas (IBGE, 2010). However, the region's economy is still dependent on the primary sector -

agriculture - and its agro-industrial local value chain. 1991 data (IBGE, 1991) shows how this region is marked by small farmers, where 75.19% of farms have between ten to twenty hectares, favoring the occupation of a regional work force in rural areas.

Nevertheless, since the 1980s, the demand for rural labor has decreased due to the increasing modernization of agriculture, industrialization and urbanization. This low labor demand also instigated a part of the rural population to migrate to larger centers in other regions, or to seek insertion in the urban environment through commercial and services jobs (Veloso et al, 2005). In this context, the urban network of the Far West of Santa Catarina is currently marked by the relationships established between the small cities (that arose as complementary to them) and between cities and their now diversified countryside.

In Brazil, the official "urban condition" is linked to legal, economic and political criteria. The municipalities have autonomy to define the physical limits of their urban areas by their own criteria. As municipal taxes in Brazil are collected in urban or urban expansion areas, and the federal taxes in rural areas, it is easy to conclude that the expansion of the urban area increases municipal tax revenues. However for a certain area be considered urban the municipality has to provide infrastructure facilities, such as: I - curb or pavement, with rainwater channeling; II - a water supply; III - sanitary sewage systems; IV - a public lighting network; V - a primary school or health center within a maximum of three kilometers. (Federal Law n° 5172 of October 25, 1966 - Article 32, paragraph 1). Thus, by extending the areas of urbanization, the municipal power often causes the retraction and disqualification of rural areas, as these services are denied to rural conditions. (Wanderley, 2009). Specifically in the Far West of Santa Catarina, urban-rural relations with asymmetries and discontinuities in supposed complementary relationships can be observed.

These asymmetries can be highlighted as opposing the housing conditions of the rural workers of small farms with the new real estate projects aimed at the middle and upper class, which accentuate the dispersion of industries, retail and services between small towns and countryside. However, in spite of many Government initiatives aiming to keep the "family farmers" on their land, an illegal process of land subdivision aiming to expand urbanization is going on in the region along with the municipality's complicity. The former thirty hectares colonial estates in rural areas began to be sold to major real estate corporations and changed to second leisure homes for the economic upper classes, even though the Federal rural legislation allows subdivisions for estates in rural areas for urban land use, only in exceptional cases[2].

While decent housing, with access to all basic public services, is only recently and gradually being achieved by the rural population through specific governmental housing programs (Sordi, 2006), the occupation of non-urban areas by projects with good infrastructure is indicative of an increased presence in rural areas of urban-origin residents. This may indicate an increase in the capacity of rural areas to provide comfortable living conditions, including so-called "modern amenities" (Wanderley, 2009). Also, the rural communities may benefit from the dispersion of urban activities in the countryside, since the new links between the urban and rural increase the access to jobs, goods and services within rural areas. The development of these new net of services tends to reflect the demands

[2] Instrução Incra nº 17-B - 22/12/80:The land subdivisions with urban purposes, outside the city limits must have the prior consent of INCRA (National Institute for Colonization and Agrarian Reform) and can only be approved if the area is a) by their characteristics and situation, are opportune for the location of community services in rural areas surrounding (b) of urban expansion or specific urbanization defined by the Master Plan or regulatory Municipal Laws (c) officially declared a tourist area or characterized as a health resort or seaside, (d) has demonstrably lost their productive characteristics, making uneconomical its agricultural use. This proof must be made through report signed by a qualified technician submitted by the owner or by the Municipality, being the INCRA to investigate its veracity (Silva, 2012. p. 326).

of agricultural households indispensable for their families to remain in the countryside such as electricity, water systems, and recently, an internet connection.

In the studied region, due to the proximity of the rural and urban areas, and due the multiplicity of small towns, there is a strong regional interconnection between rural and urban spaces, facilitating a "regional" structure of life, contributing to setting up a different conception of distinguishing rural and urban spaces. In this sense, as observed in our field study, a holiday home for leisure, a new road in the countryside, a mall along this road, are elements of a "new urban fabric" that is not restricted solely to the built-up area of the city.

## 6. Conclusion

Not different from several regions in Brazil and around the world, the bigger and growing cities keep attracting rural populations away from low paid agricultural jobs and from a precarious lifestyle. Notwithstanding, several infrastructural improvements and the diversification of activities in the urban-rural fringe generates a "counterurbanization" of population as wealthy urban dwellers choose to live in rural areas around the cities and commute to work.

In the region of São Miguel do Oeste, this regional dynamic is evident, and it is controlled by four main stakeholders, which do not always share common goals.

Firstly, there is the Federal and State Governments who promote diverse programs such as housing, production (qualification and product diversification, encouraging agro-ecology and rural tourism) and infrastructure for rural residents, in order to avoid rural-urban migration.

The Municipality appears as a second actor, concerned more about the expansion of the urban context for increased tax collection. Thereby, municipal laws aimed at simplifying the implementation of projects in rural areas (often dodging federal laws), ends up changing the character of the area and making room for a scattering of urban activities in rural areas.

Thirdly, there is the agribusiness, which promotes the dispersion of industries in rural areas. On the one hand the agribusiness expansion brings new employment opportunities and development for defined areas; on the other hand it submits the small agricultural producer to an economic dependence that encourages rural-urban migration.

Finally, the real estate market, which seeks to take advantage of the infrastructure implementation by the government and industrial dispersion in the countryside, buying agricultural land and turning it into leisure residences for the more privileged classes. Thus it acts both in stimulating rural-urban migration, as in the urban-rural one.

The end result of the convergence of actors seems to be especially perverse with small-scale agriculture, as local political and economic forces do not create appropriate strategies that could increase and facilitate their rural activity as well their everyday life quality, stronger enough to avoid rural workers migration. On the other hand, Federal government programs of productive diversification and a more balanced and widespread distribution of basic services (education, health, and infrastructure) by the municipalities of the region could place the small farmer as a potential key element for regional development in a changing economy.

Therefore, a preliminary analysis shows that it is essential to improve the quality of life for family farmers who are reliant on public policies aimed at expanding the countryside citizenship beside policies for productive diversification. Making attractive and qualified "periurban" areas, with decent homes and adequate public services can transform the region as a whole, boosting the economy and environmental sustainability. Today this reality is made possible by the mobility and accessibility to the countryside. One should not however consider those improvements as a strategy to requalify

the rural, because the choice of country life should not mean the renunciation of goods and services, which were previously identified as urban.

Nowadays, to develop possibilities in territorial planning and management policies it is important to understand territorial structures and their key components. The policies have to deal with the socio-economic and territorial complexity of rural and urban spaces, intertwined in urban and metropolitan fringes. This article sought this understanding through the observation of territorial relations, which can be references in the constitution of new development paradigms of urban areas on the countryside and on the periphery of large Brazilian cities and metropolises.

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# Research on "The trinity model" of the implementation of traditional village planning ——A Case Study of the Traditional Village Clay Figure Wang in Wuhan City

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Keywords: Traditional Village, Planning and Implementation, Trinity

**[Abstract]** *Traditional village represents the root of the Chinese culture and essence of the agricultural civilization, it is an organic combination of material culture and non-material culture which bears the value of history, culture, science, art, social and economics. In recent years, due to external influence and internal imbalance , Chinese traditional village has stepped into a "hollowing out" recession, the number of rural population is declining sharply, and economic development is faced with stagnation. Besides, the traditional village culture is waning. For better conservation of Chinese rural cultural heritage and promotion of the re-construction of beautiful villages, a sustainable plan to protect traditional village is attracting more attention.*

*Based on domestic and foreign case studies, this research attempts to establish a "trinity model" of planning and implementation which covers and unites three aspects: supervision,*

*operation and self-organization mechanism for village conservation. This paper in detail elaborates the framework and contents of this model, and rambles on the dominant roles of government, developers and villagers in the revival of traditional village. Specifically, government's regulation is the guarantee of sustainable development, developers' business operation is the driving force, and villagers' self-organization is the endogenous force for future development of the village.*

*Case study selects the traditional Village Clay Figure Wang in Wuhan City, as one representative of first batch of traditional villages in China, it has maintained a lot of intangible cultural heritage, and it is the cradle of clay sculpture making skill in Huangpi, which has a history of 1400 years. This article embarks from the village cultural inheritance, by analyzing the different functions and inter-reaction of the various roles in the revival of traditional village, to provide the revival of intangible traditional village culture with a practical planning implementation system.*

## Introduction

Chinese Traditional Villages are the essence of Chinese farming culture，different with the general rural settlements, it carries a large amount of material cultural heritage and intangible cultural heritage of organic cultural settlements. In 2012, the Chinese government established the Traditional villages in

protection and development of the expert committee, and put forward the cultural concept of "traditional village", with all over the country launching the protection and census of traditional village, the protection work of traditional village has been mentioned to a new historical height. In china, facing the rapid development of urbanization, the traditional village at the object edge of protection and development. In the actual process of the planning management, due to the lack of support of the typical cases of successful practical planning and enough founds, a mass of traditional villages are facing the dilemma of empty nest and cultural decline. Based on this, this paper mainly discusses the cultural specificity, starting with main-body participation in the process of implementation in the process of planning and management, focusing on the separation of power in the process of management. Effective collaborative relationship can promote the implementation of the protecting traditional villages, to ensure the sustainable of the village development Anderson protection.

## 1. Analysis of the problems on Planning and implementation of Chinese traditional village

### *1.1 multi-lead planning management and the regulatory standards lag behinds*

Because of the traditional village protection planning practice in China is emerging relatively late, the building of legal system has lagged behind, and protection work is also a multi-management issues. One hand, the township construction planning, natural heritage conservation planning are managed by the Ministry of Housing and Urban-Rural Development, the intangible Cultural Heritage managed by the State Administration of Cultural Heritage, and the Intangible Cultural Heritage is managed by the Ministry of Culture. However, as a material and non-material cultural heritage of the special cultural units, the traditional village is lacking clear responsibility for sector and targeted preparation and guidance. On the other hand, most of the traditional villages contain a large numb of material and on-material cultural heritage, so the Protection of Cultural Relics and the Regulations on Protecting Historical Famous Towns and Villages cannot and should not be all covered in scope of protection, and canned make specific requirement and regulation for protection. In some places it has introduced some of the local laws and regulations which have significant limitations, and it is difficult to achieve a fundamental sense in the protection of traditional villages, and thus result in a large number of villages can't be include in heritage conservation areas of traditional villages, and they are facing with the damage of legal protection.

### *1.2 The subject of planning and implementation is not cleat, the public participation is missing*

In china, according to the Urban and Rural Planning Law, The Town and Country Planning should be made by the township people's governments, and must be reported to the superior people's government for examination Anderson approval. However, due to the administrator body of the over laws is the city, the design, implementation and management which made by these inevitably make the village

planning ultimately reflect the develop model of city, which will continue to remain in the “top-down” planning model. Particularly, for the traditional village areas, the public participation is relatively weak, the plan cannot reflect the "bottom-up" of the self-governing organizations in traditional villages, which instead of by using he "top-down" management system. Mostly, the planning and management decision-making depends on the sense of the government leadership, it lacks the effective participation of villagers and cannot reflect and meet the villagers’ universal needs and aspirations, as well as to coordinate and balance the public interests.

### *1.3 The contradiction between protection and development*

The government, market and the villagers are three major stakeholders of planning and development of traditional villages, as they have a fierce competition for all kinds of benefit and resource contention. One hand, the farmers' own culture is limited, as well as the information network of underdevelopment, resulting in the local villagers' lack of the awareness of preservation of the cultural heritage of in traditional villages. And they even self-destruct, resell the old building and heritage in traditional village. On the other hand, the local government’s supervision on traditional village are not yet in place, under the impact of negative concept of government’s achievement, the local government are eager for quick success and instant benefits, which make the protection planning of traditional village is lacking of a strong regulatory mechanism. In addition, accompanied by the accelerated pace of agricultural modernization, rural urbanization and suburb urbanization, traditional villages has been subjected to the destruction of constructive, developmental and tourism. With the internal resources have been absorbed by the city, there even appears the phenomenon that “hollow villages” and “aging village”. On the other hand, because of the lack of guide from relevant regulation and laws, some of the local governments lead too excessive tourism development without a field trip about traditional villages’ actual situation, economic development and cultural heritage, most villages take a unified model of the protection and repair, over time, the “thousands of the city shows the same” appear frequently in various parts.

### *1.4 A shortage of the financial resource*

The protection and rehabilitation of traditional villages require a lot of financial support, in particular, the substantial material and non-material cultural heritage need a lot of funds for scheduled repairing and maintenance. But the reality is not optimistic, due to the protection of traditional villages has been neglected for a long time, and the government funding for protection is limited, resulting in many of the traditional building and historic building are not very well preserved, and even some of them are damaged. In addition, due to the lack of professional training of vernacular architecture and traditional crafts talents, the protection work of local culture and the material space are seriously restricted.

## 2. The overseas and domestic cases

### *2.1 Taiwan: community construction ---- the promotion of subjective consciousness*

Taiwan's "community construction" is actually a "radical movement"-----a claim for returning to land, community and life. With the goal of the existence and awareness of the community, the community residents take an active part in local public affairs, to gathering community consensus, develop the community self-sufficiency. The community members can co-run the "industrial culture" and participate in the local cultural mission and community-based organization.

The "community construction" has 3 modes: one of which is the "NGO", it more easy success, the "Tou-Mi Eco-village" is a typical case of successful; another one is "retuning young intellectual" with the biggest probability of success. The core value of community construction is strengthening the indigenous identity and starting the social reconstruction. What it creates is not only a community, but to create a new society and a new culture. The main body of construction is generally composed of the non-government, the local government and the communities, but in these 4 sections, the community is the main body throughout the whole process of the construction, the villager's common awareness is also the core strength for success.

### *2.2 South Korea: New Village Movement---- the government's drive*

In the 1970s, the Korean rural economic development gap is widening, resulting the large flow rural population and some rural parts of agriculture have collapsed. In such a social background, the South Korean government has introduced the "new village movement" to achieve a full recovery of village. By establishing an efficient unified official organization and management agency, and investing considerable amounts and resources to strengthen the villagers' educational level and promote the characteristic development of rural area in an all-round way.

During this new village movement, the national government's investment has played a tremendous guiding role. One hand, the government inject a large amount of material resources, and in the 1970s, the government's financial expenditure has accounted for 10 percent, mainly for the provision of free cement and steel, and has driven villager's devotion and social support. On the other hand, the government is focusing on helping the farmers playing the main body role and learning the basic spirit of new village movement: diligent, self-organizing and synergy.

### *2.3 Japan: One Village One Product----the endogenous driving force of culture*

In the 1980s, japan launched the "one village one product", this campaign not only hence flourish the rural economy, but also promote the development of cultural and entertainment industry. In order to promote the development of the "one village one product", Japan attached great importance to explore the local resources, traditional techniques, and the use of new technology to upgrade the traditional products. This movement fully revitalized the economic development of rural area. By strengthening farmers' self-awareness, mining and using the cultural resources, to extend the industrial chain in rural

areas is the core values campaign of “one village one product”.

## 3. The connotation of "The trinity model"

### *3.1 The connotative definition of “The trinity model”*

The trinity model is an overall system altogether constructed by regulatory mechanism, operation mechanism and spontaneous mechanism of all three. In this system, the regulation is the core of the planning implementing of traditional village, the operation and self-development of the protection of traditional villages should be run under the perfect and legitimate government regulation; the operation is the momentum of traditional village, is the effective means and approach for effective using of traditional villages; the spontaneous mechanism is the necessary condition for sustainable development of the traditional villages. Regulation, operation and spontaneous are complementary and inseparable, which have been formed an organic integer. (Figure.1)

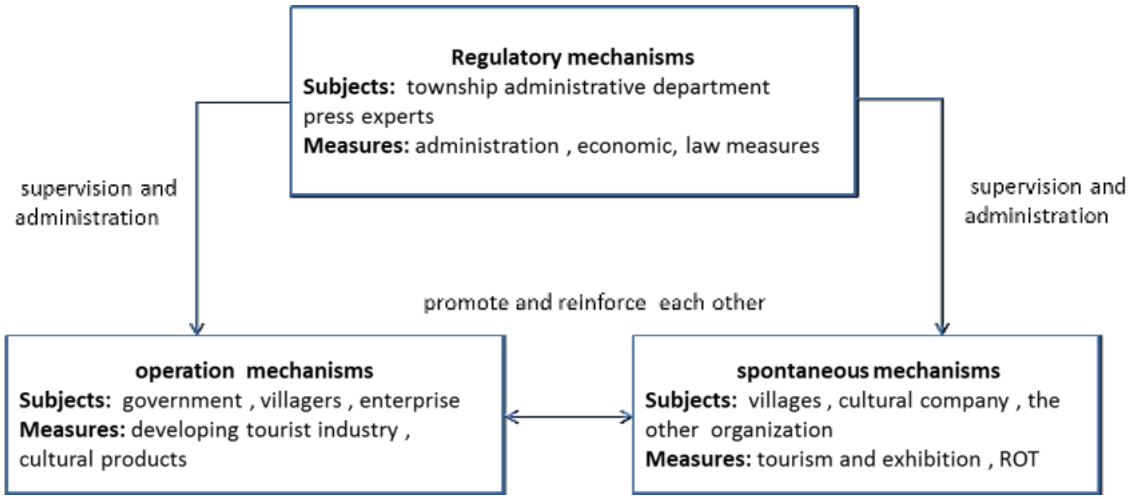


Figure.1.The paths of "The trinity model"

### *3.2 The timely significance of planning and implementation of traditional village*

The implementation of planning has the task to put the pre-coordinated program and established plan into action, and the result is achieved. At present, most system construction of traditional villages is newly-built, and lack practical experience. Besides, in the process of planning and implementation, it more ties to the urban planning itself, but for the understanding and tap of the historical, artistic, scientific value of historic cultural heritage lack of depth. As a result, the industry lack of the perception and thank rational knowledge about this kind of protect planning, besides, the too specialized language of planning and superficial protective realization is hardly to earn the emotional identify from the public and government. To ensure the scientific, forward-looking and characteristic of the protection, the implementation of rural planning need an effective planning mechanism which promote the optical allocation, place equal stress on development and protection, overall considerate

the short-term and long-term, for the overall protection of cultural heritage in traditional villages, and promoting the sustainable development of traditional villages.

### *3.3 The traditional villages' implementation way of the "The trinity model"*

#### *3.3.1 Strengthen the traction of government*

A perfectly supervised and management system can ensure that the protection planning and development of traditional villages can implement effectively. In the process of implementation and management, it should take a management mechanism of "government-led, villagers spontaneous, enterprise's facilitating"

In the development planning of traditional villages, the government should transition from a leader to a guider, by establishing a government-led census system, and in-depth investigation to have a comprehensive survey of cultural heritage resources in jurisdiction. Based on the local selection criteria, develop and introduce a list of traditional village, and make practical measures for protection and management, defining the responsibility and building the protection agency. Besides, the government should encourage the villagers to build educational institution of the cultural heritage spontaneously, and give a certain degree of incentives and support to the villagers, and to encourage them return to traditional village, make them the protector, operator and beneficiaries.

By strengthening the cooperation between government, villagers and enterprise, it can effectively enhance the operational efficiency of the protection planning of traditional villages. On the overall organization, it transforms form the horizontal missing coordination to vertical effective synergy. (Figure.2.) In addition, with the external force, forming a three-party supervision mechanism, perfecting the effecting institution, and make the protection planning of traditional village more efficient and, scientific and implemented.

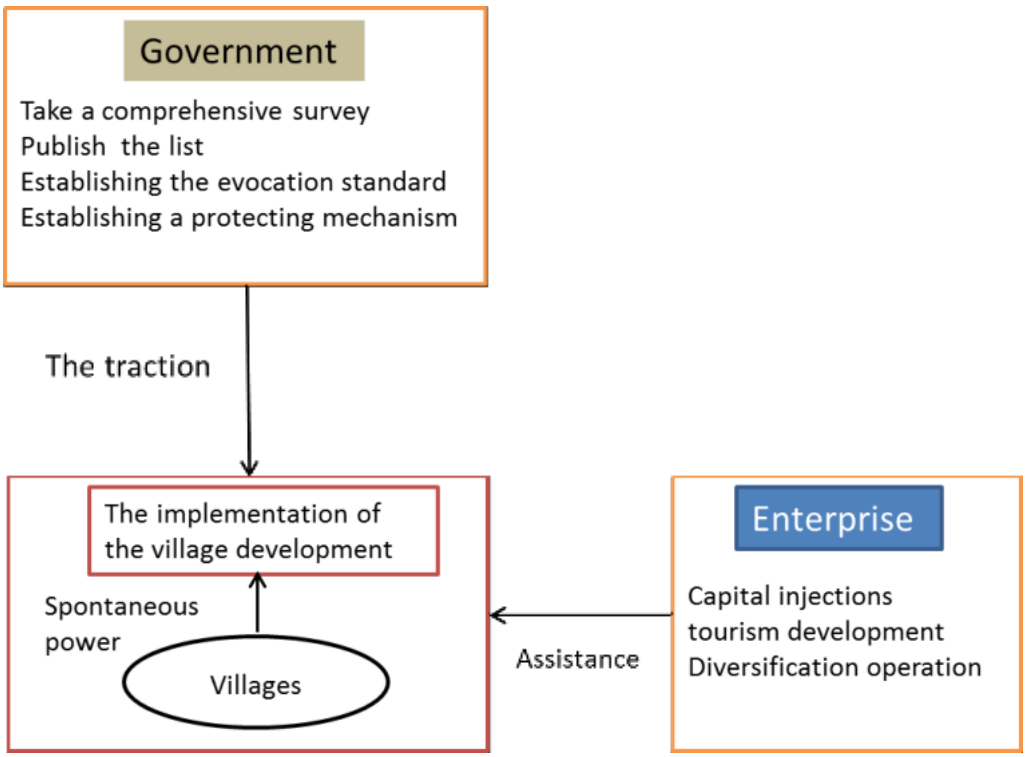


Figure. 2.
The collaborative power between crosswise and vertical

### *3.3.2 Mining the spontaneous mechanism of traditional village*

Under the waves of urbanization, the traditional village has been in the edge of urban growth and expansion, showing a phenomenon of resource shortage and hollowing. Despite the fact that many of the traditional village has a lot of valuable cultural heritage resources, but because its geographical location Ian mostly remote and inaccessible, without geographic advantage, it hardly gets the people's full understanding and attention.

Hollowing is main problem facing the development of traditional village, within the origin of hollowing, mainly because the village lack of the endogenous power for self-change and automatic development, the necessary human resources and economic power for reconstruction is also deficient. During the exploration of the path for traditional villages' sustainable development, the cultural ecological resource should be fully used. One side, excavating the economic value of traditional, take the traditional village of nonmaterial cultural, by enhancing the industrialization of culture, building a new contact of village and pulling the endogenous impetus, and then promote the economic development of traditional village to raise the funding for the protection and construction in the future, and explore a new model of protection and development. On the other hand, making a combination of protection and tourism development, for the villages where the traditional building is well-preserved, it can use opportunity of tourism market to enhance the construction of infrastructure and strengthen

the protection and use of the old buildings.

In addition, since the village formed, the villagers have been playing a leading role in the building and development of village. That is why during the constituting and actualizing protect planning, it is necessary to fully respect the villagers' sense of autonomy, and transform the action program from elitism-oriented to public-oriented. Mobilizing villager's enthusiasm in participating the rural planning and development, by the way of questionnaires and group meeting to collect villagers' opinions, and disclose the planning design drawing, to make the villagers to be the protector, operator and benefactor.

### *3.3.3 Establish a scientific and effective operational mechanism*

In the planning and implementation of traditional village, an incomplete operating mechanism can always cause the village sunk into the developing predicament, the lack of funds as one of the key issues has constraint the rehabilitation and development of traditional village. Take a certain "blood-transfusion" type of protection may have a positive effect to promote the protection of traditional village. One hand, by strengthening the government financial input, using and coordinate the funds from all departments on the construction of Chinese traditional villages properly, and bring the protection fund of cultural heritage into the budget to make sure that the vernacular architecture and important cultural heritage can get plenty of protection funds. In addition, the government can encourage the social capital investment, and take a responsible for investment, and the professional development company takes charge of planning and development. Besides, the villagers' self-organizing cultural industries are welcomed, so that there is forming a diversity financing mode and establishing a investment mechanism.

In the subsequent operations management, by respecting the villager's autonomy, to make the villagers realize the value of protection of traditional villages as well as their vital Internets, land lead the public to realize the right of use and transfer the vernacular architecture and on a voluntary basis, and encourage the social organization, enterprise and individual to participate in the use and protection through claiming, adoption. It would like to promote the protection and operation of traditional village to transfer from the inside-out profit-driven to the inside-out resource competition, and the village would transfer from the passive recipient to the active applicant.

## 4. The case study ---take the Traditional Village Clay Figure Wang in Wuhan City for example

As one representative of the first batch of traditional villages in China, the Traditional Village Clay Figure Wang has maintained a lot of intangible cultural heritage, and it is the cradle of clay sculpture making skill in Huangpi, which has a history of 1400 years. The village locates in the Yunwushan scenic spot of Huangpi district, as one of the most concentrate place of craftsman, successor and artists, the clay of farmer in Huangpi has spread fame overseas, and attracted a large number of tourists come

to visit. Nevertheless, with the accelerating development of the word's modernization and urbanization, the development is far from satisfactory, and the implementation of planning is restricted, the problems of the protection of material and non-material cultural heritage there is disturbing, the thinking on preservation of village remains to be discussed.

### *4.1 The problem and obstruction of the planning implementation of Village Clay Figure Wang*

#### *4.1.1 The lagging management and planning of village, the damage and hollowing is serious*

The Village Clay Figure Wang located in the edge of the city area, the village's superiority resources have been obliterated in the rapid expansion of the city, the out-migration is growing, and the hollow of village is increasing severely. Besides, because of the lack of effective planning and manage, the traditional architectural heritage is lacking of professional maintenance and repair, which could result in further the flavor of rural life waning and the erosion of spirit. At present, there are only 10 the old and the children living in the old village, the village lacks of energy and the memory space of clay craft are faced with lost.

#### *4.1.2 The traditional arts and crafts is facing with disappearing and lacking the protect*

The clay sculpture in Huangpi has gone through 1400 years, but in the market economy, because of the shrinking of the form of clay and the shock of the outside market economy, the number of craftsman drop sharply and the technique is in danger of disappearing. Because of the poor sales, a few of the clay factory were closed down. In the absence of special protection and external financing, the protection of Traditional Village Clay Figure Wang is under threatened. However, the government administrative departments often put the focus on the protection of physical entity on building, and lacks of the protection of spiritual culture and craftsmanship heritage, this evolution thread is biased, which might go against the sustainable development of traditional village.

#### *4.1.3 The economic development of traditional village is low, and over-reliance on "tourist-development"*

A reasonable tourism development has a positive guidance for the development of traditional village, but many villages are faced with problem of over -exploitation. A lot of renovation and reconstruction not only undermines the original local architecture and traditional building, as well as the overall outlook of village. Under the impact of market economy and modern civilization, there are lots of "counterfeit antiques", which not only goes against the protection and continuity of cultural heritage, as well hollowing the valuable natural and cultural resources in traditional villages.

### *4.2 The "The trinity model" of the implementation in Traditional Village Clay Figure*

***Wang***

### *4.2.1* ***Planning first ----make sure the scientific of protection***

Protection planning is made on the basis of research, analysis and scientific judgment, after having an in-depth analysis of values of material culture and non-material and cultural, and having a research on the historical and cultural information the village contains, then put forward the countermeasure of protection and development. Therefore, the protection planning is largely be objective, scientific and existence, ant it is precisely because of the objectivity it has, the protection and rectification have a more scientific and fixed standards. For the same type of traditional village, the protection planning should be similar. For this reason, it is only through the planning first and all-round implementation to make sure that the protection planning of traditional village area rules, and recovering the history appearance as far as possible, to show the cultural characteristic of traditional villages and achieve a better protection.

### *4.2.2* ***the public participation----rely on the people's strength to enhance the awareness of protection***

Stimulate the villager's initiative in Clay Figure Wang, widely soliciting the villager's suggestions about protection, and have incentives for the residents who have positive contribution. For the "non-legacy" project which has been included into conservation projects, the inheritor and successors have the participation rights on affirmation. The government should implement polices benefiting residents to encourage them to work in Clay Figure Wang, and engage in the tourism industry, so that they can truly be involved into the protection work. It should also encourage the research on closely related topics and strengthen the international cooperation and exchange.

### *4.2.3* ***The policy guarantee----improving the government's legal and regulatory mechanisms of protection***

In the future work, the planning should made specific and targeted local Protection Ordinance of the protection of non-material based on the actual situation in Huangpi Wuhan, and make corresponding method and procedure for protection and saving, clearing the intellectual property right to provide a strong legal basis for the non-material and cultural protection.

The protection of non-material cultural heritage is not only the work of Culture Sector, but also the responsibility of society as a whole. There is a need for the department at all levels participating, and form a long-term mechanism for the protection of intangible cultural heritage.

### *4.2.4* ***The financial security----strengthening the investment on the carrier of non-material cultural heritage***

The investment on the carrier of oral and non-substantial heritage is in fact indirectly through the carrier's construction to achieve the goal of protection. Because of the inheritance of intangible cultural heritage needs from generation to generation, the investment should also be uninterrupted on the individual or groups who can inherit the heritage successfully. In addition, the non-material culture can be made tangible by some related carriers, which can make the non-material be more easily to be understood and grasped, and closer to the population and normal life. It contributes to the achievement of education, and helps people to awareness and develops a non-material culture, and then realizing the inheritance and promotion of the non-material culture.

### *4.2.5 The innovation model---- the measures of protection*

The traditional culture needs change and innovation to get vitality. The innovation of non-material cultural heritage in clay Wang has three ways: the one is adding new content on the basis of the traditional culture, to make it more applicable to the contemporary people's way of life; the second one is to use the modern technology to manufacture the traditional cultural products, to lift the traditional culture to the modern civilization. Having a break on the traditional process to meet the people' live. It endeavors to make the two promote each other for sustainable development. The third one is to increase the influence of the clay as a non-material cultural heritage, and raise the people's awareness. Besides, it can utilize an appropriate non-material cultural heritage in different places.

## 5. Conclusions

In face of the multiple challenges of new round of urbanization, the development of town-country integration and rural tourism develop, an effective planning and management mechanism for implementation is the important security to ensure that the traditional villages to be able to withstand the external interference and maintenance the steady-state of the development. This artic is based on a perspective of innovative methods, attempt to build a monitoring mechanism of traditional village, start with the management, implementation and self-motivation of three areas to explore a new ideas of villages' implementation entirely and systematically. Through an emphasis on the multi-orientation regulatory role of government, enterprise and the villagers on the development and protection of traditional villages, the village can get a sustainable development. Are present, in china, the protect system of traditional village is still not perfect; it is only by a multi-faceted cooperation to improve the regulatory system. Making a practicality monitoring system has important research significance for three sustainable protection and development of traditional village.

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# WHAT DRIVES PLANNING IN A SHRINKING CITY? TALES FROM TWO GERMAN AND TWO AMERICAN CASES

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## Abstract

*Current debates in urban development display a rising awareness that several cities in Europe and the US have to deal with challenges of long-term urban shrinkage. However, on an international scale it is still not clear if and how planning paradigms, planning systems, planning strategies and planning cultures are changing when shrinkage and decline are taking place. This paper investigates how planning is transformed in view of shrinking cities. For this purpose, the paper introduces four cities' storylines framed by shrinkage. Particular focus lies on the question if and how dealing with decline and shrinkage led to changes in urban planning and brought about different planning styles.*

**Keywords:** planning cultures; shrinking cities; comparative planning

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## 1. Introduction

Urban shrinkage and economic downsizing in structurally weak areas – e.g. in old industrialized 'rust belts' or in peripheral rural areas – are most commonly symptoms of transformations that can be observed in Europe and the US likewise (Pallagst & Wiechmann, 2005), and current debates in planning demonstrate alertness of the phenomenon of shrinking cities. Many cities around the globe have to deal with challenges of long-term demographic and economic changes leading to urban shrinkage associated with housing vacancies, underutilised infrastructure and other negative impacts, often triggered by the effects of globalization pressures (Pallagst, Wiechmann, & Martinez-Fernandez, 2013).

However, extent and spatial distributions of population decrease differ significantly between Europe and the US. In Germany, declining birth rates and the effects of the German reunification are main triggers of shrinkage. Due to the overall population growth generated by immigration, many cities in the US have to provide for redevelopment in shrinking areas and growth-related development at the same time (Pallagst, 2008).

In current planning debates the term 'shrinking city' usually describes a densely populated urban area that has on the one hand faced population losses in large parts and is on the other hand undergoing economic transformations with some symptoms of a structural crisis (Pallagst, 2008).

The research presented here sets a basis for identifying traces of paradigm shifts, and possible changes in planning systems, planning styles, and planning cultures by means of comparative evidence based urban research. However, planning cultures is a new field when it comes to evidence based research, as in the field of comparative planning studies no systematic conceptual framework exists (Othengrafen, 2010, p. 86) Moreover international comparative work on the topic planning cultures is lacking a concise methodology (Fürst, 2009). In this respect, the paper combines the topics shrinking cities and planning cultures in a research approach that is new and experimental.

## 2. Identifying changes in planning for shrinking cities – defining an analytical frame

The following paragraphs will briefly introduce contemporary shrinking cities-research and define an analytical framework for case studies on shrinkage and changing planning styles derived from the research of planning cultures.

The existing body of literature on shrinking cities has well documented that the loss of urban population is not entirely a new phenomenon (ARL, 1995, p. 1010; Göb, 1977, pp. 151, 162; Häußermann & Siebel, 1987, p. 29; Oswalt, 2004, p. 20). What is new, however, is the extent to which shrinkage occurs on a global scale, and the complexity of its causes (Pallagst, Wiechmann, & Martinez-Fernandez, 2013). Meanwhile, shrinking cities have become a worldwide multi-dimensional phenomenon appearing in many post-industrialized societies.

Meanwhile, the policies and strategies applied when it comes to dealing with shrinkage are manifold. An interesting fact is that how shrinkage is perceived and accepted largely influences the choice of planning approaches in shrinking cities. Here, two directions can be distinguished: either growth or non-growth is adopted as a path for future development.

In order to investigate changing planning strategies and planning policies for shrinking cities, the correlation between perception and strategies might be helpful. In search of this correlation, the authors merged two typologies for shrinking cities: one based on phases of perceptions of shrinkage (Farke 2005, p. 179), the other based on types of strategies (Danielzyk et al. 2002, p. 25). Farke's typology suggests four stages of perceptions of shrinkage: ignoring, observing without acceptance, certain acceptance and acceptance, Danielzyk reveals the following typologies decline as vicious circle, expansive strategy, maintenance strategy, and planning for decline. Interestingly, both typologies correspond with each other as displayed in figure 1. Nevertheless, since shrinkage is a very complex problem, it is difficult to distinguish sharply between planning strategies and the underlying perceptions (see figure 1).

Figure 1: Strategies to cope with shrinkage depending on the perception of shrinkage

| Strategies to cope with shrinkage in dependence with the perception of shrinkage | | | |
|---|---|---|---|
| perceptions of shrinkage | | | |
| phase of ignoring | observation without acceptance | certain acceptance with or without limited public communication | acceptance |
| **Decline as vicious circle** | **Expansive strategy** | **Maintenance strategy** | **Planning for decline** |
| Without goals | Keep population within city borders | Maintain attractiveness and spatial structure | Orderly shrinkage, development of qualities |
| Hope for regional planning or financial support | Substantial expansion of residential areas | Development of existing land use, target groups programmes | Adaption and reduction of infrastructure, development of recreational areas |
| **passive strategies** | **active strategies** | | |

Sources: Own design based on Farke, 2005; Danielzyk et al, 2002

In search of planning strategies to deal with shrinkage, policies, plans and projects have been applied with different contents i.e. substitute industries, master plans, urban regeneration, urban redevelopment, urban renewal, or greening. These measures can either serve as part of a planning strategy for expansion as well as a strategy for managing decline. The common denominator is their focus on improving the quality of life in the respective area. However, measures taken on local level, often with financial support by the national governments cannot always be credited to one specific policy or strategy.

In order to investigate how planning is changing in view of shrinking cites, the authors turned to the research sphere of planning cultures. Research work by Othengrafen (2010) specified the criteria for defining planning cultures. Table 1 distinguishes the following criteria:

- *General context* displays the basis of a planning culture comprising more general understandings,
- *Planning context* displays the values and beliefs of the planning profession,
- *Planning toolset* refers to the strategies and applications at hand.

The authors of this paper have modified this list in two ways in order to use it as a basis for comparative research on planning for shrinking cities: Firstly, some of the terms were redefined, including an addition of the factor of change. Secondly, in order to broaden this typology for a possible applicability for shrinking cities, the authors introduce ‘shrinking context’ as a new criterion (see table 1).

The new category, ‘shrinkage context’, comprises aspects which most likely trigger change within a planning culture. In this respect and based on the definitions of shrinkage laid out earlier, criteria for mapping the shrinkage context of a planning culture are defined by demographic change, post-industrial transformations, and the perception of shrinkage. ‘Demographic change’, a factor highly influencing the shrinkage of German, Italian or Japanese cities, was selected in order to display changing population. ‘Post-industrial transformations’, visible in countries all over the world (Pallagst,

Wiechmann, & Martinez-Fernandez, 2013), include economic change and possible structural crises. The variable 'perception of shrinkage' demonstrates the selection of policies and strategies in order to deal with shrinkage.

Table 1: Criteria for defining planning culture's facets and layers

| **Shrinkage context** | **General context** | **Planning context** | **Planning toolset** |
|---|---|---|---|
| • Demographic change<br>• Post-industrial transformations<br>• Perception of shrinkage | • Socio-economic or socio-political societal models<br>• People´s respect for and acceptance of planning<br>• Social equity, planning ethics and values<br>• Consideration of environmental aspects<br>• Stakeholders in planning | • Major planning paradigms<br>• Objectives and principles planning is aiming at<br>• Traditions and history of planning<br>• Scope and range of planning<br>• Legal framework<br>• Planning system and governance<br>• Adaption to change | • Urban design and structures<br>• Urban plans, programs and policies<br>• Urbanand regional development strategies<br>• Planning Law<br>• Decision making process<br>• Communication and participation<br>• Financial tools and incentives |

Source: Own design based on Othengrafen, 2010, p. 93

In the next step of the research, the authors applied the analytical framework by selecting and examining case studies of shrinking cities. The authors selected Germany and the USA as planning cultural areas of investigation, as vast experience with shrinking cities has been made in these countries. Four case studies were selected for this comparative research: two cities from Germany (Zwickau and Kaiserslautern), and two cities from the USA (Flint/MI and Youngstown/OH). The choice of cities is based on the following attributes: All cities are comparable in the number of inhabitants, all cities have applied strategies to counteract shrinkage, and three of them share a history of car-manufacturing. All four cities demonstrate wide-ranging planning approaches regarding shrinkage processes, and thus can be considered as appropriate testing grounds for changing planning styles and cultures.

Case-study analyses carried out by the authors focused on exploring literature, archival records, data bases, and planning documents regarding planning and rebuilding activities in the selected case study cities. A stakeholder-based analysis (by means of surveys and interviews) is the main part of the research work. This aimed at gathering in-depth knowledge about experiences with steering planning and development of four shrinking cities, Zwickau, Kaiserslautern, Flint, and Youngstown.

The following paragraphs will highlight how shrinkage affected the four cities mentioned above, and point at the cities' struggle with addressing the problems of shrinkage. In terms of the analytical framework displayed in table 1, particular emphasis is placed on the criteria 'shrinkage context' and 'planning toolset'.

## 3. In search of evidence for changing planning styles: Four case studies

As mentioned before, the four cases represent different planning cultural realms of shrinking cities, and a large number of tested and applied planning approaches. The nest paragraphs will briefly introduce the cases (3.1), showcase their shrinkage context in terms of trajectories of population

development and decline (3.2), and in particular present policies and planning tools for dealing with population decline and shrinkage (3.3).

## 3.1 Brief introduction to the cases

*Zwickau: A shrinking East German city*

Shrinkage in East Germany is a well-known phenomenon in the national and international discourse of the field. Smaller cities like Zwickau are struggling with the effects of German reunification and the demographic changes affecting population development, as much as the prominent cases Dresden and Leipzig.

The city of Zwickau is among those not so well known examples of East German shrinking cities. It is the fourth largest city in the state of Saxony in Germany and located in the metropolitan region 'Mitteldeutschland' in proximity with the cities Dresden, Leipzig and Jena. Zwickau's former growth and prosperity were related to coal-mining, manufacturing and development of the automobile industry. Today the city's population extends to 93,750 inhabitants (Bertelsmann Stiftung 2012a).

*Kaiserslautern: Post-industrial transitions*

The city of Kaiserslautern is located in the German state Rhineland-Palatinate, within the district of Kaiserslautern. The city is undergoing economic transformations since the 1970s. Moreover, like most cities in Germany, Kaiserslautern has to deal with the effects of demographic change and an aging population. During the postwar period up to the 1960s the region was prospering due to the high level of industrialization in the manufacturing sector. Today, from an economic perspective, the city is one of the weakest areas in West-Germany with an unemployment rate of 11.2% in the city of Kaiserslautern as of April 2013. The city also ranks number one on the list of the most indebted German cities since 2012. Interestingly, despite the severe economic transformations the city's population remained relatively stable for the last 40 years.

*Flint: Motor-town collapse*

Flint is one of the showcase examples of shrinking American industrial medium-sized cities: according to the local government's website, the town 'was the most publicized example of the effects of the 1970s collapse of the US auto industry on surrounding communities' (City of Flint, 2013). The city is located in the North of the United States, in the state of Michigan within Genesee County, in close proximity to the city of Detroit. In the beginning of the 20th century Flint emerged as an automotive town with General Motors being Flint's principal economic pillar: in the 1970s, GM employed almost half of Flint's population, but ever since the company has downsized jobs in the area by 90% (Badenhausen, 2011).

*Youngstown: A Rust Belt classic*

Youngstown, located in Mahoning County in the state of Ohio, is another typical US example of a medium-sized city affected by industrial decline. Youngstown emerged in the 1800s as an industrial town, based on coal and iron processing. From the early 1900s, the industry base shifted towards steel processing and Youngstown became a major site for steel production in the US during the first half of the 20th century (Aley, 1950, p. 43), followed by a downturn from the 1950s on.

## 3.2 The shrinkage context: Trajectories of population development and recent paths of decline

Based on the investigation of the shrinkage context (see table 1), the following paragraphs will display paths of shrinkage in terms of demographic change, post-industrial transformations, and perceptions of shrinkage for the four cases.

Population growth and decline of all four case study cities is compiled in table 2, which is followed by a description of the cities' individual paths of growth and decline. Major turning points in population development are highlighted in bold. For all cities a turning point in post-industrial development can be detected in the range 1950s to 19606. For Zwickau a second major turning point can be traced with the German reunification around the year 1990.

Table 2: Population development of the case study cities

| **Zwickau** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1900 | 1910 | 1920 | 1930 | 1940 | **1950** | 1960 | 1970 | 1980 | **1990** | 2000 | 2010 |
| Population* | 55,8 | 73,5 | 73,5 | 71,7 | 85,4 | **138,8** | 129,1 | 127,0 | 122,1 | **123,6** | 103.0 | 93,5 |
| **Kaiserslautern** | | | | | | | | | | | | |
| Year | 1900 | 1910 | 1920 | 1930 | 1939 | 1950 | 1960 | **1970** | 1980 | 1990 | 2000 | 2010 |
| Population* | 48,3 | 54,6 | 56,2 | 61,5 | 65,8 | 62,7 | 86,2 | **99,6** | 98,7 | 99,3 | 99,8 | 97,5 |
| **Flint** | | | | | | | | | | | | |
| 122,1 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | **1960** | 1970 | 1980 | 1990 | 2000 | 2010 |
| Population* | 13.1 | 38.5 | 91.5 | 156.4 | 151.5 | 163.4 | **196.9** | 193.3 | 159.6 | 140.7 | 124.9 | 102.4 |
| **Youngstown** | | | | | | | | | | | | |
| Year | 1900 | 1910 | 1920 | 1930 | 1940 | **1950** | 1960 | 1970 | 1980 | 1990 | 2000 | 2010 |
| Population* | 30,6 | 79 | 132,4 | 170 | 167,8 | **168,3** | 166,7 | 139,8 | 115,4 | 95,8 | 82 | 66,9 |

* rounded in thousands

Sources: for Zwickau: Bertelsmann Stiftung 2012b; for Kaiserslautern: Stadtverwaltung Kaiserslautern 2012, p. 30; For Flint and Youngstown: US Census Bureau 2012;

*Zwickau's shrinkage context*

Zwickau's population growth was attributed to times of industrialization. In the 1950s, the flourishing coal mining industry led to an in-migration of people to the city, and the population peaked at a number of 135,751 inhabitants in 1955 (Stadt Zwickau 2006, p. 19).

But, the population of the city has changed in recent history. Main factors of shrinkage in Zwickau are the structural transformations of political and economic nature, which most East German cities experienced after German reunification in 1989/1990. Before 1989, the loss of population was induced by economic structural changes in the mining industry and the supporting branches. Due to the political and economic system, the outmigration was not as extreme as in the years after the reunification but still significant. Only two months after the opening of the border, 2.835 people or 2.4% of Zwickau's inhabitants had left the city. By the end of 1990 more than 7.000 people had out migrated from Zwickau. During the following ten years, a tremendous loss of population took place until the year 1999 (see table 3).

The increase in population in 1999 of 5.4 % to 104.146 inhabitants was only achieved by incorporating surrounding villages and towns into the city of Zwickau and its administrative borders (Stadt Zwickau, 2006, p. 19). However, this did not change the main trend of population decline the city has to face. Based on population figures of 2007, forecasts estimate a number of 84,860

inhabitants for the city in the year 2020, and only 75.990 in 2030, which resembles losses of 20.7% (Bertelsmann Stiftung 2012b). In addition to economic decline, suburbanization to surrounding towns and villages set in. These changes were motivated by out-migrating younger residents looking for new job opportunities in West Germany, and new chances of a suburban lifestyle.

The alertness for shrinkage turns out to be high as Zwickau is embedded in the East German context where vast transformations placed shrinkage on the federal agenda. In relation to the typology in figure 1, shrinkage is accepted.

*Kaiserslautern's shrinkage context*

The city's population growth becomes significant after 1850, when industrialization brought new jobs in the manufacturing of textile, machines and metal processing (Statistisches Landesamt Rheinland-Pfalz 2012). Today almost all companies involved in Kaiserslautern's growth of population during industrialization are either bankrupt or have significantly reduced their number of employees.

In the year 1969, Kaiserslautern incorporated several smaller municipalities, which led to a growth in population over 100.000 inhabitants giving it the administrative status of a major city (Stadtverwaltung Kaiserslautern, 2012, p. 30; Stadt Kaiserslautern – Chronik 2012)[1]. Structural changes started to take effect during the 1970's. After that the city slowly started to lose inhabitants (see Table 4). Compared to other industrial cities, Kaiserslautern was not affected by an immediate loss of jobs like e.g. cities in the Ruhr Area. The reason for this can be seen in the fact that Kaiserslautern's industry showed a stronger diversification to the branches of textile, car manufacturing, and consumer goods.

Kaiserslautern is affected by both industrial transformations and demographic change. The perception of shrinkage is somewhat given, though not largely accepted. In relation to figure 1, the perception of shrinkage can be labelled as 'observation without acceptance'.

*Flint's shrinkage context*

From 1900 until 1930 Flint's population increased from around 13.000 to more than 150.000 people demonstrating the enormous pull factor the developing automotive industry presented. Since the 1960s, however, a constant loss in population can be observed (see table 5).

Unemployment rates in Flint range at 9.1%, a figure near the present Michigan state average of 8.5%, yet they are exceeding the US average of 7.6% (US Bureau of Labor Statistics, March 2013). Apart from unemployment, major problems in Flint involve high vacancy rates and depopulated urban areas, safety risks for citizens (e.g. Manzella, 2011) and a diminishing tax base for basic municipal services such as police or garbage collection (Janz, 2011).

The city of Flint does not only showcase an example of a city depending on one industrial branch, but also one of a corporate town, tied to the fate of one single company. With General Motors downsizing, the city was destined to share this company's misfortune. Genesee County however, has not suffered a similar loss of population over the last 30 to 40 years. The rapid decline of the city is also attributed to urban sprawl and suburbanization processes accompanying the industrial shrinkage (Gilotti & Kildee, 2009, p. 141).

After decades of denying shrinkage, the city has reached a point of acceptance of shrinkage as a fact to be dealt with actively when looked at the typology of perceptions in figure 1.

[1] This status allows the city to receive a higher share in funding from the state, in return the city is required to provide services for the city and its surrounding areas in terms of culture and education, which is one of the reasons for the high debts of the city.

*Youngstown's shrinkage context*

The wave of plant shutdowns which started in the late 1970s entailed a loss of 50,000 manufacturing jobs in the city of Youngstown – equating to over one third of the city's population at that time (Linkon & Russo 2002, p. 131). Moreover, this represented a loss of $414 million in personal income and of 33-75 percent in school tax revenues (Bruno, 1999, p. 10). Current unemployment rates in Youngstown and surrounding suburban areas are as high as 8.4%, well over the Ohio state average of 7.0% and higher than the US average of 7.6% (US Bureau of Labor Statistics, March 2013). The city's population peaked in the 1950s, from then on it declined continuously (see table 6). In the year 2009 around 4.500 buildings and 22.000 sites were abandoned leading to the highest rate of vacancies in the USA (Mahoning Valley Organizing Collaborative, 2011, p. 13).

Youngstown's shrinkage problems sound familiar, deriving from unemployment and out-migration and they induce high crime rates and hence a negative city image (Linkon & Russo, 2002, p. 235). Social segregation is increasing and land management due to under-populated areas and under-used infrastructure places a challenge. Moreover, the provision of both private and public services is threatened due to a narrowing tax base.

Youngstown was among the first US cities to publicly announce that shrinkage is accepted as a fact. Perception and awareness of shrinkage in terms of the typology in figure 1 are high.

### 3.3 Policies and planning tools for dealing with population decline and shrinkage

This section presents the planning toolset applied in the case study cities in connection to the typologies of strategies presented in figure 1: expansive strategy, maintenance strategy, planning for decline.[1]

*Zwickau*

The city government recognized shrinkage as a challenge and fait accompli for the city of Zwickau, which is expressed in the range of strategies and planning tools applied in the city.

Maintenance strategy: Image and attractiveness

As for the strategies until 2002, the city focused on increasing its attractiveness by renovating buildings in the centre, in particular in order to strengthen the retail sector. Despite these efforts, including the development of an inner city mall in the year 2000, large area retail businesses opened up on the edge of the city by the end of the 1990's. As a reaction to the ongoing sprawl, the state of Saxony passed a new law banning the development of malls and retail business on the edge of cities in the year 2012, yet most edge city-type business parks had already been created until then (Interview with Mr. Spanger, IHK Chemnitz, Regionalkammer Zwickau, September 6, 2012).

The inner city developments were also supported by the state of Saxony after Zwickau's participation in the contest 'Ab in die Mitte! Die City-Offensive Sachsen' [engl.: Back to the centre! The Saxon City Initiative] in 2006. Within this program the city tried to further strengthen the inner city by establishing public services like a library and a new city hall. Despite the efforts to strengthen the inner city particularly for retail businesses, developments like malls on the edge of the city make it difficult to achieve positive results.

Planning for decline: Right-sizing

[1] The type ‚decline as vicious circle', which is also mentioned in figure 1 does not apply to the selected case study cities.

Due to ongoing suburbanization and high vacancy rates in the older settlement areas, in particular pre-fabricated housing (Plattenbausiedlungen), strategies shifted towards demolishing these buildings and as a result towards adapting to a smaller and compact city model. Before the federal program 'Stadtumbau Ost' (Rebuilding the City – East) started in 2002, more than 16.000 vacant housing units had cropped up in Zwickau. The main target for the federal program was to demolish vacant buildings and stabilize the real estate market as well as reduce maintenance costs for underused infrastructure. In 2010, approx. 5.060 housing units were demolished in Eckersbach and approx. 1.900 in Neuplanitz, the areas with the highest vacancy rates. In general, the East German right-sizing strategies do not only include demolition actions, but also solutions like partial dismantling, which means reducing the height of buildings of five or six floors to two or four floors. In addition, strategies aim at stabilizing older residential areas by improving the social environment, the transformation of vacant areas to green spaces, and reusing some buildings for different functions e.g. as kindergartens, medical centers, or senior citizens' clubs (Bundestransferstelle Stadtumbau Ost, 2012).

Planning for decline: Comprehensive planning strategies

The city tried to develop several plans in order to deal with the aspects of shrinkage; the first one was the integrated urban development concept of 1997. This concept did, however, not succeed in fulfilling its targets as it was lacking a detailed urban strategic plan (Pfefferkorn, 2003, pp. 83f). Another concept was developed in 2006. The 'SEKo ZWICKAU 2020' is an integrated development concept that takes into account not only specific aspects of urban development. In order to deal with the economic and demographic development of the city, strategies and measures have been enacted with regard to demolition of underused structures and to revitalizing the city centre. (Stadt Zwickau, 2006, p. 73). Another plan developed most recently was the integrated urban development concept 2011 'INSEK Zwickau 2025' (Stadt Zwickau, 2012).

In addition, as a result of an estimated vacancy rate of 15% in 1997, urban planners and housing companies arranged a 'Housing Policy Forum' ('Wohnungspolitisches Forum') in May 1997. The results included impeding the development of new urban land-use plans for multi-story apartments and the development of a concept to improve the social environment in existing housing areas.

Maintenance strategy: Substitute industries

The West Saxon University of Applied Sciences of Zwickau (WHZ) was already established in the year 1897. Today it plays an important role as an employer as well as a think tank for the city. WHZ can be considered a small university with only about 5.200 students (Westsächsische Hochschule Zwickau, 2012), yet it is embedded in the city's policy against shrinkage.

*Kaiserslautern*

Expansive strategy: Incorporations

For the last 40 years, Kaiserslautern was able to gain enough people to balance the low birth rate and keep its population on a constant level. Since 1975 the migration balance of Kaiserslautern shows only small differences between around +1000 people and -500 people (Stadtverwaltung Kaiserslautern 2012, p. 32). This was possible because the city of Kaiserslautern incorporated a number of surrounding smaller villages.

Another significant strategy for population increase was tax regulations for secondary residences installed in the year 2009. The new tax regulations made swapping to a status of primary residency more attractive, in particular for students. This encouraged a net growth of almost 2200 inhabitants (Statistisches Landesamt Rheinland-Pfalz, 2012).

Maintenance strategy: Substitute industries and redevelopment

The University of Kaiserslautern was founded in 1970 by the state of Rhineland-Palatinate which brought new employment opportunities to the city and laid the foundation for several economic developments, such as spin off companies or large research centres.

One major factor for employment in the city and in the region was and still is the military presence by US and French forces installed after World War II. Military bases, however, are continuously phasing out, and the French forces are no longer present at Kaiserslautern. The reduction of their military bases caused not only job losses and a loss of purchasing power, but at the same time it opened up new development opportunities for the city. Beginning in 1997 a former military site was developed as a new business centre on the edge of the city. The redevelopment can be seen as a success, as today there are about 90 small businesses located in this area. Many of them are spin-offs from the Technical University and belong to the high-tech sector. In total about 3.000 jobs were created. However, military downsizing is quite unpredictable, and with the latest cutbacks in the US military budget it is likely that further reductions of employees on the remaining military bases will take place.

Another substitute industry area was established in 2002 on the site of a former fright rail terminal close to the university campus. This redevelopment project was aimed at further strengthening the scientific potential of the city, and large research facilities were established here, which was part of a national competitive process of research excellence. These developments were facilitated by the scientific reputation and networks established by the University of Kaiserslautern (WFK 2012, p. 12).

Nevertheless it must be noted that the overall success in managing structural change stands in sharp contrast to the high rate of unemployment in Kaiserslautern and the entire region. Although a large number of jobs were created in public and private services, the job losses in manufacturing account for the enduring unemployment (IAB Rheinland-Pfalz-Saarland, 2007, p. 11).

*Flint*

Maintenance strategy: redevelopment and small enterprises

By the end of the 1970's the city's development focused on private investments supported by federal funds in form of Urban Development Action Grants (UDAG) and Community Development Block Grants (CDBG). Flint was successful in receiving federal funding for certain projects, mainly focusing on downtown redevelopment with private investment. However, the majority of these projects could not achieve their intended goals (Gilman, 2001, p. 57). During the 1980s the city turned towards supporting small businesses in order to improve the desolate job situation. These efforts were partly successful, but the number of jobs which were created was far too small compared to the ongoing layoffs in the automotive industry (Gilman, 2001, p. 58).

Planning for decline: land banking

Recent efforts concentrate on lank banking as a tool for managing shrinkage. In 2003, Michigan passed one of the most progressive land banking laws in the US, based on the work carried out in Genesee County, in particular the city of Flint. With the tool of the county-based land bank, Genesee County was able to adopt a brownfields redevelopment plan which utilizes a tax increment financing strategy. This enables the Land Bank to redevelop its properties in a highly effective way (Gilotti & Kildee, 2009, p. 144). Before the land bank was in place, abandoned properties were either sold to private investors or transferred to the state of Michigan. Options for the city to influence this process were limited thus hindering a strategic approach to manage the growing number of vacancies (Phaneuf, 2012). With the land bank as the managing institution for vacancies in Flint, the foreclosed properties now offer a chance for urban development instead of being a part of the problem.

Planning for decline: Comprehensive planning strategies

In 2010, the city of Flint received a Sustainable Communities Challenge grant from the U.S. Department of Housing and Urban Development (HUD) for developing a comprehensive master-plan.

The new master-plan was developed in a bottom-up collaborative process involving numerous suggestions by the citizens. The plan proposes several aims capitalizing on Flint's citizens by encouraging small businesses, developing community assets and strengthening neighbourhoods. Based on existing vacancy rates a set of designated place types was mapped out, laying out which areas of the city will remain as built up areas in the future (for residential and commercial uses), and which areas will be designated for right-sizing and tear-downs mainly of residential areas. The latter are declared as 'Green Innovation Areas' where former residential areas will be transferred to urban agriculture. In particular green infrastructure is supposed to strengthen Flint's position as an employment centre on neighbourhood level.

*Youngstown Actions for dealing with population decline and shrinkage*

Expansion strategy: Economic growth projects

After the loss of so many jobs within a small period of time, several projects were initiated to re-gain employment for the local population. There were for example plans to restore the economy by means of investments like a riverboat casino, a NASCAR race track or a car factory, which were intended to bring back jobs in huge numbers. Also a branch of the Pentagon (US Ministry of Defense) was intended to relocate to the city. These plans were, however, not implemented or failed their expectations e.g. in case of the car factory. Also it was not clear if these enterprises would have generated jobs for the local population which mainly consisted of low skilled workers, or if it would have attracted new people to the city better suited for specialized work. This development might in turn have increased social segregation, yet it never materialized.

Maintenance strategy: Substitute industries

The city is slowly shifting towards a service-based economy, while employment is also provided to some extent in the automotive and steel processing industries (Youngstown-Warren Regional Chamber, 2008). The jobs created were however much fewer than the ones lost with the decline of the steel industry and could not combat the rising out-migration.

Substitute industries took a peculiar path in Youngstown. During the 1990's the County turned the increasing crime rate in the area into a business plan and gave permission to build four prisons in the area (Linkon & Russo, 2002, p. 234), three of which are still in use. This development helped to support the local economy and to improve public finances, but the city's image degraded during this process (Linkon & Russo, 2002, p. 235).

Another popular substitute industry is education, and Youngstown followed this path with an expansion of Youngstown University by the end of the 1990's. This development was planned close to downtown in order to support this highly distressed part of the town. Youngstown's downtown improvement, much due to private capital investment, is connected to the relocation of the university campus to an adjacent site and to the setting of the new business incubator. Several start-up companies are located here and interestingly Youngstown was labelled one of the 'best 10 cities to start a new business' by 'Entrepreneur Magazine' in 2009 (Zeller, 2012).

Planning for decline: Right-sizing

Due to the high vacancy rates in the city, the costs for maintaining infrastructure and public services like roads, sewage systems and waste disposal were increasing beyond the city's financial capacities. These situation lead to drastic solutions. Abandoned buildings were bulldozed and unnecessary roads were removed. In addition, people in sparsely populated areas were offered to move, so entire neighbourhoods could be demolished (Christie, 2008).

Planning for decline: Comprehensive planning strategies

A new master-plan (named 'Youngstown 2010'), was initiated in the late 1990s. 'Youngstown 2010' was developed as a process of collaborative planning and strong participation of the local community. The main feature was the agreement that Youngstown would not regain its former population but instead would stay a smaller city in the future. The aim was to improve the quality of life for the current population (City of Youngstown, 2011). Following the efforts of the plan, some neighbourhoods remain stable – benefiting from the Youngstown Neighborhood Development Corporation, an NGO set up under the 'Youngstown 2010' framework. However, the downsizing of larger neighbourhoods remains one of the most problematic aspects of the plan, meeting difficulties with absentee owners as well as opposition from both political actors and residents.

## 3.4 Overview on the four cities' planning toolset for shrinkage

Table 3 shows an overview of planning tools and styles utilized in the case study cities as it was revealed in the analysis and interviews with stakeholders. This is not a display of all planning tools enacted in the cities, but those who are particularly intertwined with shrinkage. The table is derived from the analytical frame for shrinking cities and planning cultures presented in table 1. The purpose here is to highlight the many effects shrinkage has had on planning instruments, styles and culture in the case study cities. From the four cases it is difficult to derive any general trends, however, an active embrace of shrinkage seems to take place in Zwickau, Flint, and Youngstown.

Table 3: Overview on planning tools used in the case study cities

| | **Zwickau** | **Kaiserslautern** | **Flint** | **Youngstown** |
|---|---|---|---|---|
| **Financial tools** | | | | |
| Local tax incentives for secondary residences | - | + | - | - |
| Federal funds: | | | | |
| *'Hardest Hit Funds' for demolitions* | - | - | + | + |
| *Federal 'We can't wait' initiative* | - | - | + | + |
| *'Stadtumbau Ost' [Rebuilding the City East]* | + | - | - | - |
| *'Social City'* | + | + | - | - |
| **Urban and regional development strategies** | | | | |
| Brownfield management and conversion | - | + | + | + |
| Substitute industries-> high-tech; university spin-offs; 'eds and meds' | + | + | + | + |
| Urban gardening and green infrastructure | - | - | + | + |
| Collaborative and participatory approach as planning strategy | (+) | - | + | + |
| Coping strategies/flagship projects: e.g. casino, prisons; downtown mall | - | + | - | + |
| Modernise public transport systems; facilitate car parking | + | - | (+) | - |
| Reuse buildings for different functions (kindergarten, medical center etc.) | + | - | + | - |
| Integrated urban development concept | + | - | + | + |
| Revitalization policies | + | (+) | - | (+) |
| **Planning law; legal instruments** | | | | |
| New masterplans | (+) | - | + | + |

| | | | | |
|---|---|---|---|---|
| Law for banning the development of malls/ retail on the edge of cities | + | - | - | - |
| **Urban design; urban fabric** | | | | |
| Right sizing: demolitions of housing and infrastructure | + | - | + | + |
| Increase attractiveness by renovating buildings in the centre | + | - | + | + |
| Redevelopment of vacant land | - | + | + | - |
| **Communication and participation** | | | | |
| Housing companies; private property owners take part in planning process | + | - | + | (+) |
| Public involvement in decision-making processes | + | - | + | (+) |

Source: own design 2015

## 4. Conclusions

This paper presents a starting point for identifying changes in planning styles and tools when faced with shrinkage based on an analytical frame. While the four cases display insight in similarities and differences of shrinking cities' planning styles, the authors are well aware that – based on their specific paths and localities – the four cases can only represent a short glimpse of the situation shrinking cities in Germany and the USA. Nevertheless, they help to better understand the shrinking cites phenomenon which might in turn lead to further developing innovative ideas for dealing with shrinkage.

In terms of the individual cases, the following observations could be made:

Zwickau

Only a few years after the German reunification, Zwickau's government realized that the situation would not improve and out-migration as well as strong economic competition will be the future trend. Zwickau's planning style applied the brakes to growth oriented planning and focused on adapting to a smaller footprint. For Zwickau, right sizing seems to be a major factor in combating shrinkage, as well as comprehensive and strategic planning. In addition to local strategies the city's administration recognised that in order to keep up with the growing competition also with neighbouring cities of similar size, it is important to be part of a larger network of regional, national and even international partners.

Kaiserslautern

The city of Kaiserslautern is an exceptional case because – despite the loss of jobs and the increasing influence of demographic change in Germany – the number of residents remains stable in this city. One possible explanation might be that in general the German system of unemployment benefits reduces the pressure to find a new job in a short time. In addition the city of Kaiserslautern provides a large amount of public services while living costs are comparably low. Both aspects could be the reasons why people stay in this city even when unemployed. But, the high level of service provision is the reason for the soaring debts the city administration has to face. For the future development of the city it will be important how the chances and risks of further downsizing e.g. of military bases can be utilized for the urban and economic development of the city, and if and how former industrial areas can be redeveloped.

Flint

The example of Flint demonstrates the vulnerability of cities with a mono structured economy. Like in other cities the somewhat unexpected decline of the leading industry placed city officials and the population in some kind of 'structural shock'. Today, planning for decline is the key, where right sizing and redeveloping residential neighbourhoods is essential for Flint's future development path. The change of legislation in favour of land banking offers a radical yet feasible approach for dealing with the large changes in the urban fabric. In addition it becomes clear that the city is embracing its new and smaller footprint: With the ongoing process of implementing the new master plan, Flint has at least a new perspective for its future development.

Youngstown

Much as the path of Youngstown has been praised for being realistic, it shows the struggle over the years to adjust to a smaller footprint. Now that this insight has been delivered, the city can embrace new paths of development, some are experimental, but based on collaboration and serving Youngstown's community and neighbourhoods. In the long run, growing smaller might be the only chance to regain liveability for a city such as Youngstown.

Comparative reflections on the cases and lessons learned

All of the examples showcased in this paper demonstrate that industrial transformation affects manufacturing towns to a large extent, both in Germany (East and West) and in the USA, inducing unemployment, housing vacancies, and population losses – the usual downward spiral.

When it comes to shifts in planning, all of the cases show that substitute industries play an important role, although they can differ from location to location: today high tech, prisons, education, urban farming and others are the new pillars of the economy. In fact, the presence of a university proves to be a strong motor for development as demonstrated in Kaiserslautern, Zwickau, Flint, and Youngstown.

Moreover, all of the cities have meanwhile applied some sort of a comprehensive planning strategy in order to offer a vision or guideline for future development, but also as a basis for community building. Still it appears that redeveloping vacant land is probably the main opportunity for shrinking cities to adapt to past and future challenges. This might be facilitated by tools such as land banking, or comprehensive planning strategies.

When looked at the types of strategies to cope with shrinkage, most cities (Zwickau, Flint, and Youngstown) have found their way past the phase of ignoring shrinkage and – except for Kaiserslautern – are in an intermediate state of maintaining the urban fabric and actively planning for decline. For these shrinking cities it is a fact that planning has changed to a dramatic extent from growth as the main focus to reusing abandoned land and managing vacancies. Yet, due to the large extent of economic, social and urban fabric related problems, shrinking cities' challenges will be intertwined with the cities' planning and development paths as long term phenomena.

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# The Role of Networking, Innovation and Creativity in Social Responsibility to Connect Urban and Rural Environment

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***Abstract***
*In the changing world, urbanized areas and their growing population show us emerging necessity of the improvement of their social responsibility. Reaching towards this kind of civic responsibility may be carried out through the increase of networking, innovation and creativity support in the spatial planning theories and practise at the local level. Various bottom-up movements and participatory tools for engaging local people into the neighbourhood community life might help improve diversity and strengthen social responsibility of communities and individuals. This paper aims to discuss the potential of using social capital of local communities, which is inherently connected to the space and its quality, to foster local sustainability.*

*Social capital may be expressed also by the presence and activity of different groups and individuals, including those called "urban gardeners". Urban gardeners (or farmers) are focused on local production of food, largely for local consumption. This contribution is based on the knowledge on guerilla urbanism, community gardening, food production concepts in the urban areas and recent research of Andres Duany on agrarian urbanism. According to Duany, agrarian urbanism opens up the whole new perspectives on the role of community and considers the potential to shift leisure time activities into the commitment to the local sustainability. However, this study also attempts to extend prior research on agrarian urbanism by examining possible innovative ways of using vacant and underused spaces, such as brownfields, for the implementation of the "agrarian urbanism concept" into the planning practice.*

## 1. Introduction

Community gardening became a popular leisure time activity in the cities around the world. Participation in urban community gardening gives participants a full-fledged alternative experience in food production, even with limited time and space conditions. American Community Gardening Association defines community gardens as any piece of land, which is collectively gardened by a group of people. According to various studies and researches, community gardening provides not only experience in food production, but has also numerous positive health, social and environmental effects. Potentially, community gardening could also affect the way communities think and perceive food, environment and health (Frumkin 2005, Conradson 2005, Hale et al. 2011). As Michael Pollan argues, food production of the 21st century must change. Technologies such as food preservation, transportation and arching over seasonal and regional food production modified the relationship between food, culture and society (Pollan 2011). Community gardens are often viewed as one of the strategies, which may improve sustainability of urban environment as well as improve health and affect lifestyle of individuals. More than half of world´s populations lives in cities, which opens up a new perspective, particularly on involving society – communities, on food production in urbanized areas. Andres Duany´s concept of agrarian urbanism is one of the most beneficial methods to develop and dwell on land. Rather than agricultural, agrarian urbanism involves society into food production

and processing (Duany, 2011). This paper aims to discuss the possibility of implementation of larger-scale community gardening in the capital of Slovakia, Bratislava, with perspective of future transformation towards agrarian urbanism. Bratislava has different relicted areas, underused buildings, unused land or building gaps, which are potentially suitable for implementation of such strategy. These may become a component of urban food system in the form of community gardens.

## 2. Health and social aspects of community gardening

Social cohesion and informal social control are two major preconditions of collective efficacy. The result of solidarity, mutual trust between community members leads to the environment, where individuals are able to take action and follow the same goals together. (Sampson, et.al., 1997; Teig et al. 2009; Jacobs, 1961) We assume that community gardening may play significant community-defining role, if supported and applied widely in cities. Community gardens support social inclusion and positive social and psychological effects, which lead to healthier society (Hale et al. 2011). Moreover, community garden researches show increase of collective efficacy, neighbourhood attachment, and strengthened sense of safety. They also foster environmental knowledge, connect people and create emotional connections to the garden. At the local level, community gardens and the gardener experience provides a great opportunity to connect sustainable and productive landscape within the urban food environment (Hale et al. 2011; Teig et al. 2009).

Community gardens support local sustainability of cities and improve health of their residents. Apart from their race, age, ethnicity, social status or income, gardening supports diversity within local communities and also within greater national, or multinational movement of community gardeners. This social movement is a part of sustainable food production, which reaches also to people outside this community. Community gardeners also influence local and national policies, mainly in supporting healthy and active lifestyle and use of vacant spaces (Teig et al. 2009; Hyens, 1996; Armstrong 2000). Healthy and sustainable landscapes, to which belong also community gardens, constitute of the relationship between physical and social structures. Biological and environmental factors are meant by physical structures as well as manmade objects are meant by social structures, e.g. political, economic or cultural factors. Connecting food, environments and health through emotional, spiritual and value-driven experience is a challenge for designing places that connect individuals and shape communities (Cummins, et al. 2007; Hale et al. 2011). For planning and supporting sustainable cities it could be crucial to plan urban gardens for community activities based on these experiences.

Donna Armstrong´s survey of 63 community gardens grouped under twenty community garden programs in upstate New York resulted in the description of numerous benefits of gardening:

- Improved social connections, raising awareness and activity of local policy
- Interactions between gardeners´ groups through different programs
- Identification of children with cultivated land
- Participation also of lower income households
- Stronger community cohesion – recognition of people on the streets
- Higher knowledge about local actors – easier action initiation process
- Social control of the neighbourhood
- Landscaping attempts not only on the community garden
- Establishment of neighbourhood organizations
- Establishment and maintenance of parks and playgrounds (Armstrong 2000)

## 3. Urban and environmental aspects of community gardening

Community gardens are usually defined as any piece of land gardened by a group of people in different locations. Community gardens are very flexible and adaptable to different conditions. From spatial planning point of view community gardens can be classified by different criteria, such as location, area, connection to public/ private objects, ownership, and type of production:

- Location: urban, suburban, rural settlement
- Area: individual plots, mid-sized communal plot, large plot for urban agriculture

- Connection to objects: kindergartens, schools, hospitals, community centres, churches etc.
- Access: opened, semi-public, semi-private, private
- Ownership: public, private, unknown
- Type of production: ecological, permaculture, limited use of chemical fertilizers
- Production for: individual consumption, community, youth, local farmers´ market
- Support received: city, community budget, none etc.
  (Kaplan, et al. 2005)

Community gardens often create an environmentally sustainable alternative to the conventional rural agriculture. Gardeners grow flowers, fruits, vegetables and herbs to connect back to the nature and enjoy gardening as relaxing leisure-time activity (Kaplan, et al. 2005; Teig et al. 2009).

## 4. Challenges and perspectives of community gardening in Slovakia

According to Michel Pollan, it is necessary for our food production process to change, and this change should be made by our communities. Gardening communities might become an important part of the shift towards sustainable local food production.

Local food conditions are strongly affected by the way food is produced, transported to the shops/markets and finally distributed to the consumers. Community gardens may serve as one such landscape and are especially relevant in urban settings where residents, especially children, often lack experience with the fundamental processes associated with growing food (local farms, gardens). They are also connected with the lack of opportunities to purchase food from alternative, healthier and more personal, sustainable sources (farmers' markets, community-supported agriculture, small-scale grocery venues, food cooperatives) (Brown et al. 2000)

Challenges and perspectives in Slovakia:

- Limited research done yet (mapping of vacant spaces)
- Number of vacant/ unused plots in cities
- Brownfields as potential space
- First successful examples: community garden Sasinkova, Bratislava – Old Town, community vine yard and garden Pionierska, Bratislava – Nové Mesto
- Missing complex strategy for public spaces and legal support
- Missing support instruments for attracting gardeners (passportisation of available plots, clear rules,
- Promotion for land owners – usual fear of something new (gardeners will "stay forever", fear of plot degradation, administrational difficulties…)
- Transition of our cities
- And many others.

## 5. Conclusions

Urban environment can have positive effects on creation and growth of communities as they have the opportunity to build a local identity and a sense of localism around a certain space. Community gardens can have a huge impact on this process as well as on the quality of urban life beginning from producing fresh food to strengthening neighbourhood bonds. It can also have positive impacts on distressed neighbourhoods where vacant lots can be converted into community gardens or community green spaces and these improvements can have an effect on residents´ perception of safety outdoors, reduction of social problems and cultivation of social responsibility.

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# THE ROLE OF THE ARCHITECT AND HIS DECISION-MAKING POWER IN THE TRANSFORMATION PROCESS OF SHRINKING CITIES. LEARNING FROM TWO FRENCH EXPERIENCES.

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## Abstract

*In France, the phenomenon of shrinkage is particularly visible in old industrial cities and in small cities and villages in rural regions. The impact of this process on lands, buildings, uses and landscape asks local stakeholders to act and architects to adapt his thought of space and project at this new urban condition. Until now, the architect answered commands which integrated in urban policies for revitalizing the territory, transforming the image of the city and attracting new populations and new investors. In this way, some cities developed flagship projects and invited often a "starchitect". Today, with more knowledge of the process, local stakeholders search new alternatives to transform the urban environment for maintaining inhabitants and improving their wellbeing. The architect has an important role in this new position. This communication will focus on the importance and the influence of the architect in the decision-making power of the project ownership to transform the urban fabric and to propose new forms of collaboration between local stakeholders and inhabitants. Two characteristic projects will be study: the project Îlot-test Franche-Amitié at Saint-Etienne and the urban study Habiter les centres-bourgs proposed by the Parc Naturel Régional of Livradois-Forez.*

## 1. Introduction

### *1.1. The issues of urban transformations in shrinking cities: between urban policies and architectural and urban interventions.*

At the beginning of the XXIth century, being interested in shrinking cities and their urban evolution participates in the improvement debates about the adaptability, the reversibility and the resilience of the city. How to continue to transform the city, growing or shrinking, when the global system is questioned after successive crisis (economic, social, political, environmental, etc.)? How urban planners and architects contribute?

The shrinkage phenomenon transforms the city spatially: lands, buildings and infrastructures, uses and landscapes. A diversity of abandoned spaces appears on the same territory: flats, buildings or plots, public spaces or urban infrastructures (Oswalt, 2005). Wastelands can be industrial, residential, commercial or still agricultural. They are in old (city centre) and suburban fabrics, in neighbourhood of blocks of flats, or in villages centres in rural spaces. It exists a new form of porosity in the city between the abandonment of spaces of big dimensions and spaces of small size, which are multiplying and integrated in the urban fabrics. It is particularly visible in Europe (Vigano, 2012). When the built, the plot and the public place are not occupied and maintained, their process of degradation tends to accelerate. The landscape is quickly transformed and the man has to "live" with these abandoned spaces (Anizon, 2010). The perception of empty can vary according to urban morphology. This distinction is perceptible between European and American cities (figure 1). The spatial impacts of this process accentuate or allow several urban issues (social, environmental, security, hygiene, etc.) to

emerge. For example, abandoned spaces can become impassable, participating in the spatial fracture of the city and the isolation of individuals. Abandoned buildings often become place of squat and traffic; and their fragility can threaten nearby inhabitants and the housing (Oswalt, 2005).

Figure 1. The different perceptions of the vacancy. Detroit (Chalmers district), Liverpool (Anfield district) and Saint-Etienne (Tarentaize-Beaubrun-Severin district) between 2013 and 2014.
Source : google street view / google.maps.com

In front of these numerous urban issues, urban planners and architects have to act. This new urban condition is an opportunity to think the city and urban environment differently. However, the climate (difficult and uncertain) and the constraints, linked to demographic, political, socioeconomic and spatial changes, might complicate the urban intervention. The state of the urban environment, -the quality and the degradation of existing building, plots and grounds-, might affect the choice of orientation of the project and its costs. The instability and the uncertainty of the socioeconomic context have to be integrated, but they can impact on the implementation of the project and its sustainability. The capacity of action is often limited because of the lack of human and financial means of the project ownership (public, private or inhabitants) and the public authorities (ex.: depts, bankrupt). It restricts possibilities of the project management to intervene.
Practitioners have to confront with another difficulty: the capacity to think the project and its process. Current tools and methods were developed to answer urban growth and not to this specific phenomenon of shrinkage. Constraints and problems due to the shrinkage ask to adapt themselves and new tools are necessary (Oswald, n.d; Rienets, 2006; Ryan, 2012). For example, the big scale of the vacancy asks to requestion the land management and its tools especially when owners left or when public authorities are little means. It is an essential aspect for the transformation and the reorganisation of shrinking cities, but it is a real difficulty for local authorities.

Today, urban planners and architects with public stakeholders think together about the future of their cities and alternatives approaches to the classic system. The relation between various stakeholders seems essential to find solutions and to realise projects.
This paper will focus on the role of the architect in the definition of new tools to adapt the shrinking cities and his influence on the decision-making power of local authorities. How does the architect participate into thinking of urban strategies ? How does he make the connection between urban policies, the urban strategy and the architectural intervention? Has he a particular influence? How does he lead the project?
Three hypotheses will be explored:

- The architect would highlight the architectural and urban qualities, the potentialities of the territory which was until now depreciated. Like for “urban design theory for the shrinking city ideal”, he “will, by necessity, have to value and incorporate these attributes” (Ryan, 2012). He would allow to change the look of local stakeholders and inhabitants with his specific analysis and knowledge on the site;
- In front of difficulties to lead the project, the architect would propose new forms of collaboration between local stakeholders and inhabitants to facilitate the realisation of project, in short and long term;

- With his operational approach, the architect is capable to think about new ways and tools to manage lands, but also to test it *in situ*. This approach would help owners and project ownerships for the evolution of the city and to anticipate complex situation. Furthermore, it is an opportunity to develop new options for enriching documents and tools of urban planning.

The architect give an essential support of the project ownership at the between the urban strategy and the urban and architectural interventions.

*1.2. Case studies and method*

To explore these questions, the context of France is interesting. The first remark is that it exists more and more studies and projects treating of issues of shrinkage, in urban and rural region. The second element is that there is a participation and an investment of public authorities in most cases. This choice is also due to my knowledge of the project practice in France, further to my training of architect and urban planner. This work has allowed myself to initiate a reflexion on the condition of the architect and the development of specific roles in front of current cyclical crisis in the profession.
We will analyse two experiences in cities declared in shrinkage by European researchers and statistical datas when projects were started. We have the urban project, th*e Îlot-test Franche-Amitié* at Saint-Etienne, and the study *Habiter les centres-bourgs* (Living in center-villages) proposed by the Parc Naturel Régional of Livradois-Forez.
For the analysis, they exist research documents for understanding the process of shrinkage and to explain urban policies in this context. About the project, the analysis made with documents of project presentation (websites, brochures, etc.) and with interviews of architects, teams of project management and local stakeholders when it was possible. These discussions helped to have information, which is not accessible or visible in the communication of initiatives, by the architect or by the municipality. It does not exist currently scientific documents about projects presented here.

Firstly we shall see the current positioning of the architect in reflections on the shrinkage in the international research and in the practice of the project. Then, we shall observe the role of the architect in the passage between the urban strategy and the architectural intervention. We will try to understand why he takes a more and more important place in the assistance for the project ownership and the community project management. This evolution is particular in the case of shrinking cities. To finish, we will explore this question in the specific case of France.

## 2. The architect, stakeholder involved in the reflection about the urban shrinkage since the 2000s.

*2.1. A noted involvement in the international research.*

Works of research and scientific debates about the phenomenon shrinkage are linked in general to the fields of geography, sociology, urban planning or political sciences. Many studies interpret mechanisms of shrinkage, but they analyse urban politics too (Großmann and al., 2013; Cunningham-Sabot and al., 2014) like: the governance, the economic development, the management of urban infrastructures (water network, public road network, etc.) or programs of housing and urban renewal.

Architecture, as urban design, is little visible in the international researches until now, in proposed topics in symposium and research networks. The architect can give however a specific vision of space. It is an element on which the architect is presently called to intervene (Corboz et al., 2009). The relation is different from the one of the geographer, be it in methods of analysis, tools or the way of intervening. Even if the architect is trained to intervene in contexts of growth, he is also in capacity to analyse the urban shrinkage. He leans on concrete data, in particular from his field experiences, for

formulating the project and imagining the future. Another track of the research is the capacity to reflect on the transformation of shrinking cities through the process of project and its analysis. To conclude, the architect is able to bring complementary knowledge in definitions, in descriptions of cases studies, in the way to intervene at the scale of plot or block, or in prospective approaches.

One of the first to take an interest in urban and architectural aspects was the research team of the architect Philipp Oswalt, in the framework of the German program *Shrinking City*. One part of their work was to collect experiences in the world, which dealt with the management of the urban shrinkage, as well in term of urban policies and urban actions by the architects, as initiatives of inhabitants. All the work was mediatized between 2004 and 2006. Further to the study, a web site, a set of books and an exhibition was created. This exhibition was presented in Germany, in Europe and in the United States. A striking event was its installation at the 10th International Biennial of Architecture at Venice in 2006. In the fame of this event, numerous practitioners (architects, landscape-architects, urban designers, urban planners, etc.) were able to discover this work and became aware of the urban phenomenon.
Today, the interest for this topic among young researchers in architecture is also to underline and is beginning to distinguish. This assessment is perceptible with PhD students of the network SCRIN[1], and during training schools organized in 2011, 2012 and 2013 by the European program EU-COST action: TU0803 Cities Regrowing Smaller (Wiechmann, 2009) and the University of Dortmund (Germany). For the last workshop in 2013 entitled *Scenarios 2030 - Possible Intendeds of Shrinking Cities in Europe*, there were 5 architects and 1 landscape-architect among 14 invited students.
In the architectural research in France, the shrinkage in all dimensions still little is object of research, even if some interventions and cases of study are submitted to the debate in specialized French periodicals such as *Ecologik*, *D'A, Archiscopie*, *AMC*, *Les cahiers thématiques : architecture, histoire, conception,* or *Urbanisme* and *Traits urbains*. The case of Detroit is become one of the inescapable grounds for these five last years. Research programs, studies and thesis are developing in different laboratories of architecture schools (ex. : Nantes, Versailles, Grenoble). Works are about questions of ambiances, inhabitant initiatives, architectural projects and masterplans or the urban agriculture and the landscape evolution. Even if this context is interesting, Detroit should not to become the support for generalities on the debate and the research on the urban shrinkage. The multiplicity and the diversity of spaces in shrinkage ask to the architect to adapt in every situation.

### *2.2. A fertile ground for experimental reflections about the architectural and urban project.*

For more than ten years, at the international scale, shrinking cities has become new playgrounds for architects, urban planners, artists or inhabitants for exploring and testing alternative urban experiments. It exists a diversity of projects at various scales and we can see that in some specific books as: *Shrinking cities 1, International research* (2005), *Shrinking cities 2, Interventions* (2006), *The unreal estate guide to Detroit* (2012) and *Urban catalyst: the power of temporary use* (2013). Some projects and calls of ideas are open to debate.

One can note that shrinking cities became a veritable fertile ground for numerous architectural projects since the last crisis of 2008. The highlighting of more and more cities in shrinkage[2] and the images of empty plots indeed had an effect of electric shock in the profession. This event also accelerated an already present process where "many young architects, themselves affected by the crisis in the building sector, have taken on this new role and turned their misery into a professional challenge, exploiting the possibilities of low rents and empty spaces to set up small enterprises or cultural

[1] SCRIN : Shrinking Cities Research International Network
[2] In the media as in the scientific literature, like Leipzig in Germany or in United States (Detroit, Pittsburgh, Buffalo, Cleveland, etc.).

initiatives" (Rienets, 2006). Shrinking cities, like all territories in crisis, the post-disaster reconstruction ask the architect to "include the ability to do more with less"(Aquilino, 2011) and to define the construction neither "as the goal of architectural/urban planning action" but as "the starting point" (oswalt, n.d.). All kind of vacant spaces become the base of the intervention before favouring the artificialisation of new grounds and are questioned: do you need to preserve, to transform, to deconstruct or to recycle? Which reflection to have on plot pattern? etc.
This interest is perceptible through two examples. There is a multiplication of student works in architecture and urban design. The researcher Brent Ryan organized with the MIT different workshops on Buffalo in 2010 and Baltimore in 2011 and 2013. In France, more and more students work for their diploma in architecture about the urban shrinkage. They choose study grounds in France (Thiers), in Germany (Leipzig, Essen), in Japan or in the United States (Detroit, Saint-Louis). By the innovative dimension of propositions, some of the projects are published or awarded. This year, the topic of the European workshop *Oikodomos*[3] is about "contemporary living patterns: growth / shrinkage", with cases of Berlin and Cottbus (Germany).
This trend is also noted for the Europan competition which is recognized by the profession of architect at the international scale. For the two last sessions, Europan 12 (2013) and Europan 13 (2015), the topic is "the adaptable city: inserting the urban rhythms" and it is the occasion to highlight potentials of territories in favour of the urban innovation. The concept of *shrinking city* was presented (Rebois, 2011) in the edition 2013, and there are some selected cities are considered in shrinkage: Vichy and Moulins (France); Wittenberge, Bitterfeld-Wolfen and Gera (Allemagne); or Seraing (Belgique).
All experiences around the world contribute to reflections and debates on the practice of project in territories in crisis and the research in architecture. Some aspects and questions are recurring and we can note for example: the evolution of uses of vacant lands; the reduction of costs to realise the project at different levels (participation of inhabitants; the recycling of materials; the construction site, etc.); the place of architect in the project process.

### *2.3. An opportunity to rethink our urban model?*

The urban condition of shrinking cities re-questions our current urban models (Mateo, 2011) and the approach of development by growth. The evolution of the urban form, of the uses and of the landscape is in the heart of debates. Besides ecological issues and the ambition to reduce the human impact on the territory, to think about these questions in context of shrinkage is an opportunity: everything can be newly define. Some cities use it to think the city more "green" from the demolition of the unused and unhealthy built, and the renaturation of spaces, but these approaches are sometimes distorted for purposes of "urban marketing" by municipalities (Baron and al., 2010).

In more theoretical approaches in specific contexts, the architect contributes at the exploration of new urban models in proposing radical urban strategies.
The team of architects, composed of Rem Koohlaas, Oswald Mathias Ungers, Peter Riemann, Hans Kollhoff and Arthur Ovaska, were the first ones to explore new urban models with the case of Berlin, in the 1970s. For them, the demographic decline is an opportunity to identify vacant spaces and to determine spaces which have to be protected and those to be renatured for forming a *city-archipelago*. This theoretical project was re-communicated in 2013 with the research work of Florian Hertweck and Sébastien Marot in the book *The City in the City. Berlin: A Green Archipelago*. It still is current.
Since, more and more cities experiment new forms of urban strategies and urban policies for engaging the mutation of the city. They can be quoted in different plans and programs. In Germany, the city of Halle is exploring the *compact cit*y (De Gasperin, 2009; Roth, 2011). They are also the tool

[3] Oikodomos is a virtual campus to promote the study of dwelling in contemporary Europe. Different european schools and universities of architecture, urban planning and urban design work together. website : http://www.oikodomos.org

*International Architecture Exhibition*[4] which was used twice by authorities to think the transformation of cities and regions in shrinkage. The first experience was the IBA Emscher Park during 1990s in the Ruhr region. An important part of work was the improvement of the environmental frame and the renaturation of brownfields with the creation of cultural and sports facilities. Between 2002 and 2010, the urban shrinkage was at the heart of the *IBA Urban Redevelopment Saxony-Anhalt in East Germany*[5]. Selected cities served as experimental territories to find alternatives in their re-energization and re-organization. Dessau was the exploration territory to try the concept of *urban archipelago* through the project *Urban Cores – Landscape Zones* (Wiechmann et al., 2013). In the United States, the rightsizing of the city is more often experimented and especially for "greening" vacant spaces (Schwarz, 2012). Perspective projects like *Youngtstown 2010*[6] and the *Detroit Future City Strategic Framework Plan*[7] are two characteristic examples. In Japan, the project of *Fiber City 2050*[8] for the metropolis of Tokyo proposes a different approach of American cities in focusing on the urban development and the concentration of inhabitants on urban fibers as existing green armatures and railways.

On the short term, these examples offer various ways to adapt the city of human (demography) and urban realities (vacancy). It is an opportunity to think about to have a better urban management, to reduce artificial spaces and to renature grounds, or still to preserve the proximity and the social links between inhabitants which are scattered on the territory. In long-term, it might be a veritable impact of way of life. Nevertheless, these urban strategies still have not much impact in the documents of town planning (Ryan, 2012), or in the architectural and urban projects lead by the local authorities.

## 3. From urban strategy to urban intervention: a role of assistance for the architect with different stakeholders more and more marked in shrinking cities.

*3.1. An evolution of the public commission which re-questions the role of the architect in projects.*

Even if the shrinkage are being accepted as a "decisive factor of the evolution to come from territories, societies and activities" by local stakeholders (Baron and al., 2010), alternative urban strategies which integrates this situation (as seen previously - part 2.3.) still are exceptional.
In some cities in Europe, the architect until now answered requests which integrated in urban policies for revitalizing the territory, transforming the image of the city and attracting new populations and new investors (Baron and al., 2010; Cunningham-Sabot, Fol, 2010). The urban strategy was to recapture important brownfields and developed flagship projects (urban projects and public buildings), often linked with the culture (Grésillon, 2011) and with the invitation of a "starchitect". The Guggenheim museum of Bilbao by Frank Gehry was the first example. The "choice of architectural and design about a cultural policy of international scale" and " a new communication of the project on the outside scene"(Nicolas, 2014) made a deep impression on people and the concept was took again. Thereafter, were built: "la Cité du Design" (agency LIN with Finn Geipel) at Saint-Etienne; the Louvre-Lens museum (SANAA); the University Library of Cottbus (Herzog & De Meuron); the Riverside Museum of Glasgow and the Phaeno Science Center of Wolfsburg by Zaha Hadid, etc. In parallel of these initiatives, there are often projects of urban renewal on the existing urban fabric, treating problems of the housing and the management properties and buildings. Architects are generally in front of commissions asking to maintain, to demolish, to recycle building or to product new constructions.

[4] Translation of German *Internationale Bauausstellung,* more famous with the acronym IBA.
[5] The topic was "less is future". 19 cities participated.
[6] wedsite: http://www.cityofyoungstownoh.com/about_youngstown/youngstown_2010/
[7] website : http://detroitfuturecity.com
[8] website: http://www.fibercity2050.net

Since the beginning of 2000s, other projects have been emerging outside these important and mediatised urban and architectural projects. With more knowledge of the process and their capacities, local stakeholders searched new urban strategies and alternatives to transform the urban environment for maintaining inhabitants and improving their wellbeing (Baron et al., 2010). It allows architects to have more liberties and to experiment new ways of thinking the process of project. The architect and the team of project management are important stakeholders on the territory and its transformation. The model of urban strategy marked by cultural policies has begun to be criticized as these architectural flagship projects which can be characterised of "*machines célibataires"* (single machine). Olivier Mongin took over this concept of Marcel Duchamps illustrating architectural objects which are not in relation with its environment (Mongin, 2005). There is a "standardisation" of architectural production. In this continuity of these argument, Jean-Louis Violeau remind that "to design a project (of architecture) means to open a space, and no to try systematically to fill it as try to make it these single buildings" (Violeau, 2013, p.19). In shrinking cities, the analysis shows us that flagship projects are currently disconnected of the obsolete urban fabric and they are not accessible to all the population. It is "disembodied, on the scale of "consciousness" collective, by the construction of a "city branding"(Baron et al., 2010, p. 293).

*3.2. Actual trend in shrinking cities: more and more architects with a role of assistance.*

The current trend in Europe is an evolution of the role of the architect towards the council and the mediation "in interaction with a multitude of partners (State, local authorities, society of planning and developers)"(Bonetti, 2004). We can note this evolution especially in shrinking cities like in Germany or in France. For example, public project-ownerships (ex.: municipalities, regional structures) have little ways to act on their territories. Consequently they will lauch calls for ideas to have several possibilities to act. In France, it is very common in rural regions. In this situation, the architect as project manager might become project ownership supporter. The result is not the finalised project but the development of tools for accompanying public authorities and inhabitants in the definition of new urban strategies and urban projects. In this continuity, we have the international competition, *Future Ground*[9], organized by the Van Alen Institute in collaboration with the municipality of the New Orleans. Three multidisciplinary teams were invited to think about the transformation of landscapes and the reuse vacant lands through the experimentation of flexible designs and policy strategies.
It is more frequent to see the architect becoming "project manager supporter". His assistance is more and more asking from a specific project-ownerships, particularly present in shrinking cities : the community groups composed of inhabitants, non profit organization or association, etc. In United State, it is very visible where the State and local authorities are not any more invested (Detroit, Buffalo, Philadelphia, etc.). These community groups are the project-ownerships but also the project manager. They are themselves who think and realise projects of urban renewal at the scale of their neighbourhood. At Detroit, we have the example of the transformation of Old Redford district by the non-profit organisation Motor City Blight Busters (MCBB) and the One Mile Project in the New Center district.

With constraints of shrinking cities, architects envisage also in the process or project to give a part of project of inhabitants and became "project manager supporter". One of most significant project is "Urban cores, Landscape zone" at Dessau (Germany). The pluridisciplinary team of project management defined important axes of the urban strategy. The choice was to offer inhabitants (citizen, family, company, group of young people, etc.) the possibility of defining, producing, managing and controlling these spaces freely. The objective was to make inhabitants aware of their responsibilities in

[9] website: https://vanalen.org/projects/future-ground/#about

front of their environment, and also to reduce cost of project on short and long term, to maintain public spaces (Brückner, Stein, 2007; Wiechmann and al., 2013).

We can analyse that the architect and the team of project management have an important role to assist these stakeholders, public as private, to defend this new position and to succeed the urban intervention. It is important to take into account (Ryan, 2012). Exchanges and interactions allow to feed into the knowledge on the common territory and to bring new looks on its future. They accompany also stakeholders and inhabitants in the re-appropriation of their space by thinking about new ways of life, with proposals, which are short-term and long-term, ephemeral, as lasting.

**4. The study of the French case: example of two experimental projects.**

*4.1. The phenomenon of shrinkage in urban context like rural: two potential sources of reflection.*

The research work of Emmanuèle Cunningham-Sabot, Sylvie Fol, Hélène Roth, Daniel Florentin and Manuel Wolff in France introduce us with a diversity of shrinking cities. There are more particularly old industrial cities, small cities and villages in rural regions (Cunningham-Sabot and Fol, 2009; Wolff and al., 2013). Even if the question of the shrinkage is not directly highlighted in political speeches, there is generally a good knowledge of spatial realities by practitioners (architect and urban planner) and local stakeholders.

This multiplicity of contexts offers architects and urban planners the possibility to explore all dimensions of shrinkage. Today, these territories know an increasing interest by these professions, be it for brownfields, small vacant plots in city center or the reconquest of public spaces.
We were able to see it previously with works of students, the Europan competition or the multiplication of call for ideas. Saint-Etienne is one of the cities which explores most of possibilities, between flagship projects (building and urban project) on brownfield and alternatives projects on the existing urban fabric. The public space was also a ground of experimental initiatives in Saint-Etienne. We have for example: the transformation of the site of the cardboard industry in temporary public spaces (since 2010); the competition «Défrichez-là» (2011) to occupied a vacant plot; a competition for urban furniture for the last biennale in 2015.
Concerning policies of the urban renewal, the shrinkage is not always affirmed. We have maybe an exception with the international consultation organized to Saint-Dizier for the transformation and the extension of its historic center (Scoffier, 2011). But there is a research to have solution concerning the unhealthy and vacant habitat in shrinking cities. Since 2003, these cities are very often helped by a financial support of the State to lead their projects, through the Agence Nationale pour la Rénovation Urbaine[10] (ANRU) in charge of the Programme National pour la Rénovation Urbaine (PNRU). Among 600 neighbourhoods which received of the PNRU, about fifty cases are in shrinking regions (Kacza et al., 2013).
In 2014, the State decided to help villages centres in escheat in rural regions, further to a demographical decline or a weakening of their functions of centrality, sometimes accompanied by the development of peripheral suburban zones[11]. 300 villages centres was eligible the call of manifestation of interest “Centres-bourgs”, but only 50 were chosen to try this an experimental tool.

The French context is very regulated. How to lead the project when this framework can force or limit the action between specific constraints of the shrinkage and the regulatory system? Both two examples presented then, the urban project *Îlot-test Franche-Amitié* and the study *Habiter les centres-bourgs*,

[10] the website : http://www.anru.fr/
[11] Presentation of the project on the link : http://www.territoires.gouv.fr/revitaliser-les-centres-bourgs-un-enjeu-majeur-pour-l-egalite-des-territoires

we will observe how the project try to surpass these constraints. We will analyse : the role and the place of architect in the process of project and between different stakeholders; the spirit of initiative of architect in the arranging of alternatives solutions for allowing the realisation of project; the awareness of different components of urban fabric (plot, build, uses) to act an urban renewal of quality.

*3.2. Assuming the dedensification: Saint-Etienne and the project Îlot-test Franche-Amitié*

Saint-Etienne lost between 1968 and 2010 around 23 % of its population. The departure of the activities and the inhabitants for the first urban rings and for other regions engendered a vacancy in the city centre and an advanced degradation of the urban fabric. From 1990s, the municipality became aware of its state and have been trying to revitalize (Miot, 2009). Architectural and urban projects punctuate from now on the landscape as the "Cité du Design" or the requalification of the site of the Manufacture-Plaine Achille entrusted to Alexandre Chemetoff's team.
In parallel, the municipality searched also other approaches for its urban renewal with the priority objective: the improvement of the environment built in the unhealthy neighbourhood. It began an experimental initiative which aimed to acquire plots and building for acting on the urban fabric and for reducing the vacancy by the creation of quality public places[12]. The project of the *Square Hauptmann* designed by the local agency YES Architectes (now, A-MAS) was the first experimentation (2000-2002) of this kind. In the continuity, it is interesting to look more specifically at the project *Îlot-test Franche Amitié*, because the approach of plots repurchase was applied on the scale of a block. Realised between 2006 and 2014 by the team of project management composed of Eric Clavier (architect), François Chomienne (landscape-architect) and the BET[13] Gépral, the site is integrated into the perimeter ANRU program in the Tarentaize-Beaubrun-Séverine neighbourhood. This block was chosen because it was the most degraded of the district and had to serve as model for a process of larger-scale urban renewal[14]. The objective of the tender was to de-densify of the heart of the block, to regenerate obsolete buildings and to create public and private places with collective management for maintaining the local population.
One of the major difficulties was to act on the block. The population living in the neighbourhood is essentially poor and owners had few financial means for acting. The municipality had no stranglehold (land) on the site. The choice by local authorities was to acquire plots to intervene and to lead a global action. Before the project begun, the SEDL[15] started to acquire some plots and buildings by anticipation on the future urban renewal. But to continue this process, the solution was to do a "*déclaration d'utilité public*" (DUP - declaration of public utilities) by the creation of a road and 20 garages. This axis had to allow the deconstruction of unhealthy buildings and the connection between the site and the rest of the district. The *Etablissement Public Foncier de l'Ouest Rhône-Alpes* (EPORA) helped the team of project ownership ( SEDL and the municipality of Saint-Etienne) to acquire and manage all plots with the obligation to restore some plots to the owners after the arrangements of private open spaces (gardens). It was a complicated assembly work in order to make the project feasible. The project proposed an intervention in the inside of the block, without affecting directly the building situated at the outside.
The team of project management had a real role of assistance with the project ownership composed with local authorities to succeed in an urban project of quality. They were stakeholders of decisions and took part in the operational arrangement of project. They worked and negotiated more than 3 years with the team of project ownership to adapt the project; on one hand to answer budgets and regulatory

[12] Remarks collected with Stéphanie David, architect to the agency A-MAS (20/03/2014) and with Lauranne Ponsonnet, director of the Mission Project Urbain of the municipality of Saint-Etienne (03/06/2014).
[13] BET is the acronym for "*bureau d'études techniques*". It can be translated in english by "engineering department".
[14] Remarks collected with Anne Lebeau and Jean-Paul Chartron, assignment managers of the housing, Municipality of Saint-Etienne(02/07/2014)
[15] Acronym of *Société d'Equipement et de Développement de la Loire*

requirements, and on the other hand to allow the production of a quality public place for transforming the road into pedestrian alley. In the work of the project definition, the qualities of the existing (plot pattern, situation of buildings) helped to define buildings to preserve or to deconstruct, as well as spaces opened to clear (Horticulture et Paysage, 2012).

Figure 2. Explicative maps of the project Îlot-test Franche-Amitié. 1: Two project ownership / 2: Influence of the action of the project manager / 3: Orientations of project / 4: Current state of block
Source : Charline Sowa, 2014

Although the approach had to facilitate a global intervention, the project management team did not intervene on the built, only for the definition of its future: maintenance and renovation or demolition and recycling. The propositions of design are only on the open spaces. The architectural interventions (only buildings) were led by others architects which had to respect specifications. It was still not simple to have a global vision on the urban renewal of the block. Nevertheless, the architect played the role of advisor for projects of renovation or new building was led.
The architect knew how to highlight his capacity to have a global vision on the project, allowing him to be: the interface between the complex project ownership and the spatial realities; an important stakeholder throughout the project : from the definition of the operational frame of the constructive details, with the period of construction site. The thinking of all steps of project process allowed to limit expenses and to remain in the projected budget.

Figure 3: Point of view in the interior of block. Source : Charline Sowa, 2014

*3.3. Re-adapting the existing: the Parc Naturel Régional (PNR) of Livradois-Forez and the study on "Habiter les centres-bourgs"*

During the XIXth century, the rural region of Livradois-Forez knew an economic development engendering a demographic boom and a densification of urban fabric. Free plots were filled quickly in front of the continual growth of population It was at this period that villages took their current urban form. Until the 1950s, the centre of small cities and villages in the Livradois-Forez and all Auvergne region were populated. With the evolution of ways of life, practices in rural environment and new demands of population, there was a demographic decline with the departure of population, an escheat of center-villages and the increase of the vacancy (Gaudey and Terra, 2008; Bernard et al., 2014). The housing has become inadequate and the territory weakened.

Until now, reflections and projects on the territory answered approaches one by one, without a long-term vision, according to needs and opportunities (Bernard et al., 2014). This approach was questioned since and abandoned spaces in villages centres are beginning to be envisaged as real of equipped and serviced land-reserves. The compact form of the urban fabric also tends to facilitate exchanges between individuals. To re-adapt villages centres would so offer an alternative to the urban sprawl. With this analysis, the PNR of Livradois-Forez went into an invitation to tender in 2011 for a study about the question of the living in village centre, with the financial support of the DATAR. 6 sites of study (Cunlhat, Châteldon, Courpière, La Monnerie-le-Montel, Saint-Germain-l'Herm, Saint-Dier-d'Auvergne) served as support of reflection which were divided between three teams of project management, mainly consisted of architects, and two school of architecture.

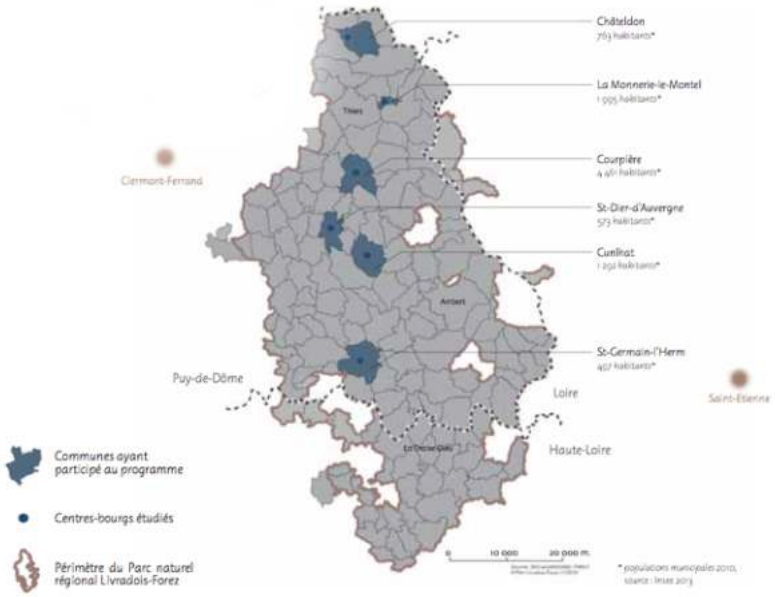


Figure 4. Situation of cities participating to the study in the PNR of Livradois-Forez.
Source: PNR Livradois-Forez, 2014.

Through this study, one of questions was the land management by municipalities and inhabitants. The architect had to propose one or several adapted solutions. The analysis presented that very often, municipalities had no idea of the state of land, little information on plot and its uses. Even if it existed, it was not always updated.
The work of the Collectif ETC on municipalities of Cunlhat and Châteldon was interesting for this dimension. To develop new tools, the team was inspired by tools of agricultural-land management

conceived by the French association *Terre de liens*. It established a protocol of actions to collect information and to develop an operating tool of land management. It was to allow then to define actions on plots which would be adjusted to needs and real practices of space. The objective was to engage a dynamics of the land observation and to integrate the inhabitants into this work. After the mass of data, the team proposed different options about the way to manage plots and especially to execute a land assembly. The first one is to connect inhabitants and to raise awareness among them. The second one is in the longer term, to assist the municipality to take the role of mediator between owners for allowing the emergence of projects with a bigger scale.

Figure 5. Tools of of analysis on Châteldon. Source: Collectif ETC.

Figure 6. Theoretical reflections for Châteldon to test different possibilities for the land assembly and the land management by public authorities and inhabitants. Source: Collectif ETC.

The architect had an important role in this reflection. Many recommendations were given on the improvement of the offer of the housing and the image of villages and the attractiveness. It was proposed innovative and alternative tools for helping municipalities and inhabitants.
Another dimension is interesting to present: the place of the communication in the appropriation process of the study by differents stakeholders (inhabitants like municipalities and the PNR Livradois-Forez). For Cunlhat, Châteldon, Courpière and La Monnerie-le-Montel, there was an important place for a blog which became a veritable space of communication and exchange.

The objective was to test and to retranscribe transposable methods of work in other territories which know the same difficulties that the villages centres of the PNR. But today, there are not continuity with different teams on the territory or applications. But this initiative inspired other territories, in the PNR Livradois-Forez (Ambert, Chabreloche, Olliergues) or in France.

**4. Conclusion: which lessons to learn of these French experiences?**

Through these examples, we saw that through the process of project, it is looked for to exceed the constraints linked with the shrinkage and in regulations of town planning. They try to propose adapted solutions for the transformation of the urban fabric. Architects and the team of project management was the interface between temporal and spatial scales for local actors and inhabitants.
Whether it is with the work of demolition and recycling in Saint-Etienne or with the reflection on the land assembly for Châteldon, the architects managed to offer another image of these spaces which were pending. They revalue as well the qualities of the plot pattern as the built and they propose a new quality of the housing environment in reply with the new demands.
In both cases, the relation between the various stakeholders was essential for a good understanding of the commission and proposals. In these collaborations, we were able to note some trends. For Saint-Etienne, the project management did the interface with the project ownership in the redefining of the commission. The architect brought his expertise and was a stakeholder in negotiations between the double project ownership and the owners. Secondly, he had a role of advisor to the architects acting on the built that to owners who wished to invest on the project in asking advices on the arrangement of private gardens. In the Livradois-Forez, we were able to see that different local stakeholders were requested at various stages of the project process. The architects valued their capacity to be porter of knowledge on their territory. They then found solutions to help municipalities to manage the land, and in particular with the investment of the inhabitants. This method aimed to allow for the inhabitants to reinvest their village and for the public stakeholders to have a better knowledge of them inhabitants and of the urban environment.
In the Livradois-Forez, the commission was complex in front of land problems. The collective ETC. gave tools to help municipalities to manage the urban fabric (land, built, uses) and to adapt it to the demand. Among other reflections on sites of the call for ideas, the proposition for the village centre of Monnerie-le-Montel proposed keys for reading of issues and a prospective vision to allow to the municipality to organize into a hierarchy their actions according to their capacities in time. A good relation between different levels of stakeholders allows to experiment new tools of project. For Saint-Etienne, they succeed to manage the project by exploring all the regulatory possibilities and by facing the multiplicity of owners.
It would be interesting to develop this analysis on other examples in France, in Europe or in United-States. For the American case, it is possible to see very often approaches in *pro bono* to help community groups to realise their project, from the program to the construction, in co-production or as project management supporter.
To conclude, projects were possible with invested local stakeholders and help of public authorities with specific funds by the ANRU or the DATAR. The position of assistance was integrated in the process of project and it is not annexe. While in the case of the commission of the PNR of Livradois-Forez, proposals might be a potential impact in the decision-making power of the municipality to develop a territorial strategy; in the case of Saint-Etienne, it is to nuance. Even the project was realised and it is a interesting urban project at different levels, the temporality of the process and this expansive cost reduced the ambition to continue this approach at the scale of neighbourhood.

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# A comparative study of the European and Japanese definitions of shrinking cities as applied to Japan

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Keywords: Shrinking cities, Definition of cities,

**Abstract**

Population decline and industrial decline are obvious phenomena not only in Europe but also in Japan. Issues related to population and industrial decline have been actively discussed, and academic knowledge and analysis based on international comparative studies are expected to develop countermeasures to the most critical situations.

The definition of shrinking city that is applied, however, is not necessarily the same, and such a fundamental element of the discussion has not been fully examined so far.

This study, therefore, aims at comparing the different definitions of "shrinking cities" used in Japan and Europe and developing the best way to provide a reliable basis for future discussion on shrinking cities' topics.

The results of this comparative study suggest that COST Action's definition allows an analysis of Japanese cities to include the so-called "depopulated area issue" because the Japanese population in municipalities is rather bigger than the population in European municipalities, and Japanese cities may have lower figures for population density distribution and artificial land use within their territory.

In conclusion, Japanese sampled cities based on the Japanese definition are not necessarily suitable for the basis of a comparison study. This is because some Japanese "cities" do not satisfy objective criteria such as population size because the "city" has never been downgraded having once been upgraded to "city". Rather, the European definition of "city" better reflects the elements of the city, so that Japan should also follow the European definition of "city" for future discussions on shrinking cities.

## 1. Introduction

### *1.1. Background*

In Japan where nationwide population decline started, not only rural depopulation but also urban depopulation has now become obvious. Population decline in cities and industrial decline has been studied in the context of "shrinking cities". The 5W1H of shrinking cities and countermeasures for it have been discussed in many previous research studies around the world. In this context, the definition of "city" used is not necessarily the same in different regions and countries.

For example, there are quite different local government systems and regional structures. These differences do not allow us to compare the problems of shrinking cities easily. To cope with this situation, a common definition of the "city" was provided in COST Action[1]. Based on this definition, shrinking cities were identified and the demographic change of the cities was analyzed (Wiechmann and Wolff, 2013).

Many case studies of shrinking cities in Europe have already been introduced in Japan. For example, there are the German shrinking cities cases (Uemura and Uto, 2010), the case of Berlin and Brandenburg (Takami and Harada, 2009), the case of French vacant house countermeasures (Koyanagi, 2014) and the Torino regrowth case in Italy (Yahagi, 2014).

When we compare the best practice for regional development around the world, we should bear in mind the premise of the case, such as the attributes of the region. In a discussion of shrinking cities, we should bear in mind the definition of "city" and "urban". Unfortunately, the difference in the definition of the city in Japan and the city in the context of the shrinking cities in Europe is still not clear.

From now on, to promote an international comparison study between shrinking cities in Japan and other countries, it is important to clarify the differences in the definition of the city in Japan and in Europe in the context of shrinking cities, and also to evaluate the impact of these differences on the discussion.

### *1.2. Aim*

In order to clarify the differences between cities in Japan and Europe and also to evaluate the impacts of this difference, the definition of "city" used in the COST Action Programme in Europe is applied to the Japanese municipalities' attribute data, and then the Japanese municipalities are categorized. By using the definition of the "city" used by COST Action, we can identify the reasons for the differences between Japan and Europe. Accordingly, this study aims to also examine the causes for the differences. In addition, the definition of demographic change used by COST Action is also applied to the demographic change of

[1] http://www.cost.eu/COST_Actions

shrinking municipalities in Japan. This study also examines the geographical distribution of cities according to each categorization.

### *1.3. Structure*

In section two, the methodology including research steps, the introduction of the definition of "city" and demographic change, and data set are introduced. In the third section, the results of the application of the definition to Japan are presented. In section four, the validity of the definition of Japanese "city" and the geographical distribution of categorized "shrinking cities in Japan" are examined. Also, the reason for the variance between Japanese "cities" and European "cities" is discussed. Finally, the summary is presented and further research topics are also indicated in the concluding section.

## 2. Methodology

### *2.1. Research framework*

This study follows the three steps below.

First, this study examines the validity of the definition of "city" in Japan by applying the European definition used by COST Action to Japanese municipalities' data and the results are plotted on a map of Japan, and the coverage of classified municipalities are confirmed.

Second, the demographic change of Japanese shrinking cities is analysed based on the European definition of dynamic typology used by COST Action and then the results are drawn on the map of Japan.

Third, a comparison between Japanese cities and "cities" categorized by the European definition is conducted. The number and ratio of Japanese cities according to the Japanese definition but not cities according to the European definition, and cities following the European definition but not cities according to the Japanese definition against the total number of municipalities in Japan are also confirmed. Moreover, the causes of such a mismatch are also discussed.

Through these three steps, the possibility of the application of the European definition of "cities" used by COST Action is examined.

### *2.2. Definition*

#### 2.2.1. Definition of "city"

Under the COST Action definition, "cities" are defined by three criteria, "size of population", "population density", and "artificial land use" as shown in Table 1. Hereafter, municipalities classified by these criteria are called "Cities by European definition" to be identified from "Cities by Japanese definition".

**Table 1 Three criteria for defining cities by COST Action**

| Items | Criteria |
|---|---|
| Population size | Total population in 2010 in the municipality > 5,000 inhabitants |
| Population density | Density of the population living in densely populated parts of more than 1,000 inhabitants per $km^2$ > 50% |
| Artificial land use | Share of urban area (artificial surface) within the municipality > 5% |

Source: Wiechmann and Wolff (2013)

### 2.2.2. Definition of dynamic typology

In order to describe the demographic change in shrinking cities in Japan, three types of shrinkage of the demography in the region are defined in COST Action: "continuous shrinkage", "episodic shrinkage" and "temporary shrinkage".
The same definitions of dynamic typology as used in COST Action are applied. In COST Action, the data between 1990 and 2010 are used for the analysis. This period may be identified by the reunion of Eastern and Western Germany in 1989, the democratization of the former communist countries of Eastern Europe in the 1990s and the enlargement of the European Union that occurred in the early 2000s. This time, the same definition should be used to confirm the validation of the definition by COST Action for Japan. The date between 1990 and 2010, therefore, is used for the analysis.

**Table 2 Dynamic Typology in COST Action**

| Dynamic typology | COST Action |
|---|---|
| Type A<br>Continuous shrinkage | These cities have lost at least 0.15% of their residents annually in all four five-year intervals since 1990. |
| Type B<br>Episodic shrinkage | These cities have lost in at least one five-year period a stable (+/- 0.15% p.a. ) or even growing population (> +0.15% p.a.). |
| Type C<br>Temporarily shrinking cities | These cities have not lost population of at least 0.15% p.a. over the entire period, but have in at least one five-year period. |

Source: Wiechmann and Wolff (2013)

### *2.3. Data*

The data for analysis are the "population" and "area" of municipalities, and land use information in a 100m × 100m grid of "Land utilization segmented grid data".
The 500m ×500m grid population data is used for the Population density criterion. The population in 500m ×500m divided by 2.5 is equal to population density (people/$km^2$) in the grid. The ratio of grids satisfying the criterion for population density against all grids within the municipality is calculated, and the result is used for classification.
For classification of artificial land use, the 100m × 100m grid of "Land utilization segmented grid data" is used. "Site of building", "trunk transport site" and "other site" are regarded as artificial land use in the data set. By counting grids used for these land uses, and by comparing the number of grids against all grids belonging to the municipalities, the

percentage of artificial land use area in the municipalities is calculated. Based on the percentage, the municipalities are classified.

**Table 3 Data for analysis and data source**

| Criteria | Data name | Data source |
|---|---|---|
| Population size | Population in 2010 | Statistics Bureau (2012) POPULATION AND HOUSEHOLDS OF JAPAN 2010 |
| Population density | Population in 500m × 500m grid | |
| Artificial land use | Land usage classifications | National Land Numerical Information, Land utilization segmented grid data |

## 3. Results

### *3.1. Result of city classification by COST Action criteria and dynamic typology*

#### 3.1.1. Size of population

The result of applying the population size criterion is that more than 85% of municipalities in Japan have achieved this criterion. The distribution of municipalities on the map suggests that municipalities located in almost all regions except the northern part of Hokkaido and mountainous areas of Honshu, Shikoku and Kyusyu could meet these criteria. Accordingly, it is suggested that the size of municipalities in Japan is rather larger than that in Europe.

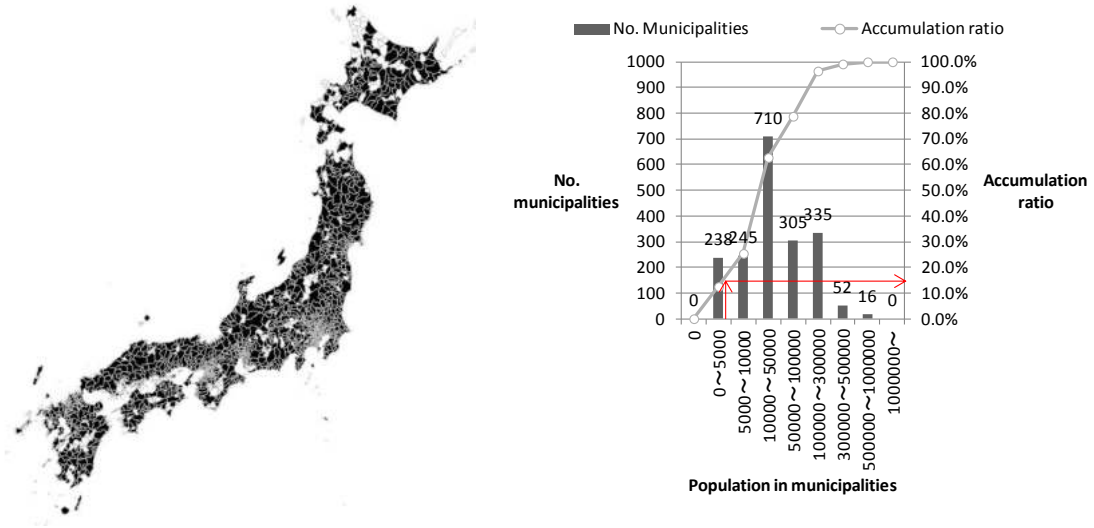



**Figure 1 Municipalities with more than 5,000 people**

#### 3.1.2. Density of population

In terms of the population density criterion, more than 60% of municipalities in Japan could meet the criteria of more than 50% of the population living in densely populated areas (1,000 people/km$^2$). Interestingly, when we confirm the distribution of these selected municipalities on the map of Japan, most areas of Hokkaido, the urban areas in Honshu, and coastal areas of

Honshu, Chugoku and Kyushu regions as well as a part of Shikoku are identified. The possible reason for this result may be due to the limited inhabitable areas as mountains and rivers are common in Japan. So that even if the municipalities have a lower population, it is natural that most of the residents in the municipalities tend to concentrate in the inhabitable areas. On the other hand, where municipalities meet the criteria for "city" in population size and are located on plain areas, the population is sometimes scattered throughout the area of the municipality. In this case, consequently, the municipality cannot meet the population density criterion.

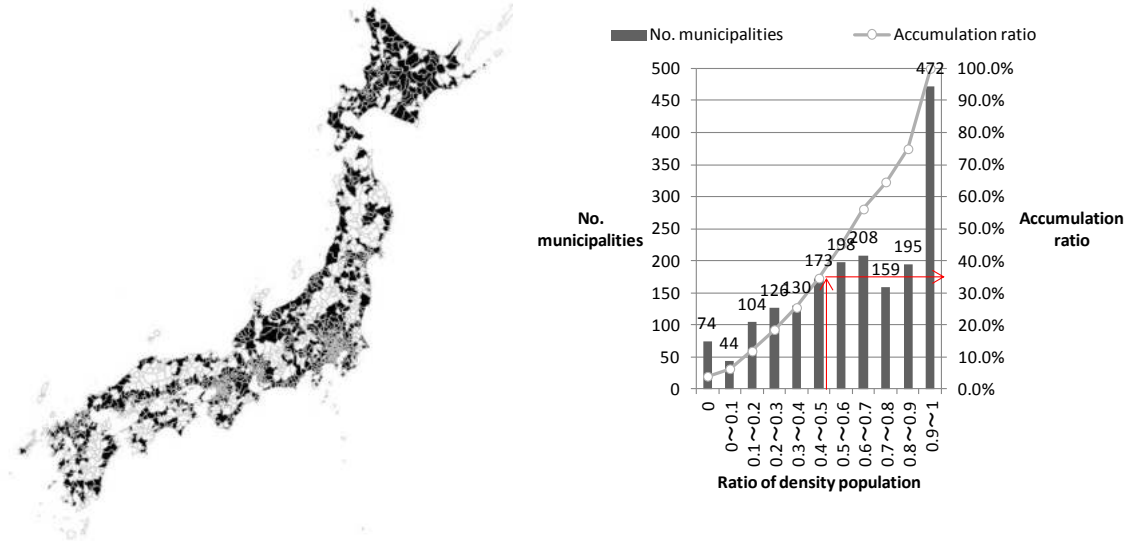



**Figure 2 Municipalities with more than 50% population living in densely populated area (1,000 population/km$^2$) in the municipality**

### 3.1.3. Artificial land use

On the condition of artificial land use, more than 60% of municipalities in Japan could satisfy this criterion. When the municipalities meeting this criterion were projected on the map, we found that only urban areas were identified. This is because urban municipalities tend to meet the criterion easily, but the area of municipalities in rural areas is typically larger than the area of urban municipalities, explaining why rural municipalities were not identified as meeting the land-use criterion.

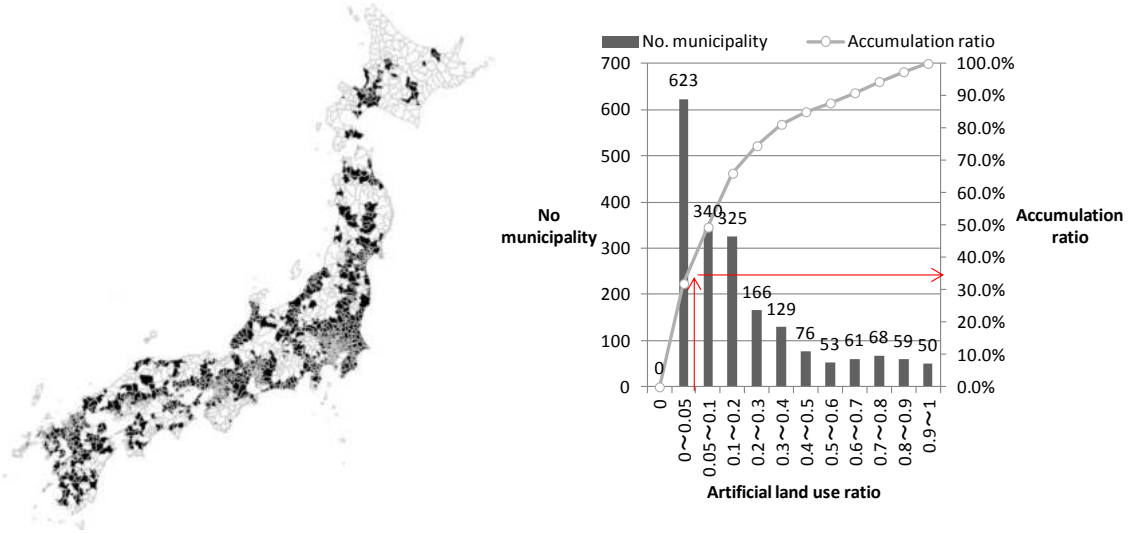



**Figure 3 Municipalities with more than 5% artificial land use compared with all municipality areas**

3.1.4. Results of the classification of municipalities

Consequently, 987 municipalities out of 1,856 municipalities in Japan are identified as "cities by European definition". The ratio of "cities by European definition" is around 53.2% of total municipalities in 2010.

**Table 4 Results of the classification of municipalities by applying the definition of the city in COST Action**

| Number | Continuous shrinkage | Episodic shrinkage | Temporary shrinkage | No shrinkage | subtotal | Total |
|---|---|---|---|---|---|---|
| Not "City" | 580 | 180 | 82 | 27 | 869 | |
| City | 142 | 148 | 293 | 404 | 987 | |
| Sub total | 721 | 325 | 374 | 436 | | |
| Total | | | | | | 1856 |

| Proportion by the city category | Continuous shrinkage | Episodic shrinkage | Temporary shrinkage | No shrinkage |
|---|---|---|---|---|
| Not "City" | 80.4% | 55.4% | 21.9% | 6.2% |
| City | 19.7% | 45.5% | 78.3% | 92.7% |
| Total | 100.0% | 100.0% | 100.0% | 100.0% |

| Proportion by shrinking pattern | Continuous shrinkage | Episodic shrinkage | Temporary shrinkage | No shrinkage | subtotal | Total |
|---|---|---|---|---|---|---|
| Not "City" | 66.7% | 20.7% | 9.4% | 3.1% | 100.0% | |
| City | 14.4% | 15.0% | 29.7% | 40.9% | 100.0% | |

When we conduct further analysis on the demographic change between 1990 and 2010 in these municipalities, 14.4% of Japanese cities (European definition) are classified as "continuous shrinkage", 15.0% of them are classified as "episodic shrinkage", 29.7% of them are classified as "temporary shrinkage" and the remaining 40.9% of cities are classified as "no shrinkage". On the other hand, 66.7% of non-city Japanese municipalities are classified

as “continuous shrinkage”, 20.7% of them are classified as “episodic shrinkage”, 9.4% of them are classified as “temporary shrinkage”. Only 3.1% of non-city Japanese municipalities (European definition) are classified as “no shrinkage”.

### *3.2. Demographic change pattern of Japanese cities (European definition)*

Next, the distribution of municipalities classified as Japanese cities according to the European definition is projected onto the map of Japan. The Japanese cities (European definition) classified as “continuous shrinkage” are located mainly in Hokkaido, coastal areas of the Japan-sea region, the western Chugoku region and Kyushu. In particular, the top 10 continuously shrinking cities in Japan are Amagasaki (Hyogo), Nagasaki (Nagasaki), Shimonoseki (Yamaguchi), Hakodate (Hokkaido), Kure (Hiroshima), Hitachi (Ibaragi), Kushiro (Hokkaido), Suma ward of the city of Kobe (Hyogo), Imabari (Ehime), and Ishinomaki (Miyagi). They are commuter towns in the Kansai district and the prefectural capital cities or second or third largest cities in the prefectures.

Japanese cities (European definition) classified as “temporary shrinkage” are mainly located in not only three major urban areas in Japan namely Tokyo, Osaka and Nagoya, but prefectural capitals as well, for example, Setagaya (Tokyo), Ota (Tokyo), Adachi (Tokyo), Suginami (Tokyo), Itabashi (Tokyo), Higashi-Osaka (Osaka), Nishinomiya (Hyogo), Kouto (Tokyo), Gifu (Gifu) and Nagano (Nagano). Twenty-three cities in the Tokyo metropolitan areas and Osaka suburb cities such as Higashi-Osaka, Nishinomiya and Neyagawa are influenced by the trend of inner migration to the city centre following outer-migration from the city centre to the suburbs.

The areas classified as “episodic shrinkage” seem to be located between “continuously shrinking” areas and “temporarily shrinking” areas. The population decline has halted at least once, but overall the areas have lost population over 20 years. The prefectural capitals more than urban areas and regional centres are regarded as “episodic shrinkage”.

Furthermore, the distribution pattern for these three types of Japanese cities (European definition) in the three major urban areas such as Kanto (Tokyo), Kinki (Osaka) and Chubu (Nagoya) is completely different. In Kanto, most of the 23 cities of the Tokyo metropolitan area are classified as “temporary shrinkage”, but the suburb areas surrounding the 23 cities of the Tokyo metropolitan area are not classified as any of the three dynamic typologies. Of course, the northern Kanto, Kamakura and southern part of the Boso Peninsula have faced shrinkage as well as most of the 23 cities of the Tokyo metropolitan area. On the other hand, the centre of Osaka cities faces “continuous shrinkage”. On the map, we can see the red marking in the central areas of Osaka. In addition, there are many temporary shrinkage areas in the suburbs of Osaka. Some municipalities next to these shrinking municipalities also face “episodic shrinkage”. In general, most municipalities in the Kinki urban areas seem to be more or less suffering from population decline.

In contrast to these two urban areas, only central Nagoya city areas show shrinkage. Apart from limited municipalities, almost no Japanese cities (European definition) are classified as shrinking areas. For reference, when we turn to the Fukuoka urban areas, the shrinkage in the suburbs is more severe than the other three urban areas, but the city centre of Fukuoka still maintains its population and is not classified as having any shrinking dynamic typology.

**Table 5 Top 10 municipalities in three demographic change patterns**

| | **Continuous shrinkage** | | **Episodic shrinkage** | | **Temporary shrinkage** | |
|---|---|---|---|---|---|---|
| | Municipality, Prefecture | Population in 2010 | Municipality, Prefecture | Population in 2010 | Municipality, Prefecture | Population in 2010 |
| **1** | Amagasaki, Hyogo | 453,748 | Yokosuka, Kanagawa | 418,325 | Setagaya, Tokyo | 877,138 |
| **2** | Nagasaki, Nagasaki | 443,766 | Toyonaka, Osaka | 389,341 | Ota, Tokyo | 693,373 |
| **3** | Shimonoseki, Yamaguchi | 280,947 | Wakayama, Wakayama | 370,364 | Adachi, Tokyo | 683,426 |
| **4** | Hakodate, Hokkaido | 279,127 | Asahikawa, Hokkaido | 347,095 | Suginami, Tokyo | 549,569 |
| **5** | Kure, Hiroshima | 239,973 | Iwaki, Fukushima | 342,249 | Itabashi, Tokyo | 535,824 |
| **6** | Hitachi, Ibaragi | 193,129 | Kita, Tokyo | 335,544 | Higashi Osaka, Osaka | 509,533 |
| **7** | Kushiro, Hokkaido | 181,169 | Sasebo, Nagasaki | 261,101 | Nishinomiya, Hyogo | 482,640 |
| **8** | Suma, Kobe, Hyogo | 167,475 | Neyagawa, Osaka | 238,204 | Kouto, Tokyo | 460,819 |
| **9** | Imabari, Ehime | 166,532 | Hachinohe, Aomori | 237,615 | Gifu, Gifu | 413,136 |
| **10** | Ishinomaki, Miyagi | 160,826 | Tarumi, Kobe, Hyogo | 220,411 | Nagano, Nagano | 381,511 |

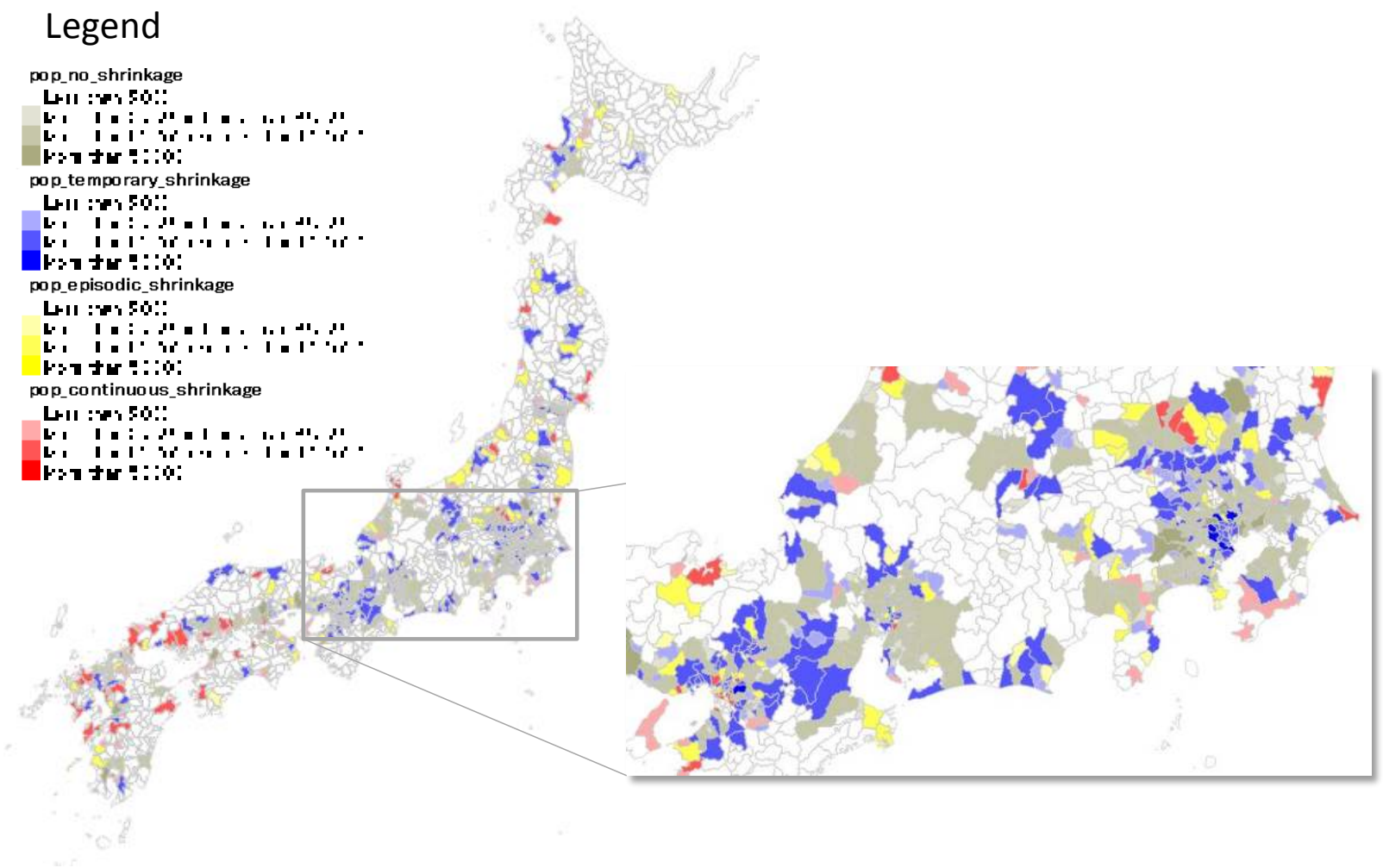



**Figure 4 Dynamic typology results following the definition of COST Action**

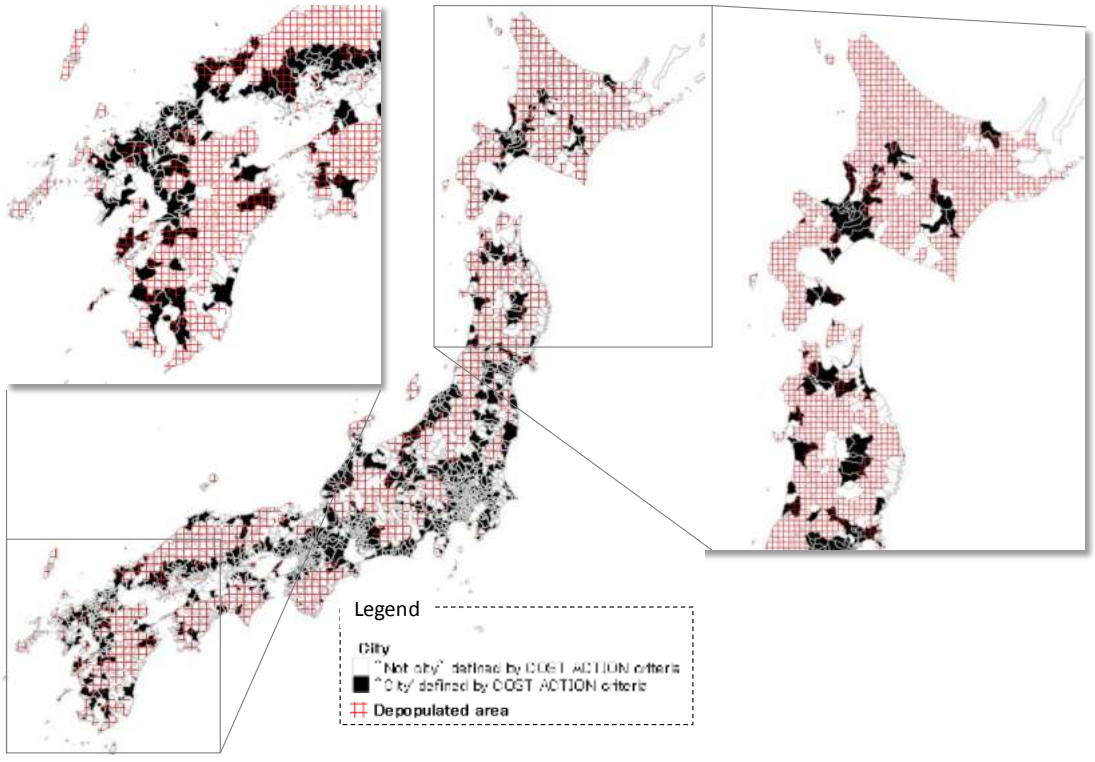
## 4. Discussion and analysis

This section mainly discusses the validity of the definition of the "city" by COST Action.

### *4.1. City as defined by COST Action criteria in Japan*

Figure 5 shows the Japanese cities (European definition) and depopulated areas on the map of Japan. The municipalities in urban areas are naturally selected as "Japanese cities (European definition)" but some municipalities in Hokkaido, Kyushu, Shikoku are also selected as "Japanese cities (European definition)".

Interestingly, some cities in Hokkaido and Kyushu are typically hatched both black and also red grid. Red grid means that the municipalities belong to traditional "depopulated areas" in rural areas as determined by the Act on special measures for the promotion of independence for underpopulated areas (enacted on 31st March, 2000). Accordingly, it is very difficult to regard them as shrinking cities. In short, these are examples of the error by which municipalities that should not be defined as shrinking cities are selected as "Japanese cities (European definition)".




Source: The data for "depopulated area" is from National Land Numerical Information, Underpopulated Area Data

**Figure 5 Cities in Japan based on the definition of COST Action and depopulated areas**

### *4.2. Comparison of the definition of "city" between Japan and the Europe*

Next, the opposite case is discussed. Namely, Japanese cities as defined in Japanese legislation are not necessarily selected as Japanese cities (European definition).

Basically, Japan has two layers of local autonomy system, namely prefectures and city-town-village. The following Table 6 shows the cross tabulation of population size and classification of "city" and "others" including town and village.

**Table 6 Situation for meeting the criterion for "city in Japanese legislation"**

| | 2005 | | 2010 | |
|---|---|---|---|---|
| | Population of less than 50,000 | Population of more than 50,000 | Population of less than 50,000 | Population of more than 50,000 |
| City | 259 | 712 | 265 | 706 |
| Others | 928 | 2 | 928 | 2 |

Generally in Japan, cities according to Japanese legislation subsume urban areas, and towns and villages are typically located in rural areas. In fact, cities in Japanese legislation are distinguished from towns and villages by the objective criteria as shown in Table 7, when the municipalities are upgraded to cities in Japanese legislation. It should be noted that once upgraded, the city will not be downgraded to town or village as long as can be anticipated. Consequently, sometimes the local situation and the classification of municipalities do not match completely.

As shown in Table 7, which compares the definition of cities by COST Action and Japanese legislation, the definition of cities is, actually, similar, but different. In particular, the population size criteria differ, and the Japanese population size criterion is 10 times greater than that of COST Action.

**Table 7 Definitions of "city" by COST Action, Japanese legislation and this study**

| Criteria | COST Action | This study | Japanese legislation (Article 8, Local Autonomy Act) |
|---|---|---|---|
| Population size | Total population in 2010 in the municipality > 5,000 inhabitants | Total population in 2010 in the municipality > 5,000 inhabitants | In principle, a municipality with more than 50,000 people |
| Population density | Density of the population living in densely populated parts with more than 1,000 inhabitants per $km^2$ > 50% | More than 50% population living in the 500m × 500m grid areas with more than 250 people in the municipality | More than 60% of households located in densely populated area, and more than 60% of population engaged in urban occupation like commerce and industry |
| Artificial land use | Share of urban area (artificial land use) within the municipality > 5% | The number of grids with mainly artificial land use like multistorey buildings (0701),factories (0702), lower buildings (0703), densely located lower buildings (0704), road (0901), railway (0902), public facilities (1001), vacant area (1002), park and green spaces (1003) and golf courses (1600) in 500 m square areas is more than 5% of the total number of grids in the municipality | — |
| Others | — | — | Other necessary conditions in each prefecture |

In terms of population density, the description is slightly different, so that we cannot compare them completely, but it suggests that the European criteria require more than 50% concentration, but Japanese criteria require more than 60% concentration of population in the densely inhabited areas. Accordingly, the European criteria may be more relaxed than the Japanese criteria.

Furthermore, the artificial land use criterion is not included in the Japanese criteria.

According to these different criteria to select "cities", the cities in Japanese legislation, which do not meet the definition of Japanese cities (European definition) number 199 cities (26.0% of all cities in Japanese legislation). Within these 199 cities, 137 cities in Japanese legislation do not satisfy the population size criterion of having more than 50,000 people. Out of 137, only one city in Japanese legislation does not satisfy the European criterion of population size of more than 5,000 people. Also, 87 cities in Japanese legislation do not satisfy the artificial land use criterion in Europe and 94 cities in Japanese legislation do not satisfy the population density criterion in the European definition.

**Table 8. Reasons why 199 cities according to Japanese legislation are not classified as "Japanese cities (European definition)"**

| | Population size (population<5,000 people) | Artificial land use criterion (Ratio of artificial land use is more than 5%) | Population density criterion (Densely populated area should be more than 50% of municipality land) |
|---|---|---|---|
| Reasons for not meeting the classification as a "city" | 1 | 127 | 124 |
| （incl. No. of municipalities with less than 50,000 population） | 1 | 87 | 94 |

The major reasons why cities in Japanese legislation are not classified as Japanese cities (European definition) are not meeting the artificial land use criterion and population density criterion. This suggests that even if the municipalities are regarded as cities in Japanese legislation, dense inhabitation is not met and population is scattered throughout the municipality.

Table 9 shows the results of the classification of municipalities in Japan based on the Japanese and European criteria.

**Table 9 Results of the classification of municipalities in Japan based on Japanese and European criteria**

<table>
<tr><td colspan="3" rowspan="2">N=1,856<br>(Municipalities)</td><td colspan="2">European definition</td></tr>
<tr><td>City</td><td>Others</td></tr>
<tr><td rowspan="3">Japanese definition</td><td colspan="2">City</td><td>567</td><td>199</td></tr>
<tr><td colspan="2">Others</td><td>367</td><td rowspan="2">670</td></tr>
<tr><td></td><td>Depopulated region</td><td>53</td></tr>
</table>

The situation is very complicated, but it can be said that the criteria used in COST Action could produce a completely different list of shrinking cities in Japan. The difference amounts to 26% between Japanese cities as defined in Japanese legislation and the common set between Japanese and European criteria (567 municipalities).

When the Japanese definition is applied, and researchers intend to include the Japanese cities in Japanese legislation as much as possible, the artificial land use criterion and population density criterion should be relaxed. Given that the objective criterion of population size for upgrading to "Japanese cities in legislation" is, however, not necessarily observed, it can be said that it is not appropriate to meet the Japanese criteria. In this regard, the European criteria in COST Action for identifying "cities" in Japan in order to discuss shrinking cities issues can be regarded as a more appropriate way to give the common basis for future international comparative study.

## 5. Concluding remarks

This study examined the validity of the definition of cities used by COST Action to discuss shrinking cities issues in Japan using data from Japan.

As a result, the "Japanese cities in Japanese legislation" and "Japanese cities (European definition)" are not the same, and two types of variance could be observed; namely, Japanese cities in Japanese legislation that were NOT Japanese cities (European definition), and Japanese cities (European definition) that were NOT Japanese cities in Japanese legislation.

One of the reasons for this situation may be that the criterion of population size has not been strictly applied for municipalities upgrading to "Cities in Japanese legislation", and some municipalities with less than 50,000 people have still been defined as "Cities in Japanese legislation". In addition, there is no criterion on artificial land use for defining "cities" in Japan. Accordingly, when we define cities around the world in order to conduct an international comparative study, it can be concluded that the Japanese criteria are not appropriate. In other words, the criteria to select cities used by COST Action should be applied to Japan to provide a good foundation for future international comparative studies.

The COST Action definition, however, also has a weak point. Bearing in mind that the cause of weakness of the Japanese criteria is the failure to strictly implement the criteria, the same can be said for the COST Action definition. This is because the COST Action definition of cities was introduced in 2013 and has not stood the test of time. In 5 years and 10 years time, researchers will update the analysis in Europe based on the COST Action definition of cities; some of the cities selected in 2010 will not be selected at that time. The situation is continuously changing and any definition will receive the evaluation of time.

In order to allow continuous research based on the same definition, researchers have to develop a more concrete and reliable definition of cities and objective rules for selecting cities to facilitate the discussion of shrinking cities. This point is still open to discussion.

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# ON RENAISSANCE MODE OF PERI-URBANIZED RURAL AREAS IN THE PATTERN OF URBAN AND RURAL INTEGRATION-WITH THE CASE STUDY OF VILLAGES ON BOTH SIDES OF HUAIJIU ROAD, FANCHANG COUNTY, ANHUI, CHINA

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Keyword: urban and rural integration; rural renaissance; peri-urbanization

Abstract
*After analyzing the characteristics of Chinese "peri-urbanization" and its the main reason, the thesis discusses the problem in peri-urbanized rural areas. Based on domestic and foreign research results of rural renaissance and China's actual conditions, the thesis puts forward a new idea: current research on the rejuvenation mode of peri-urbanized rural areas should be integrated into the overall development pattern of Chinese urban and rural integration and should include the whole rural areas rather than a single village, in order to achieve the overall rejuvenation and help rural areas produce and promote their unique output value. Therefore, the thesis takes significantly peri-urbanized villages as research object and explores the renaissance mode of China's rural areas in the case study of their development planning. The thesis proposes the rejuvenation mode of integrated development of villages in the whole district with city as the service object, country as the carrier, agriculture as the basis, tourism development as the means and cultural renaissance as the foundation. And accordingly, strategies of three aspects are given to guarantee the rejuvenation as follows: the first is scientific planning by improving its overall layout and constructing transportation organizations and supporting public services at all levels; the second is protection first by establishing supervision mechanism in the three categories (nine subcategories) of ecological protection, living environmental protection and farming culture protection; the third is four-win outcome by building a balanced and interacted mechanism for four parties (the government, businesses, villagers and tourists).*

## 1. INTRODUCTION

### *1.1 Research Background*

Since the Chinese government proposed the policy to resolve the "Problems about Agriculture, Rural areas and Peasantry" in 1998 and the urbanization strategy was came up in the 10th 5-Year Plan of Chinese development, 170 million surplus labor force have been moved from rural into urban areas.

However due to the strict regulation of the long developed city-countryside binary development pattern and the city-countryside household registration system, a great number of peasants who have entered into the urban areas engaging in the secondary and tertiary industry living there for a long period cannot be the citizen of the area, let alone enjoying the rights and interests equal to the citizens. In China, such a peri-urbanization group of population who are "non-farmers and non-citizen" is called "migrant rural workers". Under the restriction of the city-countryside household registration system, although the migrant rural workers are working and living in the urban areas, their census register still remains in rural areas. The land they owned (including agricultural and curtilage) and their self-built house are still in rural areas. Thus the rights and interests of citizens based on the census register can only be realized in the place where their census register is located. This formulated the situation with Chinese characteristics of "leaving the land but belonging to the rural" and migrant-bird-like peri-urbanization population（Liu Shenghe, et al, 2004;Liu Shuchun, et al, 2010；Li Aimin，2013；JIAO Xiaoyun，2015）.

The extended rural areas in China are in a trend of deterioration under the peri-urbanization due to great loss of population and lack of development motivation. This declining trend is mainly presented as hollowing-out of the countryside space. "hollowing-out" means that the decrease of actual residents in the countryside due to peasants being seasonally out-migrant for work or moving into cities with the whole family. However in inheriting the Chinese rural cultural convention of "set up a home and establish a business", residence is an important reflection of a family's social and economic status. Wherever the peasants are living in the rural or the urban areas, they will build or reconstruct their residence on the basis of the original curtilage. Therefore although the actual residents are continuously decreasing, the construction land and houses are not decreasing correspondingly(Liu Y S, et al, 2010). Instead they are built taller and stronger, resulting in a fictitious prosperity in space. The sharp contrast between fictitious prosperity in space and population losses has made the countryside seem even more lack of vitality. Besides, the problems of aging population, indifference relationships as well as the environmental deterioration derived from the "hollowing-out" phenomenon have accelerated the countryside industry deterioration and society depression. These deteriorated rural areas with peri-urbanized population are facing the plunder of its various resources by the urban area, which undermines their own economy and social pattern and crumbles the local culture, left a waned circumstance behind. Will our urban-rural planners not to stir a finger to this problem and left it to fend for itself in the process of urbanization? The answer is definitely no, because the countryside with the inborn values of "food production", "safeguard the Eco environment" and "deferring nostalgia" is the basic necessities of human society. It is the inescapable responsibilities for the modern planner to reserve countryside and protect its value of existence and unique characteristics that are differentiated from cities. This is also the fundamental starting point of this paper, which is to explore the renaissance pattern for the deteriorated countryside in the new era.

*1.2 Literature Review*

In recent years Chinese academics, according to the condition of China, have focused on different topics comparing with foreign scholars in studying "peri-urbanization" and "rural renaissance". The concept of "peri-urbanization" is originated primarily from a French classic geography term. Through almost a hundred years' accumulation of study, based on the two forms of "peri-urbanization region" and "population peri-urbanization", the concept has been extended to the two dimensions of geography and demography. In studies abroad, the research findings are mainly concentrated on the dimension of geography, e.g. the research of C. Kontgis et al. (2014) on the metropolitan edge of Ho Chi Ming City in Vietnam, the research of Andreas Haller (2014) on the middle area of the Andes in Peru, the research of A.O. Tavares et al. (2012) on the hinterland city in Portugal about the evolution process of countryside space and land use of these areas and the peri-urbanization geographical characteristics. In China, since Wang Chunguang(2006) first brought up the idea in the study of countryside population peri-urbanization that population peri-urbanizing is a non-integrated state in the process of urbanization, scholars tend to conduct researches from the demography dimension, analyzing the current situation, originating background and advantages and disadvantages of population peri-urbanization in China and proposing suggestions of census register system reform concerning this problem (Li Aimin, 2013; He Wei and Huang Xianjin, 2012). Whichever dimension the researches are focused, however, the content must involve the peri-urbanized rural areas and relentlessly pointed out the weakened status and deteriorated circumstances of such countryside in the city-countryside development. So how to help the deteriorated peri-urbanized countryside realize renaissance? Chinese and foreign scholars have also discussed positively about the renaissance patterns. For example, the development pattern of"one product for one village" taken as a model in Japan, combines the rural regional development with localized featured products to improve the competitiveness of the agricultural products, which realized the renaissance of countryside by industry upgrading (Shen Mingrui et al, 2015); in Korea, the modernization and urbanization of countryside developed simultaneously by peasants' autonomous "community establishment" and set-up of government, countryside as well as agriculture system, to ameliorate the elements of urban and rural areas' healthy two-way communication (Piao Longzhu, 2011); countries of New Zealand and Ireland etc. drew up regulations and policies to make countryside tourism as an important approach to avoid rural population migrating blindly to cities (Clark G, Chabrel M, 2007;Lu Xiaoli et al， 2014); The Netherlands, France, Belgium and other European traditional agricultural country to choose the "multi-function country" model(Wilson G A, 2001； Van Huylenbroeck G et al，2003)； the countryside in Taiwan emphases its originality, the providing of countryside leisure tourism souvenir and the establishment of guarantee mechanism to export rural areas' unique values to other regions, to achieve the healthy and positive development of the countryside (Liao Huiyi, 2014); Canada carries forward the transformation of countryside through the integrated approaches of market incentive, government intervention and peasants autonomous actions (Mao Dan et al, 2010); the construction of "beautiful countryside" that China is carrying out is exactly the starting

point of the renaissance of its rural areas.

### *1.3 Research Targets*

This paper reviews the research findings at home and abroad of the "peri-urbanization" and "rural renaissance pattern" in recent years through sorting out the problems in the development of peri-urbanized countryside. It combines the concept of city-countryside integration and the strategic requirements of the new urbanization pattern in the new era of China, which jumps out of the long dominated target orientation of city growth. At the prerequisite of city-countryside equality and from the point of the countryside's development endowment and its demand analysis, it proposed the idea that " in modern China studying the renaissance pattern of the peri-urbanized countryside should consider the pattern of city-countryside integration development in China and the study of this pattern should focus on the groups of countryside communities instead of the individual ones, so that to realize the overall return of vitality as well as the creation and strengthen of its unique exporting values". Based on this guideline, this paper chooses the obviously peri-urbanized countryside communities located at the two sides of Huaijiu Road in the town of Fanchang in Anhui Province, China as the research object and takes its development planning as the example to conduct the countryside renaissance research. It proposes the countryside renaissance pattern in the new era, which not only helps the countryside communities with innate self-support and developing prosperously, but also facilitates its coexistence with the outer cities harmoniously. Thereupon on the basis of positioning the main role of such countryside's renaissance, a series of relevant strategies are brought up to ensure the realization of countryside renaissance goals in these areas.

## 2. THE STUDY OF COUNTRYSIDE RENAISSANCE'S CONNOTATION

Countryside sociology professor He Xuefeng (2014) has pointed out that "Chinese traditional countryside is at the Yin and slow side as well as the pole of stability in the "Yang-to-Yin, fast-to-slow and developing-to-stability poles" of the unity of opposites. Its actual function is to provide a stabilizer to the rapid development of China in joining in the globalization system; such a unity of opposites is actually the real experience of China's stable development in the overspread of global economic crisis." It punctures a fallacy with one remark of the significance of countryside to social stability, economic development and succession of the nation. The Chinese government has paid great attention to the development problems of countryside, agriculture and peasants (the three rural issues) since 2004. In 2006, the launch of the No. 1 Document of the Central Government *CPC Central Committee and the State Council on promoting the construction of a new socialist countryside views* marks the official start of the New Countryside Construction with more than 3.2 million villages has been involved in the new socialist countryside construction. In 2012 the Eighteenth CPC National Congress first came up with the concept of "Beautiful China" pointing out the direction of the countryside construction in China.

Table 1 clearly shows the Chinese government's shift of policy-making trend in the requirements of countryside development and construction --- from purely emphasizing the space construction to the overall development of economy, society and culture.

Table 1. The emphasis changing process of the relevant policies on Chinese new countryside construction

| Stage | Period | Policy emphasis | Core contents |
|---|---|---|---|
| Fermenting stage | Between the 16th CPC National Congress to the 5th Plenary Session of the 16th Central Committee of the Party | The priority in all works is to resolve the three rural issues successfully | Requires "industry nurture agriculture and cities support the countryside". |
| Strategicall y planning stage | Between the 5th Plenary Session of the 16th Central Committee of the Party to the 17th CPC National Congress | Take the construction of socialist new countryside as one of the big strategic tasks of China's comprehensive construction of the well-off society and carrying out the socialist modernization | To construct the socialist new countryside of "product development, living in affluence, custom civilization, appearance neatness and managing democracy". |
| Large-scale practice stage | After the 17th CPC National Congress | To accelerate formulating the new pattern of city-countryside economic and social development integration | Comprehensively promote the socialist new countryside construction. Follow the agriculture modernization road with Chinese characteristics. |
| Reflection and adjustment stage | After the 18th CPC National Congress | Strengthen the integrated city-countryside development, enhance the countryside development vitality, decrease the urban-rural gap and facilitate the co-prosperity of city-countryside development. | Construct the beautiful countryside with "ecological soundness, beautiful environment, reasonable layout, complete facilities, developed industries, affluent farmers, unique local features and harmonious society". In promoting the city-countryside integration |

At the current stage, the countryside renaissance work that China has done is reflected more on the aspects of physical space landscaping and the complementary configuration of all the facilities. But the nature of the work emphasizes more on the following points: the dependence of the countryside to urban areas and industry should be transformed to the status of supplement to each other and relatively autonomous in development (He Huili, 2012), which contains the renaissance of countryside's humanistic spirit, regain of economic vitality, optimization of the spatial environment and innovative social governance etc.

The author believes that the relatively complete connotation of "countryside renaissance" should include two dimensions: **The first is about its content,** namely the village attract rural population to reflux by industry padding and reconstruction, enhancing the quality of living environment and perfection of all

kinds of facilities etc. Taking this as the basis, restructuring the rural population, updating rural governance mode, and rebuilding rural cultural charm to achieve the multifaceted spatial, economic, social and cultural autonomous updating inside the individual countryside and the internal complementary development and overall prosperity of the countryside communities. **The second is about its values,** namely in achieving the internal self-sufficiency and the common development of the communities, the values of "providing food", "conservation the ecology" and "ease the homesickness" that are irreplaceable effects and differentiated from that of the cities will certainly be strengthened. When the countryside regains the equal importance with urban areas and its unique value and charm, the majority of rural areas will began to fully reversely absorb a variety of resources and elements from cities and thus achieving its revival in a real sense(Zhao Chen，2013).

In short, the connotation of countryside renaissance lies in the two dimensions of content and values, reconstructing the unique rustic demographic, social, economic and cultural structure in the new era and realizing the integration development pattern that is equal to and complementary with the urban areas.

## 3. METHODOLOGY

### *3.1 Selecting the research object*

Anhui Province is an inland province across the Yangtze River, middle and lower reaches of the Huaihe River and neighboring the sea. It is located at the hinterland of eastern China, connected with Jiangsu and Zhejiang in the east, Hubei and Henan in the west, Jiangxi in the south and Shandong in the north. The town of Fanchang is subordinate to the Wuhu City in Anhui Province, linked with Golden Waterway of Yangtze River, located at the Mawutong area (the Mawutong Economic Zone is the three most prosperous areas in Anhui, namely Maanshan, Wuhu and Tongling) and the middle of the industrial zone along the Yangtze River, where 39 km east of Wuhu, 50 km west of Tongling. It is right adjacent to the lower point of the “Nanjing-Wuhu-Hefei Economic Triangle” and 152 km away from Nanjing. Adjacent to the Yangtze River Delta, it is 390 km away from Shanghai, the leading city of the Yangtze River economic belt. The Hutong railway line, G50 Shanghai and Chongqing Expressway and Ningan intercity railway intersect here, which indicates obvious location and transportation advantages. At the meantime, there are rich resources within the town of Fanchang, with 22 km Yangtze River bank line and the Marenqifeng, a national forest park and a 4A level scenic spot.

The object of this study is the rural area located at both sides of the Huaijiu road, which connects the town of Fanchang and the scenic spot Marenqifeng. The total length of the line is 12.6 kilometers, with 88 villages, 4955 households and a population of 14855 scattered. Same as many rural areas in small inland cities, since the decline of their traditional industries in the process of urbanization and the strong attraction from neighboring developed big cities, the region is facing a huge loss of rural population, presenting a typical situation of deterioration and hollowing-out due to population being peri-urbanized.

According to the statistics at August 2014, villages located on both sides of the Huaijiu road are emerged with varying degrees of hollowing-out, with the highest rate of 90%, the lowest 52%. Although with a high degree of hollowing-out, this rural area retains the typical rural living space and traditional farming production of central China. Moreover, as the town's "spectacular scenery" conservation area, the villages bear the dual function of serving the cities and the scenic spot. In short, the rural area on both sides of Huaijiu road in Fanchang is not only a typical representative of China's vast rural peri-urbanized population, but also bears significant rural characteristics, with a relatively unique natural resources endowment and development conditions. Therefore, the article chose this rural area as the research object.

### *3.2 Coming up with the renaissance pattern*

The rural area on both sides of Huaijiu road in Fanchang bears the dual function of serving the cities and the scenic spot on the basis of maintaining the lifestyle, production and ecological space with extremely rural characteristics and relying on the intersection and the only route for tourism of Huaijiu road connecting the city and the scenic spot. The dual functions are: firstly export various agricultural products to urban residents and second, provide tourists with leisure experience space and services with rural characteristics and complementary in tourism types with the Marenqifeng scenic spot. In recent years, with the increasing amount of tourists in Marenqifeng and the expanding demands of leisure tourism in rural areas, the modern agriculture and agricultural leisure industry in the area has obtained greater development. In the 24 villages of the area there has been 6 modernized agriculture technology enterprises and 10 happy farmhouses being launched currently. By the end of 2014, there had been 5 provincial-level models in the 10 happy farmhouses in the area, including one five-star one, three four-star ones and one two-star one. However due to lack of integrated management and guidance, they are all confronted with the development dilemma of "lack of image, taste and integration". These dilemma are presented in three aspects: firstly, although the current enterprises have developed to an extensive scale with some star-level ones, on the whole there exist the problems of extensive operation mode, low quality of space environment and fragmented business operations; secondly the peasants are in low participation of the newly emerged enterprises and hardly able to convert their own land resources into relatively high-end space and products to export due to the constraints of their own competences and skills; thirdly, the government is lack of management platform and control mechanism, failed to guide the area to escape the dilemma of homogenization and low-end development effectively.

Through the analysis of resource endowment, development dilemma and the advantageous conditions of the rural areas on both sides of the Huaijiu road in Fanchang, we proposed the idea of "formulating the integrated development renaissance pattern for all the rural communities that takes the city as the serving object, countryside as the carrier, agriculture as the foundation, tourism development as the method and the cultural renaissance as the root" in its development planning.

This planning suggests that firstly it should be guided to an industrial upgrade, by optimization and improvement of the first industry and injection of the tertiary industry, creating a wide-long type of leisure agricultural industry chain structure; secondly under the guidance of "distinctive themes, optimizing the use of resources and narrowing down the industry types", select the three types of projects (farming experience park, happy farm houses and bamboo industry project) as the priority to introduce into the development of the area; lastly, formulate the projects joint development guidance brochure of the area and put it into practice of the countryside space (Figure1). Guided by the industrial development, it will lead the enterprises out of the dilemma of homogenization and actively encourage villagers to integrated into the new industries' development, helping them increase streams of revenue, realize self-improvement and thus to revive the whole countryside individuals and community.

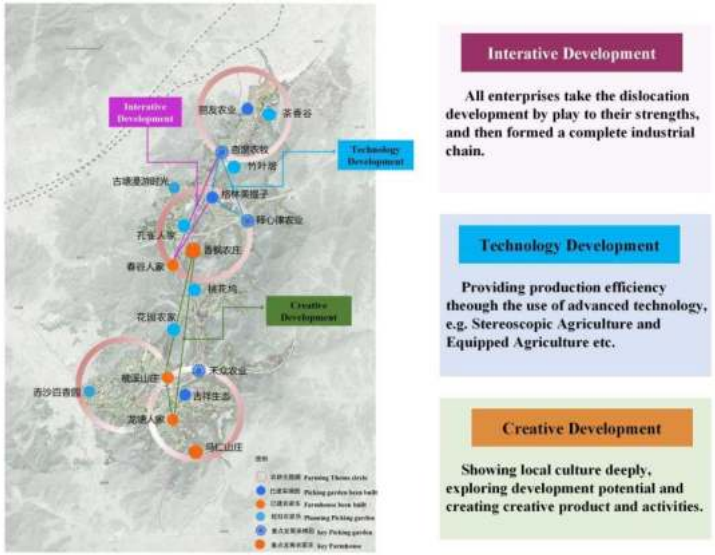


**Figure1 The guid chart of space layout of regional project's interactive development**

### *3.3 Studying the subject of the renaissance*

In general circumstances the subject of countryside renaissance should include government and villagers. However, according to the core content of the connotation of the countryside renaissance mentioned before, we consider enterprise should be added as the injector of the countryside industrial vitality. Meanwhile, tourists should also be included as part of the subject concerning the influence and the huge market they brought to the countryside development, thereby forming a four-party subject of the countryside renaissance by the government, enterprises, villagers, tourists.

In the four-party subject, the government is the controller and server; the enterprises are the leader and investors; villagers are the actual practitioners and the tourists are the drivers. As the controller and the server, the government should take the responsibilities of determining the development direction of the area, guiding the industrial upgrading, making space planning, improving infrastructure construction, implementing the control measures and multi-channel promotion etc. While supervising the enterprises, villagers and tourists, it also provides service platforms for the other three roles. The enterprises concern more about the problems of the amount and means of investment, industrial chain construction, featured products development, projects integration and operation mode chosen etc. Under the supervision of the government, the enterprises are supposed to strive to integrated into the area leading the area to the

modernized, efficiency and high-quality development; providing more employment chances for the villagers to help them improve their self-competence and skills and increase their streams of revenue; providing the tourists with featured agricultural products and souvenirs. Villagers are the subject of the countryside society and the key group in participating the countryside industry, organizing the rural society and reviving the rural cultures. Under the control and service of the government as well as the abstraction of enterprises, they provide extensive market for the labor force employment in the area's development and the rural space experiencing sites and services for the tourists that are distinctive with that of cities. For the tourists, they are under the control of the government and receive multi-level tourism services from government, enterprises and the villagers, exporting various resources, capital, and information elements and facilitating the element movements between city and countryside, which strengthens the values of countryside renaissance indirectly.

### *3.4Providing guarantee strategies*

To ensure the realization of "formulating the integrated development renaissance pattern for all the rural communities that takes the city as the serving object, countryside as the carrier, agriculture as the foundation, tourism development as the method and the cultural renaissance as the root", this research gives renaissance guarantee strategies from the following three aspects:

(1)Planning scientifically: improve the overall spatial layout, traffic organization at all levels and security and construction work of public service facilities of the area and this work will mainly organized and completed by the government.

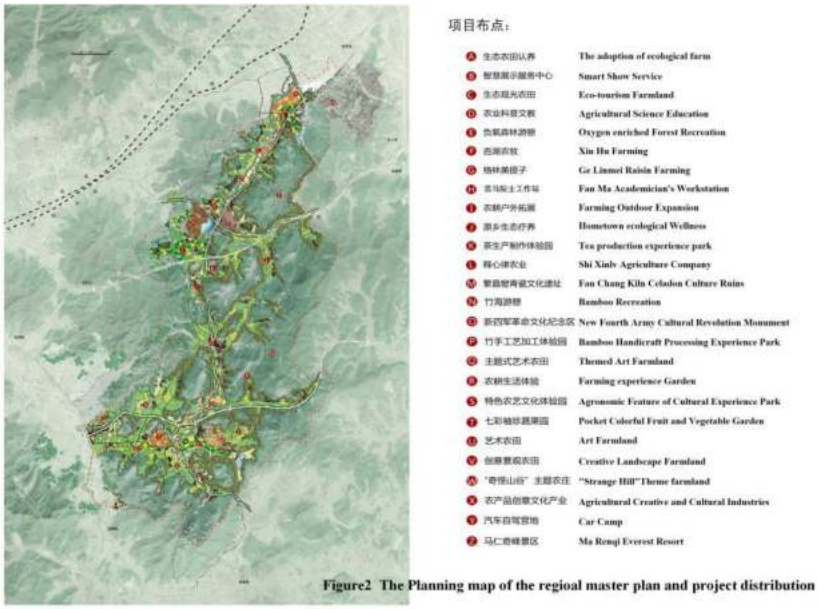

Figure2 The Planning map of the regioal master plan and project distribution

In the planning area of 45.784 km$^2$ including 11.138 km$^2$ basic farming lands, 2.655 km$^2$ general lands and 1.324 km$^2$ countryside construction lands with the remaining of water areas, mountainous areas, woodlands and scenic spots. On the basis of analyzing thoroughly of the attributes of the lands and their using conditions, relying on the countryside construction lands and farming lands the planning arranges the spatial distribution of the whole area, with its emphasis on putting the 26 different projects into the rural

production, living and ecological spaces(Figure2).

The area's transportation and ancillary facilities have also been scientifically disposed in the overall plan. The plan on transportation module is on the basis of taking the two railways of Hutong railway and Ning'an intercity railway, as well as the 5 expressways of the Yanjiang expressway, Huaijiu road, 216 provincial road, 043 and 053 county road as the main transportation lines connecting internally and externally of the area, 2 5m wide slow passable green roads are built allowing passage of both motorized and non-motorized vehicles; integrated with the mountainous lines, several 3.5m wide brand roads that mainly support non-motorized vehicles and pedestrians and several trials that are set along the internal mountains and only allowed for pedestrians are built. The ancillary facilities mainly arranged the 4 categories of bus stations, parking spaces, medical sites and public toilets and dumpsters. Among these a bus station is set in every 500-1000m; 5 more parking spaces and 3 camping bases are newly built along the Huaijiu Road; the radius of medical facilities services is no more than 3km; set up public toilets and dumpsters according to bicycle stops and camping sites, whose serving radius is no more than 1.5km to be convenient for tourists' needs.

The plan also designed the important points in the area in detail, such as constructing guiding rules design to the north entrance that is of 74.5 hectares. The plan observes the principle of low cost and keeping the original appearance, relying on the existing important villages, the 216 provincial road and Huaijiu road which are crossing the area and the Liwen Agriculture Co. Ltd. to spread the design. The Tiemen Village Committee's buildings are reconstructed and the Fanchong canal is renovated to form a coast leisure belt. A great number of ancillary facilities of functional projects, parking spaces, commercial service sites and medical outpatient clinics are newly built including Dazhuang parent-child agricultural experience park, Xiaotuan Hill Park, pedestrians entrance square, marking building for vehicle entrance and Seven color agriculture presentation field.

In short, scientific planning as the basis of government control and services has played an important role in aspects of guiding the orderly economic development of the area and efficient facility allocation

(2)Protection first: in the three fields of ecological protection, living environment protection and agricultural civilization protection and their detailed 9 domains establish the management and control system of protection first(Table 2). Then,take the management and control system of succeeded traditional culture for example. The detailed management and control content and measures are illustrated in Table 3.

Table 2. Table of the whole management and control system

| Field of management | Range of management and | Content of management and control |
|---|---|---|

| and control | control | |
|---|---|---|
| Ecological management and control system with low impact construction | Water environment | Water quality |
| | | Landscape environment |
| | Mountainous bio-resources | Rare and old trees |
| | | Forests and bamboo groves |
| | Atmospheric environment | Air quality |
| | Solid waste | Daily life waste |
| | | Waste in production process |
| Management and control system of respecting for the countryside subject originality | Residential buildings of village communities | Overall appearance of the villages |
| | | Ancient mansion/folk houses |
| | Rural residents | Lifestyle |
| Management and control system of succeeded traditional culture | Agricultural civilization | The succession of the pastoral landscape |
| | Community life and culture | Protection of folk house culture |
| | | Community autonomous organization |
| | Rural art culture | Continuation of the traditional arts and crafts and traditional cultural activities |

Table 3.able of management and control system of succeeded traditional culture

| Range | Content | measures |
|---|---|---|
| Agricultural civilization | The succession of the pastoral landscape | 1. The protection of pastoral landscape, the carrier of farming culture, should be put to the position of priority with strict control.<br>2. Actively build a platform for cultural exchange and the organization of related farming activities to promote the dissemination and awareness of farming culture.<br>3. Strict implementation of rural land use approval system, prohibiting unjustified appropriation of farmland and the crop farming structure can be appropriately adjusted. |
| Community life and culture | Protection of folk house culture | 4. Strengthen the protection of the ancient Zhongfen village and the historical attractions of Fanchang cave dwellings.<br>5. On the basis of "three lines and the trilateral regulations", efforts should be made to preserve and build residential building appearance along the Huaijiu line.<br>6. Repair and renovate residences in certain damage, protect the residential buildings with traditional culture. |
| | Community autonomous organization | 7. With the development of rural tourism, the original community family living atmosphere and culture should not be abandoned, displaying rustic atmosphere and positive neighbourhood to others.<br>8. Improve the overall cultural quality of rural residents to build the spirit of the new face of beautiful countryside<br>9. Actively building activities in rural communities and create a harmonious neighborhood community atmosphere, and retain the simple folk interaction between traditional farming neighbourhoods. |
| Rural art culture | Continuation of the traditional arts and crafts and traditional cultural activities | 10. Through the construction of the Fanchang caved dwelling museum, inherit and develop the Blue and White Porcelain culture.<br>11. The extremely distinctive arts and crafts, should be considered for official protection by application of intangible cultural heritage<br>12. Take the Marenqifeng blessing events as an opportunity to spread the blessing culture. |

(3)Common benefit of the four parties: in the renaissance process of rural areas on both sides of the Huaijiu Road in Fanchang, we can see the bidirectional logical relationships among the four parties of government, enterprises, villagers and tourists.

Firstly we are going to explain the logical relationships of tourists-government and enterprises-villagers. The population flow, capital flow and information flow introduced by the tourists drive the industrial transformation in the countryside. Under such a huge influence of rural tourism market, the government and enterprises are all injecting new and enormous production elements such as capital, technology and information. The assembling of such elements results in the rural productivity relocation in the countryside space and recombination and optimization of the resources in the area. The reassembling and combination of the resource elements introduced the fundamental power for the renaissance development of the peri-urbanized rural areas. The influx of tourists and the investment of government and enterprises at the earlier stage helps the rural area on both sides of the Huaijiu road in Fanchang transform into the traditional agricultural production, agricultural scale production and tourism consuming services pattern. Accompanied with such transformation, the channel of employment is expanded on the one hand with the improvement of employment enthusiasm and levels as well as their incomes accordingly; on the other hand, some of the migrant workers began to reflux to be employed or self-employed, which nurtures the renaissance of the rural homeland. Thus the assembled production elements such as the enormous population, huge capital, high tech, diversified information as well as it scientific layout lays a solid enough foundation for the countryside renaissance in terms of economics.

Now we are going to analyze the logical relationships of villagers-enterprises and government-tourists reversely. The villagers can choose their own production operation mode that is suited for themselves under the circumstances of market demands and government and enterprises' guidance. For example the villagers can choose from the modes of autonomous operation, "community + company + farming household", "government + company + farmers tourism committee + travel agency + farming household", "enterprise + farming household + base + cooperation" and "enterprise + farming household + government" etc. It can optimize resource allocation and improve the service level and skills to realize the increase of income and self-improvement. It has to be mentioned that from these modes we can see the renaissance in rural social aspect. For example the previously mentioned social organization forms of community, cooperation and farmers tourism committee etc. are all autonomously organized by farmers and also the organization platform of farmers conducting countryside social autonomy. The economic and social renaissance activities autonomously organized by farmers must facilitate the enthusiasm of further investment by government and enterprises and further injection of capital, population and information, which forms a benign interactive relation of the three ones. Such a benign interactive relation will definitely produce rural products of higher quality (including the general and featured agricultural products as well as the derived products, pastoral space and tourism services etc.) to the tourists to formulate the win-win interactive mechanism of the four-party cooperation.

## 4. DISCUSSION

The countryside renaissance research targeting on the rural area in both sides of the Huaijiu road in Fanchang is based on its local development planning. The proposal of its modes, analysis of the subjects' relations and guarantee strategies' study is started from the peri-urbanized deterioration problems of this area, taking its local resource endowment and development conditions analysis as the foundation and the rural economic, social and cultural renaissance as the objective. The renaissance objectives, methods and contents mentioned in this plan have gained the extensive recognition and support from the local government, enterprises and the villagers through 1 year's communication with them. At present, this plan is in the final revision process. Although the plan has not been completed, the government, enterprises and villagers have begun to conduct the countryside renaissance works according to the core content of the plan. The foremost one is the improvement and optimization of space environment's quality. The 4 villages in the urban fringe, 4 villages in the scenic spot fringe and 16 villages in the expressway and railway fringe have basically completed the public environment sanitation improvement work within the limit of sights to provide a neat community environment for both the villagers themselves and the tourists. The second foremost one is the recombination and padding of the industries. There are agricultural and travelling companies continuously launching in the area. To avoid vicious competition brought by homogenization among the enterprises, they began to refer to the relevant contents in the plan under the guidance of the government to follow the way of differentiated and collaborated development. Thus provides more employment opportunities and diversified skill training services to the villagers and also provides more diversified products and services to tourists. More importantly, the village is recombining the rural population and updating the countryside governance pattern. The countryside makes the "new rural people group" including the regular peasants, returned migrant farmers and enterprise entrepreneurs the permanent resident population in the new era, formulating the diversified population structure. Some of the villages establish production cooperation and farmer tourism committee etc. on the basis of the existing village committee according to development needs and also introduce NGO to manage the rural issue together. Thereupon the rural economic and social renaissance has been on track and for the cultural renaissance, we are planning now and will mainly be conducted with in the way of managed, controlled and protected by the government and participated by the villagers. It concerns more about the spatious expression, lacking studying in depth.

## 5. CONCLUSION

As an important guarantee of China's sustaining and stable development in the new era, the study of countryside renaissance is a significant topic that cannot be neglected. This paper starts from the connotation of countryside renaissance, pointing out the positive meanings of China's city-countryside integration by the countryside renaissance form the two dimensions of content and values. The contents involved in the study of the connotation was explained and practiced through the development planning case of the rural areas on both sides of the Huaijiu road in Fanchang. The modern countryside

renaissance pattern in the new era is proposed that not only helps countryside communities to realize self-sufficiency internally and prosperous development, but also facilitates its harmonious co-existence with the outer cities, which is to "formulate the integrated development renaissance pattern for all the rural communities that takes the city as the serving object, countryside as the carrier, agriculture as the foundation, tourism development as the method and the cultural renaissance as the root." It also pointed out the methods to bring back the total vitality of the whole rural area and produced and strengthens its unique exporting values from the two perspectives of studying the renaissance subjects and guarantee strategies.

"As a systematic concept, the content of countryside renaissance is complicated and diversified…it is also closely related to the change of city-countryside relationship, the change of the rural land system as well as the change of social consumption structure. The expectation of rural studies in future China requires a grander context, deeper degree of field investigations and more valid evidences to explore the diversified and concrete way of realizing the countryside renaissance." (Zhang Jingxiang, Shen Mingrui, Zhao Chen, 2014) This means in the study and practice of city-countryside planning theories in the future that more attention should be paid to the countryside renaissance problems. Meanwhile this requirement will also be reflected to the planning education. The rural planner system has been established in Sichuang Province in China, with the planner in villages serving better to the villages' development; the course system of city-countryside planning programs has been added relevant courses concerning countryside planning principles and designing in universities represented by Tongji University and Huazhong University of Science and Technology, to serve better to the national and professional demands. In the future there will be more and more researches about policy, system and professional education for Chinese countryside renaissance.

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# TRACK 08

# Planning 'in' or 'for' Multicultural Societies. Diversity, Social Justice and Democracy

## Track description

Co-chairs: **Lia Vasconcelos**, **Angelique Chettiparamb**

Multi-ethnicity, multiculturalism and factionalism along multiple grounds such as religion and language are increasingly becoming features common in European cities and regions today. Although, multiplicity and the presence of the 'other' through trade and travel have always defined cities in Europe, the scale, pace and nature of change is now largely perceived as being unprecedented or different. The compression of space and time in cities jostles various types of traditional ways of life entrenching some identity positions and threatening others. This track explores issues around mediation of diversity and conflict, seeking to examine ideas of social justice, human rights, and democracy in the wake of multiplicity. Specific questions include:

- How can we describe and understand the nature, potential and challenges of diversity in contemporary European societies?
- How can planning respond to diverse values and capabilities whilst retaining a commitment to ideas of spatial social justice?
- What are the roles for planners in multicultural territorial communities?
- What planning approaches at various scales have been adopted for conflict resolution in divided societies?
- How might planning contribute to ideals of democracy that define most contemporary European polities?

# "PLANNING GOING DOWN TO THE COUNTRYSIDE": HOW RURAL PLANNING IS INTEGRATING RURAL SOCIETY AND RURAL SPACE IN CHINA FROM THE PERSPECTIVE OF STATE-BUILDING

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Keywords: state-building, Balancing Urban and Rural Development, Socialism New countryside Constructions

## 1. Introduction

Today's China is undergoing practices of rural reconstructions and rural planning at a large scale. This phenomenon has aroused wide attention of scholars and literatures covers issues of rural development, rural land use, rural planning and rural residential design etc. (Van der Ploeg, Ye & Schneider, 2015; Siciliano, 2012; Long, Zou, Pykett & Li, 2011;Long, Heilig, Li & Zhang, 2007). Especially, scholars from planning disciplinary in China has done lots of works to research on how to formulate and implement rural plans (Wang, etal., 2012; Shen, Jiang & Yuan,2012; Long, Zou & Liu,2009;Yansui,2007). Those efforts help us understand what is happening today in rural society of China.

However, majority of literatures consider issues of rural planning practices from the inside perspective, such as describing rural practices phenomenon and discussing how to formulate and implement rural plans etc., while the outside perspective usually is neglected. Obviously, it is very important to examine rural planning practices from the outside perspective if we want to know what role rural planning practices are playing in our society. Regarding this situation, this paper tries to provide an outside angel to examine rural planning practices under the theory of state-building in China. From the perspective of state-building, this paper aims to explore the political meanings of rural planning practices and discuss the role of rural planning practices in the process of state-building. By this approach, we are expected to know essences of rural planning practices in the power layout of the state-building process. Then, we may know how to improve rural planning practices and finally contribute to the sustainable development of rural China.

Following the introduction section, the second section will discuss the perspective of state-building and establish the analytical framework for the whole research. The third section belongs to empirical study part, mainly discussing rural planning practices of "Balancing Urban and Rural Development" and " Socialism New countryside Constructions". Finally, conclusions are obtained and some prospects are discussed for rural planning practices of future in China.

## 2. Perspective of state-building and analytical framework

### *2.1 About state-building and state-building of China*

Generally, state can be divided into traditional state and modern state. Modern state is a term compared to traditional state. Usually, traditional state can be regarded as a small community composed of clan, family, tribal, ethnic and other small local communities(Xu,2006). Due to the limited governance capacity, the power of traditional state can't penetrate the traditional rural society completely and the interior of traditional state is separated and scattered(Ding,2014). In other words, fracture properties can be one obvious symbol of a traditional state. Therefore, state-building can be considered to be a process that one state is reconstructing and integrating itself. The process of state-building is to change fundamentally the fracture properties of the traditional state, and to achieve effective integration of politics, economy, society, culture and space in traditional state and rural areas. Each state has its own state-building process with different characteristics. Since the aim of this paper mainly focuses on Chinese issues of rural planning

practices, the following part will briefly discusses the process of state-building in China and find how state-building can provide us a special perspective for analyzing rural planning practices nowadays.

Starting with the Opium War, China was forced to start the process of modernization and state-building, and the old traditional state had to undergo a long and painful transformation and reconstructions process to adapt itself to the development of all human society(Ding,2014; Xu,2006). However, during this process, traditional rural society suffered great damage, causing serious problems of rural development. A nation-wide and sustained decline of Chinese rural society during 1920S-1930S was a good example for such a great damage of rural development in the process of state-building(Ding,2015). This situation attracts lots of attention from scholars such as Shuming Liang and Yangchu Yan and caused massive rural construction movement, to make the relief of rural society and the revitalization of state come true. At that time, Nanjing national government also launched series of measures such as land system reform and promotion of rural development activities to reconstruct the whole nation and the state-building. However, the Communist Party of China is the one who can reconstruct rural society completely and promote the process of state-building by rural land system reform and class divisions movement(Ding,2014).

People's Republic of China was founded in 1949, and this event can be treated as an important milestone in the process of state-building. After the founding of New China, the biggest challenges for the state is how to further enhance national capacity and to achieve national prosperity. The central government led by the Communist Party of China finally decide to launch the development strategy of industrialization as a breakthrough for state-building. However, because of the international environment at that time, industrial development and state-building can only rely mainly on rural areas. In this context, the new government launched a new round of rural society integration by implementing the commune system in the vast rural areas to support national and industrial construction. Until the reform and opening up in 1978, the state mainly rely on the commune system and a set of corresponding purchasing and marketing system to achieve resources from rural society to support the primitive accumulation of capital for the country's industrialization and eventually establish a fairly comprehensive preliminary industrial system(Ding,2015). However, this kind rural development practices caused serious problems for the whole rural society such as rural economic stagnation and many farmers living in poverty. This situation eventually led to the rural reform and set off a wave of reform and opening up nation-widely.

After the reform and opening up in 1978, the Household Contract System become the basic economic system in rural society. The labour enthusiasm of farmers were released by the implementation of the Household Contract System and those reforms promoted the rapid development of rural areas, increased farmers' income and improved rural living environment in rural society. While series of intuitional reforms based on the Household Contract System promoted rural development, the loyalty and identity of farmers to the modern state was highly enhanced and the modern state could further integrate the rural society. However, after the start of urban reforms during the mid-1990s, rural development entered a slow and lag stage, and then the gap between urban and rural areas was growing. All those finally caused serious problems for the whole society, namely "Three Issues Concerning Agriculture, Farmers and Rural areas". In order to combat with serious problems of rural development, get rid of urban-rural dual structure, reduce rural conflict, and integrate urban and rural development, the modern state launched a series of new programs and practices in rural society, including Balancing Urban and Rural Development, Agriculture Tax Reforms, Public Finance Reforms in Rural Areas and Socialism New countryside Constructions etc..

*2.2 State-building as a perspective and its analytical framework*

Based on the above, we can clearly concluded that the state-building of China is highly related with rural development and rural planning practices. As we know, China is a old country with a long traditional civilization. Therefore, the state-building of China has to transform and reconstruct

traditional rural society, and to some extent the process of reconstructing traditional rural society can be regarded as the state-building itself. Therefore, state-building can provide an important perspective to examine rural development and rural planning practices. Actually, lots of literatures which researches on rural politics, rural governance, and rural society shows that the state-building does provide an new and important perspective for examine the phenomenon of rural development and rural planning practices.

As a perspective for analyzing rural development and rural planning, state-building mainly focuses on practices and by those practices concludes how modern state is integrating rural society and rural space. In other words, the following section of this paper mainly investigates series of important rural development and rural planning practices to show how the modern state integrate or reconstruct the rural society nowadays. Considering the current situation of rural development and rural planning practices, this paper mainly discusses practices of "Balancing Urban and Rural Development" and " Socialism New countryside Constructions".

## 3. "Balancing Urban and Rural Development " and "Socialism New countryside Constructions"

### *3.1 "Balancing Urban and Rural Development " and its case of Chengdu City*

In 2002, the central government of China launched "Balancing Urban and Rural Development" to promote the modern agriculture, develop the rural economy and increase farmers' income. As a fundamental national strategy, "Balancing Urban and Rural Development" aims to reverse our long-term urban-rural dual structure and treat the urban-rural relations as a whole and complementary relationship to keep resources free-flowing across the urban and rural areas, such as labor, land, capital and other resources, etc.. Under this strategy, different kinds of practices of rural-urban integration occurred. The following paragraph will take practices of rural-urban integration of Chengdu City as an example to show how modern state is integrating rural society and rural space in local places and examine how those practices influences the development of local rural society.

The City of Chengdu is located in southwest of China, with an area of 12,390 square kilometres, and enjoy the reputation of "Land of Abundance" in China. The City of Chengdu is a large city with large rural areas when the total population is 10.28 million in 2002 and the rural population accounts for 60% (Ye & Jiao,2014). After that the central government launched "Balancing Urban and Rural Development", the local government of Chengdu also started a program of "Balancing Urban and Rural Development" to solve "the three issues concerning agriculture, framers and rural areas". Since 2003, the City of Chengdu had made many reforms in rural areas to promote the sustainable development.

According to Ye and Jiao(2014) a, those reforms mainly includes the following seven aspects. The first one is the transformation of government functions to build a service-oriented government, including the decentralization of economic and social management functions for the local government, the pilot town to expand its powers and the implementation of grass-roots democratic reforms. The second one is that the local government keep planning a leading position and make master plans of urban-rural integration with the content including zoning, spatial structure, rural planning, and rural development planning management, etc.. Third, the local government promotes the integration of urban and rural basic public services, including the financial transfer payment system and an equalization of public services. Fourth, the local government tries to cultivate new industries, promote new industrialization and make more employment opportunities. Fifth, the government of Chengdu tries to build a new market to promote resources free-flowing such as labour, land and capital, etc.. Chengdu Public Resources Trading and Service Center is a good example for the unified market for the trading of land and other resources between urban and rural areas. Sixth, the local government launched lots of reforms on rural grassroots democratic governance, such as the construction of village council, the Executive committee, and other economic organizations. The last one is that the local government tries to promote the modernization of agriculture and rural development, reform the rural property rights system, build

the new democratic governance, change the management of public services supply system and promote the comprehensive improvement of rural land and other infrastructure projects.

By series of reforms, the City of Chengdu achieved a rapid economic and social development and win a reputation of "a city where once you are, you never want to leave", with a effective mechanism of urban and rural integration and a high urban competitiveness capacity(Ye & Jiao,2014; Ye &LeGates,2013). The survey shows that more than 89% of the population hold a satisfaction attitude to the reforms of urban and rural integration strategy(Ye & Jiao, 2014). More observations from the macro level also shows that the strategy of urban and rural integration had a very positive impact on the local rural society. Land Comprehensive Improvement Project of Zhanqi village in Chengdu is a good example. Zhanqi village is located in the Tangcang town of Pi country, 30km far away from the downtown area of Chengdu and covers an area of 2.1 square kilometers, with nine villagers groups and the population of 1700. Land Comprehensive Improvement Project of Zhanqi village in Chengdu was launched after the strategy of urban and rural integration was implemented in Chengdu City. The procedures of Land Comprehensive Improvement Project of Zhanqi village is the following: (1) the formulation of rural planning ;(2) a new company which raised 98 million Yuan from the Urban Investment Company was set up for the implementation of land improvement and community construction project; (3) by the implementation of Land Comprehensive Improvement Project, Land indicators of 208 Mu was saved and they were transacted with those of urban areas and earns 130 million yuan (625000 yuan/mu); (4)finally, those earnings can be used to pay financing and its interest and to support the modern agriculture and its infrastructures. By the implementation of Land Comprehensive Improvement Project of Zhanqi village, farmers could live in a new rural community, and the property of the collective and the income of farmers was highly improved. Besides, the built environment of rural areas, the infrastructure and public services, the protection of rural environment and the development of modern agriculture were highly improved.

We can learn from the case of Chengdu City that " Balancing Urban and Rural Development " of the central government can be transformed into local rural planning practices by the operationb of the local government. Hence, we can treat " Balancing Urban and Rural Development " and rural planning practices as an art of how the modern state is integrating rural space and rural society.

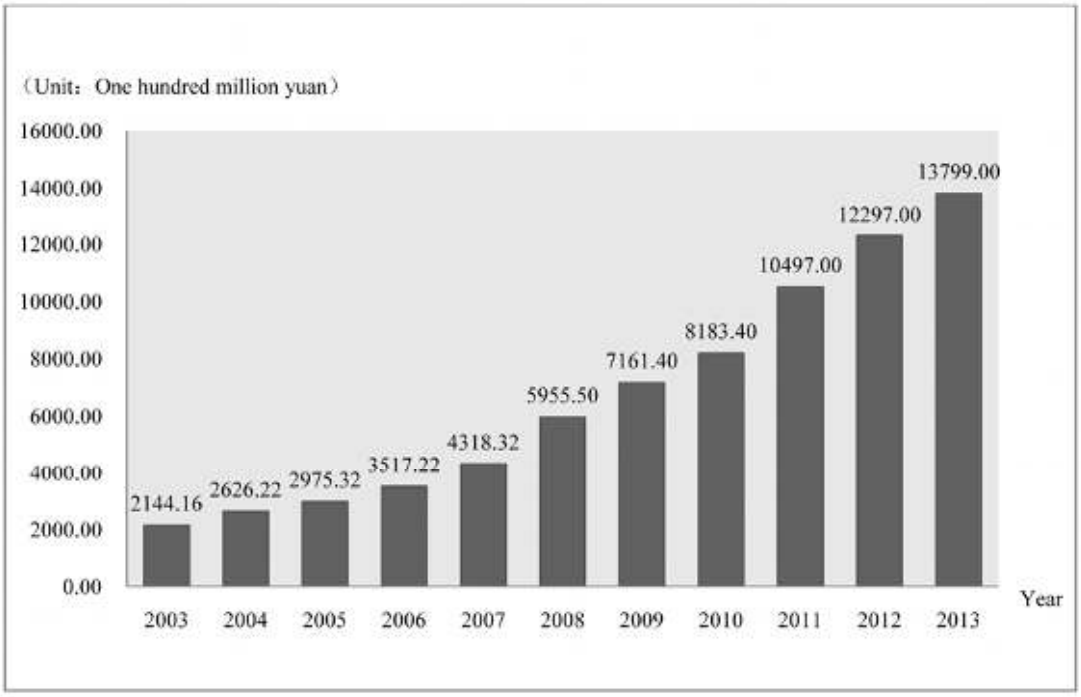
*3.2 "Socialism New countryside Constructions" and its case of Jiangsu Province*

"Socialism New countryside Constructions" can be treat the counterpart of " Balancing Urban and Rural Development " since the new century. In 2005, the central government planned to launch "Socialism New countryside Constructions" to promote the development of modern agriculture, deepen rural reforms, improve rural public services and increase income of farmers. The key of "Socialism New countryside Constructions" are "growth of production, well-to-do life ,civilized rural atmosphere, neat rural face, democratic administration". The policy of giving more , taking less and loosening control is the central measure of "Socialism New countryside Constructions". we can see from figure 1 that the central government had spend total 7.35 trillion Yuan from 2003 to 2013 for rural development concerning "agriculture, rural areas and farmers"(Ding,2014). Meanwhile, the central government tried to reduce the burden of farmers and reform the fiscal and taxation system. Besides, the central government reformed institutions and policies, gave farmers more autonomy and encouraged farmers to start their own entrepreneurship to increase their incomes(Ding,2015). In one word, the central government aimed to solve serious issues concerning agriculture, farmers and rural areas since the new century.

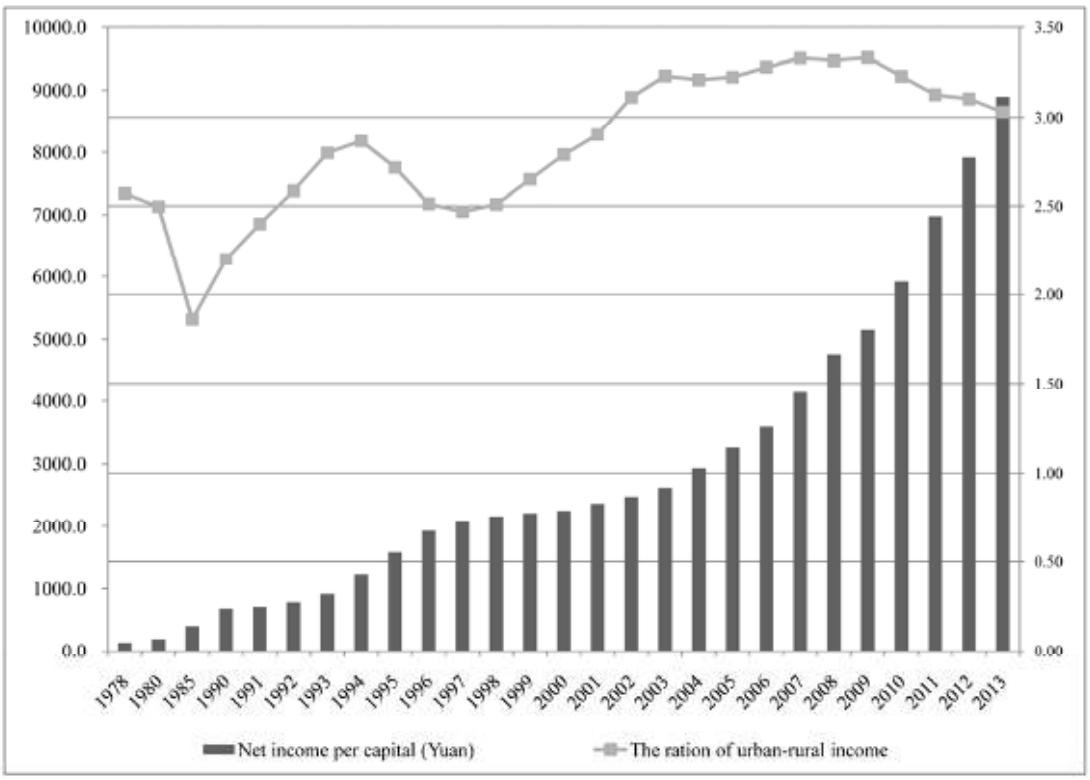
"Village environment comprehensive improvement action plans" of Jiangsu Province was a good example to show how "Socialism New countryside Constructions" was operated in local rural areas. As one of the most developed provinces in China, Jiangsu province has achieved many positive results and posted itself as one of the most low level of the gap between urban and rural areas. However, the gap between urban and rural areas in infrastructure and public services was still large. Therefore, at the background of "Socialism New countryside Constructions", Jiangsu province launched a program named "Village environment comprehensive improvement action

plans" and treated it as one of the most important part of national rural development strategy. The goal of "Village environment comprehensive improvement action plans" of Jiangsu province is to improve the environment comprehensively in 3-5 years. In order to promote the project of "Village environment comprehensive improvement action plans", 18 leading groups were set up and the ratio of village environment improvement was treated as one of key indicators for the cadre promotion. Totally, nearly 5 billion Yuan were invested by the government to promoted "Socialism New countryside Constructions" of Jiangsu province(Zhou, 2014). The government of Jiangsu province mainly focused on rural infrastructure improvement including village garbage treatment, clean water supply, rural road improvement and rural river clean, etc. to completely improve the rural built environment. After the implementation of this program for more than three years, many positive results are achieved, including the following: (1) this program were implemented in two-thirds of villages and the built environment were generally improved; (2) more than 20 million of farmers were directly beneficed; (3)more than 87.3% of residents of Jiangsu province showed their satisfaction to "Village environment comprehensive improvement action plans", ranking the number one of all other programs(Zhou, 2014).

Actually, like the program of "Village environment comprehensive improvement action plans" in Jiangsu province, practices of "Socialism New countryside Constructions" in other local places also had achieved great success that can be shown by many development indictors. On the production of agriculture, the main crop production remained a situation of steady rise, and grain output reached 601.94 million tons in 2013, with an increase of approximately 31.70% compared to 2002(Ding,2015) . On the income of farmers, the trend of the large gap between urban and rural areas was stopped and reversed. Figure 2 shows that the income gap between urban and rural residents begun to narrow steadily, declining from 3.33 times in 2009 to 3.03 times 2013(Ding,2015). Besides , the supply of rural public services and rural infrastructure such as roads, water and energy, rural education, rural culture and rural medical services were highly improved.




Figures1. The expenditures for "three issues concerning agriculture, farmers and rural areas" by the central government of China from 2003 to 2013




Figures 2. The diagram of changes of the net income of family in rural areas and the ration of urban-rural income from 1978 to 2013

## 4. Conclusions

From cases of "Balancing Urban and Rural Development" in Chengdu City and "Village environment comprehensive improvement action plans" in Jiangsu province, we can see measures, process and impacts of how the modern state is integrating rural space and rural society. Since the new century, the modern state launched "Balancing Urban and Rural Development" and "Socialism New countryside Constructions" and those policies or strategies were finally transformed into local rural development and rural planning practices by the operation of the local government, related institutions renovations and the large scale investment, posing an very positive influences on local farmers and reshaping and integrating rural space and rural society.

"Balancing Urban and Rural Development" by the modern state was aimed to change the urban-rural dual structure and eliminate the gap between urban and rural areas for the goal of the integration of urban and rural areas. Case of "Balancing Urban and Rural Development" in Chengdu City shows that by the operation of the local government and series of institutions renovation, the national development strategy of urban-rural integration really promoted the free-flowing of resources like labour, land and capital across urban and rural areas, and improved the integration development of urban and rural areas and have a very positive impact on the urban and rural dual structure. In the process of implantations of this national strategy, rural society and rural space was totally reconstructed and regenerated, the competiveness of urban and rural development was highly improved, and of course the modern state was in a great progress.

"Socialism New countryside Constructions" by the modern state was aimed to solve three issues concerning agriculture, farmers and rural areas, increase incomes of farmers, narrow the gap between urban and rural areas, and finally promote the progress of rural society. Case of "Village environment comprehensive improvement action plans" in Jiangsu province illustrated how the

modern state is integrating rural space and rural society. In this process, rural space and rural society were reshaped and reconstructed, the rural built environment was improved, and the rural social welfare was increased. Also, the urban and rural dual structure was integrated, and the identity and loyalty of farmers to the modern state were highly promoted.

Hence, from the perspective of state-building, we can treat rural development and rural planning practices as important arts of the modern state integrating rural space and rural society from cases of "Balancing Urban and Rural Development" in Chengdu City and "Village environment comprehensive improvement action plans" in Jiangsu province. Those practices will transform the traditional rural society into the modern agriculture and then realize the modernization of rural development. We also can see that the process of state-building is one the most important factors influencing the development of rural space and rural society. As we know, since China is a state with a long history of farming, the process of the modern stating integrating rural space and rural society can be regarded as the growing-up of the modern state and those practices finally realize the modernization of state. In other words, practices of state-building actually produce rural planning and rural development practices, and those practices can be described as "planning going down to the countryside". In the whole process, the modern state is enlarged and the capacity of the modern state is highly improved by integrating rural society and rural space.

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**Reviving the historical memory and promoting the understanding among different cultures: The consolidation and transformation of two refugee settlements in central Athens.**

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**Key words: urban regeneration, cultural route, restoration**

***Abstract***

*The first half of the 20th century was a milestone in the historical, social and cultural development in Greece as it involved changes that still affect current policies. Among the most significant changes has been the massive influx from the East of refugees of Greek descent who had to be urgently accommodated in housing complexes like the ones in Alexandras Avenue in Athens. The modern architectural approach of the specific buildings, their symbolism, but also their prolonged abandonment, created the need for the development of an appropriate proposal regarding their preservation, reuse, rehabilitation and their reintegration in the surrounding urban fabric.*

*The paper proposes the preservation and the rehabilitation of this settlement in consolidation with the neighboring "Stegi Patridos" refugee housing complex. The two complexes will create a cultural route and thematic park, the key elements of which will be the revival of historical memory, along with the promotion of the common elements among the different cultures involved, such as the Greek, the Anatolian and the Islamic culture of the present and past.*

*The approach is based on the ever-increasing need for more qualitative living environment in large urban centers. It incorporates actions, such as:*

- *the enhancement of the area's public space, as a field of interaction and social participation,*
- *the preservation and restoration of architectural heritage and*
- *the integration of the new cultural pole as a living organism in the city's everyday life.*

*The intervention is anticipated to improve the image of Athens, while avoiding forms of gentrification in the area.*

## 1. Introduction

The accommodation of refugees in Greece has been a milestone in the history of the country. It contributed to a range of social and urban transformations, such as the approach to social housing, which has been one of the most ambitious components in the development of the Greek social welfare state. These transformations still affect the country today. The refugee housing complex in Alexandras Avenue constitutes a significant scheme which is characteristic of the refugee accommodation campaign of the 1920s. Its architectural approach (modern movement), its symbolism, but also its abandonment for years, led to an extensive controversy and research regarding its maintenance, re-use and reintegration in the Athens urban fabric.

The result of this research is the proposal for the integration of refugee settlements in the Alexandras Avenue with that in Stegi Patridos in the neighbouring Lycabetus Hill along with the development of a

thematic park. The main objective of this proposal is the revival of historical memory and the understanding of different cultures.

The present study comprises three sections. The first section describes the theoretical background, while the second the historical background. The third one describes the study area along with the proposed urban regeneration. In more detail, the first section develops theories regarding public outdoor space, cultural routes and city branding, while its following part is dedicated to the protection and enhancement of the architectural heritage, along with the ways that historical listed buildings can be restored and reused. The second section refers to the historical context and the social and urban impact of the refugees' accommodation in Greece. The third section starts with a short description of the area and its historical development along with the analysis of its individual focal points, and presents the proposal for an urban regeneration and the concerns relevant to its implementation.

### 2.1 Urban Regeneration

The term *urban regeneration* is associated with an ideological approach, the objective and the type of intervention in urban problems. It is adopted in degraded areas with problems both in the building stock and their uses, such as urban densities, deficient public facilities or lack of protection in the historical, archaeological and cultural assets and in the activities within the region (Karavia, 2006, pp.9-10; Moschidou, 2011, pp.19-20; Bampouka, 2013; Chatzopoulou et al, 1995, pp.25-36). It consists of any type of intervention associated with the existing built urban environment. It is determined by a multitude of parameters relating to the social and economic conditions of the areas and their relationship with the wider environment. At present, urban regeneration constitutes the most appropriate approach to improve urban development and ensure social cohesion (Mitoula, 2002, p.177 Bampouka, 2013; Chatzopoulou et al, 1995, pp. 26-29).

Urban regeneration interventions may either be radical, eg. involving radical transformations in the areas where it is applied, or mild, aiming to improve the built and communal urban areas by small scale interventions. The radical type of regeneration also tends to involve 'gentrification' as it may promote the expulsion, voluntary or compulsory, instantaneous or gradual, of the existing population of the area and its replacement with more affluent new residents. This form of interventions can constitute a risk in an urban regeneration scheme (Aravantinos, 2007; Karavias, 2006, pp.6-8; Mitoula, 2002, p.177; Moschidou, 2011, p.15). A way to overcome gentrification is through the engagement of wider social groups in the decision-making process, even from the early steps of the planning, introducing the approach of the participatory planning (Aravantinos, 2007, pp.89-90).

## 2.2 Urban open space

Urban open space is the terrain where the urban population experiences everyday life in all its variety and activity. It is a field of action, interaction, a field of exchange of ideas and viewpoints as well as, a point of social life reference. Gehl (2002) among others even believe that humans' presence in public space is their most important social activity. The way people perceive open space depends both on the built environment around it as well as their personal background, their beliefs and their approach to issues such as democracy, discrimination, marginalization, political action and memory and symbolism (Belavilas & Vatavali, 2009, p. 21). According to the Greek legislation, public space is the entire space within the urban fabric that is collectively used regardless of its size, area, materials or arrangement (Giannakou & Eppas, 2011; Zourna & Danadiadou, 2011). Public space is a part of the city which may be used individually or collectively without being dominated or subjected to claims. Public space is directly available to all users irrespective of their social, economic, political, religious or national identity provided they do not deny to anyone else the right to use (Gehl, 2002, p. 229).

Urban open space constitutes a very important element that contributes to the shaping of the urban environment and its influence in the city. Thus, according to its use, it may be classified as local, supra-local or metropolitan space, as public or non - public, and may be classified as green space or meeting space according to its function. More specifically, it comprises squares, streets, pavements, urban parks, kindergartens, public or private gardens and natural formations in and around the city fabric. Still it may include space that is necessary for urban development such as a deserted plot in the center of town or an abandoned camp. Green space is the space of which the largest section is covered by vegetation (Belavilas &Vatavali, 2009, pp. 19, 86; Belavilas et al, 2010, p. 210; Pouliou, 2007). In many European countries like England, public space is treated in a paradigmatic manner while concrete incentives and policies are provided for its creation and management. One of the reasons that led to this has been the problematic quality of life during the industrial revolution (Pouliou, 2007, p. 39).

## 2.3 City branding and Cultural routes

Kavaratzis (2004) and others suggests that city branding is an appropriate approach to promote a city thought its focus on building and communicating a unique city image. Brands can serve as sources of identification and differentiation (Mommaas, 2002). At the same time, the practice of employing arts and culture as urban regeneration tools and as a means to enhance local distinctiveness is not a new phenomenon (Evans, 2003). Branding a city through heritage sites and places of cultural interest implies that city attributes and symbolic values will be mainly based on the cultural and architectural 'capital' of the area. The process of branding may seek to associate the city with specific assets or elements, like the Guggenheim Museum in Bilbao and the Barcelona Gaudi buildings, or it can aim for a more pluralist set of cultural representations, as for instance in London's 'multi-themed' branding strategy.

A potential way of increasing the city attractiveness and diversifying its brand and tourism offer is by developing cultural routes or culture trails (Puczko & Ratz, 2011). Cultural routes provide a platform for linking different assets together - such as historic buildings, monuments and museums - encouraging synergies and creating 'magnets' for visitors to experience the built environment and intangible heritage of a place (Briedenhann & Wickens, 2003). Their purpose is also to protect and enhance the cultural heritage (Khovanova-Rubicondo, 2011). The integration of archaeological sites and other places of cultural interest on cultural routes may also increase the number of visitors to less popular and more distant points of cultural interest (Moulin and Boniface 2001). Such routes are more commonly theme-based, for example Dublin's literary walking tour or Boston's Freedom trail, although the subject and type of heritage that they highlight can vary greatly. The latter suggests that cultural routes are both flexible and suitable for promoting city uniqueness and distinctiveness. Thus, their development within a city, as part of its city branding policy, allows for bringing together the different pieces of the local urban landscape puzzle.

Cultural routes are flexible tools in their design, and they can be used and adapted to different spatial scales. In practical terms, that means that there is a large freedom in determining the extent of travel, depending on the specific territorial characteristics of the place (Hayes and MacLeod, 2008; Murray and Graham, 1997). Their success in based on the organization of the signaling, the information facilities for the visitors, the public information through upgraded publications, the view of the route's topic, events, etc. (Augerinou, 2009).

## 2.4 Protection and enhancement of architectural heritage

Architectural heritage constitutes an important component of cultural heritage. It has been acknowledged since the 19th century that the conservation of the historic fabric of cities and their architecture has been of singular significance even when it is merely related to the preservation of ancient structures (Pendlebury, 1999). Nowadays, the protection of architectural heritage relates to a system of social, economic, cultural and political issues including elements of the community that hosts them, while it may also operate as the means to reestablish its cultural identity and symbolism (Nomikos, 2004, p. 3). It may involve actions such as reversing the modern interventions to older building stock and urban space, securing their structural integrity as opposed to pure 'facadism' that appears particularly popular recently. The enhancement of architectural heritage improves urban space and allows its community and visitors to re-experience fundamental principles of the past while the rehabilitation of specific building stock may offer opportunities for novel cultural activities. Alternatively, its demolition is considered as annihilation of human culture and disturbed succession of the past into the present, causing the alienation of society from its historical memory (Stamatiou, 2002, p. 750).

## 2.5 The international scale initiatives and the Greek approach

The significance of architectural heritage and its relevance to urban design has attracted a lot of consideration in the beginning of the 20th century and specifically during the Charte d' Athènes in 1933. No international scale consensus on the manner to treat historic structures had been achieved prior to the end of WWII, when the need to keep and promote the links between the present and the future was expressed. Based on this, historic sites have been approached in the Charte of Venice (1964) as sites of particular historic, cultural and aesthetic significance that must be protected, in contrast with isolated historic buildings which have been identified earlier as such. Later, the declaration of Amsterdam (1975) enlarged the notion of architectural heritage to involve building complexes, neighborhoods and even villages of historic or cultural interest that need protection. In addition, the historical periods that are characterized as heritage were expanded to include modern architecture followed by the refurbishment of old structures with novel uses to meet contemporary functional demand. Today the issue of protecting and enhancing architectural heritage is approached holistically aiming at the development of the area in question in a sustainable manner (Stefanou, 2003).

At a European level, the UK is a country with a developed and precise system of rules and legal instruments relating to the protection of architectural heritage. The "Listed Buildings and Conservation Areas" 1990 Act classifies historic buildings in two categories, Grade listed I and Grade listed II, according to their respective interest. It is noted that during the 1990s the British legal framework has extended the issue of protection of cultural heritage so as to include social housing estates, similar to the refugee settlements in Greece.

There are three different approaches on the issue of protection and enhancement of architectural heritage are outlined by Pendlebury (1999) i.e., (a) the approach of "The Society for Protection of Ancient Buildings" (SPAB), the approach of the geographer MR Conzen and the basically aesthetic Urban Design approach. The first approach tends to center on the protection and occasionally even preservation of heritage, Conzen on the other hand is interested in preserving the entire historic area and not just the buildings, while the third approach promotes "facadism" leading to the cultural consumption of the city.

## 2.6 The legal framework of the protection of heritage in Greece

The interest in protecting ancient, Christian and medieval heritage in Greece through a number of generally fragmented legal instruments dates from the foundation of the modern Greek state in 1830. The first law directly pertinent to the issue was issued in 1950. The article 24 of the Greek Constitution of 1975 relates to villages and building complexes of exceptional architectural character, the protection of which has been reinforced by several more recent legal instruments. Nevertheless the urban sprawl of the recent past, which involved excessive demolition, has had a negative impact of any attempt to conserve and renovate. For several decades after WWII the protection of heritage mainly aimed at preserving ancient remnants and specific buildings of historic or aesthetic value but nothing else. The relevant European legislation and directives were adopted by the Greek state many years later, as in the case of the Granada Convention of 1985 that was incorporated in Greek legislation in 1992. Greece focused on protection of cultural heritage only since 2002, although the law still does not adopt the terminology of the Granada Convention, as it confuses ancient with architectural heritage (Charkiolakis, 2003; Doris, 2002; Nomikos, 2004, pp.1-2; Chatzopoulou et al, 1995, pp.171-175).

## 2.7 Protection bodies and means

As provided by article 24 of the Greek Constitution, the body responsible for the protection of heritage is the Greek state and the Ministry of Culture and the Archaeological Agency, which has been the authority in charge until 1968. Nevertheless many heritage issues relate directly to the Ministry of the Environment which has sometimes expressed opposing approaches with the Ministry of Culture as in the case of the refugee settlement of Alexandras Avenue in Athens. There have been other interesting modern heritage cases that have not been satisfactorily covered due to the lack of integrated protection and enhancement programs (Doris, 2002, p. 678; Stamatiou, 2002, p.759).

In other European countries like the UK, central and local governments cooperate through “English Heritage”, a non-governmental organization. Similarly in France the body responsible is “Monument Conservation Office”, yet it is apparent that the owners of historic buildings surely play a significant role in this. Italy has developed a wider network of heritage protection bodies both at central and at local level by the relevant Ministry of Culture and bodies such as the “Centro di Restauro” in Rome and the “Instituto delle Pietre Dure” in Florence respectively (Tsaoussis & Sakkas, 2009, pp.35-54).

Cultural heritage protection mechanisms in Greece are either regulative or monetary in character. The existing planning framework consists of a number of regulations that control building construction without hindering the expression of creative architectural approach. Likewise measures of economic character comprise loans, development incentives and tax relief mechanisms aiming to promote the protection and enhancement of architectural heritage.

## 3.1 Historical context

The period after the Greek disaster in Anatolia in 1922 and the Treaty of Lausanne of 1923 was characterized by the urgent need of the Greek state to accommodate 1.2 million refugees of Greek origin who had been forced to vacate the Turkish Middle East. The task to provide proper housing for these people within Greek territory, either urban or rural, had proven to be a particularly difficult burden for a state of only around 5 million inhabitants and of limited social, economic and organizational capacity. Newcomers exerted excessive pressure in the exploitation of land and increased the population of existing urban communities while also acted as catalyst towards the development of these communities. The dramatic boost in the country’s population generated a

number of urban and social transformations (such as the urban block of flats), the *antiparohi* system (in which small businessmen cooperate with small scale landowners to develop urban land) and, lastly, the phenomenon of illegal building that characterized the urban sprawl of the 20th Century in Greece (Gizeli 1997, pp.42, 47; Baltas, 2002, pp. 3, 11; Polyzos 1984, p.51; Filippidis 1984, p.149).

### 3.2 Organizations responsible for the accommodation of refugees

The accommodation of refugees was carried out by chiefly three statutory bodies. Firstly, the Refugee Care Fund (RCF) which was founded in 1922 to cater for the immediate needs of refugees providing urgent accommodation and medical supplies during the initial phase of their settlement in Greece (Georgakopoulou 2002; Gizeli 1984, p.136). The second body was the Refugees Rehabilitation Committee (RRC) which was established in 1924 with the task of housing the refugees (Vlachou et al 1978, pp. 117-8). After 1927 the RRC activity was replaced by the third body the Urban Refugee Settlement Agency of the Ministry of Welfare, in collaboration with the Ministry of Agriculture, which dealt with the accommodation of refugees in the rural areas. In addition to the statutory bodies, the private sector was also involved in to the refugees' rehabilitation, such as the National Bank of Greece, as well as, a number of organizations of the voluntary sector, the American and the Swedish branch of the Red Cross, the 'American Near East Relief' and the migrant clubs of Greeks living abroad especially in the US (Vlachou et al 1978; Georgakopoulou 2002; Baltas 2002, pp. 6, 14; Papadopoulou & Sarigiannis, 2006, p. 9).

### 3.3 Social impact

The neighborhoods of the new settlers functioned as the space needed for the economic and psycho-social rehabilitation of refugees. Still their settlement there allowed a twofold social discrimination to develop: first between them and the indigenous population and, second, among the refugees themselves. This impact has been generated by the inconsiderate locational parameters of the settlements, as well as, the procedure adopted for the distribution of dwellings that discriminated well-off from poor settlers. In addition to the above, most neighborhoods suffered from unemployment or underemployment experienced by the majority of refugees who often lived below the threshold of poverty line similar to the condition of the British working class during the industrial revolution as described by Engels (Polyzos, 1984, pp.39, 43).

### 3.4 Urban impact – Legal concerns

The accommodation of refugees has not only influenced urban development in the large urban centers but also the housing policy and building typology. It also provoked questions concerning the employment of these policies for housing vulnerable social groups in general. The legal framework relevant to town planning and housing after 1922 amended the existing legislation of that time in issues such as the building requirements for housing, for the need for safety in construction works but also urban development in general and building settlements in the periphery of the urban fabric in particular (Gizeli, 1984, p.265). During that period, new legal instruments were directed to the housing of specific social groups such as the disabled by war, the 'poorest social classes' and the pensioners. On the other hand, it is noted that the decision to develop extensive refugee neighborhoods in the periphery of cities had adverse consequences to the development of big cities like Athens as it neglected redevelopment needs of a number of central districts such as Patissia and Kypseli. Moreover, the state tolerated the phenomenon of urban sprawl mostly in the form of self-housing involving excessive illegal building without any city plans and relevant infrastructure works (Gizeli, 1984, p.277; Biris, 1997, pp.50-2).

## 4. The study area[1]

The history of the area is more than 100 years old, with a key milestone to be the period after 1922. At the beginning of the 20th century, a significant section of the area had been planned and new buildings, along with some important public buildings and the stadium of football club of Panathinaikos, were constructed. In addition, in the area adjacent to the stadium, one of the first organized refugee settlements was set. Today, there are un-built sites, municipal sports halls and school buildings. During the '30s, the first complex of blocks of flats, both on Alexandras Avenue and in the area of Lycabettus Hill was constructed. After the WWII, the area gradually downgraded, while just after 1985 a qualitative regeneration program for the refugee housing complex in Alexandras Avenue and the surrounding area was developed. However, until the present times there are no actions towards this regeneration.

### 4.1 The identity of the focal points

Towards a better understanding of the study area and the urban problem that the proposal is called to resolve along with the benefits for the region and the city of Athens, it is appropriate to describe in some detail the focal points of the proposed urban regeneration intervention.

#### 4.1.1 The residential complex of Alexandras Ave.

The residential refugee complex in Alexandras Avenue is part of the wider installation in the area of Ampelokipi. It was built between the years 1933-1935, based on the designs of the architects Dimitris Kyriakou and Kimona Laskari, by the Welfare Ministry and it was funded by the State. The complex, as a whole, displays excellent urban quality and represents the concept of relationships between the volume and the free space of that era (Gizeli, 1984, p. 267; Demertzis, 2010, p.90). It represents an important moment in the history of Greek architecture and the modern movement of the '30s in Greece. Designwise, it was influenced by the Bauhaus movement (Fillipidis, 1984), while, its unique "decorative" element, the traces of the December 1944 street fighting on its walls, reflects the country's recent history. It also marks the use of buildings as a solution to the refugees' housing rehabilitation, for the first time since precarious accommodation forms had been practiced.

The complex is situated in 14.5 acres, 30% of which is built, while the remaining 70% is characterized as public space. It consists of 228[2] apartments, divided into eight rows of block of flats. Each one of these block of flats has three levels, with two apartments per floor, 45sqm each, with a central staircase for every 6 apartments.

Figure 1. Areal Photo from 1937
1. Alexandras Av. refugees' complex
2. Panthinaikos football stadium
3. Kountouriotika refugees' camp
4. Stegi Patridos refugees' complex

1 The 'Ampelokipoi' estate

2 In the present days only 51 of them are legally inhabited, while the remaining 177 have passed to the state privatisation fund 'TAIPED'

Their construction method was indicative of the interwar era, using domestic materials and reinforced concrete plates, along with off-white stonework. Currently the apartment buildings have obvious damages, but these are not related to its structural competence. Furthermore, there are no irreversible deteriorations (Papadopoulou – Sariyannis, 2006, p.41; Bersis, 1936, pp.607, 611; Filippidis, 1984, p.225). In 2009 the complex has been characterized as a historical monument by the Ministry of Culture.

### 4.1.2 Apostolos Nikolaidis stadium in Alexandras Ave.

The story of the stadium began in 1922, when a few acres of the wider Ampelokipi estate were given to the team of Panathinaikos. In 1928 the first wooden seats, towards the side of Lycabettus Hill were build. Since then, there were several periods when the stadium was transformed and expanded, increasing its capacity and its uses as the swimming pool and the indoor basketball court were constructed. The area is characterized as a public urban space by the strategic plan for Athens in 1985.

### 4.1.3 'Kountouriotika' refugee settlement

Apart from the refugees' complexes, within the study area, one of the first refugee settlements was created. It was consisted of booths that were arranged in four rows. It was funded by the Greek immigrants of America, in collaboration with the R.C.F. There is no evidence of the construction method or the materials that had been used; however, it was probably constructed by cement blocks. The settlement was maintained until the early 70s, when the last residents were evicted, by the Greek coop (Papadopoulou-Sariyannis, 2006, p.122). In 1974, according to the urban plan of Athens, the area had been gradually planned in urban blocks; however, since 2006 the area was included to the wider urban regeneration plan of Athens – Attica 2021 (Strategic plan for Athens - Attica 2021).

### 4.1.4 The residential complex of Stegi Patridos

This complex constitutes yet another exemplary of work of K. Laskaris. It has been constructed between 1933-1936 in the same design, style and way of construction, as that of the Alexandras Avenue[3]. It consists of seven, three-storey buildings, with 120 apartments. It is arranged into rows, where the central row it is split and a small square is fitted. Today the complex is in a good condition, having no structural problems (Papadopoulou – Sariyannis, 2006, p.176).

## 4.2 SWOT Analysis

Table 1: Swot Analysis table

| **Strengths** | **Weaknesses** |
|---|---|
| • The location of the area in the urban fabric<br>• The refugee complex of Alexandras Ave. is characterized as a historical monument.<br>• The historical memory of the wider region<br>• The un-built area, which can be | • The visual condition of the refugees' complex, especially of those in Alexandras Av.<br>• The isolation and marginalisation of the present residents in refugee complex in Alexandras Ave.<br>• The considerable cost of investing in |

3 According to Papadopoulou and Sariyannis (2006) is likely similar designs with the Alexandras Ave to be used, with slight variations

| | |
|---|---|
| redeveloped - based on the (Strategic plan for Athens - Attica 2021)<br>• The ability to renovate and re-use the existing building infrastructure<br>• The majority of the Alexandras Ave. refugee complex belongs to the Greek estate. | existing economic conditions<br>• The necessity of expropriations for the completion of the regeneration |
| **Opportunities** | **Threats** |
| • The area is incorporated in the Strategic plan for Athens - Attica 2021<br>• The ecological route between Lycabettus hill and Tourkovounia hill<br>• The cultural route of Toyrkovounia hill, Lycabettus hill, Arditou St. and Pedion areos Park<br>• the ability to install new uses in the area<br>• The urban regeneration funding or the lending programs by resources from NSRF, the European Refugee Fund and the Deposit and Loans Office<br>• The residents' and organizations interest for an urban regeneration and the rehabilitation of the refugee complex.<br>• The relocation of the stadium of Panathinaikos | • The declassification of the listed refugee complex due to its privatization by the State<br>• The constant efforts from the Greek state to demolish the existing settlement and allow the construction of new buildings based on the current building regulations and site coverage<br>• Interventions on the buildings' envelope<br>• The economic environment of Greece<br>• the potential cancellation of the relocation of the stadium and the redevelopment of the area<br>• the abandonment and the deterioration of the area's urban environment |

The opportunities for the wider urban regeneration in the area, such as those described in Table 1, along with the strong points, such as the location in the urban fabric and the preserved building infrastructure, can contribute significantly to the elimination of the weaknesses. However, the current economic condition, along with the prevailing policies on the "reclamation" of the area's public property and the efforts towards the demolition of the refugees' complex in Alexandras Av., may cause delays or even cancellation of the regeneration plan, allowing other forms of "exploitation" to be chosen.

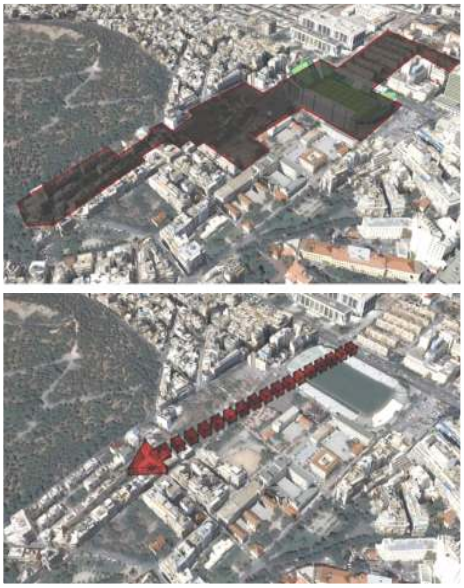

Figure 2. Areal photo. It shows the study area and the consolidation among the two complexes

## 4.3 The proposal

Given the relationship between the focal points of the area and its history, as well as advantages and the disadvantages of the area, this study proposes *'an urban regeneration plan which incorporates the consolidation and transformation of two refugee settlements in central Athens, the revival of the historical memory and the promotion of the understanding of different cultures'*.

The proposal aims to solve problems in the infrastructure and the land use of the area, along with its cultural and aesthetic enhancement. This intervention constitutes a mild urban regeneration scheme aiming to transform the selected area into an attractive urban space, utilizing the abandoned social housing stock of the refugees' settlement of Alexandras Ave. and reintegrating it in the city's urban structure, improving both built and open urban space. Its key elements are the revival of the historical memory, the understanding of different cultures and the cultural enhancement. The aim is to inform and bring in to sight the collective memory, along with the history and the interpretation of the phenomenon of exile. Furthermore the redevelopment will aim to relate directly to the issue of incoming migration from the East and South which is currently becoming particularly critical. Thus the project will be addressed to people who are interested to know the cultural, the historical and the social aspect of the refugees' life. Moreover and as the area may provide information both about the past and the present, it is suggested it will function as a "new" city hub, bringing back to life this currently desolated area. This regeneration scheme becomes more important presently as the area is included in the cultural route linking Tourkovounia and Lycabettus Hills, being part of the wider ecological path of Tourkovounia Hill, Lycabettus Hill, Ardittou St. and Pedion Areos Park outlined in the draft document of Strategic plan for Athens - Attica 2021. Its building stock and intermediate public space are the focal points of this route, in which a series of cultural activities and mixed uses are included.

Overall, the proposal deals with the redevelopment of the study area, including the recovery and re-use of the building shells, the land uses and the protection and enhancement of the environment, with simultaneous protection of the owners of the refugee residences. Besides, a proposal aiming to revive the historical memory of refugees must not ignore the existing situation and problems faced by current immigrants. It should also be noted that this proposal does not foresee any addition of new homes or the exploitation of the complex of Alexandras Ave. for residential use, in order to avoid the phenomenon of gentrification and commercialization of the building stock. The proposal also aims to avoid extensive harassment activities that are often expressed in the areas of refugee settlements, uses that could however be placed in the outdoor urban park area, such as refreshment facilities and Bazaar in certain days and hours, which will attract visitors to the area. The proposal for the broader redevelopment of area fulfils the most of the requirements described in the Greek law of 1997.

The main interventions in the study area will be:

1. The restoration and the re-use of buildings of Alexandras Ave. which includes:
    - Interventions which bring buildings back to their original condition, with the smallest possible change in its internal arrangements, in order to avoid altering its internal plan, while preserving its architectural value and the traces of the Athens history embedded on its walls.
    - An anti - earthquake reinforcement and an upgrade for energy saving.
    - The configuration of access and parking spaces for the disabled in the wider area of the settlement and the formation of public spaces.

An important approach to this intervention is the way in which we demonstrate the historicity of the settlement and the cause for its construction. It is important to note that all actions must be decided and implemented in collaboration with the remaining residents.

- Besides the exploitation of existing buildings, the intervention promotes the reintegration of the settlement in the urban fabric.

It is also important that before any restoration, rehabilitation and reuse, the urban design plan of the area is needed to be revised, as the existing one was approved back in 1975. In addition before any intervention, a modification of the land uses in the region must be promoted, in order for new uses to be allowed, especially in the Alexandras Av. complex, such as:

- the establishment of a Museum and Archives of the refugees' accommodation
- a library for the Technical Chamber of Greece and the Technical Documentation Unit (Demertzis, 2010, p.89)
- guesthouses for the patients' relatives of the adjacent hospital

2. The restoration of the external building envelope of the Stegi Patridos refugee settlement
3. The demolition of a part of the football stadium. The remaining part will be used as a space for events and conceivably as a 'border' to the Avenue. Furthermore, a museum for the athletic team of Panathinaikos, along with a cafeteria and recreation areas will be placed.
4. The integration of the 'Kountouriotika' area, along with the demolished section of the stadium, where a theme park will be planned. This urban intervention includes new paving, planting, outdoor setting areas and street lighting.

The park will provide samples of the architecture and the daily life of the refugees from the past or the present, in to a single outdoor module and it may operate as a follow-up to the museum. It will also provide an integrated and multidimensional perception of the collective memory, the promotion of the understanding of the different cultures and the history and interpretation of the phenomenon of exile (Bounia, 2004; Nikonanou, 2005). In addition, its goal is the recognition of the migrants' contribution to the local society, as well as the defense of the cultural identity and diversity.

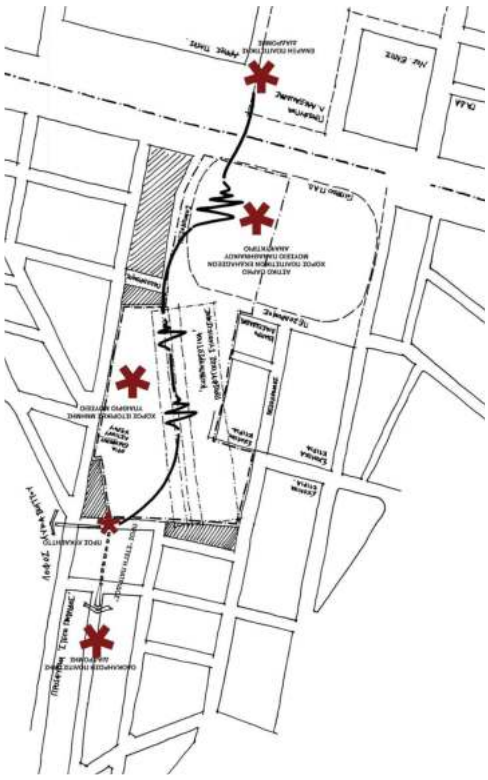

Figure 3. Schematic representation of the proposed regeneration and the cultural route

Furthermore, through the emphasis on the present, the proposed intervention will have additional targets, such us, the information and the awareness of the problems of immigrants in modern Athens, the degradation of stereotypes, along with the improvement of the social and multicultural cohesion. The above interventions are also in line with the international initiative of Unesco (2006)[4] for the creation of the museums about immigration throughout the world, a program in which the proposal could be included. It should also be noted that in order to proceed with this project, the urban plan in the area should be amended, as it is currently split in urban blocks.

- The construction of an underground car park in the area below the current football field with an urban park on top. The car park will serve both visitors and the inhabitants of the area.
- Traffic changes around the current football stadium, as well as, the wider redeveloped area

4 http://www.unesco.org/new/en/social-and-human-sciences/themes/international-migration/projects/unesco-iom- migration-museums-initiative/ - http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SHS/pdf/Final-Report-Migration-Museums.pdf

should be planned.

With regards to the proposed route consolidation, the starting point is the complex of Alexandras Avenue. Then, through a pedestrian bridge the visitor will pass to the opposite side of Alexandras Avenue, where the transformed section of the current football stadium and the remaining seating is. This area will also serve as a reception and a transition to the main part of a public outdoor area, the thematic park. This area, in correspondence with the theme park, will include tourist and leisure facilities, creating an integrated pole which attracts visitors (Sikka 2006). The aim of the park is to promote multi-cultural activities, freedom of expression and to serve as a place where the people can interact. More specifically, this space will:

- provide information for the periods of the refugees' settlement
- stimulate the historic memory, taking advantage of the memories of people who have experienced similar circumstances
- contain reference points which will inform the visitors on key events of the accommodation campaign
- illustrate the living conditions of the refugee, through a reconstruction of a small representation of the former refugee camp

It is extremely important, that the historic documentation of these events should be presented beyond any emotional or biased approach and beyond any political and ideological pressures (information gathering, oral testimony, governmental sources, etc.). The cultural route will end at the refugee settlement of Stegi Patridos from where the visitors, the residents or the walkers, will have the opportunity to continue their walk up to the Lycabettus Hill.

## 4.4 Control and management

The control of this urban regeneration and the consultation between the citizens and the institutions of the project will be achieved through an online platform, which will allow access to the information, communication and exchange of ideas among the groups that are involved. It should be noted that the success of such urban regeneration schemes, according to Stergiou (2008), depends on the political will and the acceptance of the intervention by the majority of the citizens. Finally, the project will be managed by a management agency once it is completed, so as to assure the viability of the regeneration.

## 4.5 Ways of financing the proposal

In order to implement this proposal, a plan regarding the financial resources is needed. This plan should take into account costs such as:

- the acquisition of the privately owned land in the area Kountouriotika
- the refinement of the area, the land restoration and the configuration of the theme park
- the demolition cost of the selected part of the football stadium
- the restoration cost of the buildings in the refugees complex
- the costs related to the establishment of the Panathinaikos museum in the remaining part of the stadium
- the cost to construct the walkways and the underground car park

The financial resources that could fund the above costs are:

- The EU programs such as: the ECAC or the Jessica program for sustainable investment in urban centers, with the participation of private capital
- The Urban Development fund
- The European Refugee Fund

- The Fund depository and loans. This source of funding is widespread in France end it provides loans and guarantees or even makes investments for urban regenerations in residential cooperatives, municipalities and individuals. Through this source the urban redevelopment in the area of Tauros in Attica was funded (Dimitrakopoulos 2006, pp. 24, 49).

With regards to the owners of the refugee settlements in Alexandras Avenue and Stegi Patridos, the reconstruction and the upgrading of the building envelopes will join the redevelopment program, while regarding the internal repairs some incentives in form of tax relief, low-interest loans or grants may be given. The sale of the commercial uses of the urban park i.e. the snack bar or the underground parking, could still provide part of the required financing.

## 5. Conclusion

In the recent years, the need for high quality living environment in large urban centers becomes imperative, making the actions for its upgrading a necessity. In an ideal state, the protection and enhancement of urban outdoor space is a primary concern, having recognized the importance of the field of action, interaction and social participation. At the same time, the cultural and architectural heritage of the site must be maintained and integrated into the urban daily life as a living organism, as a free thinking zone, a field of memory and emotions and a core of experience within the city. In addition, all the conservation activities and rehabilitation of historical records must be related to their urban and architectural dimension. These actions are also aiming to improve the buildings stock, the urban equipment, the network traffic and the local activities, without altering the identity of the region or causing unacceptable economic, social, cultural or environmental harm. Furthermore, a basic principle for every rehabilitation and inclusion of new uses in historic buildings is the respect and enhancement of the typological and morphological characteristics, as well as the preservation of the building's authentic integrity, in order allow the new users to enjoy the original historic and aesthetic values

Taking into account all the above, this study proposes an urban regeneration of the wider region of the refugee complex in Avenue Alexandras avenue in Athens, the site of Panathinaikos football stadium, the former refugee camp adjacent to the football pitch and the Stegi Patridos refugee complex in Lycabettus hill. In the above regeneration, the refugees' complex in Alexandras Avenue has an significant role as it is an important testimony of the establishment of refugees of 1922 as well as an integral part of the historical memory and the identity of the location. Accordingly, the preservation of the region seems to be particularly important, as the accommodation of refugees of 1922 in Athens has been a milestone for its historical, social and cultural development. It is also an excellent example of the influence of the modern movement in Greece.

However, until now, there is not any comprehensive program for the implementation of this objective. Thus, the present study seeks to fill this gap, by proposing a realistic solution to this existing problem. The present proposal is essentially a mild urban regeneration project aiming to transform the region to an attractive area through the exploitation of abandoned housing stock and the reintegration of the region into the city's structure.

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# Gaps in 'Spatial Capital' between Haifa's Neighborhoods

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ABSTRACT

*The study under progress is designed to help identify the level of disparities between neighborhoods through the definition of 'spatial profiles'. Spatial profiles are constructed through categorizing the distribution of goods and services within the local authority, based on the theory of capital assets. These profiles form the basis for a tool to help formulate policy recommendations for effective spatial distribution of urban resources; according to environmental, cultural and social assets. On a spatial level, capital assets are complex, reflecting the capabilities of the city and its neighborhoods in the context of innovation, productivity and development. From the resident's perspective the capital assets reflect the production, accumulation, and transmission of spatial capital.*

*In order to measure the accumulation of capital assets, a field survey by household interviews using a structured questionnaire specifically built for this purpose was conducted in three neighborhoods in the city of Haifa, Israel. Data on the relevant capital assets was collected and examined at a neighborhood level: social capital, cultural capital, and economic capital. In addition, the living environment was analyzed by observation and classification, in an attempt to better understand the relationship between the different characteristics and opportunities for individuals living in it and their interactions. The data was analyzed to build a spatial profile of each neighborhood thereby understanding the nature, potential and challenges of diversity in contemporary societies and help to formulate urban policy to create neighborhoods' capabilities.*

*Key words: Social Capital, Diverse Neighborhoods, capabilities*

## 1. Introduction

Spatial equality has become an integral part of the urban planning domain, and in recent years it has played a prominent role in the public and professional discourse alike. It is expressed in the spatial distribution of economic and monetary resources over territory, as well as in the distribution of environmental, cultural and social assets. The Measuring and quantifying the latter assets are complex undertakings; hence, the importance of examining and translating these variables into measurable and comparable values.

The present study examines the relationship between the allocation of goods and the distribution of capital assets over space, and the opportunities this allocation and distribution create for both the individual and the household. The neighborhood is examined as the living environment that links the physical space, the community and the network connections and opportunities that characterize it. On a larger scale, the neighborhood unit creates the latitude for civil activities, economic opportunities and the positioning of the individual's status and social role (Kearns & Parkinson, 2001). Despite the changes in lifestyle resulting from technological and transportation changes and despite the rise of different communities that are not based on geographical location, the neighborhood unit still remains influential and plays a meaningful role in the individual's affiliation and involvement in the economic and social fields (Atkinso & Kintrea, 2004). Nevertheless, there is a lack of empirical data on the

allocation of resources among neighborhoods in the city and on the role of the neighborhood unit in the accumulation and distribution of different capital assets (Kearns & Parkinson, 2001).

In order to measure the accumulation of capital assets, a field survey was conducted in which data were collected on relevant capital assets at the neighborhood level. A residential area in each of three neighborhoods in the city of Haifa, Israel's third-largest city, was sampled. The contribution of the study lies in its investigation of social and economic phenomena relating to the heterogeneous population of small geographical units in order to obtain an in-depth social-spatial picture of these neighborhoods' capital assets.

## 2. Background

### 2.1 The Forms of Capital

The theory on forms of capital developed by leading thinkers in the social sphere and the area of planning (Friedmann, 2002; Bourdieu, 2001) serves the present study as a basis for estimating the level of resources and their distribution across residential neighborhoods. This approach extends the debate that usually focuses on purely economic capital to other forms of capital, whose accumulation and then transfer to future generations may have a great impact on well-being, in both the spatial and the private sphere.

Capital forms have spatial substance, as they express human interactions that exist in a certain place and at a specific time. Their aim is to produce advantages in a series of fields of life that could be transferred to other fields in a cumulative and reinforcing process (Savage et al., 2005). At the spatial level, capital forms are the main resources used to create sustainability and the city's productive ability, thereby affecting its inhabitants' life opportunities. At the individual and the household levels, the accumulation of capital forms and the ability to influence their value provide power and reflect the ability to capture social and economic positions. Thus, an injury to the ability to accumulate these resources may harm the principle of equal opportunities (Bourdieu & Wacquant, 1992). Life chances are affected by patterns of the spatial distribution of resources. According to the French sociologist Pierre Bourdieu (1996), three forms of capital constitute the social space: economic, cultural and social.

*Economic capital*—refers to income, monetary assets and other forms of financial resources (Bourdieu, 1986; Lucas, 1988; Jaeger & Holm, 2007; Becker & Woessmann, 2009). Economic capital promotes outcomes through either direct investment (e.g., payment for activities, products or services) or indirect investment (e.g., financial subsidization of offspring). The effect of economic capital at the neighborhood level is considerable in regard to the physical infrastructure and maintenance of the shared living environment, as well as housing ownership rates, which affect the social involvement of local residents (McCabe, 2012; Forrest and Keams, 2001). In addition, economic capital is conceived as a sort of insurance for material welfare, a facilitator of the procurement of cultural accessories and even a reducer of social deviance, whether crime or psychological morbidity (Lovell, 2002; Gatrell et al., 2004).

*Cultural capital*—expresses the quality of human resources in the community. This is usually quantified through literacy, employment skills, general knowledge and education level. Friedmann (2002) defines cultural capital according to the urban– spatial configuration, which refers to the built heritage and cultural life of the city. Bourdieu refers to the connection between the built environment and the individual, but his thinking focuses on individuals and the balance of power among them, not on space. Bourdieu expanded the debate on inequality and stratification beyond its physical and economic significance and gave importance to the cultural and social variables as autonomous factors in the relationship among groups. According to Bourdieu (1986), cultural capital comprises not only educational qualifications and achievements, but also tastes, preferences and general "know-how" and knowledge; it affects cognitive skills and the knowledge of normative codes through socialization processes.

Bourdieu (1986) distinguishes three forms of cultural capital: "Institutionalized," "Embodied" and "Objectified." "Institutionalized Cultural Capital" is composed of university degrees, matriculation attainments and dropout rates, which act as antecedent roots in explaining institutionalized credentials (both academic and non-academic). According to Bourdieu (2001), human capital embodies institutionalized cultural capital. Similarly, Friedmann (2002) defines human capital as an embedded value in higher education and vocational training. "Embodied Cultural Capital" relates to both consciously acquired and passively inherited properties of one's self through socialization processes over time. "Objectified Cultural Capital" relates to Embodied Cultural Capital through material objects and visual media, such as paintings, book collections with literary masterpieces, and monuments, and becomes an indicator of visual status. As a material capital, this cultural capital is readily transferable, since it can be purchased materially by economic capital and symbolically by cultural capital.

*Social capital*—is defined as the total extent and quality of social networks and connections that one uses to promote personal interests (Bourdieu, 1986). Social relationships enhance networking ability and knowledge transfer and also provide support in times of trouble (Adler & Seok, 2001). Social capital is the outcome of the mutual emotions of trust, solidarity and gratitude among members in a social network, expressed in acts of assistance and support for members within the community (Dore, 1983; Coleman, 1988; Putnam, 1995; Adler & Seok, 2001).

Bourdieu suggests that the accumulation of the three last forms of capital (Economic, Cultural and Social) determines a social space that defines class-related inequalities in a variety of spheres of life (Bourdieu, 1989; 1985). In this social space, the different forms of capital enable an individual and his/her respective social peer groups to achieve a variety of social goods in diverse fields of life (Bourdieu and Wacquant, 1992). These social goods might later be translated into capabilities or life-chances for the social subject (Bowman, 2010).

### 2.2 Life-chances

An individual's life-chances, created from birth, depend on the circumstances and life events that are beyond one's control, but they have a direct impact on the quality of life. The community in which the individual grew up (e.g., neighborhood) and the status of the person's parents, as well as the social structure and policy and political forces, have decisive influences on the individual's circumstances and choices (Blacksher, 2002).

Amartya Sen (1992) defined two concepts in this context: Capabilities and Functionings. According to his approach, capabilities will be equal only when all individuals have the same opportunity to function well in different social fields. This opportunity stems from the ability to convert services and goods (i.e., education, money, health and social relations) into real functioning (Nussbaum, 2006; Sen, 1992).

The two terms, Capabilities and Functionings, signify the opportunities (or life-chances) that enable people to choose the kind of lifestyle they wish to pursue and to function effectively in fields of life that they value (Robeyns and Brighouse, 2010). In clarifying this definition, Sen argues that ""a functioning is an achievement, whereas a capability is the ability to achieve. Capabilities… are notions of freedom, in the positive sense: what real opportunities you have regarding the life you may lead" (Sen, 1987: 36). As such, capabilities and functionings together define the life-chances of the individual and determine the equality of opportunities in a given space and at a given time.

Life-chances may be influenced by the living environment (e.g., the neighborhood) where different forms of capital are accumulated. A mix of capital forms may reflect the ability to achieve social positions. Therefore, the individual's exposure to life- chances in different living environments may have a direct impact on that person's ability to fill positions and roles in society.

Many studies have pointed to the neighborhood as the most significant influential unit on access to goods and, accordingly, on the individual's choices and life opportunities (Akom,

2011; Atkinson & Kintrea, 2004). Kleit (2001) found that neighborhoods with a diverse mix of incomes have the potential to increase an individual's life-chances. This is due to the benefits that result from better access to institutions, such as better schools, civil service and public agencies, and to better-quality and more stable jobs. These benefits lead to lower rates of crime and violence, compared to neighborhoods with concentrations of poverty (Galster, Andersson & Musterd, 2010).

## 3. Methodology

### 3.1 Research Hypotheses

This study aimed to assist in identifying the gaps among different neighborhoods from their spatial capital profiles. The study hypothesizes the existence of a relationship between this profile and the exposure of a neighborhood's residents to a set of life-chances.

***Hypothesis H1****:* Social space consists of different accumulations of capital forms within the physical space of a city's different residential neighborhoods.

Living environments that reflect a class topography consist of capital profiles describing social stratification in space and exhibiting the unique capital profile of a particular residential neighborhood.

***Hypothesis H2****:* The characteristics of the social space (i.e., the way in which capital forms are accumulated) affect an individual's life-chances in various spheres of life.

The amalgam of capital forms characterizing each individual in the social space enables identifying interpersonal differences that affect the conversion of capital forms into "capabilities" and "functionings" in different social fields.

***Hypothesis H3****:* Households in different neighborhoods in a city exhibit differences in the accumulation of capital forms

Residential neighborhoods differ in the characteristics of the physical environments affecting the urban living space, as well as in the ability to regenerate, recover and attract a population with a high level of accumulative capital. This difference is reflected in gaps among neighborhoods in the accumulation of economic, social and cultural capital. The accumulation of these capital forms provides a more sensitive measure of social-spatial stratification.

***Hypothesis H4****:* As the level of the accumulation of capital assets increases, the extent of an individual's exposure to life-chances will also increase.

The individual's accumulation of capital forms has an impact on exposure to life- chances. Given the assumption that differences in the characteristics of accumulated capital characterize a city's residential neighborhoods, it is conceivable that a gap also exists in the life-chances of the different individuals residing in the city's neighborhoods.

### 3.2 Research Methods

In order to examine the first and the second research hypotheses, which deal with the existence of a social space associated with the physical living environment, Explanatory Factor Analysis (EFA) was employed to serve as a Data Reduction procedure (Robson and Sanders, 2010; Cattel, 1965). The justification for this step is that the concept of social space is a general idea that is difficult to describe using one variable or a simple and direct measurement (Bourdieu, 1986). It requires a multivariate setting and the use of quantitative analysis of numerous measures. This is true, too, of the concept of life-chances relating to a set of capabilities and functionings, which are measured in the present study using quantitative analysis that involve a wide set of indicators.

EFA was employed on a set of variables derived from the literature and collected through a field survey that represented the concepts of social space and life-chances. It enabled a grouping of the variables in each capital form and in selected life-chances into major factors.[1] Each factor comprises a linear combination of all measures in each relevant

[1] Main factors were defined by eigenvalues >1.

field of knowledge and contributes to the total explanation of the variance (Kim and Muller, 1978). The dominant variables in each factor enabled a categorization and labelling of the unique "identity" of the factor[2]. Thus, it was possible to examine whether the variables chosen are indeed logically related to the typology proposed by the literature. The EFA created a capital profile through latent variables obtained from the analysis, thereby defining the social space as well as the profile of opportunities that denoted capabilities and functionings in the study area.

The results obtained from the EFA were also used to test the third and fourth hypotheses regarding spatial variation among the city's neighborhoods. In order to do this, the factor scores ascribed to each observation through the EFA model were employed. These scores indicated the accumulated capital that characterized the household: the higher the score, the higher was the household's accumulated capital, and vice versa. Similarly, higher factor scores for the life- chances factors identified were indicative of a greater level of a household's exposure to life- chances, and vice versa. These standardized scores were then used to examine whether a significant difference in accumulated capital and exposure to life-chances existed among a neighborhood's inhabitants. The examination was conducted by analysis of variance through the Mann-Whitney a-parametric test.

## 4. Data Collection

### 4.1 Population and Research Area

The empirical study took place in the city of Haifa, which is located in northern Israel and serves as the core of the Haifa metropolitan region. The city is Israel's third largest, with a population of 273,000 (CBS, 2014). Haifa was selected for the empirical study, since it presents the qualities of a medium-size city exhibiting great variety in its neighborhoods in terms of average apartment size, density (persons/sq km), age distribution, occupations, education level, and other demographic variables. In addition, the city's population is heterogeneous, 24.5% of its residents being former residents of what was the Soviet Union, who came to Israel with the great wave of immigration from that country during the early 1990s and 10.3% of its residents being Arabs. Because of this diversity, we can assume that there are differences in the level of accumulation of capital forms among the city's neighborhoods. For the empirical study, three neighborhoods were selected to represent the diversity of the city's social class: Hadar, Ramat Sapir and Ramat Golda.

The Hadar neighborhood, located on the northern slope of Mount Carmel, is the middle step between Haifa's downtown and Central Carmel atop the mountain. It offers nearby commercial centers, public institutions and access to public transportation service. In addition to historical and architectural textures, many of the city's cultural institutions, such as the Municipal Theater, Al-Midan Theater, Museum of Art and Science Museum, are also located in this neighborhood. The residential area in the Hadar neighborhood that was sampled is characterized by residential buildings of 3-4 stories that were constructed in the 1920s and 1930s. The area contains 1,700 households and Haifa's largest concentration of immigrants from the former Soviet Union.

Ramat Sapir is located in the eastern part of the city. The neighborhood, purely residential, was built in the early 1980s. Saturated building characterizes the neighborhood, with structures of 8 stories and taller. The population of the residential area in this neighborhood that was sampled has 1,100 households and an ethnically homogeneous, most belonging to the middle class.

Ramat Golda also purely residential is located on the Carmel Mountain adjacent to the main transportation route of the mountain. The neighborhood, built in the 1980s and populated in the 1990s, is characterized by detached houses and low-density buildings, as

[2] Dominant measures were defined as those with an absolute value of a component coefficient greater than 0.5. These measures were taken from the Rotated Component Matrix table produced from the Principal Components procedure by the Varimax method of rotation.

well as almost no public spaces or intensive open space. The neighborhood's residential area that was sampled has 900 households and an ethnically and economically homogeneous population.

The three residential areas were chosen for the empirical study based on an analysis of the socio-economic characteristics of Haifa's population. The main differences that served for their selection related to the labor force participation rate, level of education, occupation, means of getting to work, home ownership rate and housing density as shown in Table 1.

**Table 1**

A field survey was conducted in 2013 among households in the three residential areas selected; this survey provided the research population for an examination of social space and exposure to life-chances.

### 4.2 Questionnaire Design

Data were collected by means of a four-part questionnaire that was constructed for the purpose of this study. The first part, which was devoted to education and cultural characteristics, enabled characterizing the accumulation of cultural capital by household heads, their parents and their children. The second part related to characteristics of the production and accumulation of social capital; i.e., social relationships. The third part addressed the material aspects of economic capital. The fourth part asked respondents to indicate their exposure to life- chances, such as the ability of the household head to find alternative work in the event of a loss of employment (whether through resigning or being fired) and to finance the children's academic study. Finally, residents were asked about housing ownership, residence choices and the living environment.

Most of the data collected were converted into categorical variables. Some of these variables demanded redefinition and the construction of complex variables to represent the common accumulation of capital by household heads and their common exposure to life-chances. The new variables created indices that represented both of a family's household heads (in households with two heads) effectively as a single unit (i.e., a household).

## 5. Results

### 5.1 Characteristics of the Sample

Data were collected through personal interviews conducted with the heads of households in the residential areas selected. A total of 170 completed questionnaires were received, representing 4.6% of the total households in the three residential areas. The sample was representative in terms of the economic and educational characteristics of the population in the study area, but less so insofar as demographic characteristics (there was greater representativeness of an aging population in the sample in both Ramat Sapir and Ramat Golda; CBS, 2008). The respondents' socio-economic characteristics are presented in Table 2.

**Table 2**

The majority of households consisted of two or fewer persons (60%), but the differences among the three residential areas are not statistically significant. Ramat Sapir's population is characterized by young household heads relative to the two other neighborhoods and the differences are statistically significant. The income level of households in Ramat Golda is significantly higher than that of households in Ramat Sapir and particularly of those in Hadar. This gap also applies to educational level. The percentage of household heads with an academic degree in Ramat Golda and even in Ramat Sapir is significantly higher than among household heads in Hadar. This last finding was reflected in the significant differences in respondents' occupations. The rate of household heads employed in academic professional positions and as associate professionals, technicians and

managers in Ramat Golda and Ramat Sapir is more than double that of household heads in Hadar. Housing density also showed a significant difference: the rate of households with more than two rooms per person in Ramat Golda and even in Ramat Sapir is significantly higher than in Hadar.

### 5.2 Extraction of Capital Forms and Life-chance Concepts

As explained in Section 4.2, the existence of social space at the neighborhood level and the concept of life-chances were obtained by means of factor analyses of instrumental variables collected in a field survey. The data were used to construct compound variables representing the common value attributed to both heads of a household (the investigation unit). A total of 25 variables measuring economic, cultural and social capital, based of Bourdieu's theory, and 9 variables measuring capabilities and functionings, based on Amartya Sen's approach (and representing life-chances), were employed in the models. Table 3 presents the 34 variables and their means and standard deviations.

**Table 3**

The relative high standard deviations indicate in general a large variance around the average. This may reflect the heterogeneity of the population that lives in the various neighborhoods in the city. It thus supports the assumption of this study regarding the existence of spatial disparities among neighborhoods in the city of Haifa and can assist in mapping and understanding these gaps.

Tests of internal consistency and sample adequacy constituted the necessary preliminary conditions for conducting EFA and obtaining meaningful results. The Spearman correlation matrix among the indicators provided the input for both the tests and the factor analyses. The activity-pattern items obtained in the survey demonstrate good internal consistency(Cronbach's alpha = 0.726-0.831) and appropriate sampling adequacy for performing EFA according to the overall Kaiser-Meyer-Olkin measure (KMO = 0.760-0.771). The Spearman correlation matrix contains correlations with absolute values of 0.001-0.740, and the value of its determinant is 0.001; hence, the existence of correlations without multi-collinearity is established. The result of the Bartlett's sphericity test rejects the null hypothesis that the correlation matrix is an identity matrix ($p = 0.000$).

Exploratory principal axis factor analysis with orthogonal rotation (Varimax rotation with Kaiser normalization) produced seven factors (in the case of capital forms) and three factors (in the case of capabilities and functionings). These results, derived from a combination of scree-plot analysis and the Ricolfi measure, aimed at conveying as much information as possible while maintaining the parsimony of the model (see Prato et al., 2005). The factor loadings are presented in Tables 4 and 5. A factor loading threshold of 0.43 served for retaining the items for factor analysis and for factor labeling (although most of the variables received factor loading higher than 0.64).

### 5.3 Social Space

Seven concepts together explaining 64% of the variance and representing capital forms were obtained from employing the EFA procedure on the 25 observed variables (Table 4). These concepts are consistent with Bourdieu's theory on capital forms, thereby confirming our hypothesis, which underlies the social space concept of the study area.

**Table 4**

The first three factors, each explaining about 11% of the variance, are the dominant concepts representing the social space of the residential areas examined. The first factor, loading six variables, relates to fondness for various literature genres, along with the number of books read by heads of household. This factor may represent "Embodied Cultural Capital,"

because these variables are related to investment and self-learning, which over time are embedded in the individual, and to the socialization process, which affects the evaluation and integration of certain genres over others.

The second factor also relates to cultural capital. It associates with Institutional-symbolic Cultural Capital, referring to academic degrees and diplomas, which have social and economic importance in the society. The three dominant variables, representing a common foundation for heads of household, are built on a hierarchy of capital, in which the highest category is a situation in which all heads of household earned a Master's degree or Ph.D. They received the degree in professions or fields most in demand in the employment market and at academic training institutions and acquired it from one of the elite academic institutions in Israel or other Western country. The fact that the first two factors represent cultural capital indicates their significant effect on social stratification.

The third factor, loading two variables, indicates cumulative material capital: a household's income level and the number of privately owned cars. This factor allows one to identify neighborhoods having a significant proportion of wealthy residents, with economic strength and power-monetary material. This factor also includes frequency of participation in conferences, which indirectly can also be seen as an input contributing to positioning the employment status of household heads and, therefore, belonging to economic capital.

The results regarding the first three dominant factors support Bourdieu's theory. They allow the identification of households that enjoy a high accumulation of Institutional-symbolic Cultural Capital. As such, they represent institutional training and academic achievements, which compose as part of the individual's cultural abilities and are converted into economic capital and vice versa.

The following three factors represent Social Capital through their defining of three circles (different scales) of relationships that build trust among community members in the study area. Each of the factors explains 8%-9% of the variance. The fourth factor, Support and Social Control, belongs to Social Bonding Capital (Putnam, 2000), which characterizes pattern of participation and relationships within social units having a shared identity. This concept relates to variables that support the living environment (i.e., the neighborhood): volunteering in the neighborhood, shared values and mutual help among neighbors. The dominance of this factor (over the following two social capital factors) reinforces the concept of the present study regarding the meaning of the neighborhood as the arena where capital is accumulated and strengthened or, alternatively, eroded.

The fifth factor identifies the second circle in Social Bonding Capital – Family Cohesion. The dominant variables under this concept indicate the social contextual family circle. The sixth factor, which marks the third circle by creating social cohesion, relies on the existence and empowerment of a wide circle of friendships. According to Bourdieu's approach, personal friendships constitute an important element in creating social capital. Therefore, measuring the extent to which the individual enjoys a relationship with friends is an important component of Empowerment and Social Bridging. Through these relationships, for example, the individual may promote personal affairs (Robson and Sanders 2010).

Finally the seventh factor can imply the existence of Objectified Cultural Capital through fostering cultural inputs, but it is also an integral part of the investment and long-term learning embedded in the individual (see Embodied Cultural Capital above). The factor explains only 7.5% of the variance; however, with respect to social capital factors, it may indicate a connection between fostering cultural input investment by heads of households and empowering their social capital through social bridging alongside family cohesion.

## 5.4 Life-Chances

Three concepts, together explaining 60.1% of the variance and representing capabilities and functionings, were obtained from employing the EFA procedure on the nine observed variables (Table 5). These concepts represent the life- chances of household heads in the study area, based on Sen's approach.

## Table 5

When capabilities and functionings are constructed into principles of life-chances, they are treated as complementary principles, since functionings are, in effect, the capabilities that the individual chooses to implement in practice. In this study, four variables represented the functionings of household heads in three social fields, employment, housing and academic-professional training, from an intergenerational perspective. Along with the five variables defining capabilities, the nine variables formed the foundation for an operational definition of life-chances (see Table 3). The choice of variables was dictated by the need to focus on consensual areas of action regarding the individual's definition of a "worthy" life in a liberal-democratic society.

The first factor obtained, explaining about 24% of the variance, is the dominant concept and represents the social-economic ability to stabilize the nuclear family. The variables loaded in this concept represent stability and constitute the social conditions promoting the individual's dignity and development. These variables are capabilities relating to the ability to raise children and maintain a stable family (household size) and to upgrade and ensure educational resources for the next generation, along with functionings in the housing field (home ownership and the existence of a second home).

The five variables that are dominant in this factor are positively related and represent a hierarchy of opportunities for improving the household's living conditions, which are associated with homeownership. The potential of higher education and the capability of the heads of households to finance it (the first variables in this factor) represent the economic stability of the household, even if this capability has not yet been realized. The next three variables relate to economic stability as reflected in the housing field. The last variable in this factor refers to the number of persons in the household, and the sample data indicate that these are families consisting of 3-5 persons that enjoy a high capability of funding academic studies for the next generation. These families represent stable nuclear cells, since it is assumed that households of this size allow their children to develop a healthy and stable lifestyle (Maralani, 2008; Demo and Cox, 2000).[3]

The second factor, the ability to feel control over one's life and material environment, is also a dominant concept, explaining 21% of the variance. The factor represents the individual's ability in the job market, based on the person's subjective assessment. The two variables loaded in this factor represent the individual's assessment regarding an ability to find alternative employment, thus reflecting a feeling of job security and an assessment of the ability to improve one's working conditions. As such, this factor serves as a significant element in the assessment of the exposure to life-chances. The literature refers to the ability to work and earn a living, to attain fair employment conditions and to seek employment on an equal basis as a universal capability in regard to all the capabilities that make up the individual's access to life-chances (Robeyns, 2010; Nussbaum, 2006).

The third factor, functioning in the field of employment and academic training, explains 14.2% of the variance. This concept consists of two variables, the first of which has a higher loading value and refers to functioning in the field of academic and professional training when examined from an inter-generational perspective. This variable represents the actual performance of the individual in the academic field. The second variable relates to the prestige of the jobs held by the heads of the household and reflects the ability to engage in high- status professions, thereby achieving positions and duties in the upper rank of the employment field. According to Sen (1992), these variables present the conversion of individual capabilities into real functionings, which the individual wants and respects, and assist in the mapping of equal opportunity in space.

[3] Confirmation is found in the field survey, which showed that 83% of households with 3-5 persons are households with two heads. Moreover, the finding regarding income groups showed that households belonging to the upper class (tenth decile) are those with a relatively large household size (average of 3.4 persons).

### 5.5 Inequality among neighborhoods

Factor scores obtained from the EFA were used to examine spatial differences among households in the three Haifa neighborhoods surveyed in regard to social space components, as well as to their exposure to life-chances. This examination was undertaken by means of a Mann-Whitney a-parametric analysis. The dependent variable was the factor scores that each observation received from the EFA model, while the spatial location (neighborhoods) served as the independent variable. The results are presented in Tables 6 and 7.

*Social Space Inequality*

High standard deviations exist for most of the capital forms in each of the three neighborhoods (Table 6). This indicates that the population in each neighborhood is quite heterogeneous with respect to accumulated capital forms. Still, interesting significant differences among the neighborhoods were found in some of the capital forms.

**Table 6**

The most diverse form of capital is Economic Capital, which indicates the existence of a polarized spatial structure. Material capital inputs held by households in Ramat Golda were higher than those in Ramat Sapir, and the latter was higher than households in Hadar. These differences, which are highly statistically significant, point to deep gaps in the social space of all the capital factors identified (Z value of -4.5 - -7.0). This result was expected because we had selected the three neighborhoods in the sample based on differences in their economic and social characteristics; at the same time, however, significant differences were also found in other accumulated capital forms.

In part, these differences are reflected in the field of higher education as expressed in their Institutional-symbolic Cultural Capital accumulation. In this sense, the institutional training and academic qualifications of the household heads in Ramat Golda surpass those in the two other neighborhoods (the differences between those two neighborhoods were not significant). It seems that households in Ramat Golda manage to transform their institutional cultural capital into economic capital. Similarly, though probably in the opposite direction, households in Ramat Golda manage to convert the economic capital they accumulated into Objectified Cultural Capital. That Ramat Golda households received a higher average factor score in fostering cultural inputs suggests that their investments in long-term learning were larger than those of the two other neighborhoods, and the differences are statistically significant. No significant differences were found, however, between households in Ramat Sapir and Hadar in this context. The difference between the Ramat Golda and Hadar neighborhoods in this capital is interesting, since it relates to the frequency of visits to the theater, museums, exhibitions and galleries, many of which are located in Hadar. This finding suggests that Hadar's residents do not consume culture from their neighborhood's cultural institutions despite the physical accessibility. The explanation for this is probably due to the low level of economic capital of these residents. In contrast, no significant differences were found among the three neighborhoods in the average factor score relating to Embodied Cultural Capital. The reason for this is probably very little dependence by any of them on self-learning through various genres of literature on economic capital.

Finally, interesting findings regarding differences in the accumulation of Social Capital were found among the three neighborhoods in the sample. Of the three spheres of social capital that were obtained from the factor analysis, Social Bonding Capital was found to be of prominent importance. Highly and statistically significant differences were found among the three neighborhoods in the average factor score for the Support and Social Control concept, which contribute to the living environment. However, the results are inconsistent with the findings in relation to economic capital and cultural capital (see above). The level of volunteering in the neighborhood, shared values and mutual help among neighbors are most prominent in Ramat Sapir, with Ramat Golda far behind and Hadar even further back.

Hadar in this case represents a mixed residential area with a relatively high immigrant population rate. As a result, households in this neighborhood not only demonstrate low level of economic and cultural capital, they also fail to produce neighborhood cohesion. On the other hand, the prestigious neighborhood of Ramat Golda is a good example confirming the argument over the difficulty in converting economic capital into social capital, unlike the ability to convert economic capital into cultural capital and vice versa (Savage et al., 2005), which has been shown empirically in this study.

With respect to the two other circles of social capital, Family Cohesion and Empowerment and Social Bridging, statistically significant differences were found only among some of the neighborhoods in the sample and at a moderate level. Households in Hadar maintain social cohesion, built on the existence and empowerment of friendship relationships, to a greater extent than do households in Ramat Golda. On the other hands, family cohesion characterizes households in Ramat Sapir to a greater extent than households in Hadar.

*Life-Chances Inequality*

The interesting question is whether the differences among the three neighborhoods in the accumulation of these capital forms (described above) are expressed in the ability of households to translate these forms into capabilities and functionings in various social fields so as to enhance their life-chances as hypothesized. The results obtained from employing the Mann-Whitney test on the life-chances factor scores largely validate our hypothesis. Neighborhoods where households have a high level of accumulated capital forms that significantly differ from those of households in other neighborhoods benefit from more exposure to life-chances.

Statistically significant differences were found among the three neighborhoods in the social-economic ability to stabilize the nuclear family factor (Table 7). The ability of the nuclear family to ensure stability for household heads, as well as for their offspring, is significantly higher in Ramat Golda than in the two other neighborhoods. And it is significantly higher among households in Ramat Sapir than in Hadar.

**Table 7**

In regard to the second concept (Table 7), it seems that households in Ramat Golda are characterized by a heightened ability to feel a sense of control over their lives. These households have a better chance to ensure continuity of income inputs than do households in Ramat Sapir and Hadar; this advantage holds, as well, in regard to Ramat Golda households' having the mental capability to change their workplaces while achieving effectiveness and economic well-being, even in the event of an involuntary loss of job. The finding in regard to Ramat Golda is striking in light of the ageism phenomena, which is common in the Israeli labor market, given the high percentage of residents aged 41-65 in Ramat Golda relative to the two other neighborhoods. These components, which are significant parameters in estimating the exposure to life-chances, point to a polarization among the three neighborhoods and may indicate the existence of spatial inequality in the urban space.

The third life-chance concept relates to the individual's freedom of occupation and the ability to obtain social positions, which reflect functionings in one's field of academic-professional training when examined from an intergenerational perspective. Household heads in both Ramat Sapir and Ramat Golda received higher prestige jobs on the upper social ladder than did household heads in Hadar, and the differences are statistically significant. The gaps in this concept that relate to intergenerational mobility in the household are consistent with the literature, which shows that the living environment continues to affect inter-generational mobility and life-chances even in the Global Era (Atkinson & Kintrea, 2004). The spatial patterns of reproduction may thus be transferred to the next generation in the absence of an adjusted urban policy.

## 6. Conclusions

Most of the studies that examined and measured spatial inequality have done so from the perspective of economic growth. Many scholars use economic indices in their measurement of spatial–social gaps and costs, primarily income, employment and education data, in order to assess their effect on urban and regional economic growth.

In the present study, we suggest extending the spatial inequality examination by looking at the allocation of different capital forms. We based our analysis on Bourdieu's sociological theory of the three forms of capital: Economic, Social and Cultural. A field survey provided data to allow us to build a large number of complex variables that measured the level of accumulated various capital forms possessed by household heads in the three neighborhoods sampled. Seven concepts of capital forms, obtained from employing an explanatory factor analysis on the measured variables, confirmed the existence of social space in the study area. The social space identified comprises one form of economic capital, three forms of cultural capital and three forms of social capital. Based on Sen's approach (1992), we also collected data on capabilities and functionings through our field survey. Three factors were obtained from employing EFA on those variables that exhibit life-chances concepts: a social-economic ability to stabilize the nuclear family, an ability to feel control over one's life and material environment, and functioning in the field of employment and academic training.

The analysis showed statistically significant differences in various forms of capital among the three neighborhoods examined. Household heads in Hadar are at a great disadvantage in most forms of capital compared to the two other neighborhoods in the sample. In contrast, household heads in Ramat Golda benefit from accumulated capital to a larger extent than do household heads in Hadar in terms of Economic, Institutional-symbolic Cultural and Objectified Cultural Capital. Of the three forms of social capital the most striking differences were obtained for the concept of Social Bonding Capital through Support and Social Control at the neighborhood level; household heads in Ramat Sapir enjoyed significant accumulated social capital compared to the two other neighborhoods.

Consistent with previous studies on the subject (Kearns & Parkinson, 2011), the living environment (neighborhood) was found to be a significant factor in social reproduction, an arena to gain or erode capital accumulation. Spatial variance in creating trust, cohesion and social control strengthens the argument that a neighborhood is a function of economic and social fields and capital accumulation.

As a result, it became clear that significant gaps existed in household heads' exposure to life-chances among the neighborhoods sampled. Residents of Hadar, who do not have a high level of capital accumulation of various types, are inferior in relation to residents in the two other neighborhoods in their exposure to life-chances that would improve their social and employment mobility. That households in Ramat Golda and also in Ramat Sapir enjoy greater exposure to life-chances is probably the result of the different types of capital accumulated by household heads in these neighborhoods. The interpretation of these findings suggests that the ability to use different forms of capital in order to build capabilities that can be translated into life-chances does not necessarily rely on economic capital.

Thus, household heads with a high level of different capital forms may benefit from exposure to similar life-chances as reflected in their functionings in the field of employment and academic training. It was expected that a significant accumulation of economic and institutional cultural capital, such as that characterizing household heads in Ramat Golda, would allow them to perform better in the field of employment and academic mobility than would household heads in Ramat Sapir and Hadar. However, our data indicate that household heads in Ramat Sapir benefited, too, from this kind of life- chances. In this sense, they used their significant social capital rather than economic or institutional cultural capital to gain support and social control. The findings of the present study can be helpful in formulating policy recommendations that will deal more effectively with the spatial and equal distribution of forms of capital within urban areas.

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**Table 1:** The socio-economic characteristics of the population in the three residential areas

| Variables | Hadar | Ramat Sapir | Ramat Golda |
|---|---|---|---|
| Number of residents | 3,820 | 2,800 | 2,280 |
| % of 15+ year olds who studied 16+ years | 20.8 | 39.3 | 56.8 |
| % of 15+ year olds with an M.A. or Ph.D. | 12.4 | 13.9 | 30.5 |
| % of 15+ year olds by participation in the annual civilian labour force | 53.6 | 71.0 | 68.7 |
| Arrived by car to work (%) | 19.7 | 73.1 | 85.3 |
| % of scientists, academics, and other professions of the total number of employed individuals | 19.8 | 52.3 | 63.8 |
| Average number of persons per household | 2.2 | 2.6 | 2.7 |
| Home ownership (%) | 38.0 | 64.2 | 81.2 |
| Average housing density (rooms per person) | 0.9 | 0.7 | 0.6 |
| Migration - rate per 1000 inhabitants (1996-2008) | -13.9 | 8.6 | 1.0 |

**Source:** C.B.S, Census 2008**.**

**Table 2.** Respondents' socio-economic characteristics

| **Variable** | **CATEGORIES (%)** | | | | | | |
|---|---|---|---|---|---|---|---|
| **Household size** | **<2** | **3-5** | **6+** | **Total** | **N** | | |
| Hadar | 73.0% | 25.4% | 1.7% | 100.0% | 59 | | |
| Ramat Sapir | 50.8% | 47.5% | 1.7% | 100.0% | 59 | | |
| Ramat Golda | 55.8% | 42.3% | 1.9% | 100.0% | 52 | | |
| Total | 60.0% | 38.2% | 1.8% | 100.0% | 170 | | |
| **Statistical test** | $\chi^2$=6.6, df=4 p≤ 0.153 | | | | | | |
| **Age of household's heads*** | **18-40** | **41-64** | **65+** | **Total** | **N** | | |
| Hadar | 34.5% | 41.4% | 24.1% | 100.0% | 58 | | |
| Ramat Sapir | 45.6% | 33.3% | 21.1% | 100.0% | 57 | | |
| Ramat Golda | 7.7% | 50.0% | 42.3% | 100.0% | 52 | | |
| Total | 30.0% | 41.3% | 28.7% | 100.0% | 167 | | |
| **Statistical test** | $\chi^2$=20.4, df=4 p≤ 0.000 | | | | | | |
| **Income level NIS** | **Up to 8,000** | **8,001-14,000** | **14,001-21,000** | **21,001-35,000** | **35,000 +** | **Total** | **N** |
| Hadar | 70.2% | 24.6% | 5.3% | 0.0% | 0.0% | 100.0% | 57 |
| Ramat Sapir | 17.2% | 29.3% | 36.2% | 12.0% | 5.1% | 100.0% | 58 |
| Ramat Golda | 0.0% | 8.5% | 31.9% | 31.9% | 27.7% | 100.0% | 47 |
| Total | 30.9% | 21.6% | 24.1% | 13.6% | 10.0% | 100.0% | 162 |
| **Statistical test** | $\chi^2$=106.66, df=8 p≤ 0.000 | | | | | | |
| **Housing Density (room per person)** | **<1** | **1-1.5** | **1.5-2.0** | **2+** | **Total** | **N** | |
| Hadar | 79.7% | 1.7% | 16.9% | 1.7% | 100.0% | 59 | |
| Ramat Sapir | 62.7% | 18.6% | 6.8% | 12.0% | 100.0% | 59 | |
| Ramat Golda | 34.6% | 17.3% | 30.8% | 17.3% | 100.0% | 52 | |
| Total | 60.0% | 12.4% | 17.6% | 10.0% | 100.0% | 170 | |
| **Statistical test** | $\chi^2$=33.89, df=6 p≤ 0.000 | | | | | | |
| **Level of education** | **Did not Study** | **High School** | **B.A.** | **M.A. or Ph.D.** | **Total** | **N** | |
| Hadar | 19.5% | 26.8% | 29.3% | 24.5% | 100.0% | 82 | |
| Ramat Sapir | 11.3% | 17.9% | 51.0% | 19.8% | 100.0% | 106 | |
| Ramat Golda | 2.0% | 17.0% | 35.0% | 46.0% | 100.0% | 100 | |
| Total | 10.4% | 20.0% | 39.2% | 30.0% | 100.0% | 288 | |
| **Statistic test** | $\chi^2$=51.1, df=6, p≤ 0.000 | | | | | | |
| **Occupation** | **Academic professional and associate professionals** | **Pedagogy, Art and Humanities** | **Clerical, Agents, Sales & Service Workers** | **Unskilled Workers** | **Total** | **N** | |
| Hadar | 21.3% | 18.7% | 36.0% | 24.0% | 100.0% | 75 | |
| Ramat Sapir | 48.5% | 14.0% | 36.6% | 1.0% | 100.0% | 101 | |
| Ramat Golda | 53.5% | 32.3% | 13.0% | 1.0% | 100.0% | 99 | |
| Total | 43.0% | 21.8% | 28.0% | 7.3% | 100.0% | 275 | |
| **Statistical test** | $\chi^2$=71.65, df= 6, p≤ 0.000 | | | | | | |

* At least one of the household heads is in the older age category.

**Table 3.** Variables used in the Explanatory Factor Analyses*

| Concept | Capital Form | Variable Name | Mean | S.D. |
|---|---|---|---|---|
| Social Space | Cultural Capital | Average number of books read by heads of household per month | 2.59 | 2.63 |
| | | Fondness for fiction literature | 2.49 | 1.69 |
| | | Fondness for romance literature | 3.59 | 1.86 |
| | | Fondness for historical, biographical and autobiographical literature | 3.27 | 1.81 |
| | | Fondness for reference books and popular science books | 2.82 | 1.63 |
| | | Fondness for self-instruction books and DIY | 2.05 | 1.43 |
| | | Frequency of attendance at conferences and professional workshops | 2.28 | 1.29 |
| | | Frequency of going to the theater | 2.48 | 1.41 |
| | | Frequency of visits to coffee shops | 3.67 | 1.68 |
| | | Frequency of attendance at performances of a concert/opera/ballet | 2.22 | 1.34 |
| | | Frequency of visits to galleries, exhibitions and museums | 2.46 | 1.26 |
| | | Highest academic degree obtained by the heads of the household | 2.94 | 1.46 |
| | | Prestige of academic certificate as determined by the extent of the demand for the department/faculty in which household heads earned their highest academic degree | 3.84 | 1.92 |
| | | Prestige of academic institution where household heads acquired their highest academic certificate | 4.12 | 2.13 |
| | Social Capital | Frequency of indirect social contacts with family (i.e. cell phones and internet) | 4.52 | 0.95 |
| | | Frequency of direct social contacts with family (i.e. face to face meetings) | 3.71 | 0.94 |
| | | Frequency of indirect social contacts with friends (i.e. cell phones and internet) | 4.30 | 0.89 |
| | | Frequency of direct social contacts with friends (i.e. face to face meetings) | 3.61 | 1.03 |
| | | Scope of the social network used for counseling on major issues | 2.86 | 0.74 |
| | | The extent to which neighbors share similar values | 4.52 | 1.61 |
| | | Neighbors' willingness to help | 3.71 | 1.33 |
| | | The extent to which adult neighbors are responsible and serve as a source of authority for young people in the neighborhood | 4.30 | 1.68 |
| | | Frequency for volunteer activities in the neighborhood | 3.61 | 1.10 |
| | Economic Capital | Household's income level | 2.50 | 1.32 |
| | | Number of privately owned cars | 1.05 | 0.79 |

**Table 3.** Continue

| Concept | Attribution | Variable Name | Mean | S.D. |
|---|---|---|---|---|
| Life Chances | Capabilities | Ability to find a job in the event of a need for change | 1.48 | 0.58 |
| | | Ability to find new job in the event of involuntary loss of job | 1.96 | 0.82 |
| | | Household's financial ability to improve housing conditions | 2.74 | 1.38 |
| | | Household's ability to fund academic studies for children | 3.60 | 1.39 |
| | | Number of persons in household (indicating the ability to raise children and maintain a stable family) | 2.49 | 1.28 |
| | Functionings | Social-academic mobility between household heads and their parents' generation | 3.01 | 0.89 |
| | | Prestige of the jobs of household heads | 1.82 | 0.81 |
| | | Residence tenure (homeowner/renter) | 1.61 | 0.61 |
| | | Second home ownership | 0.37 | 0.67 |

* The variables in the social space and life chances were built on ordinal scales in order to express the value of the variable common to both heads of household. Mean and standard deviation of each variable were calculated according to the ranking that the observations received in the sample.

**Table 4.** Factor analysis of capital forms: major factors[1] and factor loading

| Factors | Variables | Component (groups of factors)[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Embodied Cultural Capital | Fondness for historical, biographical and autobiographical literature | **.794** | .100 | .103 | .089 | .069 | .008 | .133 |
| | Fondness for romance literature | **.644** | .031 | .284 | .321 | .148 | -.030 | .083 |
| | Fondness for reference books and popular science books | **.635** | .304 | .078 | .132 | -.271 | .082 | .121 |
| | Fondness for fiction literature | **.586** | .019 | .251 | .021 | .247 | .052 | -.061 |
| | Average number of books read by heads of household per month | **.578** | -.009 | -.152 | -.266 | .150 | -.026 | .394 |
| | Fondness for self-instruction books and DIY | **.525** | .119 | -.061 | .326 | -.262 | -.063 | .028 |
| Symbolic-Institutional Cultural Capital | Prestige of academic certificate as determined by the extent of the demand for the department/faculty | .109 | **.919** | .168 | .062 | .000 | -.068 | .057 |
| | Highest academic degree obtained by the heads of the household | .189 | **.887** | .105 | -.057 | -.106 | -.006 | .095 |
| | Prestige of academic institution | .053 | **.785** | .370 | .113 | .108 | .013 | .105 |
| Economic Capital | Number of privately owned cars | .062 | .207 | **.822** | .213 | .075 | -.044 | .022 |
| | Household's income level | .121 | .272 | **.744** | .179 | .162 | -.016 | .145 |
| | Frequency of attendance at conferences and professional workshops | .202 | .132 | **.679** | -.006 | -.017 | .207 | .051 |
| Support and Social Control | Neighbors' willingness to help | .152 | .035 | .020 | **.790** | .102 | .081 | .064 |
| | The extent to which adult neighbors serve as a source of authority for young people in the neighborhood | .198 | .067 | .295 | **.724** | .165 | .010 | .065 |
| | The extent to which neighbors share similar values | .102 | .013 | .237 | **.681** | .157 | .068 | -.076 |
| | Frequency for volunteer activities in the neighborhood | -.146 | .009 | -.161 | **.443** | .117 | .021 | .422 |
| Family Cohesion | Frequency of indirect social contacts with family | .044 | -.051 | .115 | .107 | **.832** | .074 | -.021 |
| | Frequency of direct social contacts with family | .116 | -.052 | -.010 | .216 | **.788** | .009 | -.050 |
| | Scope of the social network used for counseling on major issues | -.062 | .224 | .168 | .144 | **.429** | .206 | .188 |
| Empowerment and Social Bridging | Frequency of direct social contacts with friends | .002 | -.041 | .018 | .021 | -.107 | **.891** | .051 |
| | Frequency of indirect social contacts with friends | .038 | .008 | -.011 | .061 | .207 | **.887** | .040 |
| | Frequency of visits to coffee shops | -.018 | -.036 | .400 | .094 | .191 | **.490** | .044 |
| Fostering Cultural Inputs | Frequency of visits to galleries, exhibitions and museums | .144 | .025 | .052 | .049 | .002 | .077 | **.777** |
| | Frequency of attendance at performances of a concert/opera/ballet | .156 | .131 | .170 | -.014 | -.052 | .035 | **.767** |
| | Frequency of going to the theater | .078 | .216 | .415 | .087 | -.014 | .004 | **.433** |

[1] Major factors were defined by eigenvalues>1.

[2] Dominant measures were defined as those with an absolute value of the component coefficient greater than 0.5. In order to facilitate labeling the factors, the dominant items are marked in bold.

**Table 5:** Factor analysis of capabilities and functionings: major factors[1] and factor loading

| | | Component (groups of factors)[2] | | |
|---|---|---|---|---|
| Factors | Variables | 1 | 2 | 3 |
| Social-economic ability to stabilize the nuclear family | Household's ability to fund academic studies for children | **0.731** | 0.365 | 0.227 |
| | Household's financial ability to improve housing conditions | **0.662** | 0.409 | 0.030 |
| | Second home ownership | **0.660** | 0.166 | -0.170 |
| | Residence tenure (homeowner/renter) | **0.559** | -0.022 | 0.336 |
| | Number of persons in household (indicating the ability to raise children and maintain a stable family) | **0.495** | -0.362 | 0.219 |
| The ability to feel control over life and material environment | Ability to find a job in the event of losing the present job | 0.116 | **0.879** | 0.086 |
| | Ability to find new job in the event of involuntary loss of job | 0.246 | **0.794** | 0.217 |
| Function in the field of employment and academic training | Social-academic mobility between household heads and their parents' generation | -0.031 | 0.137 | **0.873** |
| | Prestige of the jobs of household heads | 0.419 | 0.148 | **0.483** |

[1] Major factors were defined by eigenvalues>1.

[2] Dominant measures were defined as those with an absolute value of the component coefficient greater than 0.5. In order to facilitate labeling the factors, the dominant items are marked in bold.

**Table 6:** Capital forms – disparities among the three neighborhoods

| Factor/ Concept | Neighborhood | N | Mean | S.D. | Mann-Withney U test |
|---|---|---|---|---|---|
| Embodied Cultural Capital | Hadar | 54 | -0.187 | 1.301 | Z= -0.256 |
| | Ramat Sapir | 58 | 0.003 | 0.904 | |
| | Hadar | 54 | -0.187 | 1.301 | Z= -0.954 |
| | Ramat Golda | 46 | 0.217 | 0.610 | |
| | Ramat Sapir | 58 | 0.003 | 0.904 | Z= -0.995 |
| | Ramat Golda | 46 | 0.217 | 0.610 | |
| Institutional-Symbolic Cultural Capital | Hadar | 54 | -0.330 | 1.117 | Z= -1.328 |
| | Ramat Sapir | 58 | 0.037 | 0.921 | |
| | Hadar | 54 | -0.330 | 1.117 | Z= -2.469** |
| | Ramat Golda | 46 | 0.341 | 0.833 | |
| | Ramat Sapir | 58 | 0.037 | 0.921 | Z= -1.944** |
| | Ramat Golda | 46 | 0.341 | 0.833 | |
| Economic Capital | Hadar | 54 | -0.724 | 0.680 | Z= -5.113*** |
| | Ramat Sapir | 58 | 0.010 | 0.783 | |
| | Hadar | 54 | -0.724 | 0.680 | Z= -7.013*** |
| | Ramat Golda | 46 | 0.838 | 0.905 | |
| | Ramat Sapir | 58 | 0.010 | 0.783 | Z= -4.575*** |
| | Ramat Golda | 46 | 0.838 | 0.905 | |
| Support and Social Control | Hadar | 54 | -0.677 | 0.977 | Z= -6.306*** |
| | Ramat Sapir | 58 | 0.586 | 0.827 | |
| | Hadar | 54 | -0.677 | 0.977 | Z= -4.177*** |
| | Ramat Golda | 46 | 0.056 | 0.709 | |
| | Ramat Sapir | 58 | 0.586 | 0.827 | Z= -3.613*** |
| | Ramat Golda | 46 | -0.056 | -0.709 | |
| Family Cohesion | Hadar | 54 | -0.303 | 1.285 | Z= -1.858* |
| | Ramat Sapir | 58 | 0.189 | 0.826 | |
| | Hadar | 54 | -0.303 | 1.285 | Z= -1.176 |
| | Ramat Golda | 46 | 0.118 | 0.713 | |
| | Ramat Sapir | 58 | 0.189 | 0.826 | Z= -0.877 |
| | Ramat Golda | 46 | 0.118 | 0.713 | |
| Empowerment and Social Bridging | Hadar | 54 | 0.042 | 1.312 | Z= -0.955 |
| | Ramat Sapir | 58 | 0.020 | 0.917 | |
| | Hadar | 54 | 0.042 | 1.312 | Z= -1.923* |
| | Ramat Golda | 46 | -0.075 | 0.623 | |
| | Ramat Sapir | 58 | 0.020 | 0.917 | Z= -1.165 |
| | Ramat Golda | 46 | -0.075 | 0.623 | |
| Fostering Cultural Inputs | Hadar | 54 | -0.155 | 0.860 | Z= -0.332 |
| | Ramat Sapir | 58 | -0.125 | 1.154 | |
| | Hadar | 54 | -0.155 | 0.860 | Z= -2.780*** |
| | Ramat Golda | 46 | 0.339 | 0.875 | |
| | Ramat Sapir | 58 | -0.125 | 1.154 | Z= -2.657*** |
| | Ramat Golda | 46 | 0.339 | 0.875 | |

*** Significant at the 1 % level, ** significant at the 5 % level, * significant at the 10 % level

**Table 7:** Life Chances – disparities among the three neighborhoods

| Factor/ Concept | Neighborhood | N | Mean | S.D. | Mann-Withney U test |
|---|---|---|---|---|---|
| Social-economic ability to stabilize the nuclear family | Hadar | 50 | -0.790 | 0.886 | Z= -4.892*** |
| | Ramat Sapir | 59 | 0.076 | 0.726 | |
| | Hadar | 50 | -0.790 | 0.886 | Z= -6.711*** |
| | Ramat Sapir | 51 | 0.686 | 0.829 | |
| | Ramat Sapir | 59 | 0.076 | 0.726 | Z= -3.767*** |
| | Ramat Golda | 51 | 0.686 | 0.829 | |
| The ability to feel control over life and material environment | Hadar | 50 | -0.330 | 0.912 | Z= -1.529 |
| | Ramat Sapir | 59 | -0.044 | 1.075 | |
| | Hadar | 50 | -0.330 | 0.912 | Z= -3.668*** |
| | Ramat Golda | 51 | 0.374 | 0.878 | |
| | Ramat Sapir | 59 | -0.044 | 1.075 | Z= -2.005** |
| | Ramat Golda | 51 | 0.374 | 0.878 | |
| Function in the field of employment and academic training | Hadar | 50 | -0.600 | 0.896 | Z= -5.117*** |
| | Ramat Sapphire | 59 | 0.389 | 0.926 | |
| | Hadar | 50 | -0.600 | 0.896 | Z= -3.777*** |
| | Ramat Golda | 51 | 0.138 | 0.917 | |
| | Ramat Sapir | 59 | 0.389 | 0.926 | Z= -1.328 |
| | Ramat Golda | 51 | 0.138 | 0.917 | |

*** Significant at the 1 % level, ** significant at the 5 % level, * significant at the 10 % level

# RESEARCHING MULTICULTRUAL SOCIETIES: BENEFITS, LIMITATIONS AND CHALLENGES OF CO-ETHNICAL RESEARCH DESIGN IN URBAN PLANNING

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*One fact of a multicultural society is that people with migration background are often more deprived than those of the majority of society. Although the group of migrants is usually very heterogeneous, the factor migration makes a significant difference for participating in important parts of life like health, education, and housing (Gosine; Teelucksingh, 2008). In standard surveys migrants are frequently underrepresented; consequently, data having a bias regarding the diversity of contemporary societies is used for urban planning.*
*To understand and represent differences of multicultural society specific research methods like co-ethnical survey designs are needed: questionnaires need to be translated into corresponding languages, interviewers of the addressed ethnic group are required and quota samples need to represent different groups equally. Using such a research design a survey on the topic of procedural environmental justice comparing Germans and Turkish migrants was carried out in the Ruhr, Germany. The data shows both existing and lacking capabilities of households having a migration background. No differences were found in communal mastery and social networks between Turkish migrants and Germans, but the Turkish migrants reported less participation in decision making than Germans, although their intention was similar.*
*The method of co-ethnical surveys will be explained using the example of the survey on procedural environmental justice. Also a new survey-design dealing with possible difference in energetic renovation will be presented. Both will be discussed in the light of planning as public policy in an intercultured society.*

## 1. Introduction

*„A final problem with a narrow understanding of racism is that it limits claims, thereby reproducing a racist social order."* (Pulido, 2000, p. 13)

This quote by Pulido is part of the environmental justice discourse. Environmental justice is dealing with social differences in access to environmental amenities and exposure to environmental burdens as well as social differences in meaningful involvement in environmental decision making. Such differences are not just analysed as inequalities, they are judged as being unfair and therefore categorised as inequities (Bolte *et al.*, 2012; Walker, 2012; Schlosberg, 2007). Inequities in access to environmental amenities or exposure to environmental burdens are termed as environmental distributional injustice, while inequities in the meaningful involvement in environmental decision making processes as well as the initialisation of such processes are termed as environmental procedural injustice.

The field of environmental justice is manifold. In this paper I focus on the social differences amongst ethnic groups concerning environmental procedural justice. Schlosberg (2007: 75) puts procedural justice at the core of environmental justice and therefore as a determinant of distributional justice: *„For the environmental justice movement, the demand for more public participation and procedural equity in the development, implementation, and oversight of environmental policy is the key to address issues of distributional equity, recognition, and capabilities."*

Environmental injustice towards ethnics groups are often called environmental racism in the North-American discourse (Cole and Foster, 2001; Gosine and Teelucksingh, 2008). Coming back to the introducing quote by Laura Pulido I have to ask myself as researcher in the field of planning: How can I contribute to a broader understanding of racism and make a claim for planning in a diverse society?

Agyeman and Erickson (2012, p. 359) raise a more rhetorical question to planners emphasising that equality is on more than distribution: *„But is this redistributive justice in and of itself sufficient to fulfil our ethical obligations as professional planners and planning educators to increase equality, social justice, choice, and opportunity for all persons?“* The answer to this question is no, for sure; especially when following the concept of an intercultured society in the sense of Amin (2002, p. 967): *„The term `intercultured' is used to stress cultural dialogue, to contrast with versions of multiculturalism that either stress cultural difference without resolving the problem of communication between cultures, or versions of cosmopolitanism that speculate on the gradual erosion of cultural difference through interethnic mixture and hybridisation.“*. Communication between cultures on their spatial needs has to be part of planning procedures, if planning is understood as a process of mediating different interests concerning use of space. Therefore in the following I will deal with procedural justice as a prerequisite for the meaningful articulation of interests as a first step to integrate different cultures in planning.

In standard surveys migrants are for different reasons frequently underrepresented. Consequently data having a bias regarding the diversity of contemporary societies is used for urban planning. To broaden our understanding of a diverse society we have to be critical and not re-producing dominant discourses (Dryzek, 2008). So data collection is a crucial point. In the context of difference and diversity Davys approach of polyrationality is path breaking: *„Polyrationality therefore has little to do with approaches to planning which focus on special needs and special interests. Gender planning (planning with a view to avoid sexism) or environmental justice planning (planning with a view to confront racism or classism) are also concerned with different voices, different rationalities.”* (Davy, 2008, p. 309) But how can urban planning capture different rationalities like Davy requires and go beyond a narrow understanding like Pulido claims? I see the recognition, empowerment and capability of all people for meaningful involvement in decision making processes as one prerequisite for a cultural dialogue encompassing different voices and different rationalities.

To learn about the capability of people for meaningful involvement in decision making processes I developed the MOVE-model as an explanatory model on procedural environmental justice. In its empirical test one research question was, whether differences between Germans or people with Turkish migration background can be identified. Therefore the method of co-ethnical interview design was applied in the survey. In the following the MOVE model is explained briefly and the focus is laid on the method of co-ethnical interview design. Then results on differences and similarities amongst the Germans and Turkish migrants are presented. Finally the method is discussed in the light of planning in a diverse society and future research.

## 2. Researching differences in environmental procedural justice

### *2.1The MOVE-Model*

MOVE stands for „model on households' vulnerability towards the local environment" and aims to predict peoples' intention and behaviour to improve their local environment, depending on their vulnerability. Therefore it is meant to learn about causes of environmental injustice from a households' perspective. Household understood as a social entity living together at the same place in the same environment. The basic assumption is that households who are more vulnerable are able to carry out fewer coping-behaviour than people with more capabilities. (Köckler, 2011)
The MOVE-model has been developed to identify factors that predict peoples' intentions or behaviour to deal with environmental stress (understood as pollution or lack of environmental amenities). The MOVE model thus seeks to identify indicators that go beyond indicators like social status and migration background common in distributional justice analysis. Since these indicators represent

vulnerability only as the latent variable, their validity is limited. Therefore, they do not provide specific information for interventions and strategies for more environmental procedural justice.
To predict coping with environmental stress in the MOVE-model (Figure 1) Hobfolls' Conservation of Resource Theory (COR) is used as a heuristic to identify predictors (Hobfoll, 1989). He explains stress through availability, investment and loss of resources. Hobfoll groups resources in object resources, personal characteristics, conditions and energy. As the MOVE-model is to predict behaviour, and not the stress level of a person, the Theory of Planned Behaviour (TPB) (Ajzen, 1991) is put in the centre of the model. The Theory of Planned Behaviour is a model including three variables attitude, subjective norm and perceived behavioural control to predict peoples' intention and behaviour. The following figure 1 shows the theoretical MOVE Model, combining both theories. A description of an earlier version can be found in (Köckler, 2011).

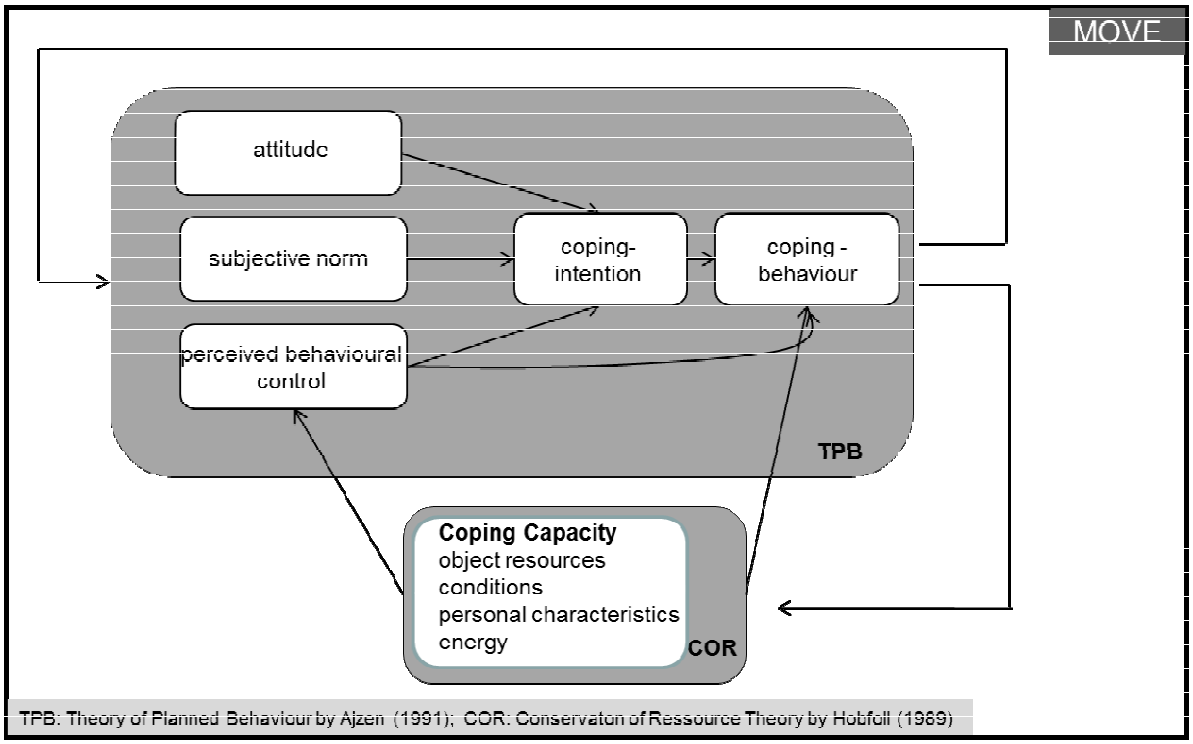


Figure 1: The MOVE-model (Model on households' vulnerability towards the local environment)

The MOVE model was used to test different hypothesis empirically. It was assumed that perceived behavioural control has the greatest power to predict coping-intention and behaviour. Furthermore it was assumed that the coping capacity, represented by resources according to Hobfoll, predicts difference in perceived behavioural control. Researching environmental procedural justice it was of additional interest to analyse if there is any difference in the responses amongst Turkish and German respondents.

*2.2 Testing the MOVE model with a co-ethnical research design*

To analyse if there is social inequality amongst Germans and people with a Turkish migration background, it was aimed to reach as many Germans as Turkish people in heavily and less polluted neighbourhood. This quota sample approach was selected to control for combined effects of environmental quality and migration background.

To reach diverse groups of society the method of co-ethnical interviews is applied. This concept goes beyond facing possible language barriers. Baykara-Krumme, (2013, p. 261) refers to the concept of joined heritage ("Abstammungsgmeinschaft" Weber 1972: 237) and existing socio-cultural

commonalities and cultural identities, including a consciousness of solidarity (Heckmann (1992) within ethnic groups. Therefore people who belong to the same ethnic group like those who are addressed by the survey, are functioning as interviewers. This leads to social matching and liking of interviewer and interviewee (Baykara-Krumme, 2013, p. 261).

The theoretical MOVE model was tested empirically based on data collected in a telephone survey being carried out in winter 2010/2011 in the Ruhr (N= 312 ). The Ruhr is a densely populated agglomeration in western Germany with high social and environmental gradients. Due to the hypothesis a quoted survey aimed at reaching households without and with migration background (represented by migrants from Turkey) in polluted and less polluted neighbourhoods (due to noise and air quality) equally.

The telephone interviews have been conducted with co-ethnical Turkish and German interviewers. The Turkish interviewers were fluently in both, German and Turkish language and a team of two men and two women. We chose a team of mixed gender because (Baykara-Krumme, 2013, p. 268) found matching of gender between interviewer and interviewee in surveys carried out with Turkish interviewees. The interviewees have been selected from an online telephone directory for streets with high levels of noise and air emissions, which we identified based on existing environmental data. The interviewees have been contacted in advance by post.

*2.3Methods of statistical analysis*

The hypothesis on relevance of perceived behavioural control as well as that on resources has been tested by multiple linear regression. The test of difference according to the grouping variable migration background (yes/no) was run by t-Test or Mann-Whitney U-Test, depending on normal distribution of the variables. All statistics were run by IBM SPSS 22.

*2.4Results on differences between respondents with and without migration background*

Table 1 gives an overview of the sample. The quota was fulfilled: almost 50% of the respondents have been reached in heavily and less polluted areas. In total more Germans have been reached (64%). But the migrants that have been reached are distributed equally in heavily and less polluted neighbourhoods. 82,1 % of the migrants have a Turkish migration background.

Table 1: Sample of the survey

| | **Heavily polluted** | **Less polluted** | **total** |
|---|---|---|---|
| **Total number** | 48.1 % | 50.6% | 100 % (N=312) |
| **% male** | 49.7 % | 49.7 % | 53.2 % (N= 299) |
| **Year of birth (MEAN)** | 1955 (1921-1992) | 1955 (1920 – 1990) | 1955 (N= 298) |
| **Foreigners** | 24.2 % | 19.9% | 22 % (N= 305) |
| **Migration background** | 37.9 % | 34.8 % | 36.3 % (N= 300) |

The results of multiple regression analysis show that the influence of perceived behavioural control has the greatest influence in predicting variance in coping intention. The overall model predicts 26% of the variance of coping intention. Figure 2 shows a lower perceived behavioural control for respondents with migration background. The difference is highly significant Mann-Whitney U-Test ( $p < .000$). A linear regression to predict coping behaviour shows that coping intention and perceived

behavioural control explain 23% of variance in coping behaviours. Both predictors have a moderate significant influence.
Differences in coping-intention comparing respondents with and without migration background cannot be found in box-plots (Figure 3). Tough some outliers show the mentioning of numerous coping-intention by people with migration background only. The difference between migrants and non-migrants considering coping intention is statistically not significant (Mann-Whintey U-Test $p = .961$). Concerning migration background and coping-behaviour a statistical significant difference between people with and without migration background was found (Mann-Whitney U-Test $p < .000$), at which the median of respondents without migration background is higher. This means that they reported to carry out more coping-behaviour than people with migration background. Figure 4 shows extreme outliers for migrants.

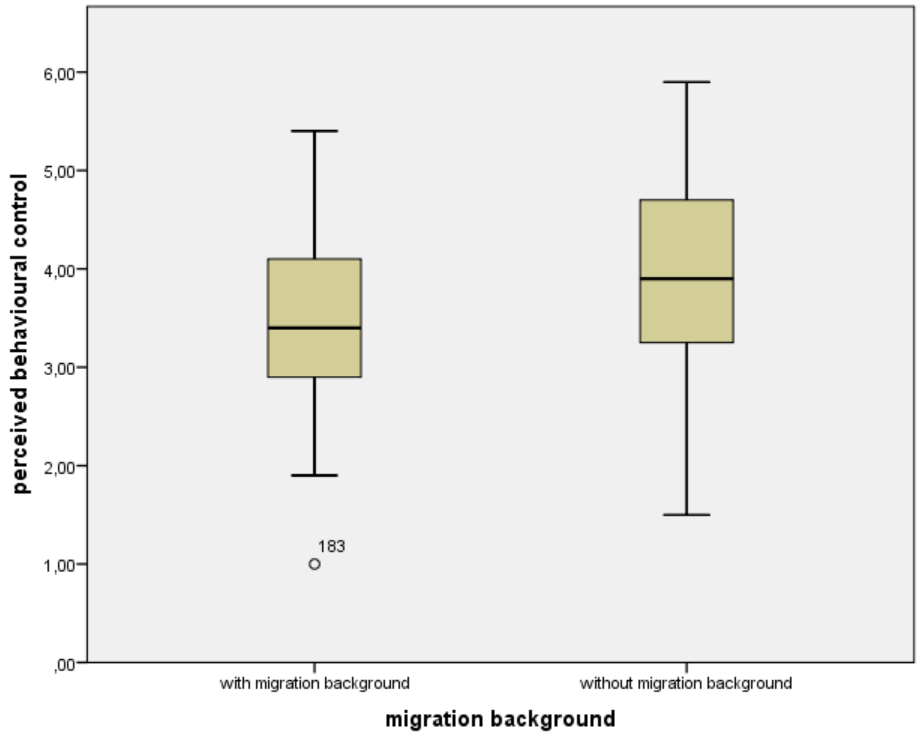


Figure 2: Differences in perceived behavioural control comparing respondents with and without migration background

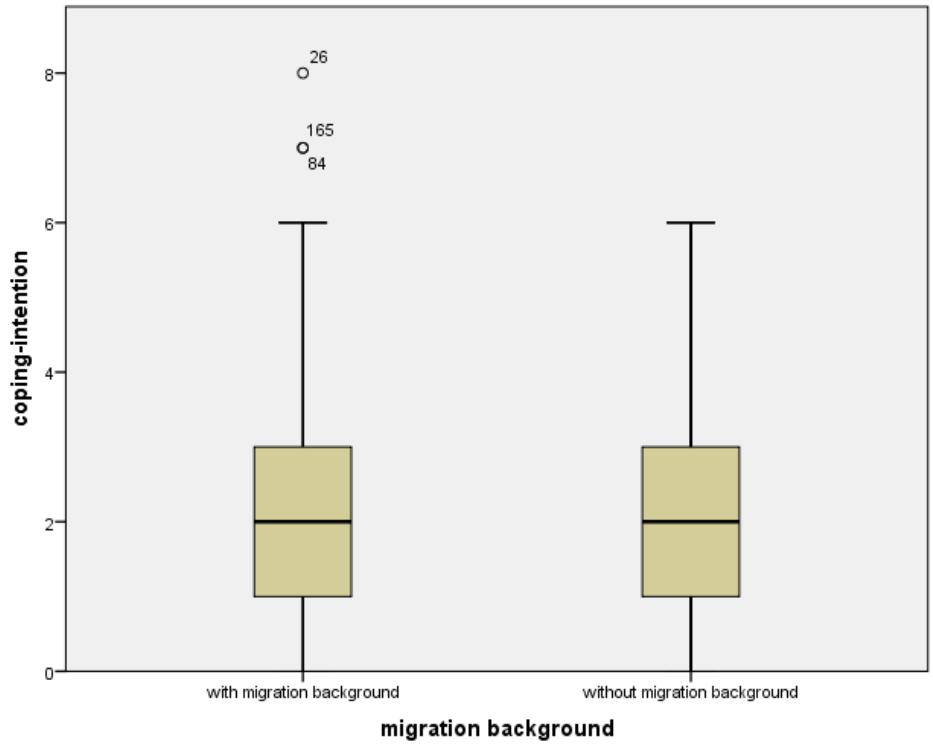


Figure 3: Differences in coping-intention comparing respondents with and without migration background

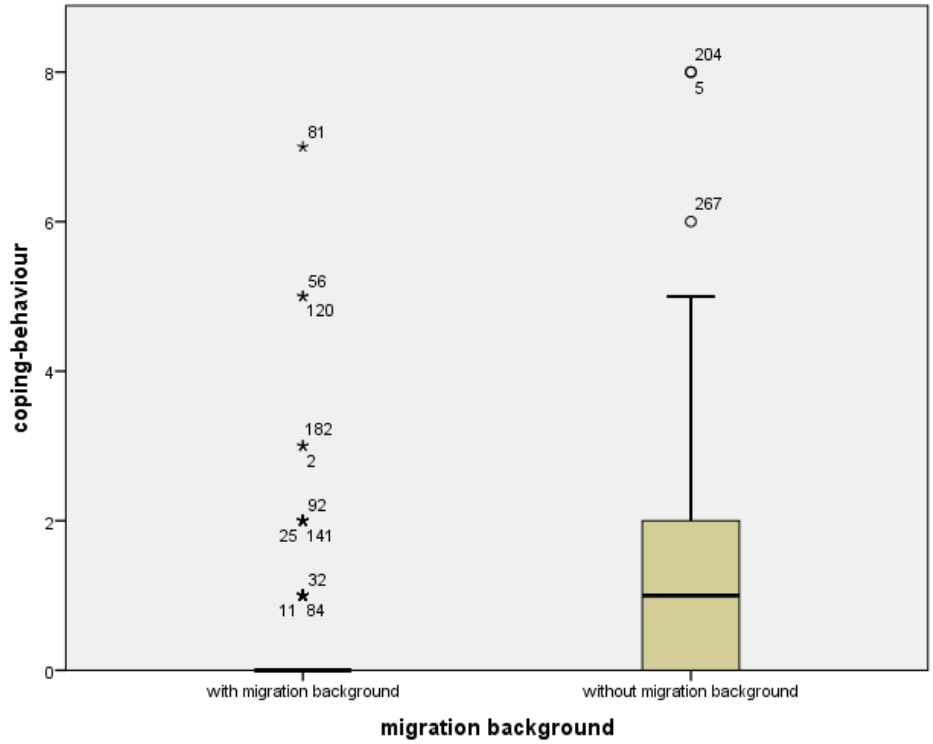


Figure 4: Differences in coping-behaviour comparing respondents with and without migration background

The results of multiple linear regression analyses to predict perceived behavioural control show, that each of Hobfolls categories produced significant variables to predict variances in perceived behavioural control. These are communal mastery, social networks, income and home-owner vs. tenant. Regarding the grouping variables migration background the picture is manifold. Table 2 reports data on those variables that have been significant to predict the variance of perceived behavioural control. Table 2 shows that people with a Turkish migration background differ significantly from people without migration background regarding per capita household income only.

Table 2:Differences between interviewees with and without migration background concerning ressources

| | With migration background | Without migration background | p* | effect-size* |
|---|---|---|---|---|
| **Object Resources** | | | | |
| being a tenant | 70.3% | 69.3% | | |
| **Conditions** | | | | |
| Social networks | 1.417 | 1.48 | | |
| **Personal Characteristics** | | | | |
| communal mastery | 3.859 | 3.903 | | |
| **Energy** | | | | |
| Household income per capita | 820 | 1232 | .000 | –.329 |

Mean average for metric variables, % for dichotomous variables
* only significant values are reported

*2.5Findings on co-ethnical interview design*

88 out of the 92 respondents (=95.7%) with a Turkish migration background carried out the interview in Turkish language. The graph on self-perception of German language skills presented in Figure 5 shows that almost 50% of the respondents with a Turkish migration background reported rather good or very good German language skills. Considering the self- perception of German language skills of those with a Turkish migration background not having a German citizenship most respondents reported language skills of middle-rate. For this ANOVA shows a significant difference ($F$ (1, 88) = 4.597; $p < .035$) within the group of people with Turkish migration background: Language skills of those with German citizenship are better ($M$= 4.08, $SD$ = .954) than those with Turkish citizenship ($M$ = 3.51, $SD$ = 1.19), while *1* represents *very bad* and *5 very good* understanding of German language.
Gender matching between interviewer and interviewee could not be found in the empirical test of the MOVE model.

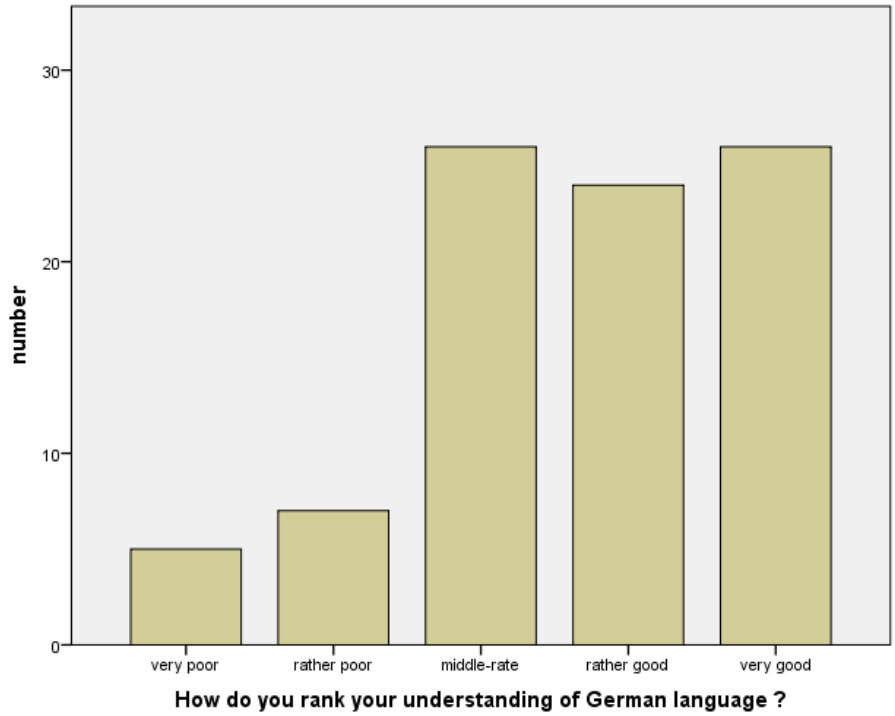


Figure 5: Self perceived language skills Turkish migrants (N=92)

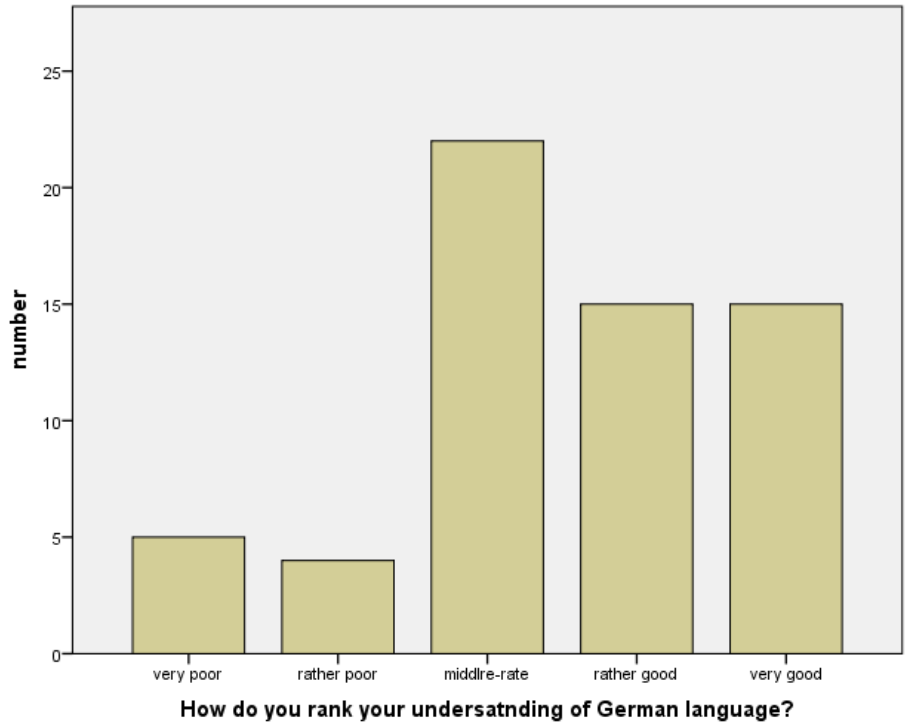


Figure 6: Self perceived language skills Turkish migrants without German citizenship (N=64)

## 3. Concluding findings on co-ethnical research design and future research perspectives.

The research presented here is limited in reaching migrant groups. Although we have been successful reaching migrants in polluted and less polluted neighbourhoods equally, we might have reached more and other people if we would have been able to carry out face-to-face interviews. Furthermore we have been able to reach 312 people in total and 92 people with Turkish migration background. This number is rather small to get an insight in such a heterogeneous group like that of Turkish migrants. So co-ethnical research always is a challenge and requires both financial resources and cultural as well as methodological competencies of researchers.

This methodological approach and results on procedural justice are dealing with prerequisites of planning in an intercultured society: the determinants of procedural justice. To make planning procedures inclusive to different cultures and rationalities the corresponding people have to be able to contribute to these procedures. The good news is, that for the respondents from the Ruhr (Germany) with Turkish migration background, we could not find any difference compared to Germans concerning social networks and communal mastery which are two of the relevant predictors for institutionalised coping, which have been identified in this survey. Also no statistically significant difference was found concerning the intention to cope by different options of institutionalised coping. At the same time the data showed less self-reported coping by people with Turkish migration background and les perceived behavioural control.

So relevant capabilities and intention exist, but they do not lead to intended behaviour, especially not for the group of Turkish migrants. Therefore those responsible for decision making, like planners, have to be empowered themselves to be able to include different rationalities by different groups. Therefore paper like that by (Agyeman and Erickson, 2012) dealing with the education of planners are of high relevance.

Based on the lessons I have learned from the analyses of the MOVE model, I make the claim that urban and environmental planning has to take vulnerability of people into account. Concerning procedural justice a lack of capabilities for meaningful involvement stands for vulnerability. Therefore I claim to introduce the Vulnerability of the Population Principle into urban and environmental planning. (see Köckler 2014)

Learning about different rationalities is not limited to procedural environmental justice. Therefore we use the method of co-ethnical surveys in other fields. At present we contribute to a project on strategies on the municipal level to promote energetic renovation of privately owned dwellings. Here again we get into dialogue with groups of society that are underrepresented today. We hope to contribute in providing information on rationalities for urban planning in an intercultured society.

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# 'They have different ways of doing things'[i] Cemeteries, diversity and municipal spirituality

Keywords: cemeteries: multiculturalism: identity

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*Abstract*

*Cemeteries offer a unique window into questions of multiculturalism in contemporary European cities; and a unique set of problems for planners to deal with. As the second largest type of urban greenspace, cemeteries form an important if forgotten aspect of most cities. However, as places of bodily disposal and remembrance, as well as (potentially) recreation and biodiversity, they present different challenges for planning than those of other green infrastructure, especially in the context of a multifaith population.*

*This paper draws on research from cemeteries in the UK which questions their role in presenting and promoting local identity, and accommodating multifaith and multicultural practices. This reveals different understandings of group and individual identities- between those seen as 'indigenous' or 'immigrant' with assumptions of homogenous wishes for members of the latter category- demonstrating the ongoing power of ideas of ethnic or religious difference - or deviance from an imagined 'norm'.*

*The paper goes on to suggests that a more nuanced understanding of cultural and religious difference can not only provide more appropriate places of remembrance for everyone, but also demonstrate the importance of a different type of sacred space. This is defined in the idea of municipal spirituality: places which demonstrate and allow access to non- instrumental, or transcendental values without being part of, or 'owned' by any organised religion. This is not only important in the planning of new cemeteries, but in reasserting the value of other places which can also fulfil this purpose.*

Keywords: cemeteries, place attachment, multiculturalism,

## 1. Introduction

Cemeteries, and 'deathscapes' (Maddrell & Sidaway, 2010) more widely (all places of death and remembrance), express something intrinsic about the meaning of existence, the beliefs, hopes and emotions of both individuals, families, communities and wider society (Kellahear, 2007). Moreover, public cemeteries, although sharing many characteristics with other 'deathscapes', hold a unique position in as much as they aim to serve the entire local population regardless of faith. They are simultaneously public open space with all the attendant issues of (in)appropriate behaviour that this engenders (Deering, 2010). They are places where fundamental beliefs about existence and meaning can be simultaneously expressed and practiced in divergent ways. They function as 'a cultural text about society and the individuals that have found their last place of rest in its burial lots' (Reims, 1999, p150) and by their nature, multi/non-faith cemeteries provide a public record of the deceased inhabitants of that place, become a physical representation of the changing cultures who live and die within that city.

However, the meaning and interpretation of this space by and for diverse groups is not readily accessible. This is especially the case in relation to their role in facilitating 'continuing bonds' between the dead and living (Maddrell, 2009a, 2013). Cemeteries, and other 'deathscapes', can be the

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physical location of relationships between bereaved people and their deceased friend or relative. As such, they are important in the maintenance and expression of identity, of both the living and the dead. They mediate representations of personal, group and civic identity. As built form, they are part of the public representation of collective memory, or the landscapes which influences our ability to make sense of our own lives (Hayden, 1997). This complex role as a material repository for memory has implications for the public memory of the city: 'public memorial practices, monuments, and other highly symbolic markers inscribe meaning on space' place' (Graham & Whelan, 2007, p488, see also Burk, 2003). Place and identity are entwined in a complex symbiosis. Within these physical and psychological battle grounds the way diverse groups are constructed and dealt with by the state are negotiated. The physical manifestation of identity are played out within dominant power structures, with certain groups being more able to claim somewhere as theirs, or as part of their story: 'particular narratives will always be privileged in attaching memory to place'(Graham & Whelan, 2007, p488).

This paper presents research into contemporary UK cemeteries which begins to unveil divergent conceptions about place attachment and memorial practice between those who are seen as ethnic or religious 'others', versus the majority 'indigenous' population. To do this, the paper draws on interviews with cemetery managers, and extensive visual data of the cemeteries in the same cities.

## 2. Research Background

This research engages with the current discussion within academic literature around cemeteries, place attachment, and about multicultural and national identity. It raises issues which frame the consideration of cemeteries' role in multicultural cities.

### 2.1 Cemeteries in the city

This section will outline the ideas and issues relevant in discussions of cemeteries and place identity, and public history. It is now a well-rehearsed argument (Massey, 2005) that places and spaces are not static backdrops to be filled with meaning by actors or by a notion of culture which can be separate from the place in which it happens; "space, like other commodities, is *itself actively produced"*(Merrifield, 2006, p105, p107 emphasis in original). More specifically, the paper begins with a discussion about the role and purpose of cemeteries, and what the implications of this are for thinking about multicultural cities: or how the production of cemetery space represents and creates the society within which it is found.

Contemporary cemeteries simultaneously play both a public and private role in society, however their exact status is less clear now than in previous decades. Established in the eighteenth century are a 'proper place of death', cemeteries were seen as a hygienic alternative to overcrowded churchyards. Moreover, their expansive green landscapes were seen as offering recreational spaces to a wider population than the deceased and their families, and also playing a symbolic role as public landscape (Rugg, 2006). Since their inception in the eighteenth century, their status as a 'proper place of death' has become eroded. These different aspects of cemetery space place competing demands on the same site, only added to by the increasing diversity of cities, and the attendant range of diverse faith based requirements these contain. Francis et al (2005) see potential issues with the cemetery's role as green space, seeing parks as active places, but cemeteries, particularly referring to Abney park cemetery in London as places of tranquillity and *inaction.* This issue will be discussed further with reference to the notion of municipal spirituality, or the role cemeteries could play in offering inclusive, spiritual spaces.

This ongoing tension between cemeteries as a place of public promenade, and private reflection, coupled with a shift away from burial and towards cremation further confuses their spatial significance. As Rugg (2006) argues, "after World War II, cemeteries had begun to lose their importance as a communal context in which grief could be framed" (p225). The notion that cemeteries have been losing their shared meaning in the post war period also has implications for memorialisation of other parts of the city. Partly due the loosening ties of religion and societal convention, and partly due to changes in technology, Kellacher and Worpole (2010) argue that there is

"increasing temporal and spatial separation of the forms of bodily disposal and rituals associated with the commemoration of the deceased" (p161). This implies that as the context for grief and mourning has become more personal or individualised, the shared space of the cemetery in the city no longer holds shared meaning amongst its citizens. The diversification of faith and cultural practices will play a part in this, however, they are not explicitly considered within this literature This loss of shared meaning has implications for both how practices within the cemetery can been deemed legitimate or not and its overall role in the city.

This notion of (il)legitimate behaviour is especially visible in the debates about (in)appropriate memorialisation. As has been well documented in both academic literature and the popular press, the ways in which graves and other memorials in cemeteries are marked has caused recent controversy. Issues around what sorts of items are suitable to be left on graves or trees, as well as inferring assumptions about good taste, also relate to ideas of what is legitimate in a space which is neither exclusively public nor private. Woodthorpe argues 'there are powerful normalising discourses in the cemetery about what constitutes 'fitting' memorialising activity" (2010, p131). This in turn has implications for practices which are deemed as outside the UK cultural norm: practices pertaining to 'other' faiths and traditions. Further, "memorialisation can be interpreted as a form of mourning activity that can be subjected to scrutiny" (Woodthorpe, 2010, p123). It is something which can be observed, and from these observations judgements can be made about what sort of practice this is. This raises the question of who is doing the judging, and how personal memorialisation interacts with public policy or civic and national ideology. Cemeteries and other public memorials are placed within their wider context, and contribute to the politics and meaning of this context. Looking at mourning practice therefore investigates more than just cemetery aesthetics. As Graham & Whelan argue, 'individual and collective identities are inflected by conflicting ethnonationalist ideologies that entwine private grief with memorial practices sited in public space' (2007, p478). This is vital when considering the role of cemeteries as part of the public memory of multicultural cities. The methodological implications of this are discussed in greater depth later in the paper.

These issues raise further questions about the role of the cemetery in the city: what is their role when cities are no longer so unitarily ordered, and places take on multiple individualised, personalised or privatised meanings? This links to concerns about public management of multicultural identities and 'alternative' spiritualities. Further, what legitimacy do civic authorities have in deeming behaviour as appropriate or inappropriate? Despite these concerns and questions about their civic function, 'each and every cemetery is the most concentrated repository of mystery and secret that is available to modern, urban twenty-first century people" (Francis et al, 2005, p215). Cemeteries, or 'deathscapes' more widely offer access to a sense of 'something beyond' the materiality of everyday life. Without being owned by of any given religion they are places for 'expressing continuing bonds embodying and evoking an active sense of the absence-presence of the deceased in the lives of the bereaved' (Maddrell, 2013, p510). Therefore, they are very importance, if not sacred, places to a wider range of people who may not express this attachment in the same way. It is therefore necessary to consider ideas of place attachment, and what this means in contemporary multicultural, multi-ethnic multifaith cities.

## 2.2 **Place attachment and belonging**

There has been a marked increase in research around ideas of place attachment in the last ten to fifteen years, with the literature spanning geography, economics, ecology and social psychology (Lewicka, 2011, Manzo & Devine-Wright, 2014), discussing both the personal and societal implication of attachment to place, how it manifests amongst different groups and in multiple geographies and time periods, and the appropriate methods for researching the concept. Lewicka argues 'that despite the growing number of the so called non-places…not only have places not lost their meaning but their importance in the contemporary world actually may have grown'(2011, p209) invoking the persistence of 'dwelling' as a key aspect of being human (Heidegger, 1962; Tuan, 1977). This is something which is echoed in the deathscapes literature, around places of continuing bonds.

Lewicka's (2011) review covers an extensive range of issues such as difference between urban and rural attachment, homogenous and heterogeneous communities, issues of scales and notions of 'home'. However, this review reveals little research into in-migrators sense of place attachment, be these people from different regions of the same nation or beyond. There is some consideration of visitors to places of high natural amenity value, and suggestions that length of residence increases place attachment, but beyond this, the topic remains largely unresearched in these specific terms.

However, issues around immigrant groups and established minority communities role in the symbolic making of the nation raise important issues for thinking about place attachment. This is considered in work about immigrant identity and hybridity (Bhabha, 1994, Hall, 1996). Hybridity is the merging or blending of an 'old' identity with a new one, based on a shift in geographic location: or migration. The concept has been criticised for assuming stability or naturalness of identity (in either old or new context) and for not seeing the temporal, cultural or political construction of these identities. However, the concept of multiple, differently rooted identities, and how these play out politically on the built form of cities, specifically within cemeteries, is important and underresearched. Importantly, 'the question is how well the immigrant sense that he or she is indeed 'home' and the extent to which he or she can shape this new home to reflect his or her own sensibilities'(Kaplan & Chacko, 2015, p129). With regard to deathscapes and memorialisation this raises importance questions around final resting places, connections with the (new) home versus bodily repatriation to country of birth or ancestry. This matters beyond the cemetery as 'places of memory act as a means to give them visibility as persons and citizens in the countries of reception' (Buciek & Juul, date p119). Cemeteries therefore hold the possibility of establishing the legitimacy of immigrant and minority ethnic groups as part of the 'host' society. However, this is a difficult and complex issue as expressed by Reims in her research into Swedish cemeteries and immigrant graves:

> 'Because Swedish identity is the norm at a Swedish cemetery it does not need to be enhanced. Symbols and customs have to deviate from the norm, thereby creating a boundary against the majority in order to serve as markers ad expressions of ethnic or cultural identity. However, when practices in accordance with Swedish norms are deployed on immigrant graves, *they deviate from the tradition of provenance* and consequently become significant as markers that express a far from self-evident identification with the surrounding culture '(Reims, 1999, p152, emphasis added)

This means that it is not as simple as migrant/minority groups simply assimilating to 'host' practices to become part of that nation. Their very nature as 'other' disallows this, and in turn, unsettles the meanings of the traditional indigenous practice. Moreover, these issues raise more fundamental questions about who can be part of a 'nation', and how identity is claimed or denied to different groups. This process of differentiation, or 'othering' is shaped by the legacy of colonialism and creation of a nation by a process of excluding those deemed as others (Anderson, 1983, Said, 2003 Gilroy, 1986, Young, 2000). The legacy of this ideology remains and goes beyond immigrant groups: people born in the UK, whose parents were also born in the UK are still placed into this 'other' category because of assumptions about their religion and phenotype, and how this differs from the assumed 'norm' of the nation of Britain. This leads to certain groups being reified and fixed as stable 'others' with specific needs and requirements which deny differences within that group.

As Beebeejaun (2012) clearly argues in relation to minority ethnic community engagement in planning, laudable 'efforts (for inclusive public participation) were undermined by the persistence of an older discourse of race and ethnicity which stressed the essential, natural, cultural nature of difference, and downplayed the socially constructed, contingent and contested nature of communities'(p545). Local government officials consulted with established faith or cultural group 'leaders' to try to understand the needs and wishes of these groups whose voices had been previously excluded or underrepresented. However, by establishing these groups as the spokespeople of the 'others', their position as beyond mainstream UK society is reinforced. Moreover, by establishing certain fixed groups who have specific and unchanging ways of doing things, power relations within those designated groups are reinforced, with negative implications for many, but especially women and younger people (Okin et al, 1999).

This research illustrates the ongoing impact of this orientalist thinking, and considers what it means for cemeteries as sites of public memory in diverse and multicultural cities.

## 3. Methodology- visual and verbal

The paper has so far presented discussion of theories of identity: both place identity and perceived or imposed national identity, and the importance of these ideas for thinking about the role of the cemetery in the contemporary, multicultural city. This section outlines both the methods undertaken to investigate these issues- interviews and photographs-and considers their relevance, importance and limitations as ways of knowing about multiculturalism and (place) identity. In particular, it discusses the importance of visual methods in this research, and in researching cities more generally.

By their nature, places provide 'an assault on all ways of knowing'(Hayden, 1997, p18), so the question of how they can be researched and represented is a perennial one in geography and related spatial disciplines. Discussion of visual, and other non-textual methods is becoming well developed within geography, anthropology and sociology (Pink, 2001, Rose, 2012Harper, 2012). This covers both the analysis of photographs as (neo-colonial) text, photographs for use as discussion points in interviews, and creative methods in which participants are asked to take photographs, often as part of wider 'sensuous' ways of understanding places (Johnston & Lorimer, 2013).

Photography is associated with demonstrating a 'true reality' of any situation and of documenting everyday life, conveying a feeling that 'visual methods give better access to the immediate lived and felt everyday world. Hence, visual methods can help researchers to 'come closer to lived life' (Oldthrup & Cartsensen, 2012, p226). However, this idea of photography as anything other than another produced interpretation is widely critiqued (Crang, 2010). Photographs are as situated, constructed and interpreted as any other form of research data: 'the meaning of photographs are arbitrary and subjective; they depend on who is looking' (Pink, 2001, p51). This does not undermine the importance of visual evidence and experience, and insurmountable difference between it and written or spoken material remains: 'the world that is photographed, drawn or otherwise represented visually is different from the world that is represented through words and numbers'(Harper, 2012, p4).

When research multicultural identity in cemeteries, my position as a white western researcher is problematic. In looking for immigrant and minority ethnic grave markings/memorial practices, I define, and therefore reinforce these orientalised, supposed boundaries of who is an 'insider' and an 'outsider' from a position of power, both in my cultural upbringing and also my position as an academic. This may be particularly problematic in photography as the object photographed has no voice in the way interview participants do. However, the photographed object itself is represented more literally, more completely, than edited and analysed interview transcripts. However, my choice of what to photograph and present is unavoidable.

With these considerations in mind, this research consists of in-depth, semi-structured interviews with nine cemeteries managers from across England and Wales. When quoting from the interviews, the text has been anonymised with a number replacing a name/place of work. This is so that the reader can identified quotes from the same person. It also consists of photographs from the cemeteries in the same cities. The paper presents a small sample of these, and the comments and analysis are made on the basis of the wider range of images. In the following discussion about identity and exclusion, photographs are used to both support and challenge the assumptions which come out of the interview data. Although readers will interpret them in different ways depending on individual background, experiences, and interest, positioning the photographs in this way- as illustrates- position them within the argument they are there to illustrate.

## 4. Findings

The following sections discuss how cemetery managers perceive place attachment in their sites, and how this is represented visually. Both accounts clearly demonstrate the importance of local identity in continuing bonds with the deceased. Further, the interviews with cemetery managers demonstrate their understanding of the need for culturally sensitive provision in multi-ethnic, multi-faith communities. However, these two understandings of the public diverge, and faith needs or attachments replace place ones, rather than overlap or mingle. This reinforces the notion of insiders and outsiders, those who belong, and those who are guests. Moreover, the research also indicates that matters may not be this simple. Firstly, cemetery managers observe that practice amongst 'non-indigenous' groups does not simply adhere to stipulated religious or cultural rules or norms. Secondly, as demonstrated by the photographic research, non-indigenous religious or cultural practices do not necessarily exclude local place attachment. These points are set out in turn below, with detailed discussion of photographs and interview data.

### 4.1 Place attachment matters

Figure 1: Flag above graves in Blackley Cemetery, Manchester; Scarves on memorial bench in Allerton Cemetery, Liverpool; Wales flags on graves in Thornhill Cemetery, Cardiff

Visually, cemeteries demonstrate that place matters. Within the cemeteries photographed in this research, place of origin or residence of the deceased what frequently inscribed on gravestones and memorial plaques (See also Maddrell, 2009b) or grave markers (flags, balloon, trinkets, scarves) express locally based identity. Figure 1 further illustrates this.

All interviewees mentioned both local attachment to cemeteries and different (minority) religious/immigrant groups. There was a strong view, across all cities, that local residents remained closely attached to their local cemetery, rather than happy to use any within the city that offered space, better financial value or any extra facilities. A sense of shared belonging in local identity was expressed in statements such as 'they're disappointed that they haven't still got their local cemetery' (Cemetery manager 1), and 'its almost a tribal thing where they're linked to that particular cemetery'(Cemetery manager 2) emphasising a collective being (they), when referring to the difficulties seen in some cities with getting people to accept new sites. This sense of neighbourhood identity was so much so that it was often cited as influencing disposal choices: 'families that are local there, would even consider cremation...rather than be buried at (other cemetery on other side of the city)( Cemetery manager 3). Managers stated that they either provided space, or planned to provide space, for the scattering of ashes and memorial plaques in cemeteries which were otherwise full, for residents of that neighbourhood or local community. This sense of local attachment often went beyond a desire to be buried/memorialised near to living loved ones, as many managers stated that a sense of local identity was so strong that people often wanted to be buried back in cemeteries which are close to their 'original' home, despite where they may have resided at the time of death. This

further suggests that there are 'continuing bonds' with place as well as with people, and that place identity is fundamentally intertwined with individuals' sense of their self, that place is part of the 'sacred quality...associated with a sense of 'continuing bonds' (Maddrell, 2009b, p36).

### *4.2 A different sort of attachment?*

Issues surrounding cemetery provision for multicultural, or more frequently, multi-faith communities came up in all of the interviews. Cemetery managers saw their sites as mirroring the society and cities of which they are a part, 'we all...live...with different beliefs and denominations when we're alive, you know, so why not when we're dead?'(Cemetery manager 4)

Figure 2 (clockwise from top left): Chinese war graves, Efford Cemetery, Plymouth; Grave with Sikh markings, Blackley cemetery, Manchester; Polish Roman Catholic Grave, Hollybrook Cemetery, Southampton; Belgium war graves, Southampton Old Cemetery

Figure 2 illustrates some of the different national, religious and ethnic identities visible in the cemeteries within the study. Simply by marking the death of much of a city's population, they provide public memorials to the diversity of the city. There are important caveats about both faiths and individuals who choose not to be buried, nor to have their cremated remains marked in a public cemetery, but cemeteries physically memorialise and display a more diverse public history that any other aspect of most cities (cf Hayden, 1997). The images of Belgian and Chinese war graves illustrate a less seen war history, questioning a notion of nationhood, and national soil dominant in such narratives. Symbols of Sikhism and Roman Catholicism are evident next to graves without such notable religious markers, and are illustrative of many multifaith areas seen and photographed across the nine cities. The images represent a small sample of the visual material evident in UK cemeteries, demonstrating their potential in telling a more diverse history of their attendant cities that dominant nationalist discourse may show.

The above images illustrate UK cemeteries as mixed multi-faith, multicultural spaces. This was backed up by the comments made in interview by all the cemetery managers. Most stated the importance of non-denominational, interfaith space in statements such as '*I have Hebrew and Muslim and they're next door to one another...that's what this cemetery's about'* (Cemetery manager 5), however, this was not always reflected in practice and interaction with community groups. Most managers stated that they had been approached by faith groups wanting to establish specific areas

within the cemetery. Responses ranged from ambivalence about whether this would cause future problems by not leaving enough space without designation, to responding positively to requests: *'if we've been approached by any particular culture that have asked us to reserve an area for them, that's something we've done, and would still be willing to do'* (Cemetery manager 3). Further, some national or cultural groups, though not creating officially designated areas within the cemetery, would be buried close to others from a similar background as *'they tend to want to be in the same sort of location'* (Cemetery manager 6). This illustrates the diverse practice in the management of cemetery space, but one which is informed by a mind-set of 'insiders' and 'outsiders'. Cemetery managers talked about the general public as 'they', but differentiated this 'they' from the seemingly established and fixed group identified given to those belonging to an 'outsider' community. This is further illustrated in the following quotes:

*'The West Indian community for example, generally the women will sing and the men will backfill the grave at the end of the service, you know, and that's something that the West Indian community often do' (Cemetery manager 4)*

'*The Polish Community tend to be right on the case in terms of maintenance, and do visit regular. Whereas some of the other faiths, you don't see people from one year to the next' (Cemetery manager 6)*

*One of the reasons the Asians come here is they can park their coaches, they can't park them at (facility in neighbouring authority' (Cemetery manager 2)*

The way cemetery managers dealt with faith/cultural/national groups is markedly different from their discussions of members of the public not designated in this way. The importance of local identity in relation to the cemetery is not mentioned. Identity for those groups is about their religious or cultural needs rather than any continuing bonds with the local area. This is not to be critical of cemetery managers, or to suggest that they making prejudice assumptions or treating certain people in a less valued way. Judgements which divide between 'insiders' and 'outsiders' in terms of national identity are framed by dominant ideologies of the nation, which frame how public official deal with 'diverse groups'(Beebeejaun, 2004, 2012).

### 4.3 Hybrid attachments?

However, evidence from the research illustrates that this is more complicated. A number of managers noted that memorial practices did not always stick to the 'rules'; either the rules of the cemetery, as is well noted more widely in the literature (Woodthorpe, 2010) or the 'rules' of the religion. Specifically managers commented on large ostentatious headstones on Muslim graves[2], when the assumed 'rule' is not to mark the plots: *'the Jewish section particularly is very strict and controlled, like the good old days of the other cemetery. The Muslim section is now, is actually starting to get away from it, they now are having western headstones, and they also have an awful lot of solar lamps'* (Cemetery manager 1). This comment which is typical of many made by cemetery mangers illustrates that cultural practices are neither fixed nor bounded. Further, there are local differences rather than static religious practices which do not alter between locations, as evidenced by the range of services offered in different locations. Some authorities offered burial within twenty-four hours, including weekends,

[2] The majority of such comments were directed towards practices in the local Muslim community, rather than Jewish or other faith groups. This may be because Muslim populations were larger and more prevalent in the cities in this research than other faith/immigrant groups. Further, it may be because, at the time of writing, British Muslims were subject to a large amount of Islamaphobia and hence their practices coming under sharper scrutiny by those outside the faith. It may be because Jewish burial ground and space within municipal cemeteries are more historically established and hence more taken for granted rather than problematized. It is beyond the scope, focus and findings of this research to do more than speculate on this matter, but it has been noted as both potentially important and interesting.

for religions that 'required' this; others did not as there was not seen as the demand for this, especially if it meant an increase in burial fees despite areas having similarly sized Muslim and Jewish populations. Despite cemetery managers working assumptions about cultural or religiously bounded identities, evidence from cemeteries suggests that this is an oversimplification. One manager commented on this, saying *'I think we're a bit hoodwinked…I think because we don't really know, we tend to listen, and different parts of the community want different things, and we end up jumping through hoops in case we get it wrong!* ***I think we deliver far over and above that they would actually deliver for*** *themselves' (*Cemetery manager 7 *emphasis added)*. This quote is revealing on two grounds. First, it acknowledges that there are difference between Muslims, and that cultural practices can be, and are, negotiated on grounds of practicality and cost. Second, despite doing this, it reinforces the idea of 'them' and 'us', as evidenced in the final part of the quote. The next section turns to the photographic data to discuss why this position is potentially inaccurate and problematic

Figure 3: Efford Cemetery, Plymouth, Hollybrook Cemetery, Southampton Gravestone, Highwood Cemetery, Nottingham

Figure 3 illustrates three examples of gravestones which demonstrate the complexity of identity and reject simplistic, discreet and fixed notions. They can be seen as examples of hybridity, but going beyond a notion of this as something which is only meaningful for 'immigrants'. The first photograph illustrates graves of people both of SE Asian (Chinese) descent and of while British origin. It is traditional for SE Asian graves to display photographs of the deceased, but what can be noted here is this is also displayed on the white British grave, paralleling cultural interchange discussed by Reims (1999) but in this case with 'natives/nationals' taking on 'immigrant' practices, raising problematic questions about authenticity, and suggesting hybridity can be a two way concept. This seen elsewhere in the cemeteries visited. Dual, or multiple, identity- simultaneously a Jewish and British war grave, but also located in a particular place (Southampton) are can be seen in the next photograph. This suggests connection to place, country and faith/culture; tentatively indicating that these identities are not mutually exclusive. The third photograph is perplexing and hard to draw any definite conclusions from. A western/English name and inscription are below stylised Arabic characters, suggesting some sort of cultural crossover/blurring of boundaries, again problematising hybridity as a phenomena only of 'incomers'.

Figure 4: Muslim graves, Hollybrook cemetery, Southampton, Gravestones (2), Filton Cemetery, Bristol

The photographs in Figure 4 further emphasise this point. The first, bearing an inscription partially in Arabic, and located within a Muslim section of the cemetery, point to minority faith adherence, whilst the statement 'resident of this isle since March 1958' indicates the importance of local place attachment. The second two gravestones in this figure express local place attachment for people born outside of the UK: 'finding freedom, peace and final rest in Bristol' and 'great Hairdresser to the community'. If this was not of importance to either the deceased or their relatives, it is unlikely that it would be included on a gravestone inscription.

All the images in figure 4 suggest a greater degree of cultural flexibility and multiplicity than a simplistic notion of a majority who negotiated continuing bonds, and connect to community and meaning through their local place, and a minority who do the same only via religion or national (diasporic) identity. It further undermines claims of insiders and outsiders, based on shared national identity and values, placed in opposition to 'foreigners' who are constitutively different. The photographs are representative of other graves, but as stated in the methodological section, products of the research and open to interpretation. The paper suggests that these images undermine dominant discourse of nation and belonging, rather than understand the motivations or emotions of those who placed these stones. This, in turn, raises questions about the role of the cemetery in the city, as places which can firstly represent (and promote) a different understanding of local identity, and secondly offer a space which connects with spiritual or transcendental values without being owned by one designated, fixed identity. The following section explores the implications of this in greater depth.

## 5. Discussion

The paper has illustrated that cemeteries in contemporary UK cities act both as markers of national, religious and cultural diversity, and concomitantly question the meaning, fixity and interpretation of these categories of identity. Their practical and symbolic functions in the city are therefore contested. Practically, they are 'multifunctional' (Woodthorpe, 2011), offering space for both recreation and remembrance, and having to manage the competing interests that these different functions bring. Symbolically, as 'cultural landscapes (they) function as significant sources for unravelling present geographies of contested political and cultural identities'(Graham & Whelan, 2007, p477). Moreover, they are places which remain largely forgotten by UK planning (McClymont forthcoming b). This leaves then as complex, important spaces which UK planning does not deal with satisfactorily. This may be because of this complexity of meaning and function, but also because cemeteries offer access to non-instrumental values, something that planning has limited or no vocabulary for. Cemeteries offer spaces for public memory which illustrate different constructions of identity that those within dominant discourses. Simultaneously, they are places of spirituality and mystery, of connection to that which is beyond material existence (Francis, etc al, 2005, Maddrell, 2013). Furthermore, public, local authority cemeteries do this outside of any established religious framework, offering spaces of 'municipal spirituality' (McClymont, forthcoming a). Municipal spirituality is a language which planning could use to promote and defend places such as cemeteries, which offer access to shared human values which are beyond instrumental rationality. In so doing, it would be able to promote their value as shared, diverse, tangible civic history, one which diverse identities can legitimately claim shared yet separate local place attachment.

## 6. Conclusions

Cemeteries are places where both grief and continued bonds with the dead are allowed to continue beyond the 'legitimate' timescales afforded by modern sociality (Maddrell, 2013.) Attachment to this space is therefore of utmost importance. Cemetery managers can see this with regards to the needs of bereaved people being their key priority. But the way they see the bereaved is still framed by neo-colonial ideas of ethnicity and difference, meaning that ethnic/religious others are given faith/cultural attachment instead of local place attachment. This leads to questions of how the cemetery operates as a material site of public memory. On the basis of the interviews, public memory is one of separateness, rather than one of shared and changing of local history. However, the photographs suggest that this is not the case: local place attachment and minority ethnic religion are not necessarily mutually exclusive.

Managers' differential views of minority and (assumed) majority groups are problematic, as it appears to suggest that minority religious faith/practice and local place attachment in the UK are non-compatible. In terms of practical considerations, there were no discussions as to whether groups or individuals from minority religious faiths would also prefer cemetery space in their immediate locality, whether local identity also was part of their notion of continuing bonds.

The importance of the cemetery, according to the managers, is different for 'immigrants' than for the indigenous local populations, and the groups are articulated as discrete entities. For the former it is about expressing a religious, and different (Reims, 1997) identity- and it is within this religious practice and tradition that continuing bonds, and all the attendant meanings described above, are expressed. For the latter, it is about expressing attachment to place and continuing bonds with the deceased- through place and local identity- what it means to be me.

Moreover, this maintenance of 'insider/outsider' as primary categories of (local) identity diminishes the role of cemeteries as public memory of whole, multi-cultural city. Instead, it still operates as finding a space for 'immigrants' positioned as guests rather than participants or citizens. These assumptions and relations have specific implications when considering cemetery *space*. Whether planning is able to rearticulate these spaces as places of shared access to different sets of values- ones which stand against the dominance of economic rationality remains to be seen, as does whether these places could challenge the neo-colonial discourses of 'otherness' in place attachment.

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# Schools as instruments of neighbourhoods

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Key words: neighborhood development, school segregation, gentrification

*The paper discusses the importance of bringing different professions and actors together in order to create new approaches to deal with challenges in multicultural and socially diverse neighbourhoods. It puts its focus on education in neighbourhoods and points out that urban planning cannot be reduced to the physical environment but needs to include social issues for neighbourhood development.*

*The paper concentrates on the project "Campus Rütli-CR²" in the district of Berlin-Neukölln, which is the concept of integrating primary and secondary schools to a community school imbedded in an education network of day cares and recreational facilities as well as social institutions and education projects. Campus Rütli-CR² understands itself as a living environment with the target of a positive neighbourhood development and identifies the multicultural diversity as a great opportunity (Bezirksamt Neukölln von Berlin, 2015[1]).*

*Based on own researches, the paper discusses the significance of schools as part of neighbourhoods Many areas with special development needs are facing the problem that well-educated parents are moving once their child reaches school age (Häussermann, 2006). Schools are one cause of segregation tendencies within cities which spatial planning needs to consider (Frank, 2011).*

*In this paper I am arguing that education networks and schools are essential instruments for neighbourhoods which ask spatial planning to work closely together with professions of the field of pedagogues.*

## 1. The city and its neighbourhood and schools

The city is a social space which is in Germany increasingly dealing with socially and economically unequal neighbourhoods due to a polarization of incomes and the differentiation of life styles. In the selection of different milieus through residential segregation is the desire for living in neighbourhoods with your own kind in which a similar way of living is practiced of great importance (Häussermann and Siebel, 2004). These segregation tendencies are spatially identifiable: middle-class and financially stable neighbourhoods and neighbourhoods in which manifold problems and a high percentage of inhabitants with migration background concentrate and which can be even detached from the cities general development are shaping contrasting social and spatial conditions. With an increasing segregation the homogeneity of students in the neighbourhood schools is also increasing. German urban development discussions are pointing out that the student selection at primary schools is reflecting the social situation of neighbourhoods (Fritsche et al., 2011). Focusing on the segregation of students with a migration background a German study underlines that the unequal allocation of students with migration backgrounds at primary and secondary schools is the result of an unequal distribution of people with and without migration background in German cities (SVR, 2013).

This leads to challenges at schools in multicultural and social diverse neighbourhoods which pedagogues are facing. In these areas the conditions at schools are often a reason why middle class families and families with strong educational ambitions are moving once their child reaches school age (Häussermann, 2006). And those who stay are developing strategies to enrol their children in schools in other neighbourhoods with better reputation (Noreisch, 2007, Simon-Philipp, 2011).

Challenges in social diverse and multicultural diverse neighbourhoods should not only be addressed by physical improvements of the neighbourhood´s infrastructure. An approach that has been identified and is included in urban development programs which aim to improve the living conditions in neighbourhoods of manifold problems such as the German urban development program ´Soziale Stadt´.

The same program was also the frame in which the first steps for the education project ´Campus Rütli – CR²´ were developed. The project is located in the capital of Germany, Berlin, in the northern part of the district ´Neukölln´ in the neighbourhood ´Reuterkiez´. The ´Reuterkiez´ can be characterized as multi-cultural and socially diverse. It belongs to one of Berlin's hot spot districts of manifold cultural and art life as well as a going out area reflecting multiculturalism. Facing on the one hand an increasing number of financially stable inhabitants belonging to the middle class and on the other hand a decreasing number of economically deprived inhabitants the area has been under strong socioeconomically and sociocultural changes in the last 15 years (TOPOS Stadtforschung, 2011).

The strengthening of education opportunities, especially for children in the neighbourhood, had been an important part of the work in the neighbourhood. One of the biggest projects which is in its realization process is the creation of a central space for the neighbourhood with an agglomeration of manifold education, social and neighbourhood oriented facilities including a community school. The whole project ´Campus Rütli – CR²´ is following an innovative approach and is carried by manifold stakeholders which get parallel connected.

Focus with regards to content of the research of which the `Reuterkiez` neighbourhood is one example is the combination and dependency of urban design and social issues in the connection of schools and neighbourhoods. Focus with regards to methods is that the cases studies will all reflect areas of multi-cultural and social diverse neighbourhoods to deepen the knowledge for these areas.

This paper is focusing on the underlining of the importance of social development with urban design development in neighbourhoods and reflecting the interdependency for neighbourhood development. It outlines the rank of communication and cooperation of stakeholders of manifold fields and emphasizes the significance of education for urban development.

## 2. Schools as instruments of neighbourhoods

Why are innovative schools and education approaches important for neighbourhoods and especially for those with multi-cultural and socially diverse conditions?

From society's point of view the investment in education is indispensable naming reasons as integration and equal opportunities. From spatial planning's perspective it is argued also with the great importance of integration and with activating neighbours as positive aspects for the neighbourhood (BMUB, 2014). In a globalizing world the importance of education is rising as the quality of education systems is becoming an indicator for a society´s international competitive capability (Braum and Heitele, 2010). In the United States the quality of schools in the district has a great value in real estate business and the relationship between neighbourhood choice and school quality is causally linked with each other. Real estate mangers are providing potential home buyers with college attendance rates and test scores of schools. Hence, schools get directly linked to urban economics in neighbourhood choice questions (O´Sullivan, 2007). The direct economical connection of school quality and neighbourhood choice has not been the case in Germany. Objectively, there are no standardized measures in Germany which display the outcome of a primary school available for the public (Noreisch, 2007). With the publication of the first PISA studies in 2000 the discussion about equal opportunities in German education systems has been recovered in the centre of education discussions due to the fact that the study reflected the strong correlation of social injustice and education equity in Germany which was the highest among all OECD countries (Hepp. 2008). The poor results lead to wider discussions about

schools and education in German society involving municipalities and planning professions (e.g. Deutscher Städtetag 2003, Leipzig Charta 2007).

The fear of parents with strong educational ambitions that their child is not getting appropriate educational conditions is present in our society. As mentioned in neighbourhoods with a high percentage of people with migration backgrounds and of socioeconomically deprived inhabitants parents are leaving the neighbourhoods in order to enrol their children in schools of other catchment areas (Häussermann, 2006). Noreisch (2007) has analysed the selective behaviour of enrolling children in primary schools in Berlin and outlines that the appearance of choice is a recent development in Germany, "choice was not traditionally or historically anchored in the German consciousness" (Noreisch, 2007 p. 1313). This emphasizes the upcoming importance of schools for middle class parents. Simon-Philipp (2011) outlines that especially for young well-educated families of the middle class the education supply in a neighbourhood has become a crucial location factor (Simon-Philipp, 2011).

From an international perspective there have been several studies which discuss the importance of local inner-city schools for neighbourhoods in order to attract or keep middle class families in the in these specific areas naming another reason why schools are important especially for inner-city neighbourhoods (e.g. Karsten 2003,2007, Kimelberg and Billingham, 2013)

In areas of special development needs in Germany the program ´Soziale Stadt´ aims in its concept to improve the living conditions in the neighbourhood for the local citizens. Since 1999 the state supports the stabilization and upgrading process in disadvantaged districts and neighbourhoods in terms of urban design and economic issues as well as socially deprived. With investments in the living environment, in infrastructure and in the quality of housing more inter-generation fairness and family friendly neighbourhoods shall be generated. The aim is the increase of chances of integration and participation of the local citizens. Target of the state funded program is to promote lively neighbourhoods and the strengthening of social cohesion (BMUB, 2015[1]). The program in total classifies ten fields of activity including local housing and housing environment, social activities and social infrastructure, the living together of diverse social and ethnical groups, school and education, local economy, health promotion, environment and transportation, city district culture, sport and regeneration, image improvement and publicity (BMUB, 2015[2]).

In the field of activity "schools and education" manifold education projects have been developed such as education networks of local actors. These have become an often used practice in program areas. Education networks are having first of all a connection of manifold stakeholders in the field of education in a neighbourhood in mind to discuss challenges and opportunities together and develop cooperation strategies. The aim is the improvement of educational opportunities for the local children.

The question is how planners can develop or conserve educational institutions and schools in multicultural areas and socially diverse neighbourhoods to become a locational advantage instead of a locational disadvantage. The results of a German pilot project `Bildung als Motor der Quartiersentwicklung` - translated 'Education as the engine of neighbourhood development' outline the importance of cooperative planning. The project emphasizes that urban regeneration needs to be closer connected with education policy. Further, it lobbies for the alliance of different policy areas for urban regeneration such as education, social issues, health, culture and employment (Simon-Philipp, 2011). The project outlines the following aspects in school development as transferable to other school and neighbourhood development projects:

- An interdisciplinary approach
- An early connection of education institutions in the urban design plannings

- An early discussion about the pedagogical profile of the school
- The location decision in the functional as well as in the urban design centre of the district
- Education and children stand in the centre of the project
- Educational institutions function as social meeting point to enliven the central space in the district/neighbourhood
- An cooperation with other stakeholders in the area

(Hochschule für Technik Stuttgart, 2009)

So the idea of putting a focus on schools in multi-cultural and social diverse areas appears to be quite obvious from a spatial planning's perspective when multicultural neighbourhoods shall be developed and to generate positive neighbourhood changes. But it is a perspective which asks planners to step out of their own field and approach another profession. It is not only the physical appearance which makes out the quality of a school but the quality of teaching pedagogical approaches to deal with the students perspectives in these areas.

Although spatial planners claim to involve the different views and interests which make out cities, it is always a step to the unknown of daily pedagogue's life experience, a different professional language which is used and sometimes varying anticipations (Uttke et al, 2013).

## 3. Manifold institutions and one shared concept - Campus Rütli-CR²

In 2005 the local neighbourhood management began with the first preparations to strengthen education opportunities in the `Reuterkiez` located in the northern part of Berlin in the district of `Neukölln`. The first project introduced intercultural moderators to the neighbourhood schools in the beginning of 2006. (Bezirksamt Neukölln von Berlin, 2015[2]). The area became famous in a negative kind of way in whole Germany due to an emergency-letter which was sent from teachers of the secondary school `Rütli-Haptschule` to the federal education board describing terrible circumstances at the school including aggression and students unable to be taught. The `Rütli-Hauptschule` became a synonym for failed integration in the media.

The pilot project Campus-Rütli has been pursued since 2007 by the district office and an education foundation of Berlin, `Stiftung Zukunft Berlin`. "The project aims not only to grapple with pressing current problems but also to help developing transferable problem-solving strategies. […]The project seeks primarily to put in place a new and sustainable educational concept which includes the creation of collective social space […]) (ibidem, n.p.) The project aims to create a new social space as a campus "in which the emerging generation will find a comprehensive and integrated socialization- and education offering" (Campus Rütli-CR² Administration of the County Mayor of Berlin-Neukölln, 2009, 5). For these existing boundaries among departments and social space were broken up to bundle competences on the campus.

The campus space is located in one street named `Rütlistraße`(figure1). The street is already nowadays a private street not allowing cars to enter in order to ensure a space without the barrier of traffic. From an urban planning's perspective, the street is at the currently designed as an agglomeration of two day-care facilities for children, a social care institution, a playground, the comprehensive school, sport facilities and at the moment fellow land for future buildings for further school and neighbourhood facilities The redesign of the street space for an increase of habitation quality as well as the remodelling of the entrance situations on the campus are planned such as the construction phases, the financing is secured (Bezirksamt Neukölln von Berlin, 2015[3]).

**1** School | **2** Day-Care Villa Kunterbunt, neighbourhood education workshop | **3** Gymnasium | **4** Youth Recreational Facility Manege, Occupation promotion for youth| **5** Day-Care Rütlistraße, Children and Youth Medical Service | **6** Neighbourhood Hall (fertigstellt 11. 2012)

**1** New Construction: economy, labour and technics | **2** New Construction occupational workshop (financing submitted) | **3** New Construction: school expansion | **4** New Construction: mixed use

Figure1: The Campus Rütli Space with existing and future buildings (Schulz@Schulz Architekten in Bezirksamt Neukölln von Berlin, 2015 [own translation and annotations])

To the campus belongs a community school which is the union of a primary and two secondary schools since 2008/2009. At the `Gemeinschaftsschule auf dem Campus Rütli` children are taught from first grade up to the 13th grade allowing all graduating certificates including the `Abitur`, the German university entrance certificate. The school understands itself as a closely connected neighbourhood school (Bezirksamt Neukölln von Berlin, CR² - Campus Rütli, 2015²).

The two child care centres as well as the youth centre located at the `Rütlistraße` have merged with the Campus Rütli. The Campus- CR² has its own structure and a project management being responsible for the overall development. The "Freudenberg Foundation´s programme "One Square Kilometre of Education", Campus Rütli is giving rise to a unified place of learning which enables young people to pursue their entire school careers from preschool to vocational training within a single space[…]Campus Rütli means that the entire spectrum of care, guidance and educational institutions for young people are for the first time collaborating and jointly shouldering responsibility. […]Children from the catchment area, nearly 90 per cent of whom hail from immigrant families, receive optimal support here, with their parents also included. Cultural diversity and multilingualism are treated opportunities and are nurtured". (ibidem, n.p.).

The realization of the project has been very complex and is divided into different levels including the content pedagogic level, the construction level, the participation level, the administrative level as well as public relations (Bezirksamt Neukölln von Berlin, 2015[4]). Recently, the finances for the next stage of construction have been released. The next step will be the development of a construction schedule for three new buildings (figure 1) as well as for the surface broaching. The objects will include a school expansion and necessary conversion in the inventory, a school building for economy, labour and technics along with a third building for a mixed use for a parent's centre and café, a pedagogical workshop, youth welfare service, dental services as well as for the adult education centre. The construction on the outdoor space will convert the entrance situations including a new footpath to increase the accessibility to the campus (Bezirksamt Neukölln von Berlin, 2015³).

## Developments in the neighbourhood `Reuterkiez`

The `Reuterkiez` neighbourhood in the district of `Neukölln` in Berlin Germany is an area with mainly Wilhelminian style architecture. With respect to statistics, the area has a population of 27.427 inhabitants[1] (31.12.2012) (Senatsverwaltung für Stadtentwicklung, 2013). The ethnical differentiation is divided into inhabitants with migration background 44% (in comparison Berlin 26%) and 28% inhabitants with foreign citizenship (in comparison Berlin 14%) (31.12.2010) (Senatsverwaltung für Stadtenwticklung, 2012).With that the part differs from many other areas in Berlin but is similar to other neighbourhoods in the northern part of the district of `Neukölln` in comparison to the social data.

In 1995 individual plots were declared as redevelopment zone and belonged to the `Sanierungsgebiet Kottbuser Damm-Ost`. One focus of the redevelopment was the improvement of infrastructure in the area especially for children and youth. The aim was to create social institutions as well as neighbourhood green and playing areas. Since 2007 recreational and day care facilities were created or developed and about 4500 sqm playground space had been created (Bezirksamt Neukölln von Berlin, 2012) The supply with playgrounds and green space is still not sufficient in the area reaching 45% supply with playground space and 15% supply with green space in the neighbourhood development zone (Quartiersbüro Reuterplatz, 2015[1]). In 2001 the southern part of the district became redevelopment zone belonging to the `Sanierungsgebiet Karl-Marx Straße/Sonnenalle`(Senatsverwaltung für Stadtentwicklung und Umwelt, 2015). That is reflecting the poor quality of infrastructure, economics and public space in the area.

The poor socio-economic conditions of the inhabitants in the neighbourhood is among other things reflected with the establishment of the area as a development zone of the `Soziale Stadt` program in 2003. Manifold projects have been initiated with neighbours and stakeholders of the area trying to improve the living conditions in the neighbourhood according to the goals of the urban development program `Soziale Stadt`.

[1] The official neighbourhood management area is smaller than the statistical area`Reuterkiez. It covers 70 hectares and has a population of 19.633 inhabitants (Quartiersbüro Reuterplatz, 2015[1]).

When the neighbourhood management started its work in 2003, 35% of the shops in the area were vacant and the area was printed of unemployment and poverty and families who were able to afford it moved away when children had to attend school. Today many things have changed positively (Quartiersbüro Reuterplatz, 2015[1]). When walking through the area vacancy is a problem which does no longer exist. Bars and restaurants as well as individual fashion and music shops are dominating the offering in the basement shops of the old Wilhelminian buildings. Expulsion processes of pioneer bars have begun. One famous example became the bar `Freies Neukölln` which belonged to one of the first bars for a Pioneer target group in the area which recently had to close because of rising rental prices. Young middle-class families are filling the streets and playgrounds and enjoying home manufactured ice-cream and buying children clothes in small boutiques. This picture is today still enriched by the inhabitants who used to print the picture in the neighbourhood in the late 1990s and in the beginning of the 2000s.

The neighbourhood has become a popular residential area which is expressed in rising rental prices and the transition from rental to freehold flats (Bezirksamt Neukölln, 2015[5]).

According to a study which was executed in order of the senate for urban development in Berlin in 2011, 25 % of the inhabitants in the `Reuterkiez` neighbourhood can be classified as gentrifiers and about 20% belong to the group of pioneers. 23% of these two household groups have children (TOPOS Stadtforschung, 2011). These two groups are almost making out half of the inhabitants and facing the group of long-term, permanent residents who have a significant lower financial situation. Their equivalence income lays about 30% under the average of Berlin and about 25% under the neighbourhood average. In this group about 31% of the households are with children (ibidem). The results of the study show that the area is in a changing process.

Due to these changes the area is released as a development area of the program `Soziale Stadt` in the end of 2016. At the moment it is in a two year lasting conservation phase in which the neighbourhood management is leaving the area stepwise. Their work in this phase is next to the finishing of projects the preservation of created cooperation structures, networks and committees as well projects (Quartiersbüro Reuterplatz, 2015[2]).

The area will no longer be funded by the program `Soziale Stadt` not because there are no problems in the area anymore but simply because other neighbourhoods in Berlin are in more need and the social and economic datas have improved and are in comparison to other areas supported by the `Soziale Stadt` among the better ones (Difu, 2013). The neighbourhood managers are pointing out though that between gentrifiers and deprived inhabitants parallel worlds are arising. Segregation within the neighbourhood with a concentration of problems in individual streets or buildings is seen as one of the biggest challenges of the neighbourhood (DifU, 2013). The social situation in the area is ambivalent today. On the one hand there is a more and more arising cultural hot-spot neighbourhood with financially stable middle-class inhabitants and on the other hand there are deprived inhabitants with problems. Recently, in March 2015 the district administration has given out the order for an independent study to proof if the housing in the area shall be protected by law (`Milieuschutz`) to not be converted to luxury housing and further freehold flats. Aim is the preservation of social diversity in the area (Bezirksamt Neukölln, 2015[5]).

## 4. Examination of pilot projects to gain knowledge about the significance of schools and strategies to knot neighbourhoods and education institutions - Methodology

The community school Campus Rütli located on Campus Rütli-CR[2] is one example out of manifold approaches which has been developed within the frame of urban development programs and projects. Schools and neighbourhood managements have been developing various projects which are documented differently concerning their qualities. The case study is the first case to be included in a

doctoral research. The goal is to look at the individual projects closely to increase the knowledge about how to connect schools with the neighbourhood, from an urban design as well as a social perspective. In particular focus are those schools in multicultural and social diverse neighbourhoods.

The work is following a case study approach using a mixture of qualitative research methods of interviews with experts of the neighbourhood and observations as well as literature research. The work is enriched by the outcomes of ongoing TU Dortmund Spatial Planning Projects researching about child friendliness in the district of Neukölln and the `Reuterkiez` neighbourhood. Within these teaching and research projects manifold stakeholders and parents have been qualitatively interviewed, schools have been visited and children have been participating to allow telling their perspective on the neighbourhood. The case study is backed up with existing literature about school and neighbourhood development in Germany and from an international perspective.

The case study `Campus-Rütli and Reuterkiez` is planned to be the prelude for a doctoral research study about the connection between schools and neighbourhoods in multicultural and social diverse areas.

## 5. Analysis with discussion of findings

Campus Rütli CR² is an example for a new approach including a school designed for the neighbourhood demands. It is in its concept innovative for Berlin and the costs of more than 34 million € for the campus illustrate the huge scale of this pilot project. The political efforts to get stepwise finances for the implementation have been approached after the first concept was developed in 2007 (Wolter, 2015). Hence, in the focus of the concept stood the idea and strategies instead of developing a concept within a certain financial frame. The project is carried and supported by many protagonists. According to the project management it was the continuous cooperative work of stakeholders in the area next to the cooperation with district administrations, politics and civil society as well as foundations and a famous patron which led to the realization of the project (Wolter, 2015). The amount of individuals who have been involved in the project and their important professional positions reflect the awareness of importance for changes in the situation at schools in the district of `Neukölln`. Especially the former major of the district has been geared for the media first the problematic challenges at the schools and then the positive changes at the community school. To be questioned is if the successful realization could have also been supported and caused by the attention through media and society in this case.

In high dense inner-city neighbourhoods space is limited and is often leading to a conflicting use. In the case of Campus Rütli the advantage was that plots were able to be bought or already state owned to be able to get converted for the campus idea. That was not without oppositions, though. The closing of the street for traffic and parking for the creation of a playing area in between the gates lead to repeated violence of the gate locks, probably through car owners (Wolter, 2015). Especially the demolition of a garden plot `Kleingartenkolonie Hand in Hand` that had been there since 1935 for the planned extension of the campus lead to wider critiques. The plot users were fighting by court against the decision especially because the financing for the extension buildings was not secured at that time and because of the neighbourhood's lack of green space. Losing the process the green garden lots were demolished leaving fellow land. This underlines the political back up for the realization of the concept.

Education has been one of the main focuses of the work of the neighbourhood management team. To keep middle-class parents and education oriented parents in the neighbourhood it is important to generate appropriate education infrastructure. To increase chances of children from low educated families and increase integration conventional schooling was not sufficient in the neighbourhood when the area was declared as target zone of the urban development program `Soziale Stadt`. In the multicultural and social diverse neighbourhood `Reuterkiez` this meant a task which included

manifold areas involving various administrative fields and professions which were brought together to develop strategies and ideas which lead to the concept of Campus Rütli- CR². At the schools there are today still more than 95% of the students from a non-German speaking family background (Quartiersbüro Reuterplatz, 2015[1]). And more than 50% of the children in the area are living from public aid money (Senatsverwaltung für Stadtentwicklung und Umwelt, 2013). The challenge is to deal with heterogeneity in the area in context of social, ethnical and performance-related backgrounds (Wolter, 2015). To encounter parallel worlds between these inhabitant groups high quality education and recreational facilities are important as the space where children and parents can mix. Professionals in the district state that the challenge lies in the varying living environments outside the institutions where children with different backgrounds do usually not mix due to different layouts of their spare time. So much more important is the supply with space at day-cares and schools for recreational activities in form of clubs to be able to generate integration space besides the formal instructions.

At the moment the transition of children from day-care to the school is still field of action of the community school. The problem of middle-class families moving once their child is reaching school age still exists. Analysed interviews with day-care institutions indicate that the reasons for that is still the fear of poor performance outcomes but also the habitus of the potential future classmates.

The increase of education oriented parents with school children is rising in the neighbourhood though. This is getting visible by stakeholders in the area through the attendance at parents meetings and specific questions which are asked (Rostalski, 2015). First analysed statements of local protagonists in the district indicate that other close by public schools to Campus Rüli seem to struggle with the competition for middle-class students at their schools. The differentiation among schools in the area is also pointed out by the neighbourhood managers. They state that while to one school children from education oriented parents are sent to again, in other schools the situation is as it was when they started their work in 2003 (DifU, 2013). The school choice process of middle-class parents have been recently analysed in a study for Boston. Coming to the conclusion that „despite the fact that individual middle-class parents express a preference for a diverse educational environment, the way in which they settle on a school ultimately produces a ‚clustering' effect in a small number of city schools, potentially amplifying intradistrict segregation by race and class" (Kimelberg and Billingham, 2013). The gentrification situation in day-care facilities in the `Reuterkiez` neighbourhood is further advanced than the one in schools. The neighbourhood managers state that the expulsion of children from low educated households through children from high education families is the new dilemma in the neighbourhood (DifU, 2013). The further developments at Campus Rütli –CR² and the social structure in the area and district will show if intradistrict segregation will also become a bigger challenge at the school level for the neighbourhood and district. The district administration and schools will have to deal with the challenges when creating a sticking out pilot project in an area which is located in a district with social data which lays among the lowest in the whole city and in which in almost every neighbourhood of northern `Neukölln` the state funded program `Soziale Stadt` tries to improve the living conditions in the neighbourhoods.

Campus Rütli combines two important aspects of school development in neighbourhoods. It is embedded in an education network and bundles the important facilities for the neighbourhood in reference to education, health and social issues. The conversion has been done with wide participation possibilities for inhabitants and after the finishing of the creation of the campus at least five institutions will explicitly address neighbours of the area and district (Wolter, 2015). The recreational youth facility `Manege` for instance is a meeting point not only for students from the community school but supplying the neighbourhood and district youth with offers such as free tutoring. In the institution also parents are engaged offering home-made cooked food for the visitors. This is reflecting the integration and the direct connection of the campus with its inhabitants.

## 6. Conclusions

The `Campus Rütli-CR` is a good example for how planners worked together with other institutions. It's a unique pilot project from a German perspective. If you want to make changes as a planner more than the physical appearance is of great importance. With increasing importance of education, neighbourhood as learning environment and the connection of educational and social care institutions is rising. The conversion of the campus space with its new buildings for the school and neighbourhood as well as the conversion of the accessibility and quality of the street space will show how the campus will merge in the neighbourhood. Especially the future changes with the closing of the neighbourhood management office, the potential protection of the social mixture of inhabitants through restoration and renting policies will show how the area will socially and economically develop.

For the planning education practice I state that it is important to outline the increasing importance of education in our society for the importance of integration and for planning. When working with students, most of them coming from middle-class households, I realized how big the prejudices are against schools in the district of `Neukölln` with its high percentage of multicultural and deprived inhabitants. Also the questioning why institutions needed to be visited from the inside and the use of talking to pedagogues lead to misunderstanding. The understanding after the excursions has been high leading to target group shaped results and a great reduction of prejudices usually admiring the schooling conditions. As for many other fields education is one for which planners need to listen carefully to the demands and cooperate closely with pedagogues and social workers in order to find individual strategies shaped for the target area.

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# PAPER TITLE: Participatory Planning: State Spatiality and Discursive Spatial Scales

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**Abstract**
The recent proliferation of institutional geography of state power provides insight into the analysis of socio-political dynamics of multi-scalar participatory decision making. This review examines how discursive strategies of state spatiality may be mobilised to interrogate the rationale for translating decisions at one scale into decisions at another scale. My approach draws together three complementary strands of literature – participation, state spatiality and scale. I first review how participation have been conceptualised, including the nexus between participation and decision making. I also review the literature on state spatiality in conjunction with state spatial projects and state spatial strategies to explain spatial privileging and socio-economic intervention of the state. I then describe the theoretical perspectives on the scalar discourse. The paper concludes by arguing that while spatialisation of socio-political contestations within multi-scalar configurations of state spaces may be scale-sensitive, the rationale for translating decisions at one scale into decisions in another has lacks explicit explanation.

**Keywords:** Participatory Planning, State Spatiality, Spatial Scale, Discursive Strategies, Multi-scalar

## 1. Introduction

Planning literature has placed significant emphasis on participation as a means for balancing and rationalising varied interests and preferences. This has also helped in the creation of participatory spaces across a spectrum of institutions and scales. The justification for increasing the role of participation in planning includes, among other things, the improvement of the quality of planning decisions (Kaza, 2006; Cornwall, 2008; Brownill, 2009). However, significant changes have occurred within the planning decision making environment that provide different contexts for the socio-political and spatial contestation across spatial scales. One of such changes includes the proliferation of institutional geography of state power and the decision making processes that fundamentally shape political outcomes (Allen and Cochrane, 2010). For instance, within the last three decades or so, the processes of spatial rescaling had contributed to the creation of more fragmented spaces with the opportunity for different groups to articulate their interests (Meadowcroft, 2002). These processes of spatial rescaling or devolution do not simply imply changes in the coordinates of socio-political struggle but also involve inter-scalar decision making that may be articulated in spatially selective forms and may target different actors across scales of state intervention (Brenner, 2004). At the core of the analysis of the roles between tiers of governance is the perception that the institutional geography

of state power and their decision making processes are greatly transformed by the reconfiguration of the scales that govern their activities (Jessop, 1990; Brenner *et al.,* 2003; Brenner, 2004).

One theoretical approach that shed much light on how the concept of state has a central role in socio-political discourse as well as embedded with political strategy is Bob Jessop's strategic-relational approach to state theory. Strategic-relational theory emphasises the dynamic interaction between state structures and the selective strategies adopted by social forces to advance their divergent interests. In this sense, the diverse societal forces and their interests are institutionally mediated through structurally inscribed strategic selectivity (Park, 2008). By strategic selectivity, I mean, if the state is considered as a social ensemble, then it has specific and differential impact: privileging some interests, spaces, scales, strategies and actors over others (Jessop, 1990; 2002). In other words, the relational character of the state and its attendant concern with strategic selectivity implies differential ability of social forces to seek their interests through selective strategies (Jessop and Sum 2006). Strongly influenced by Jessop's (1990) theoretical arguments, Neil Benner demonstrates how the state theory can be spatialised to provide the foundations for a strategic-relational-spatial conceptualisation of the state as well as spatial selectivity of state institutions. He sees spatial selectivity as the processes of 'spatial privileging and articulation' through which state policies are differentiated across territorial space in order to target particular geographical scales (2004: 89). Even though some state policies may privilege particular geographical spaces and scales, it does not defy the logic that state spaces and the diverse social forces are continuously interacting through the state at various geographical scales (Park, 2008).

Related to the interconnectedness of spatial scales is the call for mullti-scalar arrangement for bottom-up decision making, particularly within political geography, political economy and planning. As the brief account on state spatiality from the preceding paragraph has shown that state regulation and political struggle often unfold at a variety of intertwined spatial scales, it may be fruitful to deploy multi-scalar institutional arrangements for participatory decision making. Some might argue, in this respect, that under multi-scalar decision making organisation, some decision tradeoffs have to be made both between actors' preferences and between spatial scales. But because some scales or layers of state power are subordinate to others, it is not every level of political authority that can be said to constitute, in itself a distinctive state apparatus (Shaw, 2000). To be sure, the existence of scalar mismatch (lack of fit between discursive processes and the scope and mechanisms of institutions to address of institutions a given problem) and the potential overlap of strategic interaction across may create uneven and variable outcomes in particular time and space. To some extent, this view is discussed later in the paper. Swyngedouw (1997b) emphasises that the 'metaphorical use and material construction' of geographical scale can easily move from one scale to the other (p.140). However, depending on the scale at which the metaphorical and material processes operate, scale may affect

different people in different ways due to differential discursive strategies. Similarly, accepting that strategic multi-scalar decisions are products of socio-political strategies imply that the achievement of a particular preference over the other will not solely depend on the scale itself but on the agenda of actors who are empowered by the scalar strategy (Born and Purcell, 2006).

Though the multi-scale nature of state spatiality has been acknowledged and useful theoretical frameworks developed to engage with scale and its strategic actors (Brenner, 2004), how multi-scalar decision tradeoffs are made and the kind of specific impacts scale choices might have on decision making have received far less attention (Karstens *et al.,* 2007). Yet it is acknowledged that translating felt needs at a lower scale into decisions at a higher scale often raises fundamental questions, not only about analysing the multiple perspectives within and across scales, but also about the strategies for aligning and harmonising lower and higher scales' decisions. These considerations open up two fundamental theoretical questions. First, how does participatory planning across scales take into account the tendency of the state to privilege particular preferences over others? Second, what are the rationales for translating lower scale decisions into decisions at a higher scale?

In this paper, I reflect on these questions, drawing on the theoretical approach that spatialises the strategic-relational theory of the state (Jessop, 1990, 2002; Brenner, 2004; Park, 2008) to provide insight into the analysis of socio-political dynamics of multi-scalar participatory decision making. Specifically, my account draws together three complementary strands of literature: the concept of participation; state spatiality; and the scalar discourse. I argue that the conceptualisation of discursive strategies of spatial scales may be fruitfully mobilised to interrogate and inform our understanding about the rationale for translating decisions at one scale into decisions at another scale. Specifically, the paper focuses on two key issues: (a) how participatory planning takes into account the tendency of the state to privilege particular interest over the other in participatory decision making framework; and (b) the rationales for translating lower scale decisions into decisions at a higher scale, particularly within inter-scalar decision making structure. To do this, I structured the paper into two interlinked sections. It starts by examining the concept of participation and the impact of participation in planning on decision making. It seems to me that public participation and the possibility of translating its outcome into a decision does not necessarily occur together, and thus deserve analytical scrutiny. The subsequent section presents an overview of the theoretical discourse on state spatiality, with specific focus on strategic selectivity and spatial selectivity as structural features of state organisation. Developing the argument on state spatiality further, I shall examine the theoretical perspectives on spatial scale. The paper concludes by arguing that while spatialisation of socio-political contestations within multi-scalar configurations of state spaces may be scale-sensitive, the rationale for translating decisions at one scale into decisions in another has lacks explicit explanation.

**2. Conceptualising Participation**

This section attempts to broaden our understanding of participation in planning by addressing two key concerns. The first part addresses some of the conceptual underpinnings of participation. In the second part, I examine the argument on how public participation in planning may be an integral part of the decisions that may emerge. In other words, to what extent does public participation represents an exercise in decision making? Participation and its decision outcomes have to be investigated fully if one is to take any critical stance on the explicit links between the participatory planning process and its resultant decisions. However, it is not my intention here to deal substantially with the theoretical foundation of decision making except to point out that improving public participation in planning may not be a substitute for establishing the nexus between public participation and decision making. My argument is that, analysing participation and its impact on decision making is problematic. The reason is that, while some genuine commitments may be made towards public participation in planning, the ultimate decision-making authority is retained by decision makers. This underscores the fact that participatory processes can conceal undemocratic tendencies and the complexity of incorporating public preferences and interests into decisions. Thus, inclusionary approaches that are required for a decision to emerge from public participation in planning may be fraught with difficulties and ambiguity (Creighton, 2005; Aitken, 2010).

In what Follows, I attempt a brief discussion on conceptualising participation. Although the concept of participation has been continuously debated in the development, planning and political science literature, its meaning, function and importance lacks consensus. Also, the term participation is often used by people with different ideological positions, who invariably give varied interpretations of its meaning (Nelson and Wright, 1995). Given the variation in usage and orientation of commentators, it is not surprising that the concept of participation has been conceptualised differently.

Despite varying interpretations and a wealth of differences in conceptualising ‘participation’, Sherry Arnstein’s (2011) definition is insightful and worth discussing. According to Arnstein, participation is ‘the redistribution of power that enables the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future” (p. 3). This conception of the participatory project encompasses the sharing of relevant information, broadening the framework of planning and policy discourses as well as allocating the benefits thereof. Arnstein’s position is that the redistribution of power is not accidental but is a conscious effort to empower the excluded. Whereas political scientists, economists and development administrators may look at participation in terms of public involvement in decision making, sharing in benefits and the roles people assume in implementation respectively (Fecade, 1994 in Kinyashi, 2006), Arnstein’s (2011) definition encompasses all these three dimensions. Emphasisng on participation-decision making nexus,

Creighton (2005: 7) also defines participation as 'the process by which public concerns, needs, and values are incorporated into governmental and corporate decision making'. The key concern, from Creighton's conceptualisation of participation is that, it is not just an exercise to provide information, but also that members of the public who choose to participate should have some level of impact or influence on the decision being made. Taking into consideration the definitions and explanations of participation that I have discussed so far, Creighton's work is more appealing in the context of what this section set out to examine - how public participation in planning may be an integral part of the decision making process.

Based on the foregoing discussion, public participation has been entangled with an ongoing debate between commitments to participatory planning on the one hand, and the opportunity it offers the public to influence decision making processes and/or outcomes on the other (Creighton, 2005). In this view, contemporary scholars of the participation discourse and political scientists are thus confronted with the task of deciphering the rhetoric of participation and active involvement (acting in and through state institutions) of participants from translating public input into decision thereof. Recent literature responds to this task from two strands of arguments. First, the view that participation in planning and decision making are deeply complementary and can be considered both as means and ends, and as processes and outcomes respectively. The second perspective is that, although planning processes may be described as being inclusive, it does not necessarily guarantee that the outcomes of public participation are integral to planning decisions. In the analyses to follow, I examine these strands of argument in turn.

Those scholars who celebrate the causal link between participation in planning and decision argue that participation forms an integral component of decision making processes as it upholds the effectiveness and quality of the planning process and validates planning decisions (DTLR, 2001; Lane, 2003). Relatedly, public participation can assist in producing a 'better' policy outcome. Arguably, 'better' policy could mean that the outcome of participation is more in tune with society's values and preferences or tied to using participation to achieve stated goals (Rydin and Pennington, 2000). Puri (2004) argues that the causal link between participation and the effective use of public input in the decision making process can be presented in two dimensions: efficiency-based participation; and agency-based participation. The former understands participation as instrumental means to attaining a defined public interest, but the latter focuses on the role of human agency, defined as actions that bring about change in public policy planning. Given the growing interest in the ideas of 'people-centred' approach to decision making, at least at the rhetorical level, the second dimension (agency-based participation) seems to dominate. The underlying presumption about the agency-based dimension of participation is that human agency is preeminent in determining the success or failure of 'state-society' planning and decision making processes (Puri, 2004). Also empirical evidence from Agrawal and

Ribot's (1999) study seems to support the agency-based perspective on participation when they assert that the opportunity to participate in planning and decision making is a positive good in itself – it democratises decision making and governance.

In contrast, some commentators argued that meaningful public participation in planning and decision making process requires not only the creation of the opportunity to participate but also involves designing the mechanisms for incorporating the results of public deliberations into decisions (Gregory, 2000; Albrechts, 2002). As Alterman et al. (1984) emphasised in their work on 'the impact of public participation on planning', the general public do not lack the capability to provide useful input into planning decision making but it is only a small proportion of their comments affect the final decision. Another pessimistic account of the impact of participation on decision making posit that making participatory practices more inclusive for the previously marginalised groups and individuals, while using the same structures of power which excluded them previously is simply an act of getting the public to 'rubber stamp' a decision (Kothari, 2001; McCoy *et al.,* 1994; Kaza, 2006). This presupposes that public participation in planning does not always equate with public influence over the resultant decisions (Brownill and Carpenter, 2007; Purcell, 2009). Purcell (2009) further contends that the nexus between participation and decision may not be realised because of the nature of the participatory decision arenas or systems. The point is that, the form of governance and its participatory spaces that are more attuned with consensual methods of decision making may only help to maintain the dominance of the powerful interests and voices over a range of issues. In part, and in some cases, consensual systems may highlight in-built power imbalances and as well eliminate genuine political space of disagreement to unfold in a participatory decision making setting (Ploger, 2004; Swyndegouw, 2009).

In addition, Alterman et al. (1984) work on the impact of participation on planning decision making made an incisive observation. According to these authors, each stakeholder group employs participation as a strategy to achieve its own goals vis-à-vis the participation strategies of other groups. From this perspective, participatory settings can be perceived as the spaces for the deployment of a set of strategies toward the attainment of set goals by the participating groups. Kaza (2006) shows very clearly that one of the purposes of participatory planning is to identify the different positions and strategies of the diverse social groups. However, because it is possible to know the preferences and values of other groups beforehand, two issues are likely to emerge: (a) thus, certain groups actors may misrepresent their positions and/or obscure their intent so as to prevent others from gaining strategic advantage over them, and/or (b) those with prior knowledge about others' preferences may resort to strategic posturing. An analogous argument is that, the possibility of misrepresentation and the adoption of strategic posturing by some actors have the tendency to privilege particular interests and strategies over others in a participatory setting.

In the foregoing section, I have defined and explained the concept of participation. I have also carried forward the discussions by addressing some of the arguments on how participation in planning may be an integral part of the decision making process. In a limited way, I relate this discussion to the agency-based perspective on participation and its causal link with decision making. Even though the above arguments have provided valuable insights into the relation between participation and decision making, the participatory literature rarely examines how participatory decision making can be organised under the processes of state spatiality, and how these processes at diverse institutional sites and geographical scales may be deployed to investigate multi-scalar decision tradeoff. In the following section, I propose to build upon the participatory planning debates by integrating questions of state spatiality and spatial scale in an attempt to understand the discursive effects of multi-scalar decision making of the state.

**3. State spatiality: A Framework for Analysing Participatory Decisions**

This section presents an overview of the theoretical debates regarding conceptualisation of state spatiality as a form and action of the state. Specifically, I examine how state spatial organisation may offer a framework for analysing multi-scalar decision tradeoffs. I shall also devote some attention to the conceptual discussions on scale. My argument is that state spatial organisation and practices, including state scalar configurations have significant impact on how decisions at a lower spatial scale are translated into decisions at a higher scale. I emphasise that Brenner's (2004) 'State Spatiality' approach to state theory provides the theoretical basis on which the above claim may be further elaborated. It requires further elaboration because the socio-spatial and political forces that operate within and across state spaces are not explicitly specified. And given the fact that these socio-political forces of the state increasingly influence decisions at a variety of intertwined spatial scale, there is the need for a systematic reflection on the dialectical interaction of state spatiality and how it may impact on multi-scalar decision making. In order to make an incisive inquiry into this, it is first necessary to explore the theoretical interpretations of state spatiality.

Brenner's (2004) concept of 'New State Spaces' is partly influenced by Jessop's (1990) theoretical approach on strategic-relational theory of the state. Basically, Jessop's work combines two important concepts – strategy and social relation. First he argues that strategy is often deployed to mediate between structures of the state and human action. He further proposes that the state operates as the site of strategies, the generator of strategies and the product of strategies. Based on this, Jessop defines the state as a system of strategic selectivity. I will return to a detail discussion of the concept of strategic selectivity later. Secondly, he conceives the state as a social relation that derives its specificity from the interaction between state structures and the efforts of diverse social forces to influence or promote their interest in a particular context (MacKinnon and Shaw, 2010). From this perspective Jessop

(1990, 2002) broadly conceives the state as an ensemble of socially embedded and strategically selective institutions which unity cannot be taken for granted. Accordingly, the state has no inherent substantive unity. However, the state can be unified through specific 'state projects' for the mobilisation of its various configurations. In order to modify the balance of forces and/or regulate the economy, the state also intervenes in society and the economy through 'state strategies' (Brenner, 2004; MacKinnon and Shaw, 2010).

Brenner (2004) spatialises Jessop's strategic-relational approach to state theory, with particular emphasis on the production of state spatiality. He conceptualises that state spatiality, like all other aspects of the state form, is never permanently fixed, but represents an emergent, strategically selective, and politically contested process (p. 89). He also points out that, political contestation is often mobilised within multi-scalar politico-institutional terrain on which diverse social forces attempt to influence the geographies of state territorial organisation and state regulatory activity. This perspective heavily relies on the assumption that the diverse social forces which are acting through the state are in constant search for the optimum combination of state structure and political strategy. In such a case, the search is also about the best means of using state structures to be able to implement the political strategies of social forces. Interestingly, what come to the fore here are the relationships between state structures and the various strategies social forces adopt, the outcome of which is open to further transformations (Goodwin *et al.,* 2006). Given the above, Brenner (2004) is convinced that, established configurations of state spaces always represent expressions of a dialectical interaction of ongoing regulatory strategies and socio-political struggles. In this sense, both the existing state spaces and the emergent state spaces are contingent in character. It also means that the strategies and regulatory activities adopted may have differential impact across space or lead to what Brenner terms as 'spatial privileging and articulation' – a situation where policy intervention leads to asymmetrical privileging of particular scale, space and place over others, partly with the aim of achieving political control (Jones, 1997; Jessop, 2002).

While understanding the role of dialectical interaction between regulatory strategies and socio-political struggles is critical to understanding spatial privileging and articulation, I want to argue that our understanding about spatial privileging would be augmented if we extend the analysis to cover the frameworks of state spatial projects and spatial strategies. By state spatial projects, I mean the initiative to differentiate the internal operations of the state, which are functionally coordinated within an organisationally coherent regulatory geography. Basically, state spatial projects are the embodiment of internal scalar partitioning among diverse tiers of administrative jurisdictions. On the other hand, state spatial strategies refer to how the state interacts with society more broadly to promote economic and social development across a wide range of policy areas. In other words, it is the spatial dimensions of state intervention in socio-economic processes within a given territory, including both spatially

targeted interventions and indirect spatial effects of aspatial actions (Brenner, 2004; Goodwin *et al.,* 2006; Breathnach, 2010; MacKinnon and Shaw, 2010). Together, state spatial projects and state spatial strategies can be mobilised as an integral part to the analysis of spatial selectivity.

Before we can engage with the literature on dialectical interaction and spatial privileging with the framework of state spatial projects and state spatial strategies, one additional concept need to be clarified – Strategic Selectivity. I choose to follow this line of argument because of the belief that both strategic selectivity and the frameworks of state spatial projects and state spatial strategies result from the dialectic of strategic interactions and socio-political struggles. Also, both have the tendency to privilege particular forces, spaces or scales over the other. Hence, in an attempt to expand our understanding about their effects on spatial privileging, they can be examined together. My argument is not that the notion of dialectical interaction and those of state spatial projects and state spatial strategies converge around a single theoretical foundation. I am suggesting, rather, that if strategic selectivity, state spatial projects and state spatial strategies are the outcome of dialectical relationships and political strategies with spatially selective and privileging effects on space, place and scale, then analysing them together can advance our understanding about spatial privileging.

Even though strategic selectivity has been defined in the introductory section of this paper, it is quite appropriate to reiterate it here. From Jessop's (1990, 2002) conceptualisation, strategic selectivity aims at developing a framework for examining how political strategies may influence institutional structures and strategies of socio-economic intervention of the state. For Jessop, even though the state can be best understood as an outcome of ongoing socio-political contestation, it can produce specific systems of structurally-inscribed strategic selectivity. This situation is capable of producing a form of political class domination in terms of specific configuration of state institutions and its branches. By implication, the state can neither be equally accessibility to all social forces nor be controlled or resisted to the same extent by all strategies, or be available for all purposes on equal terms. More generally, we can safely assume that, if structures of the state are not accessible, cannot be controlled, and may not be available for all purpose on equal terms, then strategic selectivity has the tendency to create uneven spatial effects of state policies (Jessop, 1990, 2002: Brenner, 2004). Meanwhile, uneven spatial effects cannot wholly be attributed to structural and institutional constrains. As argued by Jessop (2002) and MacKinnon and Shaw (2010), institutional structures may contain in-built biases but it is the strategies adopted by the actors that increase their prospects of gaining access to the state institutions and resources. And the manifestation of strategies is always found in and through discourses in a socio-politically contested manner. I believe that understanding how the strategic discourses and the reasons why actors privilege particular strategy and/or state space over others are problematic, particularly when this is analysed within multi-scalar configurations (I intend to take this argument up in the last portion of the section).

Equipped with this conceptual reflection of strategic selectivity and its spatial effects, I now turn to examine the conception that the framework of state spatial projects and state spatial strategies are critical for understanding spatial privileging. By taking note of this, one important task immediately emerged – analysing co-evolution of state spatial projects and state spatial strategies and its impact on spatial privileging. Starting off, I draw from Brenner's (2004) conceptualisation of state spatial projects and state spatial strategies to argue my case. On the most basic level, the conceptual distinction between state spatial projects and state spatial strategies is that whereas the former aims at functional unity, operational coordination, and organisational coherence of state institutions, the latter mobilises state institutions concerning particular forms of socio-economic intervention (Jessop, 1990; Brenner, 2004). The frameworks of state spatial projects and state spatial strategies may be conceptually separated, but my purpose here is not to establish their distinctiveness. Rather, I have tried to illustrate how the mutual transformation of the two frameworks can transform spatial effects of regulatory strategies and socio-economic intervention of the state.

As mentioned elsewhere in this paper, the framework of strategic selectivity examines how political strategies may influence institutional structures and strategies of socio-economic intervention of the state. By analogy, both state spatial projects and state spatial strategies are bestowed with strategic selectivity and by extension, spatial selectivity. For example, the struggle to influence the evolving institutional structures of state power (under state spatial projects) and the evolving role of state regulatory strategies (under state spatial strategies) often offer privileges to particular social forces over others. Brenner argues that, successful mobilisation of state spatial projects and state spatial strategies result in relatively coherent state spatial organisation of state institutions as well as modify the political and institutional terrain in which state spatial intervention (state action) occurs. From this perspective, state spatial projects and state spatial strategies can mutually condition and constrain one another partly, because they are endowed with a dialectical relationship between strategic interaction and socio-political contestation of social forces.

Another issue of importance to the co-evolution of state spatial projects and state spatial strategies is political strategy. Here, I shall briefly consider the role of political strategy in the evolution of institutional structures and socio-economic intervention of the state. Jessop's (1990) conception of strategic selectivity, which Brenner (2004) later spatialised, observes that the state often provides specific opportunity to some but not all categories of political strategy. The ongoing political strategies may be used by social forces to shape the evolving institutional structures as well as alter the modes of socio-economic intervention. This suggests that, both state spatial projects and state spatial strategies can mobilise political strategy, though, towards different interest and agenda. In the course of

mobilising political strategy, state spatial projects and state spatial strategies continually transform the political geographies of state regulation. The key message is that while state spatial projects and state spatial strategies may harness political strategies simultaneously, their co-evolution may occur in the mid of uneven spatial effects of state policy through spatial privileging. Against this background, Brenner points out that:

> 'As diverse social forces struggle to mobilise state institutions towards their own ends, state space is continuously reconfigured, whether through explicit projects to reorganise the geographies of state territorial organisation and state intervention, or as indirect outcomes of ongoing regulatory experiments and socio-political conflicts' (2004: 111).

Quite clearly, linking the above discussions under state spatiality to participatory planning in the first section of this paper raises a key question. Thus, if the strategic context of taking a particular course of action by social forces (individuals and/or collective) produces differential privileging effect, then how does the discourse on scale and multi-scalar decision making take account of this? In the present context, I shall not attempt a comprehensive narrative of scale. Instead, the following investigation focuses on a brief account of scale and how it affects participatory planning within multi-scalar configurations. I shall argue that, either on the same level or not, discursive strategies of actors at one spatial scale can be embedded into another through multi-scalar configurations. The issue of scale is worth incorporating into the present discussion for two main reasons. One, it extends the discourse on state spatiality and tease out the ways in which scale shapes socio-political struggle. Second, the scalar discourse will help us to ask deeper questions about socio-spatial relations of governance activity with respect to participatory decision making within multi-scalar configurations of the state. In what follows, I present a brief account on the concept of scale.

Generally, earlier conceptualisation of scale perceive it as the nested hierarchy of bounded spaces of differing size, such as the local, regional, national and global. However, an attempt to treat geographic scale simply as pre-given and fixed hierarchy of bounded spaces at different levels of political organisation and action is fiercely challenged (Delaney and Leitner, 1997: 93) for its failure to capture the myriad of socio-spatial configurations that are continually evolving within and across state space (Brenner, 2001, 2004; Marston *et al.,* 2005). In an attempt to unpack and present a steady conceptual meaning of scale, some political geographers and economic geographers have been spawning an impressive body of literature (Moore, 2008). In spite of the burgeoning literature on scale, it is appropriate for the present purpose to briefly review the theoretical position on the scalar discourse.

According to Swyngedouw (1997a), scale is the 'embodiment of social relations of empowerment and disempowerment and the arena through and in which they operate' (p. 169). This suggests that scale is not an independent definable geographical territory, but correspond to real material processes and spatial formations. Just as spatial selectivity which has the potential of creating uneven spatial effects, Swyngedouw's conceptualisation also acknowledges that scalar processes may not offer equal opportunity for all actors. Swyngedouw (2000: 68) later observes that 'scale … has always been the terrain of the political where socio-political tensions were fought over, mediated, and negotiated, resulting in ever-changing forms of territorial or geographical organisation and in territorially shifting forms of governance'. In this sense, the theoretical and political priority should not focus on particular scale, but rather on the discursive processes through which a particular scale may be (re)constituted (Swyngedouw, 1997b). For Leitner et al. (2008), scale is 'a relational, power-laden and contested construction that actors strategically engage with, in order to legitimise or challenge existing power relations'. In the process of actors' strategic struggling, new scales are constructed, and the relative importance of different scales is reconfigured (p. 159).

An emerging issue of concern is that, if the (re)constitution of a particular scale is more defined by an ongoing dynamics of socio-political struggle, then, how do specific discursive strategies of actors condition and/or constrain socio-spatial and political relations in a multi-scalar decision making configurations? To illustrate my argument, I will describe how analysts of scale in the field of political geography and planning have attempted to address issues of multi-scalar decision making. This line of thought is greatly influenced by the argument that planning problems manifest themselves at variety of scales and that, in order to address them accurately, discursive action should reckon with these spatial scales (Buizer *et al.,* 2011). A complementary argument from Morinville and Harris (2014) is that, though multi-scalar governance processes may be established, the ability to mobilise the discursive strategies of the diverse social forces across scale is not a given.

To demonstrate how scale can be used to address multi-scalar participatory planning problems, I structure my argument into two parts: (a) the argument in favour of the rationale for multi-scalar decision making; and (b) those against multi-scalar decision making structures. Starting with the first segment is the view that participatory governance and decision making often involves multiple stakeholders whose needs cut across scales. Within this logic, multiple levels of interactive decision making might prevent the problem of 'one-size-fits-all recommendations (Ostrom, 2009). Viewed through a planning lens, Leino (2012) also posits that participatory planning procedure is multi-disciplinary and as such it requires input from multiple stakeholders and fields of knowledge. In order to confront multi-scalar planning problems, people have to negotiate and tradeoff their competence and interest with other actors across scale. This may be explained in part by the fact that, the scale at which a particular problem is experienced, discussed and analysed may not neatly correspond to the

scale at which implementable decisions are taken (Tower, 2000). Some may argue that multi-scalar interaction that is conditioned by the above scenario is problematic. However, this view is contested by Swyngedouw (1997b). He points out that, though socio-spatial relations of scale may operate over certain distance, neither the larger nor the smaller geographical scale is considered as a preeminent site for interactive decision making.

However, the notions of multi-scalar decision making within spatially organised governance processes across scales are not left uncontested. For instance, in policy and management studies, Cash et al. (2006) explain that interactions that may occur within or across scales of decision making are embodiments of dynamic relationship. These dynamics – ignorance, mismatch and plurality – which determine the choice of scale can also as a challenge. By ignorance, I mean lack of understanding about how a solution to a given problem at one scale may engender new problems at another scale. Plurality also refers to the ability to recognise that there is no one scale, representing the whole system that is best to focus solutions on. The fundamental issue is that, at any given time, a particular scale would be best only to a select group. Finally, mismatch is the challenge of matching the discursive processes and the scale at which decisions are made (Buizer *et al.,* 2011). Following this line of argument, it can be suggested that poor articulation of issues of ignorance, plurality and mismatch may constrain effective use of multi-scalar settings for participatory decision making. Hence, until the challenges associated with ignorance, plurality and mismatch are recognised and their opportunities exploited, the existence of multi-scalar structures per se will not provide enough basis for analysing planning problems.

Another contrasting view is that public participation at all scales is limited by the problem of inequalities of power (Pickering and Minnery, 2012), including multi-scalar organisation of state spaces. Some writers, including Swyngedouw (1997b) believe that, even though scale is fundamental to temporal transformation of existing socio-spatial power relationship, neither the local nor the global scale offers a viable option for power neutrality. This often raises a fundamental question about the scales at which planning problems need to be analysed and/or solved. Swyngedouw remind us that scale do not emerge only as a site for domination, but also as an arena where compromises are negotiated through a series of socio-spatial struggles. So, in a multi-scalar configuration of the state spaces, the role and interpenetration of a particular geographical scale are determined by nested socio-spatial relationships. Of course, spatial scales are deeply heterogeneous with embedded ongoing transformative socio-spatial power struggles, but the struggles will always lead to three things – changing the importance of certain scales, reassert the importance of other, or new scales may be created entirely. In short, as power coordinates shift, though temporally, new actors join or the existing actors reinforce their power position (Swyngedouw, 2005). In this sense, the power and control of some scales will be strengthened while others are disempowered. Even though a given scale of state

power may encompasses and constitutes other scales of political authority, with the latter still playing significant roles within the wider multi-scalar institutional structure (Brenner, 2004), the capacity to make strategic use of any spatial scale typically varies greatly among stakeholders (Swyngedouw 1997b). This suggests that the discursive strategies and/or strategic selection by the actors are fundamental to analysing, incorporating and solving planning problems.

It is important, nonetheless to recognise that despite the ongoing debates on scale's conceptual potential and limitations, decision makers and other socio-political actors continue to engage with scalar concepts within and across varieties of geographical scales. Some even assume that decision makers possess an unlimited processing capacity to be able to translate strategic choices of the public into decisions that are relatively acceptable to all stakeholders (Sanz de Acedo Lizarraga *et al.,* 2007). However, the central importance of multi-scalar decision making becomes distorted when the analysis of scale is not in tandem with these three factors: (a) decision features; (b) situation factors; and (c) individual differences. A balance between these factors will be useful in trading off decisions across spatial scales. For instance, this will help to incorporate regime factors (Jessop, 1990), and the socio-political context of the decision (Mackinnon and Shaw, 2010). In sum, while spatialisation of socio-political contestations within multi-scalar configurations of state spaces may be scale-sensitive, the rationale for translating decisions at one scale into decisions in another has lacks explicit explanation.

In relation to the present section, I examined how state spatial organisation may offer a framework for analysing multi-scalar decision tradeoffs. Using the concept of state spatiality, I discussed how the dialectical interaction between regulatory strategies and socio-political struggles affect the institutional structure and socio-economic intervention of the state. I also distinguished between state spatial projects and state spatial strategies dimensions of state spatiality, and how together they can be produced and (re)produced through spatial privileging and/or uneven spatial effects of state policies. I end the section on the scalar discourse. This cover the conceptual debates on mobilizing scale for multi-scalar decision making. Here, the insight I draw is that multi-scalar configurations of the state may or may not offer a viable option for participatory decision tradeoffs. The strategic choice of actors, both within and across scale is more critical for trading off decisions.

**Conclusions**

The paper considers how the participation discourses, state spatiality and spatial scales provide the context for participatory planning within multi-scalar decision making arrangement. I argue that the conceptualisation of discursive strategies of state spatiality can be mobilised to interrogate and inform our understanding about the rationale for translating decisions at one scale into decisions at another

scale. I begin the discussion on the concept of participation, and how participation represents an exercise in decision making. I contend that the nexus between participation and decision making is more than the commitment towards public participation in planning. To be able to draw on some of the implications of state spaces on the participation discourse, I carried forward the discussion into how state spatial organisation may offer a framework for anaysing multi-scalar decision tradeoffs. My argument is that state spatial organisation, including its scalar configurations have significant impact on how multi-scalar decisions are being traded. Here, I draw heavily on the spatialised version of strategic-relational theory of the state to argue my case. In doing that, I show that state spatial projects and state spatial strategies dimensions of state spatiality can be produced and (re)produced through spatial privileging and/or uneven spatial effects of state policies in a reciprocal manner. I end the discussion on the scalar discourse with specific focus on discursive strategies of actors and how they condition and/or constrain socio-spatial and political relations across spatial scales. Though socio-political and spatial forces continue to use scale discursively, the conceptual explanation on the rationale for translating and/or recomposing decisions at a lower scale into decisions at a higher scale has not been explicit.

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# AN INQUIRY INTO SOCIO-SPATIAL SEGREGATION: CASE OF SYRIAN URBAN REFUGEES IN TURKISH BORDER CITY

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Keywords: marginalization, urban refugees, socio-spatial segregation

*Massive influx of displaced people into urban areas reshapes cities' economic, social, political and spatial structures. This research creates a broader understanding of the displaced person phenomenon as one of the main drivers of the urban transformation through analyzing formation of urban marginality in the case of Syrian refugees in a Turkish border city, Gaziantep. This paper uses the findings from the fieldwork that I conducted in Gaziantep including in-depth interviews with both refugee and host communities, and a series of mapping exercises showing the spatial distribution of urban refugee in the city. The urban marginalization explored in the research reveals that the city itself as a social and physical entity is as important as policy interventions in the integration process of refugees.*

## 1. Introduction

UN High Commissioner for Refugees (UNHCR) stated that more than half of the world's 10.5 million refugees live in the urban settings rather than the designated camp-based settlements (UNHCR, 2009). In other words, almost 5,5 million people have fled into cities, creating new forms of urban marginality and inequality. Cities are being reshaped by diversity, conflict and rapid population growth due to urban refugees, yet urban studies still fail to address the question of displaced people. Undocumented refugees in urban areas are considered to be the most vulnerable group due to their inability to claim any right or justice (Grabska, 2006). I argue that if we are to discuss spatial social justice in cities for refugees and other persons of concern, we need to understand the mechanism and the facilitators behind the social and spatial inequalities. This paper aims to create a broader understanding of the displaced person phenomenon as one of the main drivers of the urban transformation through analyzing formation of urban marginality in the case of Syrian refugees in a Turkish border city, Gaziantep.

Since the first uprising against the Bashar al-Assad government of Syria there has been an ongoing-armed conflict between different rebel groups and the government that cause destruction of urban settlements and massive displacement of local population to Syria's neighboring countries of Turkey, Lebanon, Jordan and Iraq. UNHCR (2015) reported that Turkey is hosting 1,759,846 Syrian refugees and as expected, more than 70% of them live in cities and towns as urban refugees (AFAD, 2013). What does it mean for the city? How does the displaced population establish their lives in the urban area and consequently transform the urban fabric? These two key questions have become the standpoint of this research.

This paper analyzes the social and spatial transformation in Gaziantep, Turkey as the most affected area from the massive urban refugee influx (Figure 1). Within the research framework, I define the transformation as a mutual process in which displaced population produces a new spatiality constituted through their social, economic and spatial activities, and simultaneously this new formation reshapes the city's existing structure. Urban spaces are not only social and physical configurations in the city but also critical political entities of the urban fabric (Sanyal, 2014). Although the perceived transformation is predominantly marginalization, the process of segregation is rather complicated with multiple actors, institutions and political forces. Unfolding the marginalization requires an agenda that enables the understanding of different facilitators and their interrelationships. The major organizers of urban refugee's restructuring in the city, as seen in this paper, are refugee policies and the city itself as a socioeconomic and physical entity.

Figure 1. Density of Syrian Urban Refugees in Southeast Turkey

## 2. Related Research

Research on refugee integration requires interdisciplinary approaches combining various branches of social sciences including political science, economics, sociology, anthropology and urban studies (Castles *et al*., 2002). This paper particularly focuses on the relationship among refugees, urban marginality and the city in order to bridge the gap between forced displacement studies and urban studies. Integration level of refugees defines the extension and model of transformation in urban areas; therefore providing a definition of integration is critical for the purposes of this paper. The concept of integration is ambiguous and controversial because it has been described in various ways by different disciplines. Other terms such as assimilation, acculturation and inclusion have also been studied and used instead of integration (*ibid.*). Berry (1997) defined integration as a mutual accommodation situation where both host and refugee populations maintain their original cultures and identities while connecting with the broader society through daily interactions. The concept becomes more complicated when different modes of integration such as social, cultural, economic and political are considered. Besides the objective dimensions of adaptation such as employment and education, refugees' perception on their integration is a critical subjective indicator for understanding and measuring the success of integration (Montgomery, 1997). Different definitions, standards, and measures used in refugee literature do not only affect the scholarly research but also influence the policy decisions and implementations in practice (Korac, 2003). Building upon these arguments, I define the integration with spatial, economic and social equality and inclusion as well as perceptual integration of both populations.

A significant portion of refugees build informal livelihood in urban settings through their engagement with illegal employment and trade. A case study in Eastleigh, Nairobi where the population was composed of predominantly Somali refugees revealed that the urban refugees built trade networks and business in the informal economy and eventually started providing employment for the host society (Campbell, 2006). Similarly, according to a research on Sudanese refugees in Egypt, despite of the economic, social and political marginalization of refugee population, Sudanese refugees reshaped the urban spaces in Cairo (Grabska, 2006). They established schools, centers and housing networks as a new spatial layer in Egypt. Consequently, they became social and economic actors of the society as well as important labor resource for the economy.

Integration process of the displaced people into the host community largely depends on the efficiency of the policy intervention. However, the major challenge is that host governments do not usually recognize urban refugee rights in policy (Buscher, 2001). Even in the circumstances where there are proper institutional integration programs and legal frameworks, mode of integration greatly varies based on the success of programs and policy terms. A comparative research on Yugoslavian refugees in Netherland and Italy shows that policy frameworks and reception strategies of the countries shape the perception towards the refugees in the new societies, which eventually affects the social and economic inclusion of the newcomers (Korac, 2003). Besides the impacts of policy concepts, Reitz (2002) points out that existing social structure of the receiving society is a critical factor for the

inclusion of the migrants. Established ethnic and racial communities as well as the existing immigrant groups in the society create a social framework where the diversity helps the integration process of the newcomers.

## 3. Gaziantep, Turkey

Gaziantep is the financial center of the Southeastern Anatolia and the largest city in the region. Between 1990 and 2000, the population was increased by 31.25% due to immigration related to economic growth (TUIK, 2005). In 2008, 1 out of 3 people was rural immigrant and 69.5% of these people immigrated because of economic purposes (Genis and Adas, 2011). Consequently, Gaziantep as an internal migration-receiving city has been struggling with housing and employment problems. In 2011 when the refugee influx began, the population of the city was 1.753.596 and the official unemployment rate was around 16%. Because of the high unrecorded employment in the city, the actual rate of unemployment is unknown.

The first influx of Syrians fled across the border to Turkey in April 2011 and In October 2011, Turkey declared an open door policy for Syrian refugees and established a legal framework known as the temporary protection (Dincer *et al*., 2014). Majority of the refugees came from the regions close to the Turkish-Syrian border including Aleppo, Idlep and Raqqa. Close to half of them indicated that their homes in Syria were not inhabitable due to the severe damage. Many of refugees showed security reasons for their departure and a smaller portion of them reported political reasons (AFAD, 2013). The number of Syrians that crossed Turkish border has dramatically risen with the increasing use of violence. Gaziantep, a city in southeastern Turkey, has become the destination for displaced Syrians due to its economic resources and its proximity to the border. The number of registered refugees in the Gaziantep is 314,917, as 240,000 of them being urban refugees out of camps (GMM, 2014). Because of the open door policy, the exact number of displaced people out of camp settings is unknown. However, many local authorities claim that the real number of Syrian migrants is far more than the official records including the undocumented refugees.

## 4. Research Questions

The framework of this research is built on a number of questions. What are the main drivers behind urban marginalization of refugees? How does the city's existing socioeconomic and spatial structure affect the urbanization process of refugees? What determines the spatial distribution of displaced population in the lack of policy implementation? How do the policy terms associated with refugees contribute to the integration or marginalization process? In order to answer these questions, I conducted a field investigation in Gaziantep during August 2014. Fieldwork included series of mapping exercises showing the general spatial distribution of urban refugees in the city and extensive in-depth interviews with the key informants from both refugee and host communities.

In parallel, and complementary to the field investigation, I analyzed the refugee policies, socioeconomic profiles, and spatial distributions of refugees. The study method had four components. The first part was to focus on overall process of social exclusion by using findings from the interviews. The second part was to analyze local refugee policies in relation to their roles in urban marginalization process. The third part was to compare socioeconomic identities of host and refugee population. Finally, the fourth part was to examine mapping studies produced during fieldwork in order to explore formation of new spatial patterns and configurations.

## 5. Field Investigation

As a part of the fieldwork in Gaziantep, I conducted open-ended interviews with Syrian refugees and members of receiving community. The main goal was to map the process of social exclusion in a chronological order and to explore the reasons of segregation. In the literature, qualitative interviewing is a common method for refugee research and mostly focuses on the voices of

refugees, their experiences and subjective evaluation of their integration. However, this approach ignores that integration is a mutual phenomenon since it disregards the perspective of existing population. Therefore, this research is based on the voices of both newcomers and existing community. While the interviews with refugees intended to gain information about their use of city, economic activities and the settlement locations since they crossed the border, the interviews with the local residents focused on their interaction with the migrant population.
Despite the availability of camp residency, Syrian refugees preferred to live in non-camp settings because they already had relatives and business contacts in the city. The economic relations across the border over the years have created kinship relationships between the Turkish and Syrian communities, and many refugees used their family routes upon arrival in Turkey. When the refugee inflow began in 2011 and the population of urban refugee was considerably small, integration of displaced people with the host society was established through pre-existing networks. Humanitarian support by the local community provided housing and livelihood for the newcomers thus they gradually constructed their lives in the city. The successful integration of the first Syrian community has led to subsequent chain migration of refugees into the urban areas. However, growing population of forced immigrants in the city started to have severe impacts on housing and labor markets.

Urban refugees are obligated to find their own accommodation, in spite of the refugees in the camps settings who are provided with shelters and basic services such as water, sanitation and electricity. High demand on housing led to extreme rise in rental prices and housing scarcity, which had been an already-existing problem in Gaziantep. According to the interview with the President of the Association of Real-Estate Agencies, monthly rents for apartment units increased from 300 TRY to 900 TRY in 2013. Housing market problems emerged as a potential source of tension between refugee and the host community. One Turkish interviewee, a landlord, explained that she rented her apartment to a 7-person Syrian family, however, the family began hosting other refugees and the total number of people in the apartment went up to 20, causing unrest and infrastructural problems in the building. Similar stories indicated unwillingness to rent housing to the urban refugees. On the other hand, many refugee respondents stated that illegal status of tenant-landlord arrangements caused exploitation and abuse of the refugees. High rental prices, scarcity of housing, and discrimination against the refugees have forced Syrians to find shelters in public parks, abandoned buildings and vacant areas of buildings such as garages, roof terraces and storage rooms (Figure 2). As a result, the Syrian population is largely located in the inner city, where they find vacant buildings and ruins.

Figure 2. Left: A vacant house occupied by 30 Syrian refugees.
Right: A vacant garage used as a market place by a Syrian refugee

Besides the housing problems, another dramatic impact of rapid population growth is on the labor market. Because the Turkish Government does not issue work permits for the refugee status, Syrians built up illegal livelihoods in urban settings. Many Turkish business owners took advantage from

refugees' inability to engage in formal employment, and forced them to work under exploitative conditions. The data collected from the interviews shows that the urban refugees provided labor at below market rates without demanding any benefits from the employers. Consequently, refugee workers replaced local workers and unemployment rate in the host society increased dramatically. During the fieldwork, I interviewed Turkish employers from three different businesses. The first respondent, owner of a contract manufacturing business, stated that when he saw that Syrians provide the same quality of work at a lower salary, he started to hire them. Over time, because of the language barrier he had to make a decision to have either all Turkish employers or all Syrians so that they could communicate with each other. At the time of the interview, all the workers were undocumented Syrian refugees who replaced Turkish workers. The second respondent, owner of a pistachio orchard, said that he hired both Turks and Syrians as temporary agricultural workers. Although they worked for exactly the same hours, Turkish workers earned 35TL per day, and Syrian workers earned 18TL. The third respondent, owner of a small grocery store in the city center, stated that he is going out of business because the new residents of the area, Syrian urban refugees, preferred to go to Syrian-owned shops. Turkish interviewees mentioned the existence of "Little Aleppo" or "Little Syria" in the city as the second commercial center that belongs to the refugee community. As a result, both receiving and migrant population are severely damaged by the lack of refugee employment policy. In the case of refugees, they are subject to exploitative employment conditions and serious protection problems, which creates hatred towards the host country and society. On the other hand, local community holds refugees responsible for rising unemployment rate and lack of labor opportunities.

Growing unemployment and rising rents due to the increasing demand by the urban refugees gave rise to social tensions and protests against the Syrian population in Gaziantep. Threats against Syrians have also impacted daily lives and routines. One Syrian informant stated that he had to sell his car that had Syrian license plate because the car was attacked several times by Turkish people. Another Syrian interviewee explained that they did not feel secure going outside of their home because their Turkish neighbors threatened them with eviction. Multi-dimensional conflicts have emerged gradually through complications in housing and labor markets. Findings of the fieldwork indicate that social tension is an outcome of a 2-year long interaction between host and refugee communities.

## 5.1 Refugee Analysis

What is the contribution of policies related to urban refugees in the process of social and spatial transformation of the city? Refugee policy terms have various levels of involvement with either the marginalization or the inclusion of refugee communities. The subject of policy can be discussed in multiple scales such as UN policies or Turkish Government policies as well as specific policies including border, security or registration strategies. For the purposes of this paper, I chose the policy decisions that have direct impacts on the social, economic and spatial restructuring of the new population in Gaziantep. I used the policy reports provided by the Gaziantep Metropolitan Municipality, City Council (2014) because they primarily organize the urban life of refugees.

The Gaziantep Metropolitan Municipality classified the complications with refugee influx as security, housing, health, social, environmental, education and economic problems. On the municipal reports, policy proposals and decisions are introduced for each problem statement. In terms of housing, the local policy focuses on the relationship between homeowner/landlord and refugee tenants and introduces a legal framework for contracts and rent control by the municipal authorities. The framework also requires landlords to only rent their properties to the registered refugees in order to encourage them to legalize their status. Although there are policy proposals to build affordable housing for the refugees, there hasn't been a serious attempt to put it into practice. Policy response to refugees' accommodation problems does not address the most serious problems of inadequate housing and refugee right to housing, although they remain effective on reducing conflicts of landlord-refugee tenant relations.

Employment policy introduces two critical points: first, the policy avoids generating a pull factor for the future immigration and second, it aims to preserve the civil peace and prevent social conflict. The

policy suggests that every institution can only have 10% of its employees to be Syrian who should have the same employment rights with Turkish citizens including the insurance plan and the minimum wage. Similar to the housing policy, employment strategies also fail to address the broader problem of unemployment and the exploitative employment conditions. There is also a number of unanswered questions remain as potential sources of future conflicts: what will happen to the thousands of urban refugees who are already employed illegally? Under what condition urban refugee will gain legal work permit? Besides the potential conflicts, the policy doesn't make any recommendation on when the policy goes into operation and who is responsible for controlling the employment conditions.

In the case of public services, urban refugees have been holding free access to medical care and education. Although refugees' access to state hospitals has been a successful implication, access to education has failed because of the language barrier and the curriculum differences. The only policy that is directly targeting the integration process is the language program in which the municipality runs campaigns for encouraging refugees to learn Turkish language.

Refugee studies scholars advocate gaining legal status for refugees as an important step towards sustainable and permanent solutions (Grabska, 2006), which is also embraced by the Gaziantep Municipality. Through the policy interventions in employment and housing, Syrian urban refugees are obligated to obtain legal status in the city. However, overall evaluation of refugee strategies shows that refugee integration into the receiving society has not been the part of policy approaches. The lack of state-led attempts on integration results in severe social and spatial segregation and creates isolated refugee communities. Moreover, The Turkish government has been criticized for inadequate governmental policy that causes the weak coordination between local and global humanitarian help (Dincer *et al.,* 2013).

## 5.2 City as a Social Entity

How does the city's existing socioeconomic structure affect the urbanization process of refugees? The city as a social entity plays a critical role in the integration process of refugees. Depending on how similar or different the newcomers and local people are, social and economic conflicts may rise between communities and eventually lead to segregation of refugees. Republic of Turkey Prima Ministry Disaster and Emergency Management Presidency (AFAD) conducted a profiling survey in 2013 as face-to-face interviews with the refugees. By using AFAD survey results (2013), I conducted comparative analysis between the host and the refugee communities based on the indicators directly related to housing and employment focuses.

| | REFUGEE POPULATION | RECEIVING POPULATION |
|---|---|---|
| HOUSEHOLD SIZE | 6.2 PEOPLE | 4.8 PEOPLE |
| GENDER DISTRIBTUION | MALE: 51.4 FEMALE: 48.6 | MALE: 51 FEMALE: 49 |
| WORKING AGE (19-54) | 45% | 44.50% |
| ILLITERATE | 18.80% | 14.20% |
| SCHOOLING | 72% | 85.10% |

Table 1. Comparison between refugee and receiving populations

Table 1 shows the comparison list based on education level, age distribution, household size and gender distribution. Within the employment subject, the most crucial finding is on the age distribution showing that in both communities the working age group forms the largest proportion of the total with %45 for the refugees and %44,5 for the receiving society. Massive influx of working age population into the city added heavy pressure to the existing unemployment problems. In the matter of urban refugees settlement, critical benchmarking factor is the greater household size of the refugee population, which creates a new layer of settlement problem. Housing typology in the region is developed in accordance with the typical household size of the local population, thus both building infrastructure and the models of housing units are not capable of hosting larger number of people. In addition to the similar age distribution, both populations have greater percentage of male and

education level is slightly lower in the refugee community, which indicates that the two populations share similar demographic characteristics. A case study of community relations in a refugee settlement shows that similar identities in terms of gender, age and language help the interactions among refugees, migrants and existing residents, and provide close relationships across differences (Dale, 2007). However the case of Syrian refugees in Gaziantep has a reverse situation because the similar identities compete for the same social, economic and educational resources in the city, which causes social tensions and segregation of refugees.

## 5.3 City as a Spatial Entity

What determines the spatial distribution of displaced population in the lack of state-led resettlement process? The mapping exercises that are produced as a part of fieldwork show that the urban fabric facilitates the distribution pattern of refugees. Existing spatial configurations in the city become the pull and push factors that determine the movement directions and the settlement areas. The major challenge of the mapping study was the lack of data on refugees; hence the study relied on the qualitative data collected during the fieldwork. Data collection involved interviews with municipal authorities, real estate specialists and NGO members as well as Syrian urban refugees who were asked to explain their reasons why they chose to reside in the particular neighborhood. Refugee respondents were also asked questions targeting to understand their use of city, such as the places they go more often, which streets they know in the city, what kind of transportation they use, and where they go to socialize.

Figure 3. The map of Gaziantep, areas of urban refugee settlements.

As shown in the Figure 3, spatial organization has a main spine that became the attractor point pulling new refugees to the surrounded area. The main spine, namely Inonu Street, is the commercial and business center of the refugee community in the city. Most of the businesses on the street are either owned or managed by Syrians. Main reasons that made this area an attractor point are the pre-existing Syrian-owned businesses that were located in the area before the refugee influx and the intercity bus, which is the main gate to the city for the people who cross the border from Syria. The secondary neighborhoods that have high refugee populations are the existing marginalized areas and urban poor shown as area 1, area 2, area 3 and area 4 on the map.

Besides the Inonu Street as the commercial center, small sized industry has the largest number of

Syrian workers. Area 5 became the refugee worker zone where most of the small sized factories are located in the city. Although this area is defined as the business zone, refugees work all around the city in various businesses, which is very difficult to map due to undocumented refugee employment. In the case of public space use, interviews showed that public park-1, public park 2, public park 3 and public park 4 are mostly used by Syrian population. Figure 4 attempts to visualize possible flows in the city by connecting public spaces with housing and business zones of refugees.

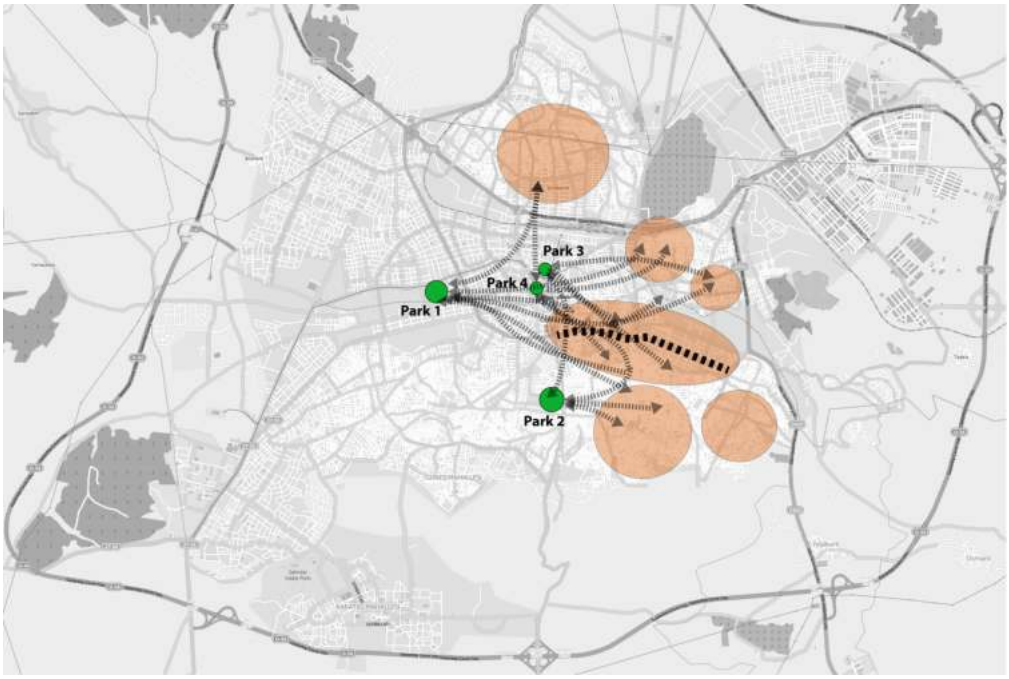


Figure 4. The map of Gaziantep, public space use of Syrian urban refugees

To sum up, urban fabric is the main organizer of refugees' spatial distribution in the urban settings. Mapping analysis demonstrates a number of notable spatial features of urban refugees.

- Urbanization of refugees is centered on a business main spine.
- Transit stations and its surrounding areas are pull factors for urban refugees.
- Neighborhoods of urban poor and ethnic communities are pull factors.
- Neighborhoods where vacant houses are available are pull factors.
- Small industry sites and service sector zones are pull factors.

**6. Conclusions and Discussion**

Massive influx of displaced people into urban areas reshapes the cities' economic, social, political and spatial structures. Systematic analysis of refugee segregation in this paper demonstrates that the generators of urban refugee marginality are multifaceted with complex interrelationships and require interdisciplinary research. A new layer of urban marginality and inequality is emerged in Gaziantep through social and spatial exclusion of Syrian urban refugees. This paper documents that social exclusion of refugees is not an immediate outcome; rather a gradual process with multiple actors and factors. The drivers of social exclusion in the case of Syrian urban refugees are the conflicts emerged from the labor market and housing issues. These problems can only be addressed with proper policy regulations that recognize refugee's right to housing and employment.

This research also reveals that understanding and analyzing the spatial distribution of refugees is a significant component of the refugee research because it identifies the potential areas of marginalization. Spatial organization of the refugees in the urban settings is highly dominated by the pull and push factors of the city's spatial configurations such as existing urban poor, neighborhoods of the same ethnicity and transit stations as the entry points of the city. This key finding about the role of city's spatial fabric in refugee integration brings up two critical questions for future studies: Is there a typical spatial model that urban displaced population produce? Can we predict the spatial distribution of urban refugees before the migration begins? I argue that successful integration strategies and policy concepts rely on the understanding of the distribution patterns of displaced population in urban areas together with their facilitators.

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# TRACK 09

## Energy and Space as Resources / Limits for Planning Decisions

### Track description

Co-chairs: **Thomas B. Fischer**, **Giancarlo Cotella**

With rising fossil fuel prices and growing concerns about their wider environmental and social impacts, there is great interest in sustainable energy solutions. Communities need reliable and affordable, as well as environmentally and socially sustainable energy. Whilst there are many ways for reducing the need for energy, demand is unlikely to reduce dramatically in the near future. With regards to sustainable energy supply, there are a number of renewable energy options, many of which are already implemented widely (i.e. hydro, wind and solar), whilst others are still being experimented with (e.g. tidal). However, whilst these renewable options are able to deliver comparatively clean energy, there are other problems, in particular with regards to an extensive spatial footprint with associated impacts , in a context of definite space and often fuzzy responsibility, for both, space and energy provision.

In this light, the integration of energy efficiency strategies into the planning process constitutes a challenge for policy and decision-makers active at the various territorial level. There are particular problems due to European and globally uneven geographies of energy security and energy economics. These have various negative implications on the development of policies and strategies for e.g. low carbon societies. We invite papers to this track that explore challenges and constraints, as well as solutions in support of sustainable energy solutions further.

# "THE IDEAL OF SUSTAINABILITY IN PLANNING: A STUDY ON CONSUMPTION FACTOR RELATED TO THE GREEN ECONOMY"

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## Abstract:

*In this study,green economy subject is examined within the scope of rebound effect issue by consecutive questions in the light of the world's main goal of the sustainable development.The components of sustainable development known as 3E(economy-ecology-equity) has been studied since 1987.There are discussions on this subject about the significance,comprehensiveness and integration into countries of these components.The economy represents a significant role in these discussions.Economic and environmental attitudes that globally adopted; use-distribution of natural resources and waste shows that the world moves away from sustainability.It is stated that placing green economy approach to 3E supports sustainable development by the various disciplines.However the consumption creates the subject of debate in this situation. Sustainable development is affected negatively in all economies by the consumption-oriented lifestyle.Game theory approach could establish the link between the consumption with environmental issues. In this context, the main problem question that directs the study is: even if all technological developments and new economic regulations will be provided, can sustainable development be achieved in consumerist society?In conclusion; these evaluations can be carried out when trying to understand environmental issues by different game theory approaches from the perspective of urban planning: All the living thing on the earth wants to maximize their profits independently of each other.But human is tend to interfere with the systems of the other living or non-living thing.Unless there is no sense of near-term profits individually, sense of unconscious consumption doesn't disappear.At this cycle, planning is canalized to unsolvable questions.*

**Keywords (maximum 3):** sustainable urban planning, green economy, consumption.

## Introduction

More for the extension of the practice of urban sustainability, these practices are also supported by both public administrations and the private sector that will contribute to achieving the purpose of the provision of urban planning, it is believed of the city; the host offered by them in the residential area of population, housing area, work area, employment conditions etc. because of the features that can be increased in the way the city enters into a direct relationship with the system environment. Therefore, the individual and the community gradually working to meet the needs of the urban system, sustainable development is meeting at this point. The expression of sustainable cities, indicate the appropriate actions to be found in most of the city (Nijkamp,1998). The reasons for the creation of indicators that determine the suitability of this be listed as follows: II. Major breakthrough of industrialization after World War II was experienced, towards the end of the 1960s, air pollution, lack of infrastructure, population growth and mass deaths begin to occur because of hunger (Douglas,2012). Therefore, strengthening environmental sensitivity starting in the 1960s, and in the 1970s, the result of moving to the international platform today, the concept of sustainability (Yönet & Yirmibeşoğlu, 2005). Starting in the 1970s, urban planning agenda and increasingly after 1990 and therefore constitutes the main framework of the main goals of sustainability (Munda,2006). In the report Our Common Future (UN,1987) as noted, economic development, sustainable development,

ecological conservation and intergenerational equity considerations strives to provide a compromise in between. While doing this approach emphasized the necessity of the adoption by countries globally 3E. These economy-equity-ecology is defined.
The triple bottom components are in equilibrium with each other when in the area and by the nature of the components in approach, a resource conflict between economy and ecology, Ecology and development conflict between equity, there is ownership conflict between them. (Godchalk,2004). All end this conflict and urban planning approaches that are being developed in order to produce solutions (new urbanism, Smart City, green city, eco-city, etc.) it is known that one of the main purposes of sustainable development. However, the components that can be achieved for a sustainable balance between residential systems still are being put in the effort. Questionable relationship to the present day, while the components with each other since the year of 2010, the components themselves in the science of urban planning also has begun to be questioned (James, 2015). The adoption of a global economic system and process, the level of economic development between countries and the diversity of the diversity of the possessors of natural resources between countries, between countries and socio-cultural values in the difference, therefore, accepted the obligation to consider the diversity dynamics of urbanization among countries is a fact. If that is the situation common to all systems are "the economy" component on all components of domination and oppression. Therefore, by countries, global and national economic insights, for the purpose of a sustainable future, is born out of the necessity to be revised. The goals of sustainable development that is compatible with the other components of the economy more realistic, an approach that puts a floor when you enter a search for "green economy" is the only approach that can meet these expectations. The green economy approach; as a concept, especially focuses on generating alternative sources of energy and efficiency. Encountered as a researcher, "consumption efficiency that eliminates the element of "rebound effect" (Hahn,2013) has created some of the systematic study of the phenomenon.

This study of the components of sustainability accepted by querying the relationship with each other to discuss how to update the tools of Urban planning is made accordingly for the purpose of the think piece. The first hypothesis of the proposed study; the phenomenon of consumption in societies that exists for various reasons, internal and external, and the latter with a permanent tension between sustainability therefore is based on where it is located. Practice is as followed:

-How are the components of sustainable development and relationship between them interpreted in history?
-Are the components of sustainable development and "green economy" approach compatible?
-Changing the name of the economic approach and the concept of sustainable development can produce a solution to the goal?
-Why the green economy approach in the rebound-effect phenomenon is emerging?
-Why sustainable consumption is not done?
-Non-sustainable consumption, How does that affect the concept of urban planning?
-Urban planning tools in this context, How can be re-editable?

The literature on the questions in the interpretation of the results from a general result by associating them with each other shall be made. This thought in the following way conveyed graphically the relationship of the questions and content of the work (see fig1):

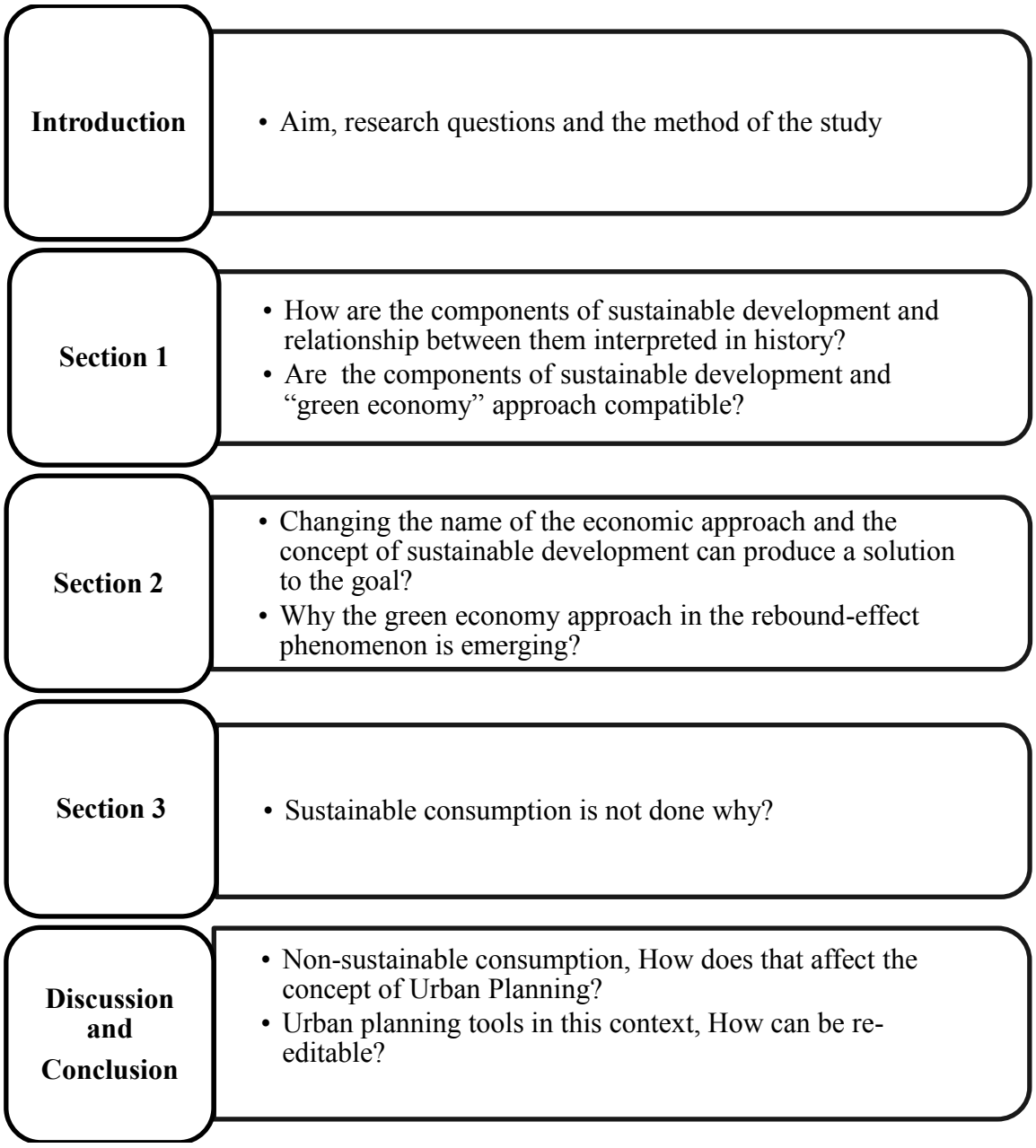


**Figure 1:** Thinkpiece Questions in the Content of the Study

## 1. The Components of Sustainable Development and Green Economy Approach

All three components of sustainable development in the 1970s and 80s ( community-nature-economy) began to appear on the public agenda and in the planning at the same rate. In the 1990s, environmental problems all over the world has become visibly noticeable (see Fig2). In response to this effect to the work of civil society organizations, in particular, sustainable development of the components of the "environmental" more focus on the phenomenon was born of necessity.

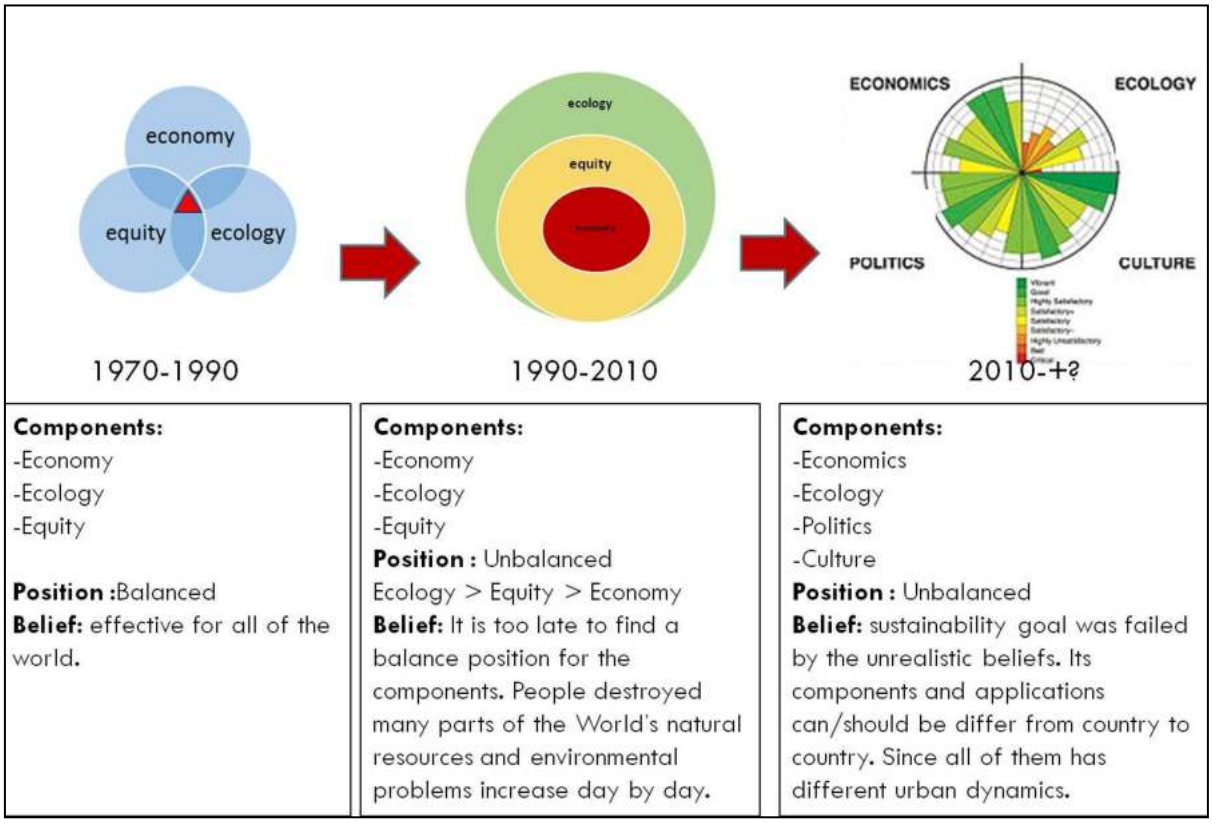


**Figure 2**: Components of Sustainability and their relations between each of them in history

But the global neo-liberal economic approach in the system, most of the economy is dominated by the left behind the sustainability approach, in theory, even a bona fide destination, can be applied in practice to the present day to get away from the semantic losses and is noted as the source.

In this context, the influence of modernism and the quest for the middle way approaches have changed in the scientific world, advanced, and "Environmental Economics" emerging stronger from the science academic with a workspace "ecological economy" kept on the agenda of the phenomenon (Stop& Başol,2007). "Ecological Economics" in general "sustainable development" as the main goal of classical economic theories set off with "environmental issues" with the title is moving. According to Sengupta (2014);ecological economics are considered interdisciplinary scientific field of study and in this workspace: Ecology, physical resource theory, institutional economics, neoclassical economics, the environment, politics, and sociology, psychology and business organizations, human ecology and

sustainable development is all about research fields. In this branch, environmental problems one-on-one is interested in theory, "the theory of externalities" (Stop& Başol,2007). This theory; Ecology and economy among the public is described as an approach to seeking solutions. Externality; Economics field, an asset for production and consumption goods to third parties other than vendors and buyers to install or to provide a benefit at a cost is called (Sengupta, 2014). In the opinion of the Mishan (1993) is another feature of the external behavior of an individual's impact on other individuals was a legitimate activity, and is not intended or earlier is that it is an extraordinary byproduct. According to the economist who created the first theory of externality Marshall(1920) reflected positive externalities to third parties to be questioned, while negative emphasis areas occured. Here is the next sub-research question can be mainstreamed into these externalities? Shaped. So, as a result of substances that are used in production and consumption activities, is it possible to leave no waste processes. At this point, the responses give clues to sustainable development are obtained. Today's manufacturing technologies and recycling efforts significantly advances over the last century to show that although waste-free production and consumption is still not possible (Sengupta,2014). This course of studies after the response given to people to reduce harm and tertiary media evolving. In this loss mitigation, environmental and personal losses in order to resolve different types of taxation and subsidies with persons, institutions or organizations, there are 2 different options on it. This chart outlining all systematic thought (see Fig3) is located below:

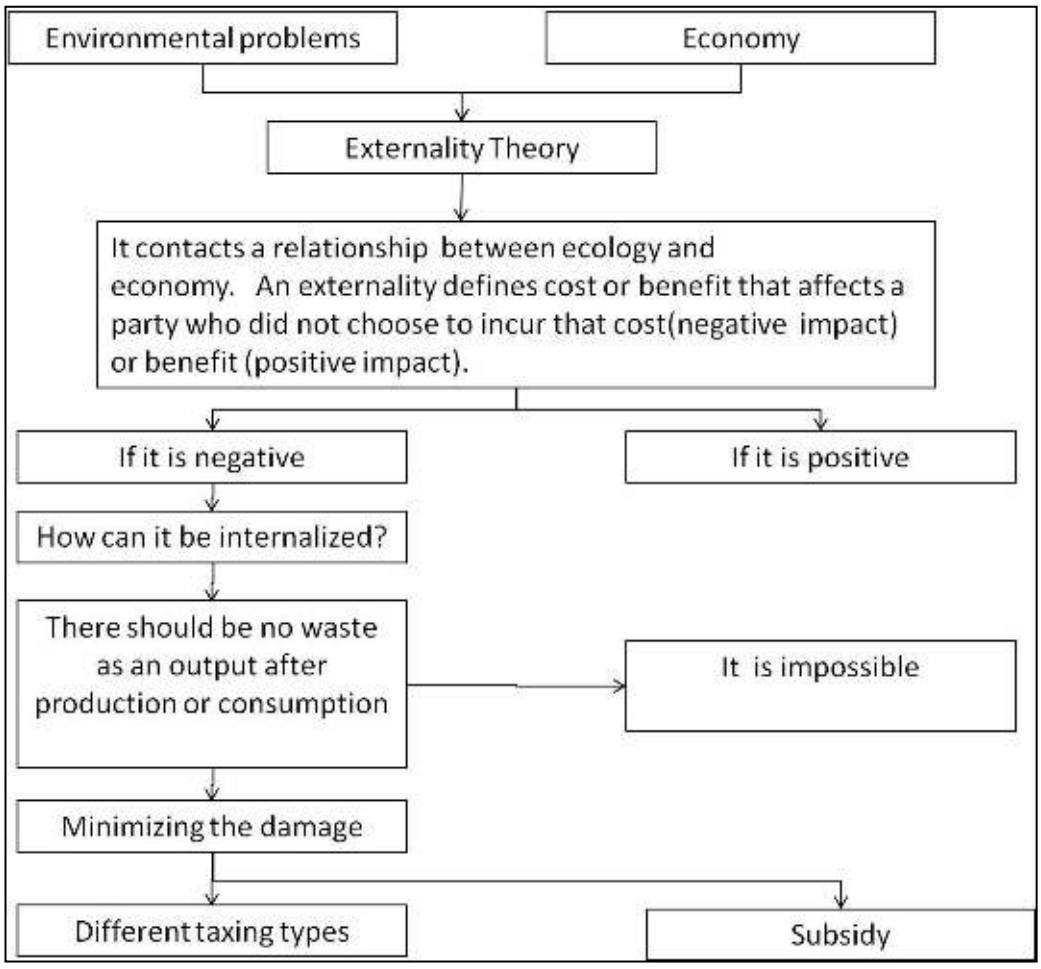


**Figure 3:** Summary of the relationship between environmental issues and the economy

Summary of the relationship between environmental issues and as a result of the economy, in order to be a new concept for sustainable development approach is the necessity arises. At this point, the "green economy" approach comes up. "Green economy" as found in the literature the term: The United Nations Environment program (UNEP, 2010) Although the concept of a framework proposed; production and consumption as the world's natural boundaries of thresholds can be expressed as an economic approach. Under the theme of ecological economy are separated from each other with the expression as one of several approaches to "green economy" approach among the ecological oriented economies (Hahn, 2013).. Sustainable development, green economy is the first to make the connection between the capital approach in the public interest that creates economic study, published in 1989 by Pearce (1993), Green has been named the blue book for the economy works. In this book, is failing because of sustainable development in today's economies tend to consume natural capital to sustain growth was suggested. 20 years later, in 2009, the UN General Assembly first Rio Earth Summit for 20.To celebrate the year 2012 (Rio + 20) in a Summit in Rio de Janeiro it was agreed to. Two of his agenda for Rio + 20; "The fight against poverty and sustainable development in the context of green economy" and "sustainable development" has been specified as the International Framework for the first time and "green economy" goal, global and officially adopted at this event. UNEP's definition of "green economy"; mankind's environmental risks and the likelihood of ecological scarcity, improve the quality of life and social justice wants to ensure he was born with. The green economy is simply low-carbon, resource efficiency and the thought of social inclusion can be expressed as. The main purpose here; sustainable development and quality of life and the economy is thought to be as a tool for it. "Green economy" of components and objectives with today's global world, the prevailing economic system on the path to sustainability, there are significant differences between (Hahn, 2013). These are conveyed in the following table (see: table1):

**Table1:** Today's global economy and "green economy", the differences between the approaches are, (adapted from Hahn,2013)

| **Today's Global Economy** | **Green Economy** |
|---|---|
| To maximize production (To increase GSMH), close to the targeted to maximize profits | Increasing the benefits of low consumption, long term increase in targeted income |
| quantitatively increasing economic growth | Both the quantitative and qualitative increase economic prosperity |
| By exploiting natural resources abuse | Planning and efficient use of natural resources |
| Investors will be focusing on their earnings;<br>-increase the external costs<br>-reduce workforce costs<br>-linear production model<br>-product selling | Focusing on the shareholders ' gains;<br>-external costs reduction<br>-versatile viral production reduction<br>-circular economy model<br>-services for selling |
| Efficiency is defined as the factor that reduces the consumption | Providing capacity to reach their goals of sustainability efficiency being defined as |
| Technology and innovation are accelerating the use of energy and natural resources, reduces the efficiency of work force | Energy-work force and natural resources in order to establish a balance between innovation, energy efficiency is the most important target |
| Based on your personal interests: saving status to persons of consumption<br>Contest | Based on the interests of a broad audience: the use of natural capital incentives for public goods<br>Business Association |

It is seen that the green economy approach, in theory, creating strategies that will serve the main goals of economic sustainability; at the same time, provides a positive contribution to the social and environmental components.

## 2.Rebound Effect in Green Economy: As a Result of Consumption Factor

The economic component of sustainable development in this part of the study with others is to be able to adapt more easily discusses whether there will be enough of the green economy approach. In this context questions also asked: to change the name and concept of the economic approach to sustainable development goal can produce a solution for it? Why rebound effect phenomenon is emerging? Quality of life based on purpose, mostly; low carbon, resource use efficiency, efficiency in energy consumption, focusing on the green economy approach in the rebound-effect phenomenon are encountered ( Lin&Liu,2015), (Hahn,2013). Why rebound-effect phenomenon is emerging? The question proposed to call this phenomenon is clearly described and the establishment of relationship with sustainability is required. The term "Rebound effect"; which is one of the most important goals of sustainability energy efficiency and reducing consumption phenomenon is noted as the consumed with (Aydın, 2014), (Lin & Liu, 2015). "A case of repeated consumption described over includes 2 different types of rebound effect (Aydın, 2014).

**Direct Way Rebound Effect:** To describe the phenomenon of the consumption is deirectly destroyed or where it reduces efficiency.
If there is to be transferred via a simple example of the general; Governments, corporations, etc. organizations by energy-efficient tools to produce a high budget diverged. The idea here; less energy consumption to reduce carbon dioxide emissions, provide as follows. Fuel savings of up to 50% of new vehicles developed provided the person making the 50 km per week with the old tool, this new vehicle less fuel consumption when the 200 km a week, thinking he was doing the main objective is deviated from. In this way gives rise to a further increase in energy consumption and emissions.

**Indirect Rebound Effect:** Income effect terms in the literature as the energy efficiency obtained with additional income to other energy sources consumption refers to the focus. Very often, to be expressed with a simple example, more for the extension of the practice of urban sustainability, these practices are also supported by both public administrations and the private sector that will contribute to achieving the purpose of the provision of Urban planning, it is believed.
With these facts in the literature as direct and indirect rebound effect, asked at the beginning of this chapter: “the economic approach can produce a solution for change the concept of sustainable development? Generally the answer to the question can be given. Changing methods and approaches do not produce a solution. The system as a whole should be viewed, in part, the problems faced, both within itself and in its entirety should be evaluated.
The rebound effect and negative effects on the sustainability brings forth the issue of “consumerism” in this context also the element of the next section is a phenomenon that needs to be addressed and re-produces the research question.

## 3.Understanding the non-sustainable consumption behavior with a game theory approach

In the previous chapter with an element of sustainable economic approach could not serve the purpose of consumption have been identified. Why, sustainable consumption is not done in this part of the study? The main question with "renewable energy, energy efficiency, and all technological

developments, political support, even if these components to consumer society enough?" an answer to sub-question is being sought.
While you're at it "dealing with the economic behavior of consumption, researching game theory" (Hanley&Former,1998) over a general review will be made. City planners perspective, game theory approach with only; city planning since the 1990s are concentrated in "sustainability", why can not reach the purpose, general idea, located under the economic behaviors, therefore the validity of the impact on society and the nature of the world being studied.

Game theory, which explains the uncertain situation that many decision makers are in, will affect planning discipline in a positive way. Nijkamp (1980) proposed negotiations between agents for solving externalities in environmental problems and he added that game-theoretic strategies could be used for negotiations. He indicates min-max models that the compromise solution for conflicting objectives is based on conflicting strategies from game theory.

Game theory approach to urban planning discipline it wants to achieve with the actual result; More for the extension of the practice of urban sustainability, these practices are also supported by both public administrations and the private sector that will contribute to achieving the purpose of the provision of Urban planning, it is believed.

Game theory, an individual's success is based on the selection of other choices covering strategic situations do mathematically behaviors has been working to catch up. While modeling environmental problems since the 1960s as the sole strategy of the country uses to produce theories accepted (Stevens, 1961). According to Hanley, friends and Folmer (1998) international environmental problems addressed to the main static game theory concepts: Pareto efficiency, market equilibrium and Nash equilibrium can be listed. Briefly the content of this concept is to be transferred (if Hanley, Folmer&et al.1998):

***Pareto Efficiency:*** Society producer, consumer and factor the status of one of the owners, without sacrificing one of them for improving the situation of someone else where it is not possible resource allocation status with the approach of this theory is expressed(Folmer&Musu,1992).. So, without reducing the welfare of at least one other of the individual in society the possibility of improving the welfare of society or the welfare of the opinion that it is defended optimum.

***Market Equilibrium:*** The amount of a certain price level in the market the quantity of presentations with the prompt is equal to each other, in other words an excess of involuntary or presentation and can be described as the absence of (Hanley, Former & Mibfeldt, 1998). Win-win situations that accept a system that works, in theory, the supply with the demand for both producer and consumer in the belief that it would always balance each other out.

***Nash Equilibrium:*** According to Hanley,Former (et al) (1998); each player select one of the actions within the game and all the players accepted that it is in the case of making such a choice. The selected action to a player, other players have chosen their action when given, which can be played (in the sense of return) is the best action for all players, and if this feature is provided ,these actions constitute a Nash equilibrium. Here players, they can choose simple actions, and multiple actions they can opt to play with a certain probability. According to the other theory approaches that appears more complex this theory; Hardin's(2000) book, descriptive of the subject in the literature, the most recognizable example is the (prisoner's Dilemma) can be read through the example. The prisoner's dilemma, which is known to be two criminals in the different interrogation rooms have been tried to be forced to confess their ensured crimes. Police is aiming the confession to be easier by making a deal with the suspects. According to the agreement, one of the suspects testifies against the other and the other remains silent, the one who testifies will be released and the other who remains silent will be

sentenced to10 years imprisonment. If they both do not testify against each other and remain silent, both 1 year imprisonment, if both testify against each other they will both be imprison for 5 years. At the end of the game both players have a short-term prison sentence to be preferred to the longer one, and each one will not gain any benefit from reducing the penalty of assuming that the other prisoner's dilemma, zero-sum games are considered as. However, prisoners that are expected from an environment of trust, based on individual interests rather than the decision to higher productivity in the long run, in the short term, low-efficiency, they continue with the decision to testify against each other. Game theory approaches to sustainable development and the players that are observed when the sole purpose of the bond is established independently from other players, to maximize their own profits. Here, environmental issues, therefore, according to the model of sustainable development to be adapted to the desired behavior; long-term investment, instead of the height of purposeful work and productivity; in the short term, a temporary solution, fast, efficient but low profit approach, represents human nature on the economic behavior. The belief that an individual is able to increase the welfare of other individuals due to the use of natural resources-waste, the use of distribution represents. It would balance out supply and demand balance of the market in accordance with their belief that no it's not the end of existence, emphasizing the consumption of like represents. Nash equilibrium in the approach of all societies, on the global level, and equal with interest in a holistic way, to move in the path of sustainable development strategies in an environment of insecurity produced concluded that would not be possible.

## 4.Discussion and Conclusion

Finally in the results section of the study, the questions are: non-sustainable consumption, How does that affect the concept of Urban planning? Urban planning tools in this context, How can they be re-editable? In fact, the content and scope of the questions; is not only the discipline of planning, covering all relevant disciplines, inter or trans-discipline is to describe a discussion of the environment. “The phenomenon of consumption, the economic system of the conscious and unconscious communities, particularly the media element is driven with a phenomena that” it is a fact that is publicly accepted (Baudrillard, 2013). However, the questions according to the response received from the literature in search of related topics; every creature, even though the yield is low in the close process that maximize profits in the long term high yield without general to observe the behavior can be specified.

First systematic thought in the ring; the relationship of the green economy and sustainable development and consumer relations in the cycle of the rebound effect of the subjects in this study have been analysed. Every one of the key words in the review has been questioned in connection with another theoretical. The result that is to be accessed; replacement of the current economic system in order to ensure sustainable development, or the economy in terms of being compatible with the other components to the understanding of sustainability has been on the introduction of naivety. Ecological economies, and which is an example of this approach, which is one of the most important components of the green economy with regard to energy efficiency that may not be serving the purpose is understood. Here intervenes and consumption habits or lifestyle questioning the necessity of the human factor has been identified. In this context, especially environmental issues within the scope of the study of economic behavior, game theory has been interpreted as a general topic.

In the latest systematic thought point; independently of each other, all living things on earth has been on wanting to maximize their own profits. For that reason they lived or attack the current global economic system is still supported. Instead of holistic and long-term mindset with contributing to sustainable development, focuses on understanding individual and collective consumption and

economic growth empoze. But the human can intervene and all creatures cycles for more destructive effects, hence it is more observable.

For this reason a human being who can think, should be trained in accordance with the behavior of consumption, should be directed behaviors. For the discipline of planning, at this point, the approach adopted on the basis of the objectives of sustainable development for the future of sustainable development in 3E or which they adopt all the components approach, on the components of consumption "element/pressure can be said for the importance. The components of sustainable development into a slippery floor is prepared, the element that creates conflict and tension between each other in this context, is an element of consumption. The components of sustainability in the planning studies, the present neo-liberal economic there is no requirement to be addressed by considering the plane again. While the planning tools that are adapted to 3E's also seen first have to consider the phenomenon of consumption, and how, by whom it should be directed. Sustainability approach away from its own logic and being applicable for this reason, a critique of the romantic approach. The main purpose of Urban planning since the 1970s, which is only due to the element of the sustainability of consumption, planning of scientific, social and economic, rather than supporting the validity puts you at risk. In this context, in order to increase the prosperity of the people of the individual and an increasingly science of existing planning, on the social process of participation and governance, especially in vehicles is expected to develop policies, arguments over consciousness. More for the extension of the practice of urban sustainability, these practices are also supported by both public administrations and the private sector that will contribute to achievement and the purpose of the provision of urban planning, it is believed.

# Solar heat strategies for Vienna: identifying regions with highly reliable and affordable potential

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Keywords: solar heat, economic potential, 3D city model

**ABSTRACT**
A techno-economic heating energy system model for Vienna (Austria) is developed. Based on an existing solar potential map, different solar heat strategies can be evaluated economically and ecologically. The resulting share of installed solar heat units for every building is displayed in a 3D city model. This 3D model allows city planners to study the spatial impact of these strategies. Results are reported for three different scenarios, which differ in the assumptions regarding policy frameworks.

## 1. Introduction

### *1.1. Motivation*

The heat sector causes a huge share of a city's energy demand: in Vienna 41 % of the final energy demand is used for heat and domestic hot water demand (Stadtvermessung Wien (41), 2013). Actually, less than one percent of this demand is supplied by solar heat - a negligible share of the theoretical potential of 27.2 TWh (Haas et al., 2013). To exploit this theoretical potential for solar heat, investments in buildings heating technologies are necessary. These investments have to be done by the building owners and therefore subsidies and political strategies can be helpful to influence these decisions and the share of renewable heating technologies.

For a sustainable long-term planning of a city's energy system, the strategies have to be analyzed from an economic and social point of view too. The increase of decentralized solar heating technologies can worsen the economic feasibility of centralized supply by district heating due to a decrease in demand. The interdependencies between the centralized and decentralized heat supply as well as the interdependencies between the investment decision of the building owners, the government and strategies of district heating operator require an interdisciplinary analysis.
Such an interdisciplinary analysis aims to indicate the reduction of the total costs for heat supply, the reduction of the CO2 emissions and the share of each technology for different strategies. In addition, it is necessary to provide the results for scenarios differing in subsidies and strategies in a decision support tool to analyze the long-term effects.

This approach addresses the following research question:
"How do solar heat strategies influence the energy system and the spatial footprint of a city and which consequences arise for its total costs, the $CO_2$ emissions and the share of renewables?"

### *1.2. State of Art*

In recent years many different 3D city models have been developed for computing the theoretical potential for solar energy in urban areas (see for example (Hofierka and Kaňuk, 2009) and (Erdélyi et al., 2014)). However there has been little work on the economic viability for solar energy strategies that are trying to exploit these potentials. Up to now no simulation model exists for future heat demand and supply of all buildings in a city that includes an economic and ecological analysis of the impact of solar heat strategies, as well as the visualization spatial planning.

The well-established model Invert/EE-Lab considers the heating related investment decision of building owners due to legislatives, subsidies and obligations (for detailed description see (Müller, 2015), selection of projects and publications: (Kranzl et al., 2014a), (Müller and Kranzl, 2013), (Müller et al., 2010), (Kranzl et al., 2014b)),. It describes the future development of buildings heat demand and the share of the different heating technologies for the building stock. In particular it can be used for the analysis of the impact of solar heat strategies on the building owner's decisions. However when concerning the entire heating energy system the supply side sub-model for district heating, described in 2.2.2. Optimization model for district heating supply, is needed. Many other existing models like (Blesl, 2002), (Neuffer and Witterhold, 2001), (Hausladen and Hamacher, 2011), (Hensel, 2013) or (Nielsen and Möller, 2013) focus on the optimized expansion planning of existing district heating networks and also considers the heat supply. The development of the buildings' heat demand is not considered explicitly it's considered via endogenous scenarios.

3D city models in general support multilevel and procedural planning processes as cooperative planning instrument used in the "Model of Vienna" ((Freisitzer and Maurer, 1985)) or problem solving strategies in planning environments based on trainings formulated by Walther Schönwandt ((Schönwandt et al., 2011)). The aim to help city planners and policy makers is also included in a project of the ETH Zürich in collaboration with IBM, ESRI and the Imperial College London, named "Smart Urban Adapt". This project wants to support "european cities with next-generation decision tools, to design development paths for the 1-ton-CO2-society."(Weinstock, 2013, p.120-124) It comprises a scenario-based low carbon development path assessment. In 2011 Daniel Segraves and Adrian Smith dealt with the goal to reduce carbon too. They designed a "decarbonisation tool" for the city of Chicago. It is a comprehensive decision support tool within a 3D graphic environment, that incorporates carbon tracking, building energy analysis, design and planning optimization.(Weinstock, 2013, p.120-124).

### *1.3. Overview*

To evaluate solar heat strategies economically and ecologically we introduce a techno-economic model of the entire heating energy system of a city with three different sub–models, described in

section 2.2. However, it should be recognized that the areas of highest economic potential for solar heat is not necessarily the preferred optimal location. This is determined by the impact on the cityscape especially in the historic center. Thus simulations of visual axis for economic reliable solar heat units are needed for spatial planning. Therefore we build a 3D spatial simulation described in section *2.3 3D spatial simulation*.

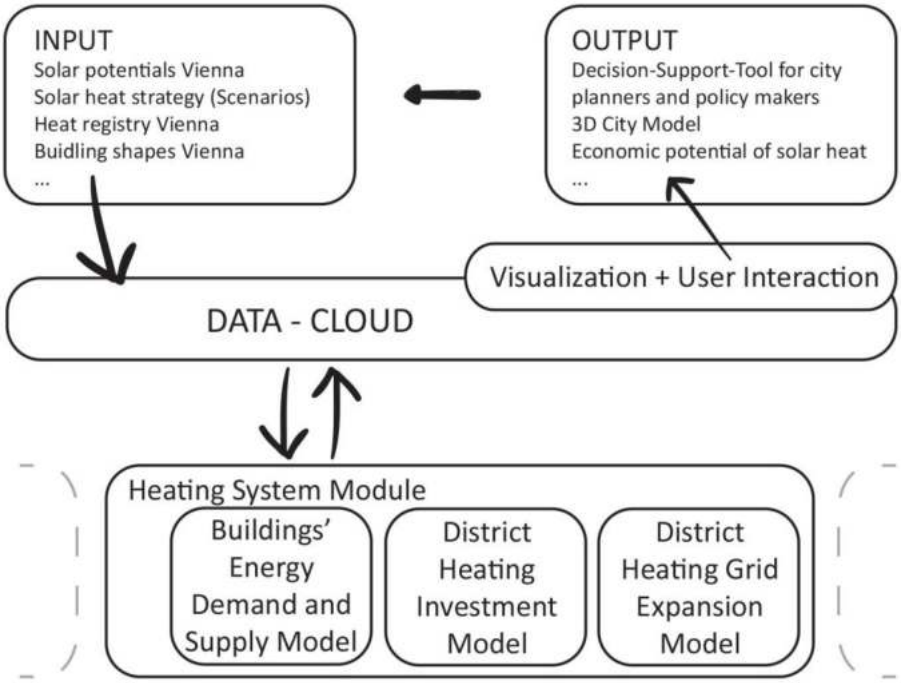


**Figure 1: Overview of the evaluation platform environment**

For our calculation we will use three different scenarios for subsidies until 2030, that can be found in section *3.2 Scenario Description and General Assumptions*. We will build our economic computations on the existing solar potentials computed by the Viennese municipal department 41 (Magistratsabteilung 41 der Stadt Wien), for an overview see *3.1 Data set* .The results of the economic and ecologic assessment can be found in section *4. Results* as well as in screenshots of the 3D spatial simulation.

## 2. Methodology

### *2.1 Methodological Framework*

We use a techno-economic model for a city's heating energy system and a 3D spatial simulation in order to evaluate different solar heat strategies based on economic, ecological and spatial planning criteria. Based on a data cloud, the involved sub-models of the heating energy system model (see *2.2.* ) are connected to this cloud enabling the data transfer. On top of the data cloud, a visualization environment is involved, displaying a 3D simulation of the installed solar heat and illustrating the

considered scenarios with the predefined parameters. The visualization environment also enables user interaction and predefined parameter control. Figure 2 shows an overview of the visualization framework, including the sub-models.

*2.2. Modelling heat demand, supply and related infrastructure*

For evaluation of solar heat strategies by economic and ecological criteria we set up a techno-economic model for the entire heating energy system. Modelling only the building owners' investment decisions for different solar heat strategies is insufficient for city planning: rising capacities of decentralized heating technologies have a strong influence on the economic viability of district heating and subsequently on the overall $CO_2$ balance of a city's heating energy system. Many district heating systems rely on combined heat and power plants that have a thermodynamically highly efficient use of fuel. Thus a substitution by solar thermal heating may be undesirable in the short-run. On the other hand extending the existing district heating grid causes additional costs that have to be taken into account for investment decisions. Thus the heating energy system model for Vienna for evaluation of solar heat strategies consists of three parts:

a. a simulation model for the future development of the buildings' heat demand and supply. It considers the economically based investment decisions for increasing energy efficiency as well as heating technologies including solar heating.
b. an optimization model for the investments in district heating plants based on the buildings' district heat demand computed in (a). It will give a cost-minimal investment strategy for district heating based on the future demand.
c. an optimization model for the district heating grid expansion. It maximizes the heating network operator's profit with possible new connections of building blocks to the existing grid.

The results of the heating energy system models comprise the investment costs in heating systems, the share of all technologies as well as the corresponding $CO_2$ emissions. Figure 2 shows an overview about the methodological framework. Moreover we provide a more detailed description of the mathematical foundation in the following sections.

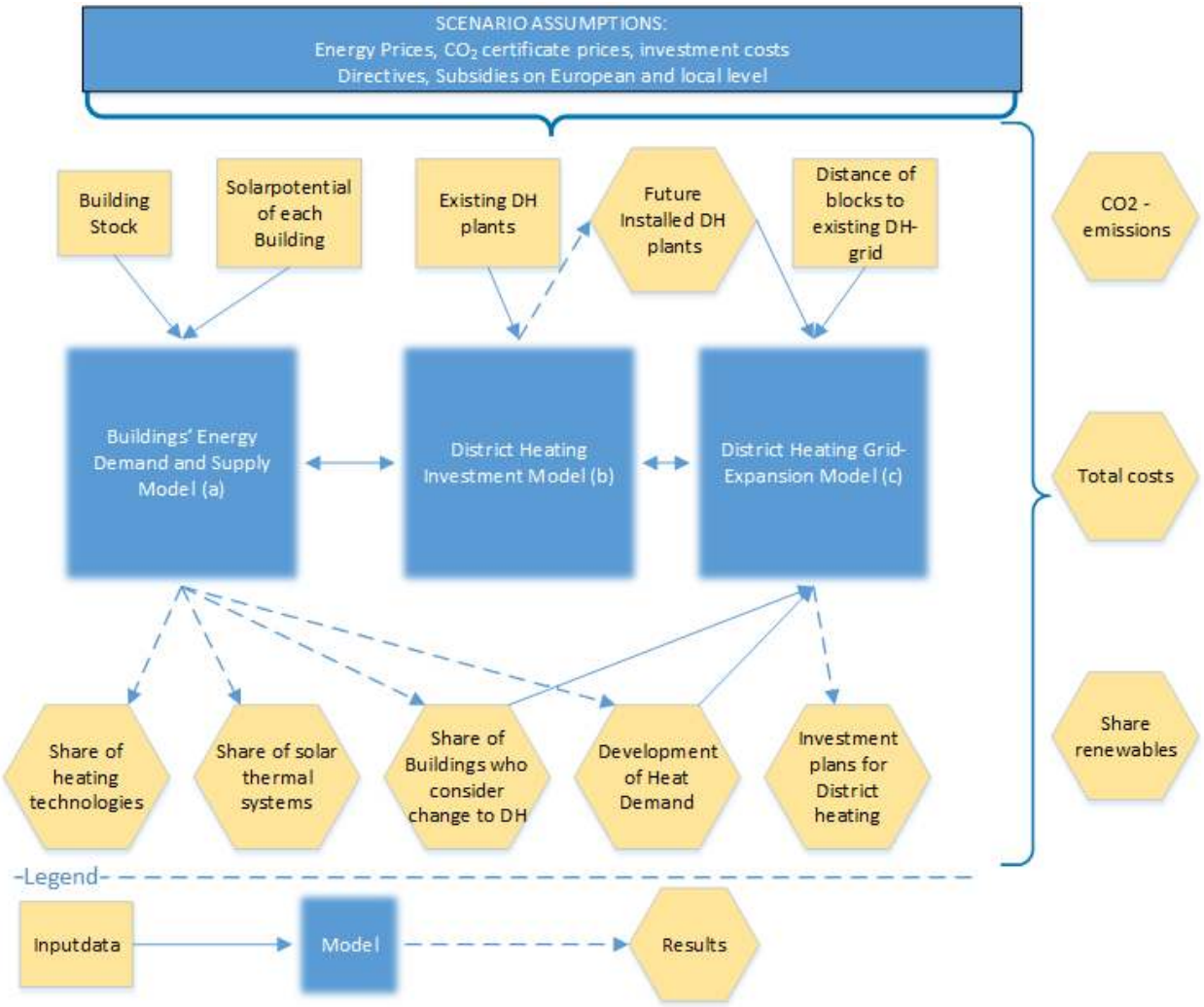


**Figure 2: Overview of the methodological framework**

*2.2.1. Simulation model for buildings' heat demand and supply*

For the simulation of the buildings' heating demand up to 2030, the share of solar heat, district heating and other heating technologies, the existing techno-socio-economic bottom-up modelling tool Invert/EE-Lab is used (for detailed description see (Müller, 2015)). The model uses a cost based logit approach to describe potential future paths assuming the consumer's decisions strongly depend on the costs of technology. These costs cover energy prices, connection costs for grid-bounded heating systems as well as obligations or subsidies. The buildings are grouped by their area of settlement, usage of building, building size, construction period, quality of thermal insulation and installed heating system. With the usage of areas of settlement the building can be located within the city and a distinction for different connection costs to the existing district heating network is possible.

*2.2.2. Optimization model for district heating supply*

The model for district heating plant investments assumes that investments are based on aiming minimal generation costs. The optimization program for the district heating system is based on a generation expansion planning model (GEP), a well-established linear program (De Jonghe et al., 2011). A simple model for short-term CHP planning of (Lahdelma and Hakonen, 2003) will be used to adapt the standard GEP formulation for district heating investments.

For every year $t \in T$ the district heating plants $i \in I$ are associated with fixed costs $F_i$ (in Euro/kW). Heat generation is optimized for every hour. For every plant $i \in I$ we consider the sets of extreme points of the (convex) feasible generation region $J_i$.For the $j_{th}$ extreme point then we have corresponding variable costs of cogeneration $V^h_{i,h,j}$ (in Euro) with generation of $g^h_{i,h,j}$ $kWh_{th}$ heat and $g^{el}_{i,h,j}$ $kWh_{el}$ electricity for every hour $h \in H_t$. The optimal generation can be displayed as convex combinations with weights $\lambda_{i,h,j}$ with $j \in J$. (see (Lahdelma and Hakonen, 2003) for details)

Investment decisions are modelled via the binary variables

$$n_{i,t} \coloneqq \begin{cases} 1 \; opening \; plant \; i \; in \; period \; t, \\ 0 \; else. \end{cases}$$

If the plant already exists $n_{i,t}$ can be set to 1, i.e. $n_{i,t} \coloneqq 1$ for all $t \in T$. Further we need to include the spot electricity market with spot price $s_h$ (in Euro/$kWh_{el}$) for every hour $h \in H_t$. Note that all monetary values are discounted and all decision variables are non-negative.

In such a two-stage formulation, $n_{i,t}$ are the first-stage decision variables, $\lambda_{i,h,j}$ the second stage decision variables. Thus we have the program:

$$\min_n \coloneqq \sum_{t \in T} \sum_{i \in I} \sum_{s=1}^{t} F_{i,t} \eta_{i,s} + \sum_{t \in T} \sum_{h} O_h(\eta_{i,t}),$$
$$O_{h(\eta_{i,t})} \coloneqq \min_{\lambda} \sum_{i \in I} \sum_{j \in J_i} V_{i,h,j} - g^{el}_{(i,h,j)} s_h \lambda_{i,h,j}$$

To ensure that heat and power generation is within the feasible operation region of every power plant and only proceeded in already built plants, suitable constraints are included. Moreover heat generation has to meet district heating demand for every hour. Additionally technical linear operation constraints for district heating plants can be added, e.g. temperature requirements for the district heating system.

*2.2.3. Optimization model for district heating grid expansion*

The investment optimization for the district heating grid expansion is based on the results of the module (a), shown in Figure 2, grouped by building blocks. The objective of the mixed-integer linear program model with several investment periods is to maximize the heating network operators profit $P_i$,

under consideration, that already connected blocks can't be disconnected as long as there is heat demand for district heating. The costs for the grid extension/expansion $c_{inv}$ and the costs for heat generation $c_g$ are considered, as well as the capital costs $c_{cap}$ and operation costs $c_{op}$. The revenues $R_{tot}$ respect the base price $p_{base}$ dependent on the blocks heat load in MW and the demand charge $p_{dc}$, which arise from the heat demand in MWh. The objective function is to maximize the profit Π, where $r$ is the interest rate, $T$ the considered horizon, $P_b$ the connected heating load in MW of the building block and $D_{b,t}$ the heat demand in MWh per block.

$$\max_{x_{b,t,}} \Pi = \sum_{t=1}^{T} \frac{R_{tot,t} - c_{tot,t}}{(1+r)^t}$$

$$R_{tot,t} = \sum_{b \in B} \left(p_{base,t} + p_{dc,t} D_{b,t} + p_{base,t} P_b\right) x_{b,t}$$

$$c_{tot,t} = c_{cap,t} + c_{op,t} + c_{Inv,t} + \sum_{m=1}^{12} c_{g,m,t}$$

Due to cost variations within the year for the heat generation costs $c_g$, these costs are calculated on monthly base. The decision, whether a block is connected to the district heating network or not is formulated as a binary variable $x_{b,t}$.

$$x_{b,t} := \begin{cases} 1 \; if \; block \; b \; is \; connected \; in \; period \; t, \\ 0 \; else. \end{cases}$$

This binary variable also indicates blocks, which are already connected to the existing heating network and influences the capital costs $c_{cap}$, the operation costs $c_{op}$ and the costs for the grid extension/expansion $c_{Inv}$.

*2.3 3D spatial simulation*

For further evaluation of the economically and ecologically reliable solar heat strategies by means of their spatial footprints, we propose a 3D spatial simulation. It serves as a decision support tool and is based on the output data of the heating energy system model, in particular the future installed solar heat units per building. It allows spatial analysis in a three-dimensional virtual space.

The computed installed solar heat units data is joined with the building shape data via an ID number defined by the GIS data source for buildings of Vienna. These GIS based data can include several parts of a building complex with the same ID. We dissolve all building complexes via their IDs and the maximum height of all parts will be assigned to the building complex. Thus a two dimensional map can be designed with the solar heat units for the considered scenarios in specific city quarters over time as well as the distribution of solar heat units in the whole city.

Based on this 2D city map, areas of particular interest, determined by the city planner can be displayed in bigger scale and transformed in a 3D city model with a rule based procedural 3D modeling software

(ESRI City Engine). The two dimensional building shapes are extruded to three dimensional objects, roofs and front buildings. A 3D city model is evolved which enables the possibility to change single object's appearance via defined color intervals corresponding to the data it represents. The underlying data determine the visual design of the spatial objects.

To enable interactive user control and multi-scalar viewing options, the use of a web viewer (ESRI) is beneficial. Especially the possibility of implemented features like sun altitude simulation within diurnal variations offers advantages for the user.

## 3. Data and Case Studies

### *3.1 Data set*

Two main data sets are used for this case study: the "Solar potential registry of Vienna" (Wiener Solarpotential Kataster) provided by the municipal department 41 and the "Heat registry of Vienna" (Wärmekataster Wien) provided by municipal department 39. The Solar potential registry of Vienna (GIS data set) is a land register for the solar potential in Vienna and includes the area suitable for solar thermal and photovoltaic potential for every single building. The Heat registry of Vienna (table data set) contains every single building from Vienna with the construction year, actual heat demand and its geometry like total gross floor area, ground area, number of floors, etc... The theoretical potential for solar thermal is the basis for the actual used potential up to 2030, determined with the simulation model.

To match the data structure for the used models (see chapter *2.2.1. Simulation model for buildings' heat demand and supply* for detailed description) some modifications and pre-calculations are necessary: In a first step, the data for the solar potential has to be matched to the building stock database and as the potential for the simulation model depends on the available roof area and the algorithm of simulation model is for segments and not for every single building, the roof area as well as the area for the theoretical potential has to be averaged. For visualization purposes GIS data sets representing streets, parks, etc. of the Open Government Data[1] Platform are used.

### *3.2 Scenario Description and General Assumptions*

Three exemplary scenarios, based on those described in (Müller and Kranzl, 2013), are considered. These scenarios are adapted for the situation in Vienna, since the scenarios in (Müller and Kranzl, 2013) represent the situation for policy instruments for whole Austria. It's necessary to mention here, that the considered scenarios don't represent the actual situation in Vienna, they just should point out potential developments dependent on different policy frameworks.

[1] https://open.wien.gv.at/site/open-data/

- Scenario 1 - WEM (With existing measures): This scenarios represent roughly the existing policy frameworks implemented in spring 2012 in Austria. The Scenario considers investment subsidies for heating systems and for refurbishments up to 2030. (see detailed description in (Müller and Kranzl, 2013))
- Scenario 2 - WEMpluSol (Additional Solar thermal subsidies): In addition to the policy frameworks from Scenario 1 the investment subsidies for solar thermal are increased.
- Scenario 3 - WAM (with advanced measures): In addition to the WEM Scenario additional budget for renovations is available and the renovation quality increases within the simulation horizon. (see detailed description in (Müller and Kranzl, 2013))

The focus of the analysis of all scenarios is on the actual building stock. New buildings due to the increase in population are neglected. However, buildings newly constructed due to demolition are included in the case study. In addition, the competition between photovoltaic and solar heat isn't the focus of this study either.

The yearly price increase varies in average during the simulation period between 1.02% for gas and 0.76 % for district heating, the two mainly used energy carriers for heating and domestic hot water in Vienna. (In 2013, share of gas in final energy consumption: 42.3 %, share of district heating: 40.6 % (Statistik Austria, 2014)) For climate data, the hourly averaged temperature values for the years 2012-2014 are used (Source: Wien Energie).
We assume constant losses for district heat distribution amounting to 7.5 %[2].

## 4. Results

To compare the results for the different scenarios, the following indicators are used:

- Average $CO_2$ Emissions (kg/GWh) for heat and domestic hot water supply.
- Cumulative costs for the building's heat and domestic hot water demand from 2015 until 2030. These costs include the annuity of investments in refurbishments, the annuity of constructions of new buildings and investments in heating systems as well as subsidies for refurbishments and heating systems and annual energy dependent consumption costs and operation and maintenance costs.
- Share of solar heat and district heating in the final heat consumption in 2030.
- Additional average generation costs for district heating in 2030. These costs include future annualized investment costs for new heat plants as well as fuel costs in 2030. They do not include investment costs for already existing plants.

[2] Source: http://www.nachhaltigkeit.wienerstadtwerke.at/oekologie/energieerzeugung-bereitstellung/energieeffizienz.html

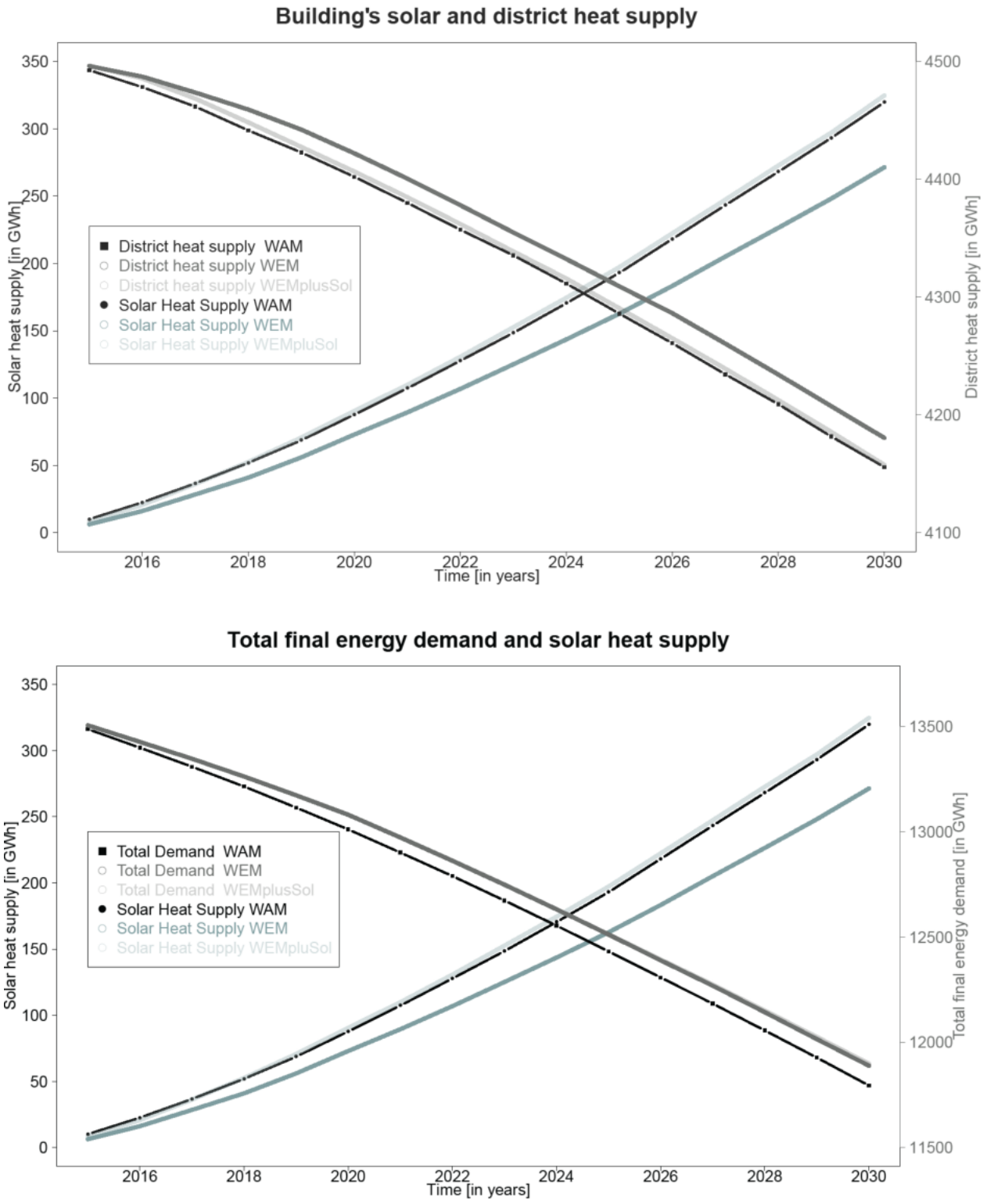


**Figure 3: Development of the building stock's (Residential and office buildings) final energy demand for space heating and domestic hot water**

In Figure 3 final energy demand (FED) for buildings in GWh in total and for district heating and solar heat is depicted from 2015 until 2030. The FED in total remains the same for the WEM and WEMpluSol scenario since the WEMpluSol scenario considers higher subsidies for solar heat with no additional incentives for the building owners to decrease their energy demand. The FED for the WAM scenarios decreases until 2030 by approximately 105 GWh. The impact of the additional solar heat subsidies is highlighted in the plot for the district heating demand and the solar demand: Here, the same change in demand for the WAM scenario and the WEMpluSol can be seen.

**Table 1: Overview economic and ecological assessment**

| Scenario | Avg. $CO_2$ emissions [$kgCO_2/kWh$][3] | Cumulative Costs demand side [Mio. €][4] | share solar in 2030 [%][5] | Share district heat in 2030 [%][5] | Generation Costs district heat 2030 [€/MWh][6] |
|---|---|---|---|---|---|
| WEM | 0.2248 | 3031.7 | 2.20 % | 35.16 % | 19.87 |
| WAM | 0.2239 | 3028.3 | 2.70 % | 35.23 % | 19.81 |
| WEMpluSol | 0.2236 | 3034.7 | 2.73 % | 34.94 % | 19.80 |

In Table 1 the indicators for all three scenarios are shown. Due to the lowest final energy demand in the WAM scenario and the same demand for solar heat and district heat as in the WEMpluSol scenario, WAM scenario has the lowest CO2 emissions. In addition, because of the reduction in the energy demand, the additional costs in the WAM scenario are balanced and the lowest average costs for the considered simulation horizon can be seen. As the building's energy demand and supply model gives a similar decline in demand for all three scenarios there will be no difference in district heat generation costs and investment decisions computed by the district heating investment model. In all three cases a modest change of the generation portfolio by installing 50 MW of heat pumps is cost-optimal. Thus the district heat generation in Vienna would still be mainly based in these scenarios on CHP plants with heat-only boiler station for peak load and incineration plants for based load. As the generation portfolio remains widely unchanged the additional generation costs can mainly attributed to fuel costs (gas) and the gains/losses of electricity generation by CHP plants.

- 3 Calculations based on the following values for CO2-emission: Gas: 0.252 kg/kWh, Oil 0.299 kg/kWh, Coal: 0.34 kg/kWh, electricity: 0.157 kg/kWh, district heating: 0.211 kg/kWh, Wood: 0.025 kg/kWh, wood pellet: 0.052 kg/kWh
- 4 The Cumulative costs of the demand side include the annuity of investments in refurbishments, the annuity of constructions of new buildings and investments in heating systems as well as subsidies for refurbishments and heating systems and annual energy dependent consumption costs and operation and maintenance costs.
- 5 The share is defined as the proportion of solar energy resp. district heating in the final energy consumption.
- 6 These costs include future annualized investment costs for new heat plants as well as fuel costs and gains/losses from electricity generation by CHP plants in 2030. They do not include investment costs for already existing plants.

Screen shots of the 3D spatial simulation are shown in Figure 4-Figure 6. In all three figures the probability of installing solar heat units until 2030 for different scenarios is displayed. In Figure 4, a 2D map of a city quartier in Vienna is displayed. This 2D map gives an overview of the impact of solar heat strategies. The City planner can choose some areas with particular interest that can be shown in a 3D partial simulation as shown in Figure 5. Here, two scenarios can be considered simultaneously. Moreover this 3D spatial simulation allows for more detailed street views too (see Figure 6).

**Figure 4: 2D city map with the share of installed solar heat units in comparison to the theoretical potential until 2030 for WAM scenario**

**Figure 5: 3D Spatial simulation with the share of installed solar heat units in comparison to the theoretical potential of installing solar heat units until 2030 for WAM (right) and WEM (left) scenario**

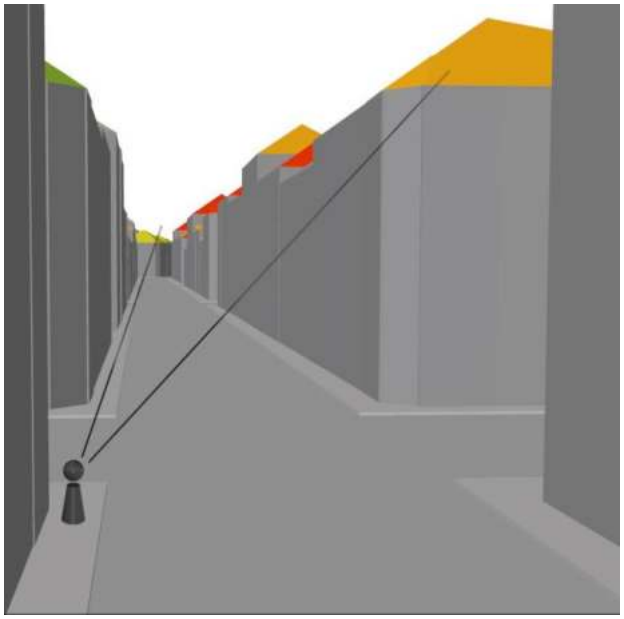

**Figure 6: Street view within the 3D spatial simulation**

The interactive (ESRI web viewer) version (see Figure 5) is available under: http://tinyurl.com/oebhcbl. It enables the comparison screen for two scenarios (WEM: Scenario 1; WEMpluSol: Scenario 2) for the year 2030. The Legend for the online tool is shown in Figure 4.

## 5. Conclusions

In this paper we developed a methodological framework for evaluating solar heat strategies based on economic and ecological indicators. Further we implemented a 3D spatial simulation of the probabilities of installing solar heat units for every building roof in Vienna. This allows an additional analysis of the possible spatial impact of economic and ecological reliable solar heat strategies. As seen in Figure 4 an economic assessment of theoretical solar heat potentials yields a quite different distribution of the most favored locations for solar heat. This can be attributed to the fact that many buildings with high theoretical solar heat potentials may already have economically or ecologically efficient heating systems installed. Thus we believe that such an analysis is essential for reliable city planning. Furthermore, we believe that using a 3D spatial simulation enhances city planning, since this is the easiest way for displaying spatial impacts.

Concerning the results for the city of Vienna, we want to raise several points: The theoretical solar heat potential differs severely from the economic potential. However solar heat subsidies don't have displacement effects on the usage of district heating in a city. In our computations mainly usage of gas for heat supply decreases by purely economic reasons. This is very satisfying from an ecological point of view and eases the implementation of solar heat strategies for city planners. Finally we have to emphasize that our 3D spatial simulation is designed as a decision support tool for city planners only. For detailed and reliable analysis, city planners need to define buildings, where installments of solar heat units (panels) are undesirable. Furthermore they have to define visual axes that have to be preserved due to historical or cultural reasons.

## 6. Acknowledgment

This project would have been impossible without the support of Wiener Stadtwerke Holding AG, Wien Energie and the PhD course URBEM. Further we would like to thank Stefan *Dürauer (MA 41) and Christian Pöhn* (MA 39) for providing us the data sets on building solar potential registry, GIS building data and heat registry.

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# RENEWABLE ENERGY RESOURCES AND LOCAL POTENTIAL FOR A REAL "SUSTAINABLE" DEVELOPMENT: A MULTI-CRITERIA DECISION PROCESS. CASE STUDIES FROM TER.R.E. PROJECT

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Keywords: renewable energy resources, sustainable development, multi-criteria decision analysis.

*Abstract*
*In the last decades, the discussion about Renewable Energy Sources (RES) has been involved and integrated in many fields of studies. However, the discussion and integration of RES has been considered without critics and context considerations, producing a wrong belief, namely that the implementation of RES project is positive by definition. In that way it is believed that the mere production of Renewable Energies automatically brings development, forgetting that "sustainable" development is based on environmental, social and economic factors, connected and calibrated on local territories and their potential in producing RES. Thus, considering the relationship between RES and local framework and potential must be a priority, before adopting and implementing some RES projects or policies. Despite, all this is recognized and supported by the scientific community and European Union, the awareness and capacity to adopt multiple integrated criteria is not fully understood by decision makers and stakeholders, who are in charge of translating the general concept of local sustainable development into praxis. This paper aims at discussing the multi-criteria decision model developed in TER.R.E. project (TERritory, eneRgy & Employment), built on the comparative analysis between 11 case study areas from 8 South East European Countries.*
*The model's indicators, selected by the decision makers involved in the process, are compared with those found in the literature and commonly used for sustainability assessment. Considering the decision makers' preferences, it emerges that the integrated and multiple vision on which sustainability is composed is not perceived by decision makers. On the contrary, their vision on sustainable development is anchored to pre-conceived pure economic perception on energy production.*

## 1. Introduction

In the last decades, sustainable development has been incorporated in many discussions on society and his future. The most common definition about sustainable development provided by Brundtland Commission, "to ensure that it meets the needs of the present without compromising the ability of future generation to meet their own needs" (WCED, 1987), is a starting point for any other definition of the concept. Sustainability research, which aims at better understanding the complex dynamic interactions between environmental, social and economic issues, and sustainability assessment, which aims at evaluating the progress toward sustainability, are based on the identification of criteria (and related indicators) (UN, 2007). Thus, the analysis of sustainable development means to develop a sustainable assessment, and in this paper it is presented one of these cases.
Renewable Energy Sources (RES) are generally considered to have a large potential, especially for local territories, in terms of achieving sustainable development. In fact, RES can provide a wide variety of socio-economic benefits, including diversification of energy supply, enhanced regional and rural development opportunities, creation of a domestic industry and employment opportunities (Del Rio and Burguillo, 2009). The European Directive 2009/28/EU on Renewable Energy (RED, EC, 2009a) recognises "the need to promote renewable energy sources as a priority measure given that

their exploitation contributes to sustainable development, create local employment and have a positive impact on social cohesion".

However, energy policies can produce local development benefits (Del Rio and Burguillo, 2009) but not automatically sustainable local development (Pflüger et al., 2005), which entails a process supported by local stakeholders built on local resources activation. All this produced a wrong belief, namely that the implementation of RES projects is always positive by definition. In that way, it is believed that the mere production of renewable energies automatically brings development, forgetting that "sustainable" development is based on environmental, social and economic criteria, connected and calibrated on local territories and their potential in producing RES. The aim of this paper is to demonstrate and discuss that this wrong belief about RES is widespread among decision makers and stakeholders, and it can lead to the selection of projects, which are not appropriate (i.e. sustainable) with is local context. The demonstration will be conducted using the case study of the project TER.R.E. (TERritory, eneRgy & Employment), under the South East Europe Programme of Territorial Cooperation 2007-2013. The study is based on the elaboration of a multi-criteria decision model and the analysis of its criteria and indicators. These criteria and indicators, selected by the decision makers and stakeholders, are compared with those found in the literature and commonly used for sustainability assessment.

Accordingly, the paper is structured as follow. Section (2) describe the TER.R.E. project as case study, its research objectives and its model. In section (3) the theoretical framework applied in the empirical study is summarize. Section (4) includes the methodology of the study, the decision model, its criteria and indicators. A discussion on the study results is made according to the comparison between the 11 case study areas across South East Europe is provided in section (5). The paper closes with some concluding remarks and policy implications in section (6).

## 2. Case study: the TER.R.E project

TER.R.E (TERritory, eneRgy & Employment) is a transnational project, involved 13 Partners (Figure 1) in 9 European South-East Countries (Italy, Hungary, Austria, Romania, Slovenia, Bulgaria, Croatia, Bosnia-Herzegovina, Albania).

Figure 1. TER.R.E Partners

Eleven case study areas are identified as "marginal rural areas", as small towns and villages located in less urbanized areas (or at the margin of metropolitan areas). They have, from an energy point of view, a greater competitive hedge compared to cities, as larger space and natural resources are available. These territories are characterized by hilly and mountain and are mainly rural, and are affected, although at different level, by similar problems: less or lack of service and less employment opportunities compared to urban agglomerations and competitive growth areas. Such problems cause (or could cause) a gradual depopulation of the less inhabited areas, with serious consequences in terms of new territorial disparities, risk of depopulation of more peripheral zones, risk of underproductive crops as well as loss of ecological safeguard and control of the territories.
TER.R.E. objective is to experiment and demonstrate that a wide and integrated exploitation of endogenous resources to produce renewable energy is an effective engine for a self-generated and sustainable local development in marginal and less developed zones. In such zones Private-Public Partnerships (PPP), between public institutions, private operators and local communities, can produce revenues and employment opportunities, and thus to promote tailored paths of growth and development based on a proper use of local resources. The project aims at path the way for long lasting positive effects on the local energy policies, which, if properly set, can overcame obstacles to energy plants investments across the civil society and can support policy-makers in elaborating RES programs and investments by adopting decision support models, based on a multi-sectorial approach.

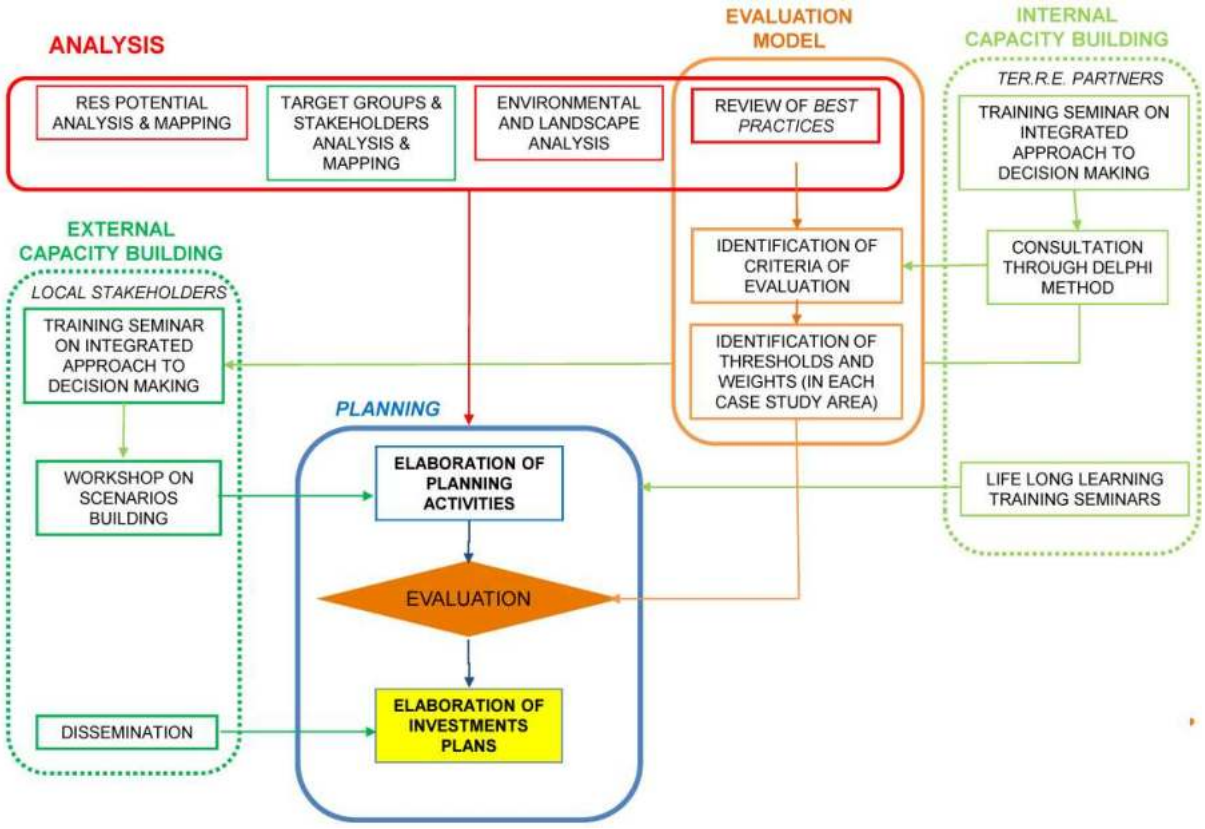


Figure 2. TER.R.E. rationale

The TER.R.E. approach (Gissi et al., 2014; Lucertini et al., 2014a; Lucertini et al., 2014b) was structured following different steps (Figure 2). The first step concerns the indications to support activities in mapping landscape capacity, and potential related to energy, and to build capacities for policy makers, stakeholders and target groups. In this way, in each case study area data are recollected

and stakeholders are informed about RES potential, as to make them part of the knowledge building process and to raise awareness about sustainability criteria (Analysis). The second step is related to the application of the Decision Support System (DSS) to elaborate investment plans. The evaluation model has been constructed through the involvement of all TER.R.E. Partners in an internal capacity building program. After the mapping phase, local actors are involved to discuss, in each area, about targets of local development and to elaborate strategies and actions, integrating human, natural and financial resources (external capacity building program). Planning alternatives are elaborated within a specific workshop in each case study area, and then evaluated according to the DSS. The third step concerns the capitalization of the results in relation to capacity building. Workshops for the promotion of investments (from different sources) are put in place, as well as specific actions towards target groups according to its interests, specificity and local contexts. In this way the outputs (investment plans) are supported in parallel by the construction of a networks of relevant actors (policy makers and stakeholders) and situated knowledge in all phases, two aspects that contribute to the implementation of the purposes and goals of the plans and public policies.

## 3. Theoretical framework

### *3.1. Multi-Criteria Decision Analysis*

Multi-Criteria Decision Analysis (MCDA) is a research area within the field of Decision Analysis (DA), which deal with the process of making decisions in the presence of multiple objectives. It develops methods and tools to assist with decision-making (DSS), in terms of the choice, ranking or sorting of options (i.e., alternatives, solutions, courses of action, etc.), when there are conflicting criteria (Figueira et al., 2005). These methods, which can handle both quantitative and qualitative criteria, share the common characteristics of conflict among criteria, incommensurable units, and difficulties in design/selection of alternatives (San Cristobal, 2011). This is one of the most used methods in environmental/ecologic science (Huang et al., 2011; Fontana et al., 2013), since MCDA give the possibility to combine environmental, social and economic information, and thus address interdisciplinary and complex issues. Moreover, MCDA, if a discrete number of alternatives is given, is a useful tool to structure the decision-making process, and supporting with evidence the decision-makers choices (Bouyssou et al., 2000). Decision-makers objectives are usually conflicting and therefore, the solution is highly dependent on the preferences of the decision-maker and must be a compromise. In most of the cases, different groups of decision-makers are involved in the process. Each group brings along different criteria and points of view, which must be resolved within a framework of understanding and mutual compromise.
Until now, MCDA has been mainly applied in a case studies with specific focus, like forest management (Ananda and Herath, 2009), river alteration projects (Oikonomou et al., 2011), or bioenergy solutions (Buchholz et al., 2009). Most of those studies apply specific criteria, so that the solutions to the environmental problems addressed are hardly comparable or transferable to similar cases. However, different land-use options, or land-use changes in a sustainability perspective have rarely been the focus of MCDA studies. Usually, sustainability criteria are general and about omnipresent phenomena, but they are disconnected to specific land-use resources. Thus, in this work we try to strictly link local resources, land-use, decision makers and stakeholders' preferences and expectations with the criteria, sub-criteria and indicators selected, used into the MCDA model. They are selected by stakeholders through a Delphi method.

### *3.2. Delphi method*

The Delphi Method is a systematic way to query and consult a panel of experts, through questionnaires in two or more rounds, that was developed by Norman Dalkey in a U.S. military project

of the RAND Corporation in the second half of XIX century (Dalkey and Olaf, 1963; Brown, 1968; Sackman, 1974; Linstone and Turoff, 1975, 2002; Skulmoski et al., 2007). Some authors (Thomas, 1972; Sackman, 1974; Rowe and Wright, 1999; Rowe and Wright, 2001; Green et al., 2007) define the Delphi Method an interactive and facilitated (assisted by a facilitator) process, used for the elicitation of opinions of experts and for the forecasting of the consequences of a specific issues. Delphi Method has been widely used in social, ecological and economic studies. For Rowe and Wright (1999), the principle features of the classical Delphi method were *i*) Anonymity of Delphi participants; *ii*) Iteration or information flows between participants through some rounds of discussion; *iii*) Interaction with controlled feedback through report of results, that inform the participants of the other participant's point of views; *iv*) Statistical aggregation of group response, for qualitative and quantitative results.
According to Linstone and Turoff (2002), the reasons to use this method are related to the undefined, unresolved and unclear issues that need to *i*) the subjective judgments on a collective basis; *ii*) the diverse backgrounds with respect to experience or expertise; *iii*) the preservation of the heterogeneity of the participants without domination of the positions; *iv*) an integration of efficiency, that a face-to-face meeting can't guarantee. Moreover, the Delphi Method reduces the time and cost of group meetings.

## 4. Methodology

The methodology proposed aims to identify a comprehensive list of criteria, sub-criteria and indicators, in order to construct a MCDA model able to assess the sustainability development produced by alternative options related to RES projects, considering that sustainable development "must aim to foster and preserve socio-ecological systems, from the family to the global levels, which are dynamic and adaptable, satisfying, resilient, and therefore durable" (Gibson, 2006a, p. 173). Thus, following the Gibson's (2006b, 2012) approach about sustainability assessment we identified the three main categories of sustainable development (environment, social and economic), plus one for the administrative and participation requirement, which have helped to underscore the mutual importance of the several sustainability aspects. In such perspective, we identify criteria and indicators through a process developed on four main steps (Figure 3).

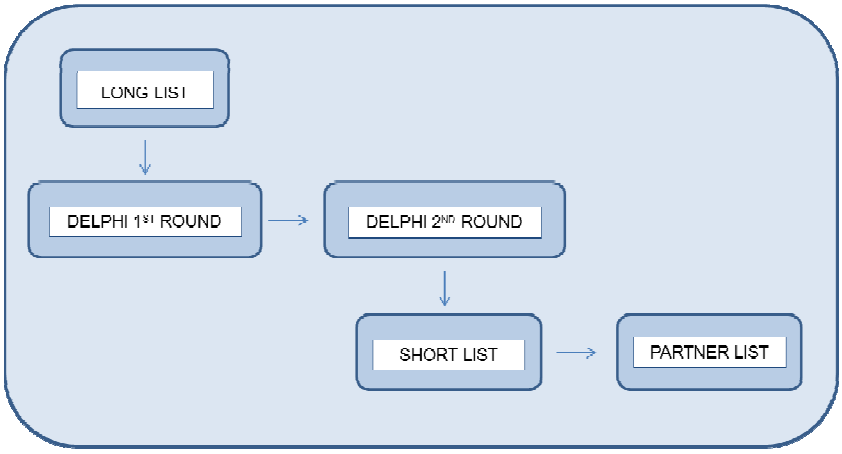


Figure 3. Delphi method, phases

A long list, of criteria, sub-critera and indicators, is completed by the involvement of experts from the Iuav research team, confirmed by European Union indicators and by the related scientific literature. The Delphi method is then applied starting from the long list. A facilitator coordinates a panel of informed and experienced actors through a series of questionnaires in a computer-assisted way. The

first questionnaire aims at acquiring preferences about each criterion, sub-criterion and indicator in their relevance in evaluating RES projects alternatives towards sustainable development. First round' results are elaborated through selection rules agreed with participants.
A second questionnaire is developed, in order to return at the Partners (PPs) the results of the 1st round, and to investigate on sub-criteria on which there is not perfect convergence of preferences. The indicators that will receive the absolute majority of preferences in 2nd round are included in the short list. Moreover, in this way, it is asked indirectly at the PPs to agree with the analysis, the selection rules and so with the short list emerging from the whole analysis process. The short list will be used to create the MCDA model.
In TER.R.E., 2 different groups of respondents were involved: an Experimental Group (EG) and a Control Group (CG). The EG was constituted from the panel of TER.R.E. project partners, 2 respondents for each partners, one decision maker and one professional (for the 12 partners of TERRE project, the panel consists of 24 respondents). The CG was composed of experts of the energy sector, technicians chosen by the Austrian partners (30 participants). In this case there was no anonymity, but the risk of mutual influence was very low and therefore negligible.

### *4.1 Criteria, sub-criteria and indicators*

In the definition of sustainability criteria, sub-criteria and indicators related to the RES system, sustainability was represented according to the 6 principles of Afgan et al. (2000), who include *i*) relevancy to the sustainability, *ii*) indicators should be measurable, in quantitative or qualitative way; *iii*) significance in the time of sustainability assessment; *iv*) reliable information; *v*) enhancing a strategic reflection; *vi*) significance in the optimization of the criteria of evaluation.
Considering that, the long list of 4 criteria, 18 sub-criteria and 114 indicators was completed, including sets of criteria and indicators from European Union (HM Government, 2013; EC, 2013; EC, 2011) and by the related scientific literature (for example, Del Rio and Burguillo, 2009; Neves and Leal, 2010; Gibson, 2012; Hak et al., 2012; Piorr, 2003; Shen et al., 2011; Milman and Short, 2008; Moussiopoulos et al., 2010; Lebre La Rovere et al. 2010.).
The four criteria considered are: *i*) environmental aspects, *ii*) social aspects, *iii*) economic aspects, *iv*) legal, institutional and perceptional aspects. The criteria aim at characterizing all the possible changes or impacts due to the strategies/actions/projects /plants implementation which occurs, respectively, on the environmental components, on social groups, on economic aspects, and on institutional framework and on stakeholders perception.

## 5. Results and Discussion

According to Lancker and Nijkamp (2000), "a given indicator does not say anything about sustainability, unless a reference value such as thresholds is given to it". However, considering the indicator selected by the project partners and decision-makers we can understand how they consider sustainability and RES.
In the TER.R.E. project 24 participants took part to the Delphi. From the complete list of 114 indicators, grouped in 18 criteria and 4 operational objectives, the participants have selected 43 indicators (but the short list contains 58 subcriteria).
With respect to the Operational objective related to the environmental aspects, almost half of the indicators were discarded (23 out of 47). Most of the maintained indicators were the ones related to natural resources in general, as "water", "habitats and biodiversity", followed by "soil". Surprisingly, the "available energy potential" was considered less important with respect to the precedents, even if the evaluation of sustainability is related to RES projects. The sub-criterion related to "greenhouse gas emissions" is in a lower position in the preference ranking, even if it is explicitly mentioned in RED (EC, 2009a). Finally, some criteria deriving from EU Directives, as the Directive 92/43/EEC

"Habitats" (EC, 1992) and Directive 2009/147/EC "Birds" (EC, 2009b), are excluded from the list as "habitats amount", "Protected areas", and "Habitats conservation". The least represented criterion is the one of "Landscape", interpreted only as "crops change (loss)". Landscape is widely considered as a resource for multiple purposes, as for rural tourism. This aspect might entail several problems in the evaluation of sustainability of local development from RES projects, reducing the possibility to consider synergies with other possible strategies in local development.

Table 1. Objectives, criteria and subcriteria (in number) in the short list and in the long list

| Operational objective | Criteria | Subcriteria of the Long List | Subcriteria of the Short List | Percentage of Subcriteria stability |
|---|---|---|---|---|
| A. Environmental aspects | A.1 Soil | 7 | 4 | 57% |
| | A.2 Water | 6 | 5 | 83% |
| | A.3 Air | 6 | 3 | 50% |
| | A.4 Landscape | 5 | 1 | 20% |
| | A.5 Habitat and Biodiversity | 10 | 5 | 50% |
| | A.6 Energy | 7 | 4 | 57% |
| | A.7 waste/residues | 6 | 2 | 33% |
| B. Social aspects | B.1 Population | 5 | 1 | 20% |
| | B.2 Services | 7 | 4 | 57% |
| | B.3 Job | 7 | 2 | 29% |
| | B.4 Poverty | 5 | 3 | 60% |
| | B.5 Settlement and Infrastructure | 8 | 3 | 38% |
| | B.6 Risks | 5 | 3 | 60% |
| C. Economic aspects | C.1 Costs and benefit | 7 | 4 | 57% |
| | C.2 Financing and Funds | 6 | 4 | 67% |
| | C.3 Productive investments, Research and Development | 7 | 3 | 43% |
| D. Legal, institutional and perceptional aspects | D.1 Legal and institutional | 5 | 4 | 80% |
| | D.2 Partecipation and acceptability | 5 | 3 | 60% |
| TOT. | 18 Criteria | 114 | 58 | 51% |

With respect to the operational objective related to the social aspects, they represent the second represented criteria among the 4 ones. Only 16 out of 37 criteria are accepted by the respondents. The most preferred criteria are related to "Services" to education and health, "Poverty" and "Risks". In contradiction with European social policies, Jobs and Gender issues are the least represented, as for the policies related to the construction of Smart Energy strategies. Social Inclusion and innovation strategies might risk to weigh less in the evaluation model.

With respect to the operational objective related to the economic aspects, some indicators were constrained by the authors, as required by the setting of the TER.R.E. project, as the criterion "Financing and Funds". They are at the basis for the elaboration of the investments plans related to RES. With respect to the others, 9 out of 20 indicators were discarded, confirming that market-related issues (as cost and benefits) are more relevant than issues related to innovation and research. It might result that classical economic approaches might weigh more than innovative and diversified approaches towards RES.

With respect to Legal, institutional and perceptional aspects, 7 out of 10 were constrained by TER.R.E. project, and only those indicators were maintained.

## 6. Conclusions

Besides the general agreement on the importance of considering significant criteria to assess sustainable local development, our analysis put in light that sustainable development is not completely understood in its complexity by decision makers and professionals in charge to support it. Beside the wide variety of objectives, criteria and subcriteria emerging from literature, experts and EU documents, still economic issues are perceived in quantitative terms, considering with higher rank the costs-benefits characteristics instead on including innovative aspects connected to investing in research and development. Moreover, criteria connected to PPP were not acknowledged for their importance to support local development, as to indicate that innovative practices might be difficult to be implemented.

Legal and institutional objectives as well as social acceptability – and related criteria and subcriteria – play a marginal role in the set of criteria selected by TER.R.E. partners. This aspect reinforces the fact that lifelong learning programs are needed to support decision makers and professionals in updating their understanding of problems. It is not sufficient to provide innovative criteria in a top-down manner, as issuing new laws or regulations.

The analysis has been replicated in a case study area in Austria, were RES have been considered as a source of local development till 30 years. From the comparison of the results it is evident that more advanced Austrian context and marginal rural areas from South Est Europe diverge with respect to the issues related to research and innovation, as well as on public-private partnership. To overcome this divide, it is necessary to accompany the process of elaboration of planning proposals related to RES with specific trainings and processes of capacity building, to support learning and understanding of innovative approaches.

Another important aspect is that landscape issues were considered negligible when evaluating local sustainable development through RES investments from the respondents. Landscape entails integration between ecological and social aspects, as well as the perception and preferences of local communities, as declared in the European Landscape Convention (Council of Europe, 2000). Landscape is considered as an asset in sustainable local development (Termorshuizen and Opdam, 2009), as it provides multiple services as, for example, flood prevention and recreational values (De Groot, 2006), besides the capacity to provide renewable energy sources. It would be worth to evaluate how sustainable local development can derive from different types of investments plans, without considering RES as a panacea for development (Del Rio and Burguillo, 2009). The risk is to disregard other possible paths, as for example, rural tourism based on landscape cultural services, or to underestimate possible impacts deriving from the implementation of RES projects with respect to multiple ecosystem services delivered by landscapes.

The analysis of RES investments plans according to a Multi-Criteria Decision Analysis (MCDA) model is meant to anticipate possible trade-offs between different alternatives. Objectives, criteria and sub-criteria are at the core of the model to interpret and to evaluate the performances of alternatives to achieve sustainable local development, as the result of multiple and integrated perspective able to include social, environmental and economic issues at once. The challenge is related to the perception and understanding of decision makers and stakeholders with respect to the interpretation of sustainability within DSS, as put in light in this paper.

## 7. Acknowledgements

We thank all experts, decision makers and stakeholders that took part in TER.R.E. project activities from the 11 case study areas. The TER.R.E. project, started in November 2012 and ended in November 2014, was financed by the European Union under the programme “South East Europe” (SEE), Transnational Cooperation Programme .

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# URBAN STRUCTURE AND ENERGY EFFICIENCY

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Keywords: urban structure, urban development, energy efficiency

**Abstract**

*Transforming cities' energy use to address the threats of climate change and resource scarcity is a main challenge in local governance. The EU-FP7 project PLEEC – "Planning for Energy Efficient Cities" – uses an integrative approach to elaborate pathways, considering diverse challenges and requirements, for energy efficient and sustainable urban development.*
*This paper addresses the challenges of urban energy policy from an urban structure related angle. The relationship of energy and urban structure is investigated by means of a literature review and in-depth knowledge from three case studies of medium-sized Northern European cities.*
*The study takes stock of the current state of energy in urban development and policy, and reveals current options and constraints of energy efficient urban development.*
*The case cities go in some ways ahead their national climate and energy policy and aim to establish urban planning as an instrument to regulate and influence the city's transformation process in a sustainable way. At the same time the cities are constantly facing goal conflicts which induce dilemmas in their strategic orientation and planning activities (e.g. regional enlargement and increased commuting vs. compact urban development). We conclude that applying a broader understanding of urban structure than usually encountered in the academic literature turns out as a suitable framework in order to address the challenges of energy efficient urban development.*

## 1 Introduction

In the backcloth of the EU's 2020 climate and energy package ("20-20-20 targets") energy is high on the agenda in current urban development issues. Energy is an important element in various urban visions including being a sustainable and climate-friendly city, being self-sufficient, regenerative (Girardet, 2015) and resilient or also in more general concepts a *Smart City*.

This paper approaches the challenges of urban energy policy from an urban structure related angle. Urban structure is part of the sphere of influence of the municipal planning authorities and can hence be operationalized through urban planning as competence. Municipalities can act within and affect urban structure which enables cities to contribute to the achievement of the 20-20-20 targets.

The chosen cases, Eskilstuna in Sweden, Turku in Finland and Tartu in Estonia, face similar challenges like tendencies of ongoing urban sprawl and regional commuting, strongly related to their position within the regional urban system; as well as partly comparable constraints towards energy efficient urban development. In this sense the cases can to some extend be considered as exemplary for the challenges many medium-sized European cities have to deal with today.

Urban structure is in the academic literature mainly related to *urban form* (morphology, configuration and compilation). This paper suggests a broader approach to urban structure, including *urban administration* (policy, planning and governance) and *urban functioning* (urban system, city-region and flows). This study reveals the interrelations between those three dimensions of urban structure and

shows that addressing urban form to increase energy efficiency requires accompanying policies that are likewise addressing urban administration and function as an integrated policy package.

The studied cities go in some ways ahead their national climate and energy policy and aim to establish urban planning as an instrument to regulate and influence the city's transformation process in a sustainable way. At the same time the cities are constantly facing goal conflicts which induce dilemmas and trade-offs in their strategic orientation and planning activities (e.g. regional enlargement and increased commuting vs. compact urban development). Consequently, the paper reveals current options and constraints of energy efficient urban development as well as potential contributions of cities to the achievement of the 20-20-20 targets.

## 2 Approach and methods

In 2008 the European Union (EU) set up a climate and energy package containing three key objectives for 2020: 20% reduction in EU *greenhouse gas emissions* from 1990 levels, raising the share of EU energy consumption produced from *renewable resources* to 20% and 20% improvement in the EU's *energy efficiency*. Transforming cities' energy use is a main pillar to reach these goals.

The research uses a twofold approach including a literature review on the relationship of energy and urban structure as well as in-depth knowledge from three case studies. The *literature review* examines the state-of-the-art of research on the relationship of energy and urban structure. The review includes conceptual and empirical work published in journal articles, conference papers, books and book chapters, as well as policy-oriented documents from the EU and other organisations. The literature search focused on energy use in urban areas, preferably in a Northern European context, but included further work from e.g. a Northern American and Australian context in case of specific relevance. This paper presents a summary of the outcome of the reviewed literature as baseline for the discussion on urban structure.

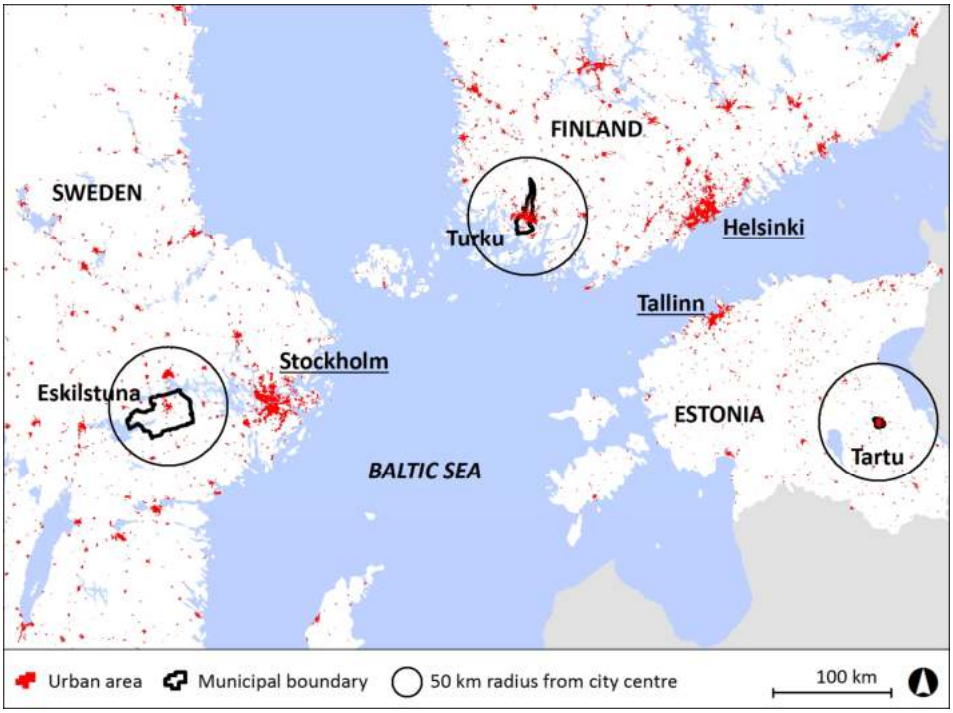



Figure 1. Urban areas in Northern Europe (European Environment Agency (EEA), 2014) and the three case study cities

Three in-depth *case studies* of medium-sized Northern European cities, Eskilstuna in Sweden, Tartu in Estonia and Turku in Finland, form the main part of this study. The case studies were conducted in 2014 as part of the European project PLEEC – "Planning for energy efficient Cities", funded by EU's Seventh Framework Programme (Fertner et al., 2015; Große et al., 2015; Groth et al., 2014).

The chosen cases are suitable for the intended investigation because they are both contrasting and similar. They are all medium-sized European cities (see Table 1), functioning as regional centres and striving to increase their energy efficiency. However, they face divergent urban dynamics and development challenges and act in different planning systems.

The investigation of the case studies is based on interviews with civil servants and stakeholders in urban development and energy planning, site surveys, scientific publications, planning and policy documents, maps and statistical data. The interviewees were asked about their perception of framing conditions and national energy regulation, the evolution of spatial planning, current transport planning as well as national and local energy policy and the role of regional planning.

The aim of the study is to investigate the relationship of urban structure and energy and examine urban structure as a suitable framework to address questions of urban energy efficiency. Subsequently, current options and constraints of energy efficient urban development and therefore potential contributions of cities to the achievement of the 20-20-20 targets will be elaborated.

## 3 The relationship of urban structure and energy

Since more than three decades researchers investigate the relationship between urban structure and energy use in cities. The approaches range from urban form related angles to approaches including for example socio-economic factors. Based on a comprehensive academic literature review on the relation of urban structure and energy use this paper provides a summary of main findings.

The reviewed literature proofs a relationship between urban structure and energy use. Næss and Jensen (2004, p. 37) summarize that "urban structure makes up a set of incentives facilitating some kinds of travel behaviour and discouraging other types of travel behaviour"; thus, the structural conditions have relevant potential to influence people's travel behaviour (Næss, 2006). Dense and concentrated cities are considered as contributing to reduce travel activities by car (Næss et al., 1996). Still, it is difficult to clearly verify this relationship between urban structure and travel behaviour; some approaches even consider it as 'weak' or 'uncertain', also due to the importance of socio-economic factors and people's attitudes (Næss and Jensen, 2004). Stead and Marshall (2001) identify effects of land use and socio-economic factors on travel patterns; consequently, policies aiming on influencing travel patterns have to assume "a set of interactions between land use, socio-economic characteristics and travel patterns" (Stead et al., 2000, p. 185), since land use characteristics explain only some of the variation in travel patterns. This relationship between the *parameters* or *structural variables* of urban structure and the final *energy implications* can be simplified as a causality chain (Figure 2), as comparably applied e.g. by Næss (2012, 2006), Næss and Jensen (2002) and Owens (1986):

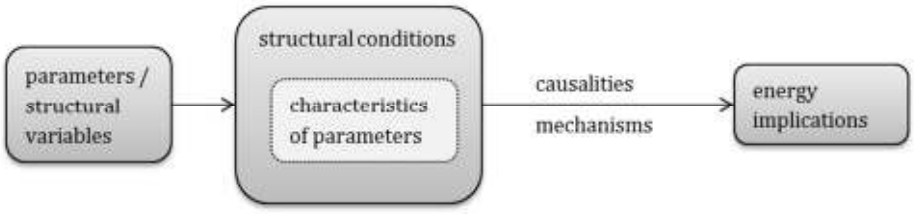
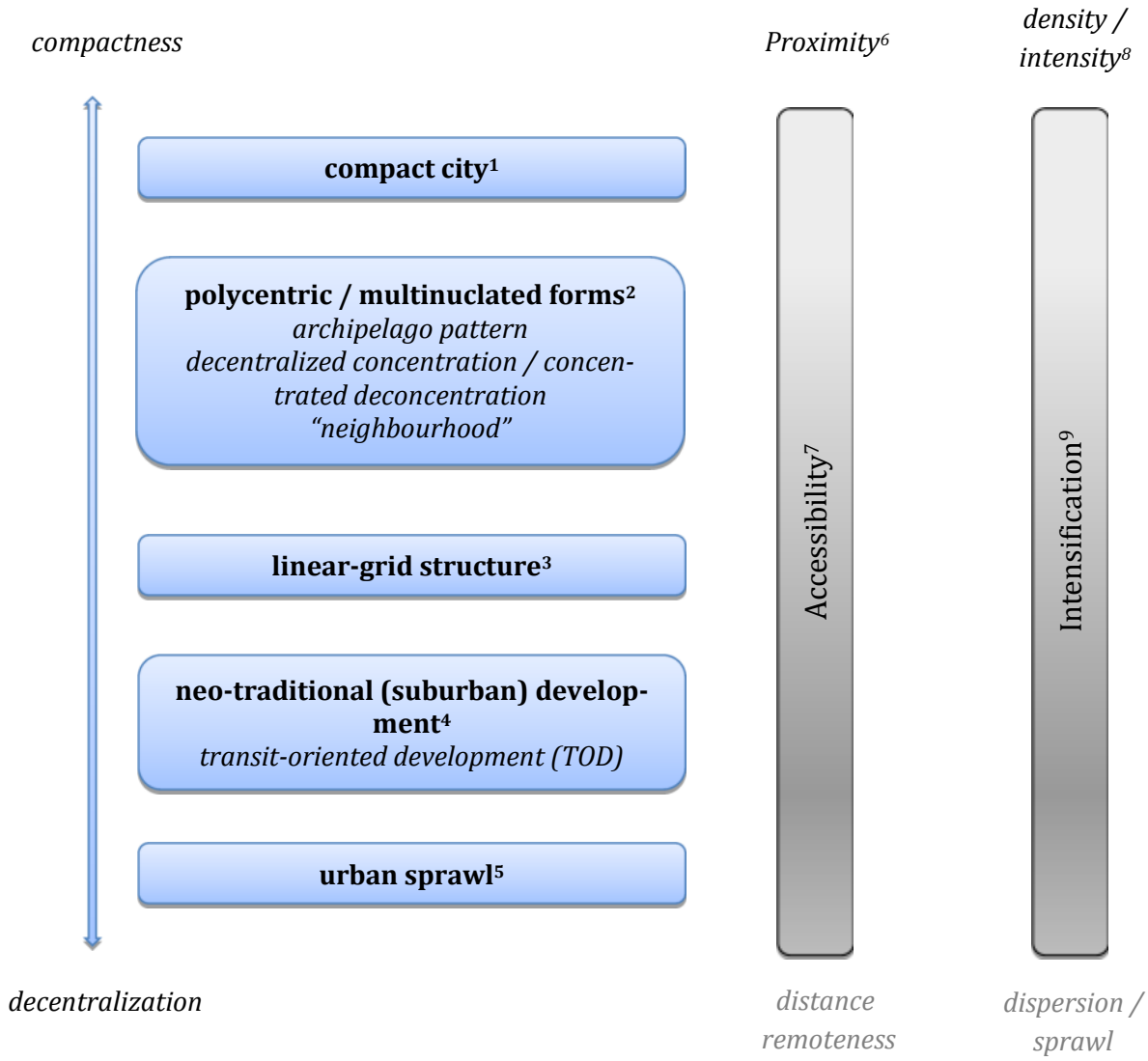



Figure 2. Causality chain between parameters of urban structure and energy implications

The *characteristics of the different parameters* (e.g. density, land use mix, settlement pattern) form *structural conditions* (e.g. accessibility, mix of facilities and services), which can be understood as "qualities" of a specific urban structure. Specific *structural conditions* induce then specific *causalities* or *mechanisms* that induce certain *energy implications*, e.g. a certain outcome of travel behaviour (modal split, journey frequency, travel distance etc.). The literature indicates that not only urban form parameters determine the relationship between the structural conditions and their energy implications, but a wider set of parameters needs to be included in order to sufficiently explain this relationship.

The identified causalities between urban structure (structural conditions) and energy use in cities are "translated" into concepts of urban structure which are supposed to facilitate efficient energy use. These theoretical concepts presented in the literature, that describe the relationship between urban form and energy use, range between the 'compact city' concept as summarizing term for towns and cities which "stress the merits of urban containment" (Breheny, 1995, p. 82) and 'decentralization' as referring "to all forms of population and industrial growth taking place away from existing urban centres" (Breheny, 1995, p. 87).

Figure 3 provides an overview of the different concepts of urban structure in the range between compactness and decentralization:




[1] Breheny, 1995; Christensen and Jensen-Butler, 1982; OECD, 2012; Owens, 1986; Rickaby and Steadman, 1992; Westerink et al., 2013
[2] Anderson et al., 1996; Breheny, 1995; Owens, 1986
[3] Owens, 1986
[4] Breheny, 1995; Calthorpe, 1993; Gordon and Richardson, 1997; Handy, 1992
[5] Breheny, 1995; European Environment Agency (EEA), 2006
[6] Anderson et al., 1996; Westerink et al., 2013
[7, 8] Westerink et al., 2013
[9] Jenks, 2000; Williams et al., 1996

Figure 3. Conceptualization of urban structure

Comparing the presented approaches it appears that compact urban structures and concentrated development at least facilitate and favour an efficient use of energy at the city level. In this sense, polycentric spatial structures (decentralized concentration) appear to provide an answer to the trade-offs arising from the pure compact city concept, since they are capable to diminish the disadvantages of a single compact city (e.g. too high densities) while keeping its advantages. Also they provide an alternative spatial principle for regions where compact city development is hardly feasible (e.g. sparsely populated regions).

The reasons for the divergence between (compact city) theory and planning practice are by Williams (1999) accounted also to policy implementation (process), as she questions the power of the (local) planning system to ensure intensification and also to manage its consequences. Complementary to this, Owens and Rickaby (1992, p. 251) consider "the absence of a supportive national policy framework" as one of the reasons that the "intellectual recognition of the links between settlement patterns, energy use and the environment has not yet been translated into real practical significance". Van Stigt et al. (2013) illustrate that the range of local options is determined by sectoral regulations from higher tiers of government when adopting the concept of environmental policy integration.

Furthermore we can conclude from the literature that changes in urban form can facilitate or affect, but not in itself constitute energy savings. Rickaby and Steadman (1992) found out that differences in urban form between different compact city models do not have significant implications on energy use; only competitive public transport systems and accompanying policies could induce reductions in energy use. Also Næss (2006) recognizes the necessity to complement transport reducing urban planning policies and measures with accompanying instruments in order to achieve significant changes. Mutually, public transport needs to be accompanied by land use and transport planning policies restricting car use and orienting development to transit nodes (Anderson et al., 1996).

In the backcloth of the main findings from the reviewed literature the relationship of urban structure and energy is further examined by using and applied approach, the investigation of three cases of medium-sized cities in Northern Europe.

## 4 Energy planning in three European cities

The investigated case cities contribute in different ways to the achievement of the "20-20-20 targets" [1] of the EU's climate and energy package. The cities' various efforts, current options and constraints towards increasing their energy efficiency will be discussed.

The following chapters are based on the results of the case studies that were conducted as part of the European project PLEEC (Fertner et al., 2015; Große et al., 2015; Groth et al., 2014).

Table 1. Key figures of Eskilstuna, Tartu and Turku (Giffinger et al., 2014)

| | **Eskilstuna** | **Turku** | **Tartu** |
|---|---|---|---|
| **Inhabitants in the municipality** | 99,804 | 180,225 | 97,847 |
| **Inhabitants in the larger urban region** | n/a | 316,634 | 150,528 |
| **administrative area of the municipality in km²** | 1,100 | 245 | 39 |
| **urban area of the municipality in km²** | 51 | 75 | 29 |
| **population density in inhabitants per km² urban area** | 1,945 | 2,403 | 3,396 |
| **Average number of persons per household** | 2.2 | 1.9 | 2.3 |
| **Final energy consumption per capita in MWh** | 26.5 | 35.3 | 13.0 |
| *share of transport in final energy consumption* | 16% | 9% | 20% |
| **Level of motorization - Registered cars per 1,000 inhabitants** | 450 | 420 | 250 |

[1] 20% reduction in EU *greenhouse gas emissions* from 1990 levels, raising the share of EU energy consumption produced from *renewable resources* to 20% and 20% improvement in the EU's *energy efficiency* until 2020

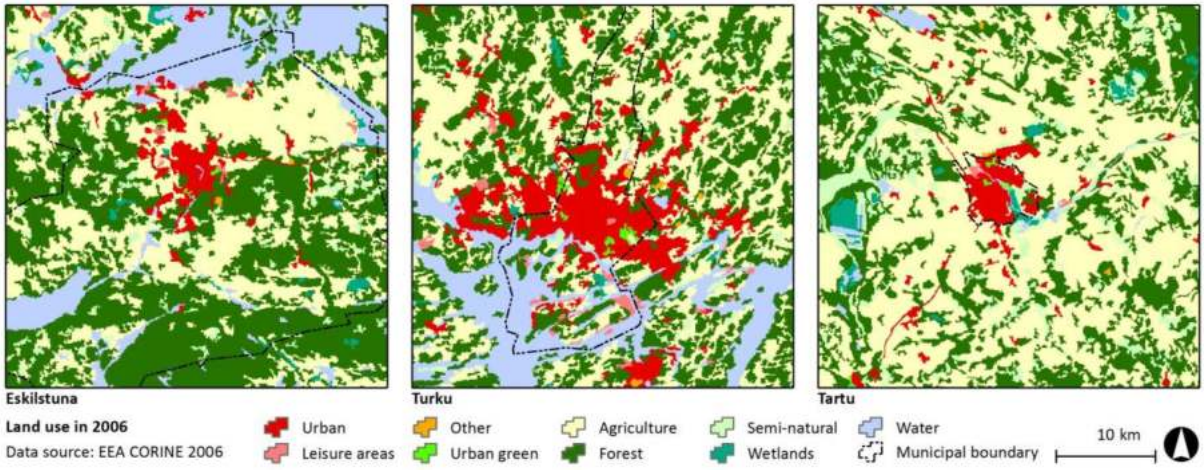



Figure 4. Land use and municipal borders of Eskilstuna, Turku and Tartu 2006

The key figures and the land use maps show the differences between the three cases in terms of their administrative boundaries and the actual urban area. While Eskilstuna municipality includes an area much bigger than the urban area, the urban area of Turku is significantly exceeding its municipal boundary. In Tartu the municipal boundary matches more or less the urban area, although tendencies of exceeding its boundaries are already visible.

Consequently, it is difficult to compare the cities' density or compactness only based on the key figures, they need to be related to the discussed area. Regarding the urban area, Tartu shows the highest population density, whereas Eskilstuna has the lowest density; Turku's density is amounted between Tartu and Eskilstuna, but it has to be considered that Turku urban area is much bigger than the municipal area which might result in a different overall density.

## 4.1 Eskilstuna

The Swedish municipality Eskilstuna, with almost 100,000 inhabitants (2013) [2] and a size of 1,250 km$^2$, is located around 100 km west of Stockholm and part of Stockholm's commuter belt. Eskilstuna is situated in the county Södermanland which is part of the Stockholm-Mälar Region, a polycentric region with about 3 million inhabitants. Eskilstuna marks a former major industrial location in Sweden; its population is since the 1970s rather stable between 90,000 and almost 100,000 inhabitants. Deindustrialization in the 1970s caused a pronounced decline in the number of jobs, making the city ripe for urban restructuring.

Comprehensive spatial planning is emphasized as a key instrument of sustainable development in Eskilstuna. Energy efficiency has become an almost omnipresent issue, integrated across sectors and between levels in the municipal organization and as such an issue of general commitment.

**Energy and urban development**

The biggest consumers of energy are households and transport. But their potentials for reducing the $CO_2$-emissions vary. With few exemptions transportation depends on fossil fuels, whereas energy consumption in households, mainly serviced by district heating, is composed by a number of energy sources, including an increasing amount of renewables operated by district heating plants as well as by individual house owners' initiatives. Only 25% of the electricity demand is provided by the local

[2] all eurostat (2014)

plants, thus, the main remaining part is imported from the national grid, i.e. produced by energy sources that are beyond the control of the municipality.

Regarding transport, the design of effective incentives to reduce fossil fuels remains the key challenge, also on the national level. Strong structural development trends that have increased transport both internationally and regionally exacerbate such efforts.

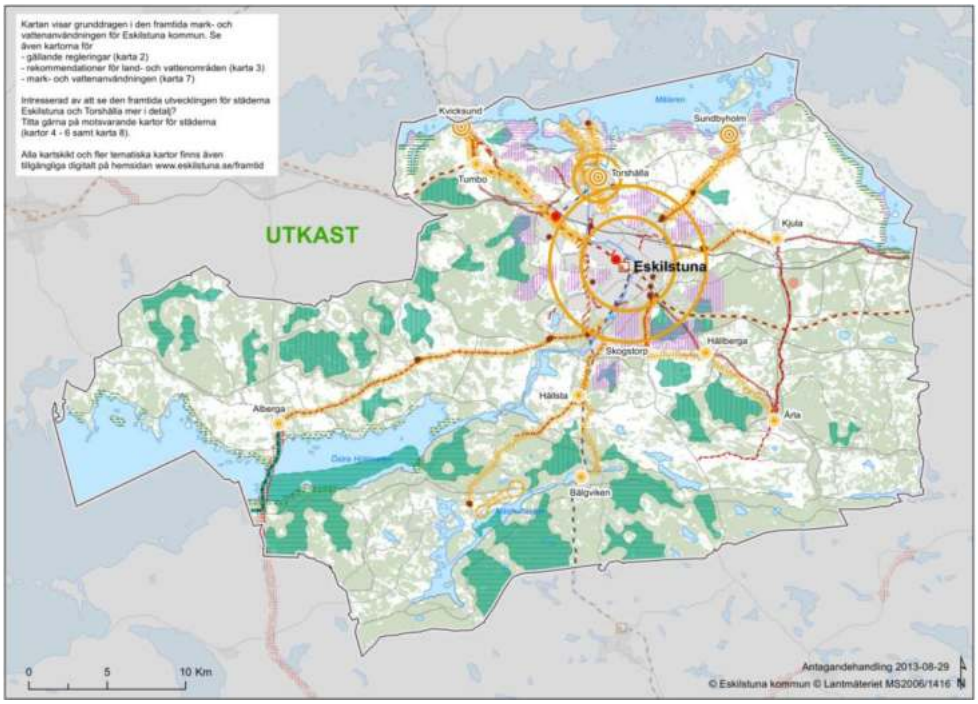



Figure 5. Development concept of Eskilstuna comprehensive plan (Eskilstuna kommun, 2013a)

Urban densification and urban connectivity to transport routes facilitated by public transport are generally acknowledged as the two main principles of energy efficient urban development in Eskilstuna. With the current comprehensive plan (Översiktsplan 2030, Eskilstuna kommun, 2013a) a radical decision was taken by abandoning former settlement planning in the attractive coastal area of the lake Mälaren. Furthermore, future urban development will be concentrated within or close to the existing urban cores as well as in connection with public transport links between these cores (Figure 5). Currently two thirds of the inhabitants live within 3 km of Eskilstuna city centre.

**Policy arenas**

Energy and climate policy is carried out at *two policy arenas*: The arena of the municipality acting as a concern ('planning') and the arena of the municipality acting as a stakeholder of energy initiatives ('strategy').

The municipal climate plans and projects are carried out with high level of effectiveness by the Eskilstuna municipal concern (municipal services, energy supply, public enterprises), which is in charge of all decisions concerning municipal planning, services and infrastructure. The climate strategies concerning the entire municipality have much larger potentials for e.g. $CO_2$-savings, but the development and implementation of such strategies relies upon partnerships to be established between the Eskilstuna municipal concern and e.g. private companies, organizations and the public, all of which operate outside the direct influence of the municipality.

The efficiency of the first is very high, due to an omnipresent 'sustainable thinking'. The total effect of the latter is, however, much larger, due to the size of the arena. For example, the concern's share of $CO_2$-emission reductions amounts only for 7% of the total reductions in Eskilstuna. The distinction between those two policy arenas is very relevant for the operational preparation of plans, projects and strategies.

**First- and second-order policies**

In Eskilstuna energy efficiency policies are developed subordinate to the basic drivers of economic development. Regional enlargement and entering Stockholm's labour market offered the municipality a way out of a long economic downturn from the mid-1970s to the late 1990s but is also facilitated by increased commuting. This development of the regional urban system is not questioned by the city authorities; it is taken as point of departure for policies that aim on compensating the effects of commuting; policies to enhance commuting by train rather than car and the development of a dense urban structure in hub-and-spoke patterns adjacent to public transport lines.

Although the municipality has a clear "climate oriented" strategy and a concrete orientation in planning within the municipal concern, two kinds of strategic planning are at play: first, matching trends in the outside world (e.g. 'threats' and 'opportunities') and second, setting up hierarchies of visions (strategy) and goals (plans and projects). In this sense, although the Transport Plan (Eskilstuna kommun, 2012) and the Climate Plan (Eskilstuna kommun, 2013b) contain concrete measures towards sustainable transport, these remain "mild answers to strong trends" as part of the latter strategy. Policies of energy efficiency are of *'second-order'* compared to the economically driven *'first-order'* development of the regional urban system coming along with increased transport.

## 4.2 Tartu

Tartu is with 98,000 inhabitants (2014) and a municipal area of roughly 40 km² the second largest city in Estonia after Tallinn, located about 180 km southeast of the capital and the centre of southeast Estonia. Tartu has no relevant big industries; the main employers are the municipality (incl. hospital) and the university. Energy related challenges occur from transport and residential (district) heating.

**Energy and urban development**

The highest share of emissions is allotted to energy production. In terms of energy sources Estonia is highly dependent on imports like oil and gas and the Estonian electricity production is to more than 90% based on Estonian oil shale. Due to Estonia's high dependency on resource imports, national efforts towards higher energy efficiency are rather driven by ambitions to decrease fuel dependency and secure energy supply than merely sustainability objectives.

Although, regional energy production and increasing the share of renewable and local fuels are considered as relevant measures, the above mentioned policy related goal conflicts are also reflected in the planning documents. Those lack concrete energy efficiency measures that affect urban energy policy. Municipal energy planning therefore has to deal with a different commitment to energy efficiency or sustainability than for example in Eskilstuna.

One major problem in Tartu is regional commuting, short distance commuting due to ongoing urban sprawl and far-distance commuting, e.g. to Tallinn. This is also caused by the orientation on the capital Tallinn, providing diverse employment possibilities. Thus, the modal split shows big differences between journeys within Tartu and journeys between Tartu and its surroundings. While the first shows a high share of public transport and walking, the latter includes a high share of car use, especially in work related travelling. A strong driver for this development is also the ongoing catch up with Euro-

pean standards of car ownership, the number of registered cars is constantly increasing in Tartu since 2008 (eurostat, 2014).

A development concept addressing those challenges is the concept of *"Low-density urbanized space"*, as implemented by the National Spatial Plan (NSP) "Estonia 2030+" (Ministry of the Interior, 2013). It is also transferred into the previous and current Master Plan of Tartu (City of Tartu, 2006). The concept aims to combine the concept of sustainable (compact) urban space with the low-density settlement characteristics in Estonia. By these means polycentric spatial structures (decentralized concentration) provide an alternative spatial principle for regions where compact city development is hardly feasible. Contrary, Tartu is facing ongoing *urban sprawl* and car-dependent commuting, also because planning documents assign new residential areas in the outskirts of the city.

**Scope of action**

The outlined challenges like regional commuting and urban sprawl require coordinated cross-municipal efforts on the regional level. However, the Estonian planning system allots the main responsibilities for planning activities to the local level, whereas the regional level (county) is rather weak. Estonia has 215 municipalities[3] and the municipal areas are quite narrowly confined. Thus, the local planning competences have a very limited scope of action, tied to the core municipal territory.

This implies a gap of cooperation on the regional level. Therefore, addressing problems that exceed the city scale is hardly feasible, which leads to dispersed urban development in suburban areas and contradicting interests and developments between neighbouring municipalities, since their interests reasonably exceed their municipal borders. In this sense also the Tartu City Transport Development Plan 2012-2020 (Tartu City Government, 2011) is limited to the municipal boundaries. Similarly demands of regional positioning and integrated planning within the functional urban area, as e.g. mentioned in the Development Strategy "Tartu 2030" (Tartu City Government, 2006), can be hardly addressed neither fulfilled. Hence, urban planning is 'locked-in' the framework of the local power relations and limited commitment to sustainability, not favouring efforts for urban energy efficiency.

## 4.3 Turku

Turku is with a population of about 180,000 inhabitants (2014) in the municipality and 316,000 inhabitants in the larger urban area the centre of the region Southwest Finland. Turku is situated at the southwest coast of Finland, about 150 km west of Helsinki. It is an important university town due to the presence of different universities and about 40,000 students living there.

Since industrialization Turku has also been an important industrial town. Today, after considerable restructuring of the industrial sector, 79% of the jobs in the city of Turku are within services. Besides its economic base, Turku is experiencing a change in the former prevalent urban sprawl, characterizing urban development since the 1950s. The city is densifying and promoting sustainable urban development, though, with several growth centres at a regional scale. Today, approximately one-third of the 150,000 jobs in Turku's urban region are located in the centre of Turku, while the rest are located elsewhere in the urban region.

**Compact city and polycentricity in a low density country and on a voluntary cooperative basis**

Turku has experienced extensive urban growth since the 1950s. While the municipality of Turku is stagnating since the 1970s, the city region has grown further, resulting in a large urban area and a dispersed settlement structure in the fringe. Thus, Turku is, as many Finnish cities, urbanizing but in parallel undergoing tendencies of urban sprawl, inducing regional and car-dependent commuting as far as

[3] Currently a reform to join local governments (municipalities) up to a minimum amount of inhabitants (e.g. 5,000) is in process.

to Helsinki. This urbanization trend needs to be operationalized as a chance towards more energy efficient urban structures.

The traditional low density settlement structure in Finland marks a key challenge; similar to Estonia, urban settlements are dispersed and long-commuting distances are usual. Furthermore, Finland is characterized by a fragmented municipal structure, especially in urban areas, and extensive municipal self-government competencies. Regional coordination is therefore dependent on voluntary collaboration of municipalities. Consequently, it is – despite ambitious targets in energy efficiency issues – very difficult to address problems crossing municipal borders, whereon – in terms of urban sprawl – the main effort should be directed.

In the beginning of the 1990s Finland underwent an "exceptionally deep" economic depression, which turned out to become a turning point in the Finnish planning. Municipalities started to review their relationship to the private sector and their administration and organization methods in favour of an incremental and project-based planning. This turned out to have a major impact on local land-use planning; "[t]he local plan is not made as a proactive regulative statement to guide future urban development, but rather as a reactive document whose primary function is to provide the judicial legitimation for development decisions made elsewhere" (Mäntysalo, 1999, p. 179).

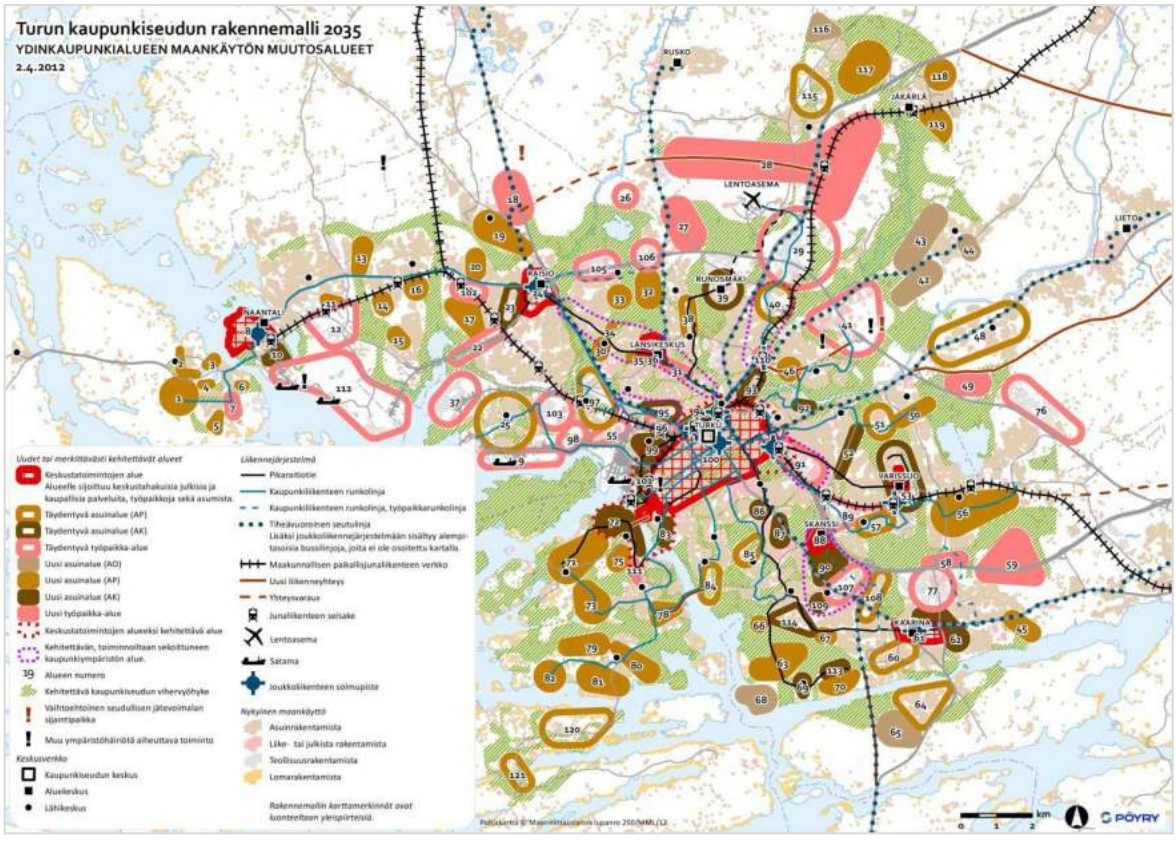



Figure 6. Regional structural model 2035 (City of Turku, 2012)

To coordinate urban development, Turku and 13 neighbouring municipalities have set up the "Regional structural model 2035" (City of Turku, 2012) as a common land use strategy, developed out of the national municipality reform. The Structural model 2035 aims on common objectives for all significant land use activities and focuses on more compact urban development along public transport corridors (Figure 6). It can be considered as a remarkable step towards policy and planning coordination on a regional level.

**Current urban development and energy supply**

Despite decreasing importance, industry is still an important sector for the city and not least for the wider region. From an energy perspective, industry is though important, e.g. as big customer of the district heating system, which makes district heating in some areas feasible. However, industrial development can also be seen as a hamper for the sustainability goals of the city.

The waste incineration plant in Turku was closed down, also because its old technology did not match with the general goals of an environmentally friendly city development. A sustainable industrial development has therefore also been seen in the light of new, renewable energy sources and how those are distributed.

Skanssi is a new urban development area in the southeast of the city centre of Turku. It is a pilot project for an integrated energy supply and demand system, mainly operating self-sufficiently.
Both, the lasting importance of industry and the development of a new urban area, reflect ongoing growth tendencies of Turku. Hence, Turku is facing the challenge to connect growth policies, by attracting population and industries, and energy efficiency policies.

## 5 Reconsidering urban structure

Energy consumption corresponds with urban development. Accordingly, principles of urban development, notably urban structure, are supposed as crucial for energy efficiency. This study provides evidence for the need to reconsider the understanding of urban structure when discussing energy efficiency.

The reviewed literature on the relationship of urban structure and energy addresses mainly parameters of *urban form* (morphology), such as settlement pattern and shape, density and land use mix, and their energy implications. Although some contributions add parameters related to *urban functioning* (e.g. communication, transportation system, location in the urban system) or acknowledge the relevance of *socio-economic factors*, the main focus sticks to a spatial perception (urban form) of urban structure; both terms are often used synonymously.

We argue, that the structural conditions, which have certain energy implications, are not only determined by *urban form* (morphology, configuration and compilation) related parameters, but include dimensions related to *urban functioning* (urban system, city-region and flows) and *urban administration* (policy, planning and governance) as well as that considerable interrelations and interdependencies between those dimensions exist. Hence, this paper suggests and applies an extended understanding of urban structure, including a *functional* and *administrative* dimension (Figure 7).

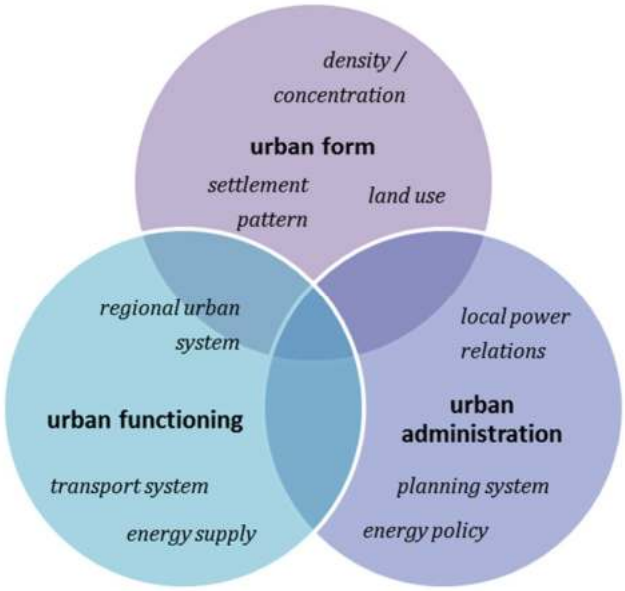



Figure 7. Dimensions of urban structure and exemplifying parameters

*Urban functioning* describes how the "system city" works; it includes all kinds of urban flows and interactions, like the transportation and energy system, as well as a city's position in the regional urban system. *Urban administration* describes the organization of the "system city" and includes the relevant organizing principles like the planning system, the local power relations and driving policies. We argue that addressing *urban form* to increase a city's energy performance requires considering *urban functioning* and *urban administration* in terms of providing adequate conditions to enable implementation as well as accompanying policies in order to exploit the potential of urban form. Urban functioning and administration inherit also additional potential to improve energy efficiency on a city level.

**Urban form – urban administration**

All three case studies exemplify how the actual scope of action of a municipality is determined:

- By the allocation of planning competences to the national, regional and local level,
- the territorial scope of a municipality, defined by the municipal boundaries or
- the coverage of a municipal concern, like in Eskilstuna.

Strong planning competencies at the local level combined with narrowly confined municipal boundaries, like in Estonia and Finland, imply a gap of cooperation on the regional level. Consequently, development challenges that cross municipal borders can only be addressed on voluntary effort between municipalities. But problems of regional and long-distance commuting in all three cases show that questions of energy efficient urban development are not tied to the core city level; they require a wider perspective taking into account the regional urban system ('functional urban area') and questions of regional positioning within that system. Also Jørgensen and Ærø (2007) recognize formal and cooperation based weaknesses on the regional level in the Nordic countries and thus, difficulties in handling problems exceeding municipal borders.

The scope of action for municipal urban planning (municipal planning authority) and options to include energy issues in urban development are framed by the organization of the planning system and the local power relations. The capability of urban planning to influence urban form, e.g. by land use

planning, is strongly related to the allocation of planning competencies as well as the interdependencies between the different planning authorities and stakeholders, namely urban administration.

**Urban administration – urban functioning**

Constraints in addressing energy efficiency in urban development can also originate from contradictions in leading principles in national or local policies as well as the need to react to trends in the outside world.

The case of Tartu illustrates that the actual commitment to sustainability or the driver behind energy efficiency in national and urban policies determines both the content and the total effect of set up objectives and measures – either energy efficiency is a subordinate or a leading principle. This is in line with Jørgensen and Ærø (2007) who attest the state a still strong role in urban policy ('national urban policy'). Solving urban problems on a local level requires backing from the state level; but likewise the state requires strong stakeholders on the local level in order to conceive and implement its urban policy (Uitermark, 2005).

In the case of Eskilstuna it is not a lack of commitment to sustainability but a twofold strategy in urban policies, following first-order economically driven policies and downgrading energy efficiency as a second-order policy. This twofold strategy is partly a reaction to trends from the outside world, but it is also taken for granted and negative effects of those are compensated by second-order 'sustainability' policies.

Both cases provide examples for policy trade-offs that originate from goal conflicts – either due to subordinate commitment to energy efficiency or ambiguities in the development strategy. These conflicts take place in the interplay between urban administration and urban functioning, as how energy efficiency is carried out in first- or second-order policies.

**Urban form – urban functioning**

The differences between the three cases regarding their municipal area in relation to their actual urban area exemplify the interrelation between urban form and urban functioning. Eskilstuna municipality comprises its urban region whereas Turku and Tartu municipality hardly comprise their urban area. Therefore, Eskilstuna municipal planning can address urban form, as related to the core urban area, and the surrounding regional urban system; Tartu and Turku municipal planning is, however, tied to the core urban area, or even less in Turku.

But, for example the way people travel is not sufficiently explained by the characteristics of urban form, as also the case studies show. Specific characteristics of urban form parameters can facilitate sustainable transport, but urban form alone does not determine specific energy consumption patterns. Travel patterns are for example strongly related to a city's positioning in the regional urban system, as the case of Eskilstuna in regional commuting to Stockholm shows.

Urban form, as related to the urban area of a city, is in some respects overlaid by the regional urban system.

**Three dimension of urban structure**

The cases reveal limitations and obstacles in urban development towards increasing energy efficiency. Thereby the cases illustrate also the interrelation and interdependency between urban form, functioning and administration and provide evidence that addressing energy efficiency from an urban structure related angle requires a broader understanding of urban structure than limiting it to urban form.

Limiting urban structure to urban form implies also to neglect factors besides urban form, like the traffic flows within the regional urban system (regional commuting) or the organization of public transport, which are crucial for the successful implementation of energy efficiency efforts.

The reviewed literature indicates and the case studies show clearly, that understanding and responding on the relationship of energy and urban structure requires taking e.g. organizing principles like local power relations, the planning system and energy policy as well as the embedment of a city in its regional urban system, the transport and energy system into consideration.

Furthermore changes in urban form are difficult and long-lasting processes. Urban functioning and administration, however, are likely more accessible to induced changes, within the scope of action of municipalities, than urban form.

## 6 Conclusions

The capacity and options of urban energy planning to influence urban energy efficiency are determined by the interplay between *urban form*, *urban administration* and *urban function*. Although the presented cases are quite different regarding the framing conditions, like the planning system, the economic situation and their positioning in the regional urban system, the constraints towards energy efficient urban development show similarities. Just as well face the cities similar challenges: tendencies of ongoing urban sprawl and regional commuting, strongly related to their position within the regional urban system. The outlined constraints mark as the same time aspects which can be affected in order to increase the capacity of urban energy planning. Addressing energy efficiency from a structure-related angle requires addressing urban form, administration and function as an integrated policy package. The study shows furthermore that applying this broader understanding of urban structure turns out as a suitable framework towards energy efficient urban development.

Urban structure is part of the sphere of influence of the municipal planning authorities and can hence (according to the framing national policy) be operationalized through urban planning as competence. Municipalities can act within and affect the three dimensions of urban structure which enables cities to contribute to the achievement of the 20-20-20 targets – decreasing $CO_2$-emissions by working on sustainable transport, increasing the share of renewable sources by local energy generation as well as increasing energy efficiency through building refurbishment, combined-heat-power generation and regional product cycles.

Nevertheless, the paper illustrates that addressing urban energy efficiency also requires an understanding of urban planning that is not restricted to municipal planning authorities. Urban planning needs to apply a cross-level and cross-sectoral form of policy integration, which exceeds public (municipal) boundaries and involves actors and stakeholders from outside the established public institutions and hierarchical decision-making chains, in order to enlarge its scope of action and respond to the actual local power relations.

The study shows that, with regard to increasing the use of renewable sources as well as urban resilience and self-sufficiency, the relevance of urban energy production as well as a city's heat energy and electricity consumption requires further discussion. Moreover, the policy trade-offs as a result of goal conflicts which take place in different stages and levels of national and urban governance and determine the policy outcome remarkably need to be further investigated in terms of their causes and how to handle those dilemmas.

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# From Urban Sprawl to Land Consolidation in the Suburban Shanghai: A Perspective of Property Rights Reconfiguration

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*Since the 1980s, China has witnessed significant city growth, and the Chinese version of urban sprawl emerged all over the country. Within the last more than two decades, the non-agricultural land of Shanghai expanded quickly, more than doubled. Under the strict land quota system, Shanghai municipal government has to transform Greenfield development approach to land consolidation strategy. Under the policy of "Increase and Decrease Balance" land use policy, Shanghai government started to consolidate the rural construction land to acquire extra quota for the state land through transferring development rights from the collective land to state land, and established a three-level land consolidation planning system. This paper firstly examines the expansion of non-agricultural land in Shanghai since 1990, and explains the policy arrangements of land consolidation from the perspective of property rights configuration of state land and collective land. Taking Xinbang Township as an example, this paper examines the roles of various stakeholders, the municipal, district and township government, local villagers and entrepreneurs in the land consolidation and the impacts of land consolidation on them. It concludes with discussion and policy implications in the future land consolidation.*

Key words: Land consolidation; urban sprawl; property rights reconfiguration

## 1. Introduction

China has experienced drastic changes in land use since the initiation of economic reforms in 1978, and the loss of farmland has been primarily driven by urbanization and industrialization (Lin and Ho, 2003; Liu *et al.*, 2008; Long *et al.*, 2007; Long *et al.*, 2012). As the trends of urbanization and industrialization show no signs of abating, the pressure on farmland coming from both urban sprawl and uncontrolled expansion of rural constructive land has raised great concerns on food security (Huang *et al.*, 2011). In order to curb the sprawl of non-agricultural land, the Chinese Central Government has introduced the strict farmland protection policy through the land quota system, meanwhile, in order to alleviate the pressure of substantial demand for city growth, it adopted the "increasing vs. decreasing balance" (IDB) land use policy to transfer the development rights from collective land to urban state land. In 2014, the Ministry of Land Resources of China further claimed that "…cities with more than 5 million will not be allocated land quota except residential and infrastructure land"[1]. Under the more and more stringent land control policy, many cities, particularly the large cities, have to transfer the strategy of

[1] http://news.xinhuanet.com/house/sh/2014-02-20/c_119417080.htm, accessed on 02/03/2014.

Greenfield development to land consolidation in order to acquire the new space for growth.

Traditionally, land consolidation has been a favorable device for solving land fragmentation and has been applied in many countries around the world. As strategy of managing land use, land consolidation has been extensively discussed in the existing literature (Miranda *et al*, 2006; Sklenicka, 2006; Tang *et al*, 2012; Dijk, 2007; Demetriou *et al*, 2012; Wang *et al*, 2012). Recently, there has been some research on local land consolidation practice of China fuelled by the IDB policy (Long *et al*, 2011; Long *et al*, 2012; Wang *et al*, 2014). Nevertheless, little research has been conducted from the perspective of land property rights re-configuration, which plays a critical role in facilitating land consolidation and reshaping spatial structure. This research is thus an attempt to fill this gap by taking the land consolidation in the suburban Shanghai as a case and focuses on the following issues: (1) how has the land consolidation re-configured the land property rights of collective land and state land? (2) What are the costs and benefits of various stakeholders in the land consolidation process in the suburban Shanghai?

Using a case study approach, this paper is organized as follows: the next section examines the role of property rights in land consolidation, and the introduction of IDB land use policy and land consolidation practices in China. The third section introduces the background, the planning and policy framework of land consolidation in the suburban Shanghai. Then, the case of Xinbang township is analyzed to explore the costs and benefits of various stakeholders with the reconfiguration of land property rights. The last section concludes with future policy implications, involving consideration on flexibility of policy-design and social equity issue in the land consolidation.

## 2. Dual land ownership and land consolidation in China

### *2.1 Institutional arrangements behind the land consolidation in China*

Two types of land ownership coexist in the current land administration system of China, namely, state-owned land in the urban area and collective-owned land in the rural area. While the establishment of the Land Use Rights System in 1988 has allowed the lease, transfer and sale of urban land at different time limits, in rural areas collective ownership has allocated farmers plots of land that they can use for cultivation and for building their own houses, which has been called *Zhaijidi* in China. Collective land can be inherited, but it cannot be converted to urban use without going through state requisition. Through strictly drawing a line between urban land and collective land, the Chinese government has created a dual land management system (Tian, 2008).

The role of property rights in land development is a central issue in land consolidation. The reconfiguration of land property rights affects land development and economic performance (Besley, 1995; Field, 2005; Galiani, 2010; Goldstein & Udry, 2008). A property right is the exclusive authority to determine how a resource is used, whether that resource is owned by the government, by collective bodies, or by individuals (Alchian, 2008). Bromely (1991) further indicates that property is not an empirical possession but rather is a social relation that defines the property holder with respect to something of value against all others. Therefore, property rights are also a factor of production. Property rights can be altered among individuals and groups to accomplish certain desired ends.

In the realm of land policy-making, the relationship between the State and the property owner has always been an important and sensitive issue, politically and economically. In most cases, the property rights have been defined by the State through a series of tools such as land laws, land use regulations and land taxation. The state, however, is not free of restraints in defining property rights in land. On the one hand, the state has its own national planning aims and preferences in different development periods. Property rights over land as basic instruments of overall development policy, perform both an indirect, facilitating role and a direct and active one, and therefore exert a great impact on urban development, in terms of both efficiency and equity (Doebele, 1988; Payne, 2001); on the other hand, the state cannot go too far for its own interests or impede the security of tenure, for the security is essential to stimulate the individual initiative necessary for economic development. The state therefore has to strike a balance between efficiency and equity (Tian, 2014).

*2.2 Increasing vs. decreasing balance land-use policy under the land quota system and development rights transfer from collective land to state land*

In 2003, with the tightening national land policy, the central government of China strictly enforced a land quota system that restricts the maximum amount of newly added land used at the subnational level, but gives local governments enough autonomy to determine sectorial allocation of land quotas within their jurisdictions (Cai，2011). Meanwhile, the rural-urban migration has led to relative stagnation in China's rural sector, but the expansion of rural construction land has never stopped. While the rural population decreased by 98.6 million within the period of 1996-2007, the area of rural housing land increased by 1180 $km^2$（Qiu *et al*, 2010）. Therefore, the pressure of urban land demand generated by rapid city growth and the inefficient rural land use coexist in China.

Realizing that the consolidation of low-efficiency rural construction land can be a valuable source of farmland reclamation, the central government introduced the "increasing vs. decreasing balance" (IDB) land use policy in 2005, which seeks to balance increases in urban construction land with a reduction in rural construction land (Long *et al.*,2011). The key objective of the IDB policy is to achieve equilibrium in the supply of land in China by balancing increases in urban construction land (driven by urbanization) with decreases in rural construction land (facilitated by out-migration). Former rural construction land could consequently be reclaimed as agricultural land, thus supporting food security goals and broader socio-economic development in rural areas. The program is to be implemented at a county level, and the local government needs to bear all cost to acquire the land quota. In nature the IDB is top-down, focusing on spatial-territorial reorganization, administrative reorganization, and industrial reorganization (Liu *et al.*, 2009; Long *et al.*, 2012; Wang *et al.*, 2014).

The mechanism of IDB is similar to that of the Transferable Development Rights (TDRs) widely applied in the United States. TDRs have emerged based on the underlying principle that the development potential of privately held land is in part a community asset that government may allocate to enhance the general welfare. In concept, TDR serves the development potential from the land and treats it as a separately marketable item. It is viewed as a means of providing an equitable return on land investment to property owners whose returns otherwise would be lessened by regulatory activity (Tian, 2014). In the framework of

IDB, the development rights of rural construction land are transferred to other designated area where the same amount of land quota can be granted, and the original land owners can receive compensation in kind. The difference from TDRs is that the transferred development rights can only be sold to the government, and thus local government can capture the differential rent between the rural construction land and urban construction land.

### *2.3 Land consolidation under the IDB policy in China*

Land consolidation is a technique for carrying out the unified servicing and subdivision of separate landholdings for planned urban development (Farvacque and McAuslan, 1992). It is designed as a vehicle to be applicable in countries with rapid growth, rapid increasing land value, and insufficient funds to provide urban services. Unlike outright purchase, land consolidation returns to each owner a substantial portion of the land originally owned in a location as close as possible to the original site. Therefore it is more politically acceptable than outright purchase or expropriation, which requires reducing all land values to specific cash sums (Tian, 2014).

Since the promulgation of IDB land use policy, the land consolidation has been widely implemented in China. From 2005 to 2010, the land consolidation was carried out in 27 provinces (including municipalities directly under the central government), and the transferred land quota reached 450,000 mu (Wang *et al.*, 2012). With the application of IDB land-use policy, a number of successes, such as improvements to rural infrastructure and releasing the potential of rural land resources, have been achieved. However, the top-down nature of the programme has proved controversial, and generated conflicts and compromises to the scheme when local actors have refused to comply in the way anticipated (Long *et al*, 2012). Wang *et al.* (2012) argue that the local government has taken the advantage of the IDB to capture the land rent of collective land, and farmers have not been adequately compensated. Tu (2010) criticizes that the IDB policy was misinterpreted, and local governments withdrew villages to get in return the construction land quota. As a consequence, many farmers who lost their housing land were forced to live in high-rise building.

## 3. Land consolidation in the Suburban Shanghai: Rationale, objective and policy arrangements

### *3.1 Urban sprawl and its consequence in Shanghai*

Since the middle 1990s, Shanghai has been expanding at the fastest speed ever. From 1946 1996, the construction land of Shanghai grew by 1,228 $km^2$ within five decades, however, the construction land had rapidly expanded from 1,705 $km^2$ in 1996 to 3,073 $km^2$ by then end of 2014 with an increase of 1,368 $km^2$ during less than three decades. From 2000 to 2014, the permanent population in Shanghai increased from 16,096,000 to 24,257,000, up by 51% (Figure 1). During the same period of time, the construction land grew from 1996 $km^2$ to 3,073 $km^2$, by 54%, indicating a higher growth rate than that of the population (source: Shanghai Municipal Planning and Land Resources Bureau).

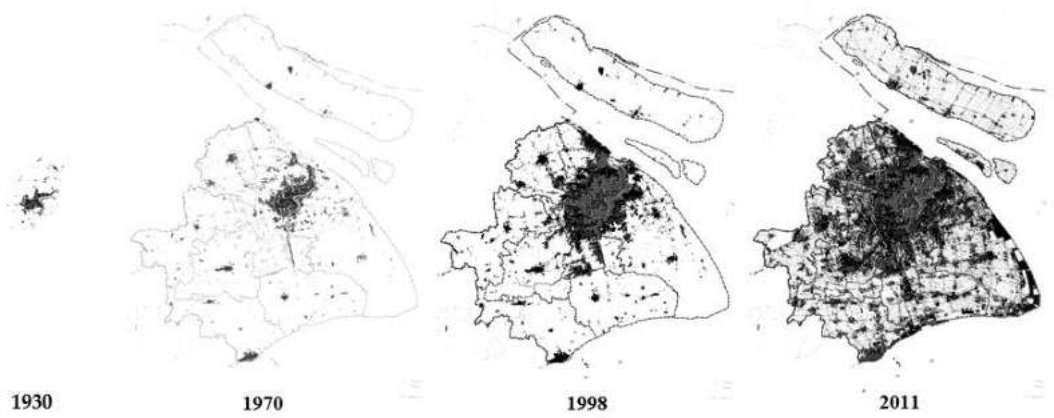


Figure 1 The expansion of non-agricultural land in Shanghai

In order to curb the urban sprawl, Shanghai municipal government designated the boundary of "Concentrated Construction Area (CCA)[2]" and a "Red Line of Eco-security" in 2008. However, there is a large amount of *status quo* construction land outside the CCA and above the eco-security red line, and most of that is industrial land. In 2012, the industrial land outside the CCA amounted to 188 km², accounting for 39% of all construction land outside the CCA and 25% of the total industrial land in Shanghai. Nevertheless, its contribution to Shanghai's total industrial output value was less than 10% in 2012. Generally speaking, this scattered industrial land share the same problems such as low production efficiency, highly energy-consuming, resulting in serious environmental problems.

The uncontrolled sprawl of non-agricultural land has led to many urban problems, such as air pollution and traffic jam. By the end of 2014, the share of construction land reached to 48% of the total land area in Shanghai, and the ecological space has been seriously squeezed. In recent years, environmental problems have been generating more and more adverse effects on people's daily life. For instance, in 2013, the haze days of Shanghai came at 61% (Source: Shang Meteorological Service). In addition, in order to curb the further sprawl of non-agricultural land, in 2011 the central government put a ceiling on the area of non-agricultural land in Shanghai: 3,226 $km^2$, yet this figure reached to 3,073 $km^2$ in 2014 (Source: Shanghai Urban Planning and Land Resources Bureau). In other words, only the land quota of 153 $km^2$ can be reserved for the future growth of Shanghai.

*3.2 Transition of growth strategy under the strict land quota system*

In the face of the urban land shortage, Shanghai municipal government has to reconsider and adjust the previous Greenland development strategy. In 2010, Shanghai government started to make the land consolidation plan outside the CCA. Based on this ambitious plan, 380 $km^2$ of rural construction land outside the CCA will be reclaimed as farmland. Under the IDB policy, the new quota for non-agricultural land can be created, and these quotas can be transferred to the CCA and sold as state-owned land. In other words, while the rural construction land is reclaimed as farmland outside the CCA, the same amount of urban

[2] CCA is similar to the Urban Growth Boundary in the United States, and any newly-added non-agricultural land has to be located within the boundary of CCA.

construction land can be added in the CCA on the grounds that the land use efficiency of rural construction land is fairly low but that of urban construction land is much higher.

### *3.3 Policy and planning framework of land consolidation*

#### 3.3.1 Targets of land consolidation

In the suburban Shanghai, construction land to be consolidated include the scattered, discarded, idle and low effective construction land outside the CCA. To be specific, it covers 5 types of land use: industrial land, *Zhaijidi* land, urban land, land for transportation facilities and water conservancy facilities land, and religious and military land. In view of the objective of environment pollution treatment, consolidation of industrial land outside the CCA has been on the primary agenda of Shanghai municipal government. The consolidation of the *Zhaijidi* land outside the CCA will be based on local situation and willingness of local residents. Since the *Zhaijidi* land is rather scattered, it is financially difficult to provide basic public service and supporting facilities to all rural residents. Promoting the compact *Zhaijidi* land use is also a key part of land consolidation strategy.

#### *3.3.2 Managing mechanism of land consolidation*

In the Shanghai suburban area, the development rights of rural construction land is transferred to other designated area, and the original land owners can receive compensation in kind. The differences from TDRs are as follows: (1) the transferred development rights can only be sold to the government under the IDB; (2) the compensation standard will not be based on the market value of the collective land rights (in theory, the collective land does not have a market value), but based on compensation standard made by the government. Therefore, the land consolidation is top-down by nature, and lacks a bottom-up facilitation procedure.

Realized that the CCA is not flexible enough to accommodate the new space, Shanghai government designates “semi-CCA” outside the CCA as the receiving area of transferred development rights. Semi-CCA has been used as the space for the relocation of *Zhaijidi* land owners and Economic Development Land (EDL) of rural collectives. For the sake of reserving enough space for improving industrial structure, no commodity property development is allowed in the semi CCA. In principle, the area of semi-CCA is 1/3 of the total area of reduced construction land. The other 2/3 land quota will be purchased by the district government at the average price of around RMB one million per mu. Figure 2 shows that the process of land consolidation.

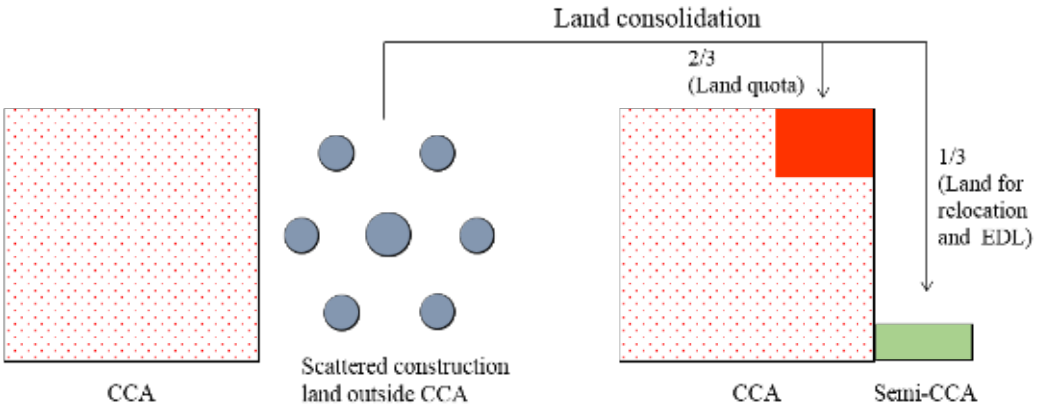


Figure 1 A schematic illustration of land consolidation process in the suburban Shanghai

*3.3.3 Financial support and compensation for the original land users*

Land consolidation involves clearing up existing settlements, reclamation of farmland and new construction in the semi-CCA, and it is rather costly and time-consuming. Taking the land consolidation of Xinbang Township, Songjiang District of Shanghai as an example, the local government estimated that the cost of land consolidation will be RMB 2.4 billion Yuan. If all of the 104 towns outside the CCA start land consolidation, the total cost may exceed RMB 250 billion Yuan. Therefore, Shanghai municipal government and district government have to set up special fund to support land consolidation.

Compensation for the relocated farmers varies from district to district. A typical way is that the *Zhaijidi* land where the villagers originally lived will be replaced by an apartment with equal floor space after the villagers move to semi-CCA from the village. The contracted farmland cultivated by the farmers still belongs to them. However, in reality most farmers of Shanghai are no longer engaged in farming, and they usually transfer the right of management to the cooperatives or professional companies and earn annual rent. Moreover, the collective economic organization can acquire EDL at fair price or free of charge in the semi-CCA, and villagers can obtain annual dividend from the rent of collective property. Cash compensation has been also applied in some areas.

The compensation for the relocated factories owners is based on the land area. There are two kinds of policies of compensation: it is generally RMB 900 Yuan/$m^2$ for the enterprises with legal land property right and lease contract, but only RMB 200 Yuan/$m^2$ for the industrial enterprises without legal property rights. In addition, compensation for the operating loss and relocation cost is also paid based on the assessment of the third party.

*3.3.4 Planning response to land consolidation in Shanghai*

In order to carry forward the progress of land consolidation, Shanghai government constructed a three-level land consolidation planning system comprising "metropolitan land consolidation plan (MLCP) → district and county-based land consolidation plan (DLCP) → township-based land consolidation plan

(TLCP)". While the former two are more strategic, the TLCP is the implementation plan. MLCP defines the task of Shanghai by 2020, quantifies the land area to be consolidated and allocate the task to district and county. Based on the MLCP, DLCP determines the key implementation area, further decomposes the land consolidation task to towns.

TLCP is a comprehensive planning involving land use, spatial layout of various facilities including infrastructure and ecological facilities. Meanwhile, it is a policy-oriented plan: it needs to identify the boundary of reduced land and newly built land, and make the cost analysis. In the suburban Shanghai, there have been 104 townships outside the CCA, and the TLCP of most of them have been made.

## 4. A Case of land consolidation: Xinbang Township

*4.1 Study area and research methods*

Xinbang Township, located in the southwest of Shanghai suburb, is about 60 km away from the downtown and it is affiliated with Songjiang District (Figure 3). It covers the land area of 4474.98ha, and its land use structure has been illustrated in 2010 based on the second national land survey (Table 1). Xinbang Township is situated at the water source protection area of Huangpu River, its expansion, particularly industrial land growth, has been restricted to a great extent.

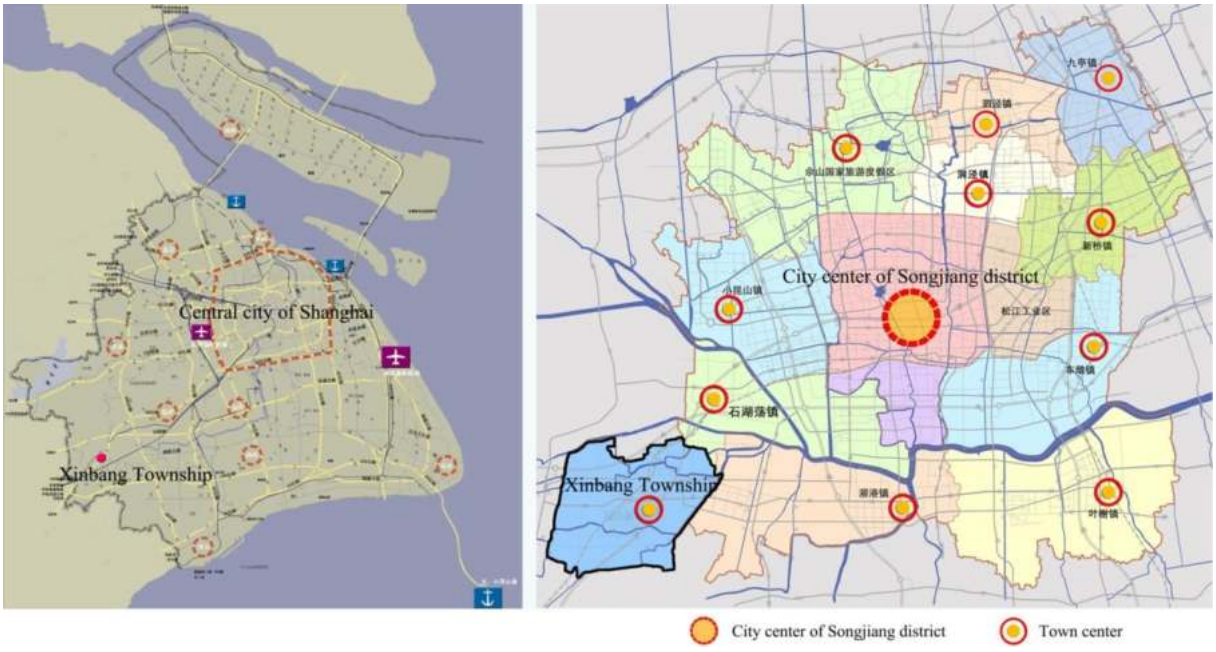


Figure 3 Location of Xinbang township in Shanghai and Songjiang

Table 1 Land use structure of Xinbang Township in 2010

| Land use type | Farmland | Construction land | | | Unutilized land | Total |
|---|---|---|---|---|---|---|
| | | Urban industrial and mining land | *Zhaijidi* land | Rural industrial land and others | | |
| Land area(ha) | 3163.96 | 345.17 | 270.21 | 401 | 294.89 | 4474.98 |
| Percentage in total | 70.70% | 7.71% | 6.04% | 8.96% | 6.59% | 100% |

In 2013, there were 11 administrative villages under Xinbang Township, and the township had the population of 37,527, among which 26,123 are residents with *Hukou*, and 11,405 are migrants, and its urbanization rate was 30%. The GDP of Xinbang Township reached RMB 2.135 billion Yuan, up 1.7% over 2012, and the local fiscal revenue were RMB 130 million Yuan. Table 2 presents the economic development of Xinbang Township and Shanghai municipal area, and we find that compared with that Shanghai municipal area, the economic development index of Xinbang township is much lower. The GDP per capita of Xinbang was 70.5% of that of Shanghai, and the disposable income per capita was only 51.8% of that of Shanghai.

In this research, we combine both qualitative and quantitative research. Firstly, the research team made extensive and intensive interviews on the stakeholders, including Shanghai municipal government, the Songjiang district government, Xinbang township government, village collectives, villagers and relocated factory owners, to understand the mechanism of land consolidation, and analyze the costs and benefits of various stakeholders in the land consolidation process. Moreover, we organized the villagers' meetings under the help of village leaders and heard about their voice. Then we distributed 120 questionnaires among the 3 administrative villages: Xinbang village which is closest to the town center, Linjian and Nanyang village which are several kilometers from the town center, and 106 effective ones were collected. The questionnaire covers the information such as age, income and job, *Zhaijidi* land, the attitude of local residents towards the relocation and expected compensation in the land consolidation. While replying the question on their attitude towards consolidation, more than 90% of villagers in Linjian and Nanyang expressed their support. In the Xinbang village, 81% of villagers said that they agree with the consolation, and the remaining 19% did not clarify their position, partly because that they expect higher compensation standard than that provided by the government. As for the relocated place, the majority of villagers expect to move to the city center and town center to use the public and service facilities. In Linjian and Nanyang village, more than 60% of villagers expect houses with floor space between 150 and 200$m^2$, but 56% of villagers in Xinbang expect higher compensation standard, more than 200$m^2$.

*4.2 Land consolidation planning and implementation in Xinbang Township*

Xinbang Township has been the first pilot town carrying out land consolidation in Shanghai due to the following reasons: (1) Xinbang is located in the outer suburban area of Shanghai and its land price is fairly low. Compared with the villagers of the towns in the inner suburban Shanghai, local villagers' expectation towards compensation is much lower. Under the policy of land consolidation, the land quota will be

purchased at the price of RMB one million Yuan per mu, and this has provided financial motivation for township government and village collectives. Secondly, since the early 2000s, the Shanghai government strictly prohibited the construction of new rural houses. In Xinbang, 86% of the rural houses that were built in the 1970s and 1980s have been aging and the quality is very poor (Xinbang township, 2014). Land consolidation provides a chance to replace the old house with the new apartment near the town center. Therefore, 92% of interviewees expressed their support towards the consolidation. Thirdly, based on the questionnaire survey, 83% of local resident are no longer engaged in farming, but working in factories or service industry. In average, they only charge the rent of 200 Yuan/month/person for the migrant workers. As the semi-CCA is close to the city center and the living environment can be much better, local residents expect the rent would be substantially increased. This is also one of the important reasons that they agree with land consolidation.

The land consolidation planning of Xinbang Township was approved in the late 2013 and the implementation started in 2014. According to the plan, the reduced construction land area shall be no less than 156.72 ha by 2016 and 496.2 ha by 2020, among which the reduced industrial area shall be no less than 61.62 ha by 2016 and 108ha by 2020. Semi-CCA is located near the town center. Targets of land consolidation include two types of land: one is the idle and low-efficiency industrial land outside the CCA, and the other is the *Zhaijidi* land. The reduced industrial land was mainly used for garbage collection, hardwires, and other small-scale manufacturing etc. These small enterprises usually sign rental contracts with the village collectives to lease land at a rent of 20,000-30,000Yuan per mu each year. Meanwhile, they generate heavy metal pollution and water pollution.

Figure 4 shows the *Zhaijidi* land consolidation process. In the first batch of village *Zhaijidi* land, agreement has been signed with all villagers. In the second batch of village *Zhaijidi* land, more than 90% of local residents have signed the relocation assignment with local government in most villages except the Xinbang village which is closest to the town center. Due to the advanced location, local villagers expect higher compensation, and only 60% signed the agreement (Source: Xianbang township, 2014). The new apartments for relocated residents have been completed in the semi-CCA.

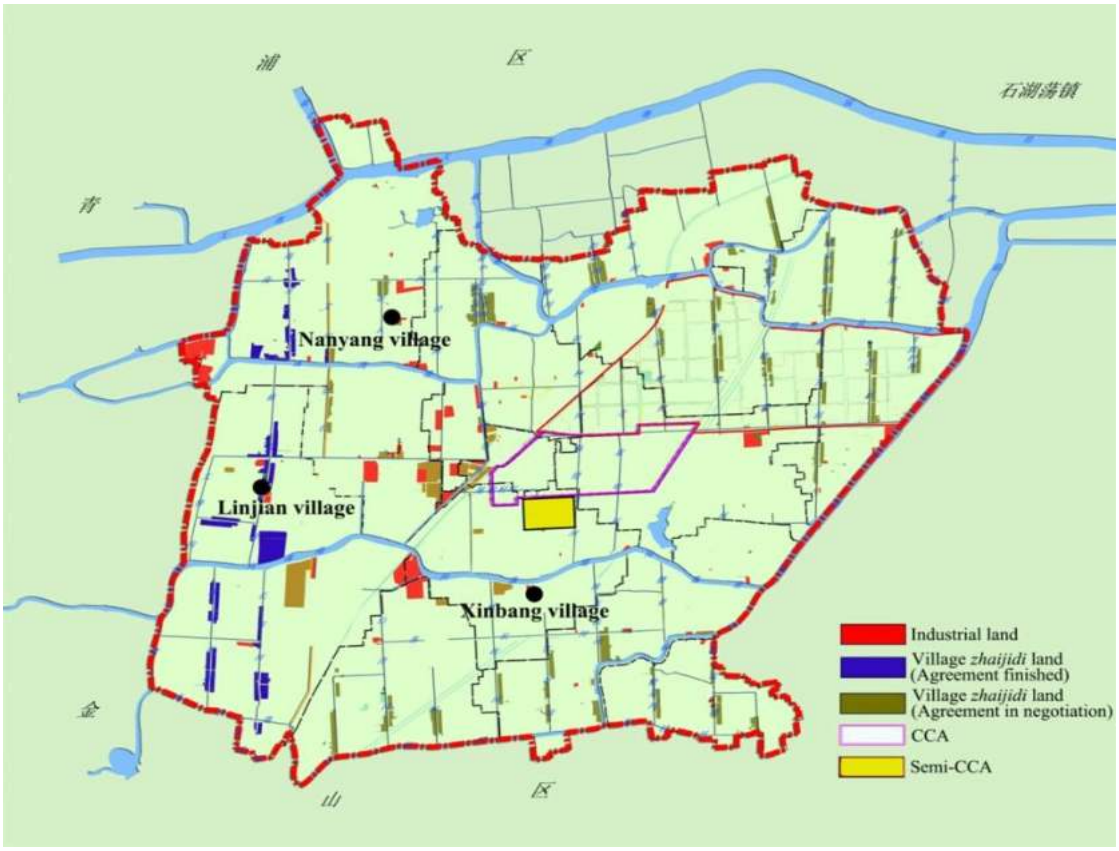


Figure 4 Land consolidation process of Xinbang township
(Source: Shanghai Urban Planning and Research Institute, 2014)

### *4.3 Property right reconfiguration and its impacts on stakeholders in land consolidation*

#### *4.3.1 Municipal and district government*

In the course of land consolidation, the municipal government has been playing the role of policy-making, and it provides local regulations to implement land consolidation. Under the strict land quota system, the municipal government can only make policies within the existent legal and policy framework and it is politically needed to obey with the central government (Zhou, 2004). Motivated by economic growth and demand for non-agricultural land, municipal government has great incentives to explore the new source of urban land. As a result, under the IDB policy, Shanghai municipal government promulgated regulations on land consolidation in the suburban Shanghai in June 2013 and the land consolidation has been officially launched since then.

In the case of Xinbang land consolidation, Shanghai municipal government has invested 788 million Yuan in land reclamation and compensation for the relocation of villagers. For the purpose of encouraging land consolidation, the municipal government will additionally provide a land consolidation award of 200,000 per mu of industrial land to township government, totally 466 million Yuan. Municipal government

needs to invest RMB 1,250 million Yuan in total (Source: Xinbang township land consolidation plans, Shanghai Urban Planning, Design and Research Institute, 2014 ).

Meanwhile, the Shanghai municipal government has achieved its multiple objectives through the land consolidation. Firstly, land consolidation is the optimal choice for Shanghai to deal with the performance evaluation of the central government, and the major source of future new space. Secondly, the low-end industries will be expelled, which creates opportunity for industry upgrading. Last but not least, municipal government can obtain certain amount of LURs transfer fees: 20% of the LURs fees from selling the 2/3 land quota. From 2014 to 2016, Xinbang Township will consolidate 2,330 mu of non-agricultural land, and the municipal government will receive 20% of LURs fees of 1553 mu. according to statistics of Shanghai Land Market Trading Center, the average LURs fees of Songjiang District was around RMB 12 million Yuan per mu in 2013, and the municipal government can expect the LURs fee of about 3.728 billion Yuan, among which the municipal government will return 129 million Yuan to Xinbang Township.

As a lower level government, the Songjiang district government has its political obligation to implement land consolidation according to the requirement of municipal government. Songjiang district government is the major party in charge of the implementation of land consolidation, and it bears most of the cost of land consolidation. It has to pay the land quota fee of RMB one million Yuan per mu, and thus needs to spend 2.33 billion Yuan in total, which covers expenses on houses displacement and resettlement, compensation for clearing-up of the industrial land, farmland reclamation, and the infrastructure investment in the semi-CCA. Meanwhile, while transferring the land quota to the developable land, the district government has to invest in the infrastructure to transfer the raw land into serviced land. Although the land consolidation is rather costly, the district government can benefit from it in many ways. Firstly, district government will gain 80% of the LURs fees from selling the 2/3 land quota, which is about RMB 14.9 billion Yuan in the Xinbang case. Secondly, the more compact land use, industry upgrading and improvement of environmental quality are the key objectives of land consolidation. Nevertheless, in the reality, district government has to assume the risks in the land market and social instabilities caused by the large-scale relocation.

### *4.3.2 Township government and village committee*

Township has been playing the key role in implementation of land consolidation planning, and it is responsible for the relocation of farmers and construction of new apartments. As a reward, the township can obtain some extra EDL in the semi-CCA at a fair price. In the semi-CCA, the Xinbang township government finally received the LURs of EDL of 397.19 mu. Other additional benefit includes the improvement of environmental quality, and more chances for attracting outside investors. While obtaining the LURs fee return of 129 million Yuan from the municipal government, the township government needs to pay about 358 million Yuan for the consolidation (Source: Xinbang township government).

Village collectives are mainly responsible for negotiating with local farmers and factory owners. As a return, they can get the LURs of a certain amount of the EDL in the semi-CCA and the award of RMB 100,000 Yuan for clearing-up of construction land per mu. In the semi-CCA, EDL of 174.17 mu land has been reserved for village collectives. In average, the 11 villages in Xinbang Township will get an award of

about 20 million Yuan per village, which will not be granted to villagers but reserved as for future development funds of collectives.

While the factories are closed, the village committee loses some rent revenue. Before the land consolidation, the village collective could acquire the rent at the annual price of 10,000 to 20,000 per mu. However, compared with the rent loss, the income from the reserved land in the semi-CCA has been anticipated much higher.

### *4.3.3 Local villagers*

During land consolidation, villagers have to give up their *Zhaijidi* land and move to the semi-CCA. After the *Zhaijidi* land is cleared up, villagers can move to new houses whose floor space is equal to the original *Zhaijidi* land in the resettlement area. Moreover, the new house has a state-owned property right, and thus can be sold or mortgaged in the open real estate market. Meanwhile, the Shanghai municipal government requires that the maximum floor space of each household shall be 176 $m^2$. Based on the questionnaire survey, the average floor space of farmer's original houses is 187 $m^2$, among which 155 $m^2$ has legal certificate. In the land consolidation, many households will obtain a new apartment of 176 $m^2$. Furthermore, the farmers can still own contracted farmland, although most of them are no longer engaged in farming. They can transfer their farmland to large landlord or cooperatives at the rent of about 800 Yuan per mu per year.

The villagers will receive no other cash compensation or subsidy except the new apartment. Based on our interview and questionnaire survey, more than 90% of the villagers have shown their willingness to give up *Zhaijidi* land. This is primarily because under the strict planning regulations and *Zhaijidi* land control policy, villagers have little chance for the expansion of their old houses or new construction. It is more favorable for them to obtain a new apartment and public services in the town area. However, the situation is different in Xinbang village adjacent to the town center. Due to the relatively good location, villagers can earn fairly high rent income from the migrant workers. Based on the interview, each household can earn annual rent of RMB 5,000~8,000 Yuan. Moreover, the floor space of some houses is far greater than 176 $m^2$, and the location of semi-CCA is not better than the original village. Therefore, some of them are reluctant to move to the semi-CCA. The over-simplified compensation standard without considering the location difference has been problematic.

### *4.3.4 Entrepreneurs*

In the process of land consolidation, 919.96 industrial land needs to be cleared up, which involves many micro and small enterprises engaging in machining, hardware and chemical industry. They are characterized by low output and serious environment pollution. Some of these enterprises lease land from the township or village collectives, and the lease will be terminated after paying compensation. However, there is a small amount of land owned by the enterprises, and the land consolidation will be more difficult. The compensation is 900 Yuan/$m^2$ for the enterprises with legal land property right and lease contract, and 200 Yuan/$m^2$ for the industrial enterprises without legal property rights. Besides, compensation for the operating loss and relocation cost is also paid.

In the land consolidation, these enterprises will be "expelled" out of Shanghai. In Xinbang Township, most of these enterprises are micro processing factories with 3-4 employees who can make profit of about 300,000 Yuan each year (Source: interview with village committee and local enterprises). After the industrial land is cleared up, the factory owners have to move to other regions or enter the industrial park in Shanghai. Nevertheless, the industrial park has its thresholds such as minimum input-output and high pollution control standard, and land price or rent is much higher than the collective land, thus it is rather difficult for factory owners to find new space in the industrial park. Land consolidation does not take their future development into account, and their voice is intentionally or unintentionally neglected in the land consolidation process.

## Discussions and conclusions

While the available non-agricultural land resource has become more and more scarce in China, many cities, particularly large cities in the developed region, have to transfer their strategy from urban sprawl to land consolidation. Under the strict land quota system and IDBP policy, Shanghai government put the land consolidation in the suburban Shanghai on the agenda in 2011. Through transferring the development rights from collective construction land to state land, the municipal and district government can acquire extra land quota for the growth of new space. Meanwhile, the multiple objectives such as more compact land use, industry upgrading, spatial structure reshaping and environmental pollution treatment can be anticipated.

The case study of Xinbang Township has enabled us to gain insights into stakeholders' perspectives in the land consolidation of the suburban Shanghai. The cost-benefit analysis shows that the municipal government might be the biggest winner. Through the provision of the policy framework and limited land consolidation fund, it can acquire the multiple goals including revenue from LURs fees. The district government has to bear the largest share of cost of consolidation, including villager's relocation and farmland reclamation, but the rewarding can be attractive, for instance, the largest share of LURs fees, the improved environmental quality and investment environment. The district government, however, has to take the risks such as real estate market downturn and social instability due to the large-scale relocation. The township government and village collectives are the party who is responsible detailed negotiation with villagers and entrepreneurs, and relocation of local villagers, and construction of new houses for villagers under the financial support of the district government. As a return, they can receive the bonus from the upper-level government. In the Xinbang case, most villagers expressed their support for the land consolidation, however, a small number of villagers have opposed the consolidation on the ground that the compensation standard is uniform without consideration of their *status quo*. Undoubtedly, the entrepreneurs are the biggest "losers" in the consolidation, and they are expelled out of Shanghai ruthlessly based on a limited compensation.

In general, the land consolidation of Xinbang township seems a "win-win situation". Nevertheless, equity issue emerged during the consolidation. In view of the complexity of local socio-economic condition, policy makers should provide flexibility in policy planning and implementation. Moreover, they should take the attitudes of those adversely affected by their policies into consideration, and compensation should be sufficient to cover their loss. Therefore, local governments are well-suited to tailoring solutions based on local conditions and are rightly the institutions that should play a lead role (Wang *et al.*, 2014). Policy makers should provide flexibility in policy planning and implementation. Institutional changes are capable of

increasing production efficiency, of distributing income in some socially more desirable manner, and of reallocating economic opportunity to achieve social efficiency in line with social objectives (Bromley.1991).

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# Community Energy Enterprises in a polycentric society: new devices for local energy system

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*New technologies for "local energy systems" have recently reached a degree of maturity that now allows for significant innovations and investments in community-based initiatives. As such, they could have a critical role in totally new polycentric development processes. While the issue of distributed energy is widely discussed in technological terms, a more articulate connection between distributed energy productions and local initiatives still needs to be elaborated and put into practice. The main objective of this paper is therefore to verify how the availability and advancement of certain current technologies – along with the potential of new forms of community organisations – can solve some of the economic and environmental problems that are becoming an increasingly critical and inexorable challenge in today's world. The principal issue here is that the crucial obstacle to innovating the utilities supplying statutory services to local communities today remains basically our outdated legislation and regulation. In many countries, the legal setup for the entire supply system was actually devised to secure and perpetuate the interests of the centralised, statutory energy sectors. This analysis therefore suggests ways in which certain elements of our legal framework might be revised and reformulated so as to allow greater leeway for the proliferation of bottom-up initiatives in energy production.*

*Keywords***:** local energy systems, community enterprises, community technology.

## 1. Introduction

An energy system is an "energy chain" that comprises energy production, conversion, transmission, distribution and consumption (Alanne and Saari, 2006).
The technologies currently available for creating "local energy systems" (e.g., small devices to product electricity on-site, two-way smart grids and micro-grids, etc.) have reached a promising level of advancement, and these new system are now in a good position to be integrated with renewable energy sources, and for reducing supply costs, streamlining consumption, creating new production chains, increasing local employment, and not least the empowerment of the local communities.
Any discussion of these new systems inevitably pivots on how they compare with the large energy systems, namely the traditional centralised models of energy production, and on the viability of local energy systems as an alternative in terms of efficiency and sustainability.
At present the debate on local energy production hinges mainly on questions of technology and engineering; at most, some reflections on economy are thrown in for good measure. What we believe is essential is to cast the net wider and include the organisational, social, and ethical-political issues involved (until now largely ignored: Alanne and Saari, 2006; Ribeiro et al., 2012). As Nele Friedrichsen et al. (2014, p.264) observe, "t*he institutional set-up of the smart system is still uncertain*". The crucial issue here is that in a distributed energy system "distribution" refers not only to energy generation units, but also to ownership, decision-making and responsibility as regards energy supply (Alanne and Saari, 2006). In short, distributed energy means more than merely situating smaller energy units close to consumers.

## 2. Available technological for local energy systems

Local energy systems have now become a workable reality thanks to new technologies that can guarantee local energy production and distribution, along with computerised systems for managing local demand and consumption, which include such vital devices known as the "smart grid", along with their parallels such as "micro-grids" (functioning in both on and off-grid modes), and the other experimental systems such as on-site utilities and user coalitions (Mendes et al, 2011; Chicco e Mancarella, 2009; Hiremath et al, 2007).
More specifically, the relevant technologies can be grouped into three main categories, as follows: first, technologies related to the production and utilisation of energy – namely, those that enable the on-site

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production of the energy needed by the local system, and for ensuring that consumption is efficient; second, the technologies for the distribution and proper flow within local grids; third, management technologies that enable the remote control of the assets of production, distribution, storage, and consumption of energy.

*2.1. Production, storage, and usage of energy*

As far as the local production plants are concerned, the available technologies are based on four different types of renewable source: photovoltaic/solar thermal, wind farm, small-scale hydropower, and geothermal; but to some degree they also rely today on traditional sources, such as the use of heat pumps or co-generation/tri-generation systems.

Among the technologies in this first category are also those relating to accumulators and devices (electrochemical and others) for storing electrical and thermal energy; logically, these are critical for off-grid units, namely special systems that can run independently from the national power grid.

Similarly, the technologies affecting the end-use of energy can contribute to improving the local networks, such as more efficient lighting and heating, building automation, and the use of smart appliances.

A fair quota of technologies for energy production and consumption have achieved a high level of effectiveness and sophistication (Fig. 2), and boast an increasingly valid cost-efficiency ratio. The only area still lacking at present is storage technology, though a recent report published by UBS (2014) – in tandem with Tesla and Umicore – shows a vast market potential of storage technologies in the next twenty years, which will see an up to 50% reduction in energy storage costs by the year 2020 (Fig. 1).

*2.2. Distribution of energy*

By "technologies for energy flow" we mean local infrastructure for optimising the transfer of energy from the power units to the points of consumption.
This area of technology can be divided into two types.
The first is the physical distribution system itself, either for electrical energy (electricity network) or for thermal energy (remote heating network), which consists of pipes and/or pipelines created to connect the energy production plants to the storage depots, the end-users, and on occasion also the national grid (Rezaie and Rosen, 2012).
The second is the communications network or information exchange systems linking the various "nodes" of production and consumption. This virtual grid facilitates the exchange of data via cables (increasingly optic) or wireless data transmission (radio waves, or infrared). This technology was set up to ensure the efficiency of the physical network and deploys sophisticated smart-metering devices to maximise production/consumption ratios (Feng et al., 2013).

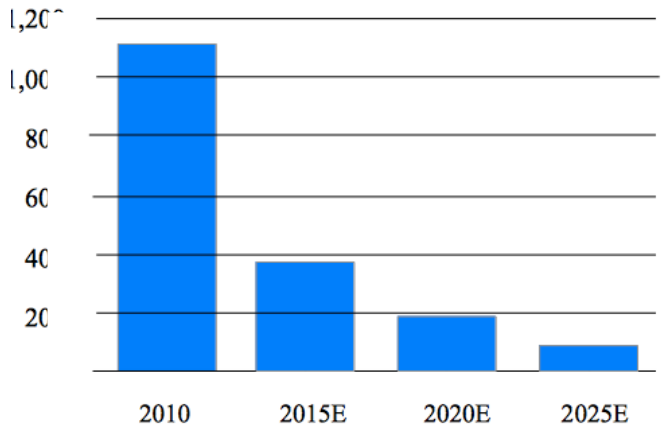


Figure 1. Graph of cost of energy saved on storage devices (€/kWh); re-elaborated by the authors from data estimated by Tesla, Umicore, and UBS (UBS, 2014).

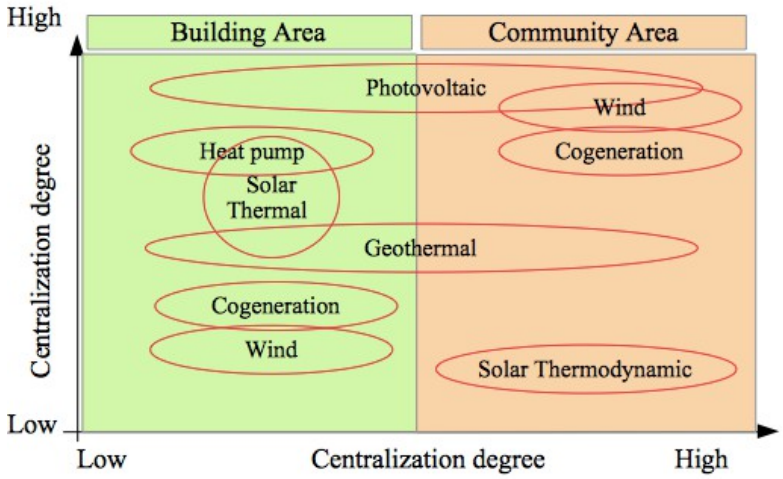


Figure 2. Degree of technological advancement and centralisation from building to system (from left to right) in energy production technology; re-elaborated by author from an evaluation done by the Energy and Strategy Group and the School of Management of the Politecnico di Milano (ESG, 2014)

*2.3. Management, control, and monitoring of energy flow*

The technologies involved in the control, management and monitoring of energy flow consist of two systems in particular.

First we have the software systems that can forecast energy consumption patterns and those for the production of plants powered by renewable sources; these systems include cloud computing energy efficiency (Berl et al.; 2010). Such predictive systems make it possible to optimise consumption and ensure the efficiency of the local energy grid.

Second come the hardware systems backing up the assets of production, storage, and consumption. These devices are the physical side of energy management (computer, sensors, meters, switches) that function at the local unit or network scale, automatically regulating the network flow to ensure the maximum efficiency in response to the fluctuating consumption quotas.

## 3. A potential system of decentralised energy units: aspects of infrastructure and organisation

The world's major energy networks continue to provide the backbone for most of human activity, and are hence essential for the proper functioning of today's societies. Thanks to them we have linkage between producers and consumers, the transmission of energy between different regions and states, energy for our offices and homes, and heating and air-conditioning according to the changing climatic conditions.
According to a recent study (Dobs et al., 2013), the value of a country's overall infrastructure stock (including energy, but also roads and waterways) on average amounts to 70% of its GDP – that is, an enormous amount of capital. Given such a massive employment of physical and financial assets, at first sight any alteration to this setup would seem impracticable.
When we think of the energy infrastructure, we invariably think primarily of the physical infrastructures needed for energy production, transformation, transmission, distribution, and storage. The current setup for electricity production is principally generated by large power plants, which are usually located at a considerable distance from the end-users, who receive it via long and complex networks of power lines. In Italy the current power grid is composed of 63,500 kilometres of cables (www.terna.it).
A possible alternative scenario centred on local energy systems would entail the creation of numerous smaller, modular plants located closer to the places where that energy is actually being consumed. At present, such a setup could come about by combining traditional power plants burning fossil fuels with other renewable sources. In future that energy production could rely entirely on the latter sources (photovoltaic, solar thermal, wind farm, small-scale, hydropower, geothermal). Basically, this local redistribution is the

only arrangement that would enable a extensive network of renewable energy sources to function (Scheer, 2010; Lowi & MacCallum, 2014).
If we embrace this idea of local energy systems, we need also to think about what kind of organisations would be appointed to manage these new initiatives. The concept opens up a whole new gamut of opportunities in collective energy production and management. The nodes of this new polycentric system of energy production will not be the individual homes, stores, or industries (as is often considered, also in terms of new legislative measures), but new forms of "intentional communities", and "voluntary communities" (Brunetta and Moroni, 2011).
We will adopt the expression "Community Energy Enterprises" to indicate this particular type of collective management unit (voluntary, self-regulating and self-financing); clearly, such units could easily form coalitions to create a wider grid of sorts.
To this end, the production of on-site energy would not only benefit domestic appliances and so forth (heating, lighting, etc.), but also could be used for recharging electric vehicles and the like (Newcomb, 2013).
The efficiency of a polycentric system of electricity generation of this type would be guaranteed by the introduction of the aforementioned smart grids, whereby the units are rendered interactive via smart software protocols. This contrasts with the standard type of power grid with its single source and passive distribution, and instead would involve users interactively with the grid (consumers and producers) connected to a network fed by multiple energy sources. As such, the smart network would be able to respond promptly to surges and dips in demand from the various end-users, thereby ensuring the optimal and immediate management of energy supply and demand (Butera, 2007; Dall'Ò and Galante, 2010; Enea, 2011; ESG, 2014; U.S. Department of Energy, 2014). Clearly, this smart grid does not need to pose as a public utility, nor need it be unique or universal. Such a scenario does away not only with the alleged intrinsic reasons for a "natural" monopoly of energy *production*, but also with the idea of "natural" *distribution* monopolies.
As Alvin Lowi and Wayne Crews write (2003, p.164): "*Historically …, electric utilities never achieved natural monopoly status before the advent of the state public utility commissions that arose to regulate them*". See also Geddes (1992, p.76): in the sector of electric utilities, "state regulation was instituted not to correct private market failures and to increase social welfare, but to provide firms with a way to insulate themselves from the discipline of competition". The issue is evidenced also by Fred Foldvary (2005, p. 28): "*Electricity provision has been regarded as a natural monopoly, a utility with a high fixed cost and low marginal cost. … Historical studies have shown that governments have helped to create a monopoly situation – there may not be a natural monopoly*".

## 4. Polycentric energy systems: the foreseeable implications

The advantages of a polycentric system composed of multiple local energy systems are twofold: it would have positive implications both in general terms (i.e., systemic benefits) and for the end-users (i.e., specific benefits).[3] Here we will look at six different forms of positive side-effects generated by a polycentric energy system.

### *4.1. Reduction in power transmission and distribution losses, and recovery of residual heat*

At present, local energy production could turn out more expensive, owing largely to the reduced size of these distributed energy production plants. This greater outlay would be immediately offset however by the lack of the notorious energy losses whenever electricity is transmitted over long distances. In Italy these electric power transmission and distribution losses amounted to 6.2% of the energy on the national grid in 2007, 6% in 2008 (www.terna.it) and 7% in 2011 (http://data.worldbank.org). Parallel figures for the United States showed similar trends. The U.S. Energy Information Administration estimates that national electricity transmission and distribution losses average about 6% of the electricity that is transmitted and distributed in the United States each year (average of losses from 1990 to 2012: www.eia.gov).[4]

3 One aspect omitted here (for methodological reasons) is the creation of new national production chains and employment from the expansion of the sector dealing with the production, installation, and maintenance of the proposed local energy systems; for more in this, see the specific literature (Sastresa et al, 2010; del Rio e Burguillo, 2008).

4 Compare electric power transmission and distribution losses (% of output) in other countries (2011): Denmark (7), Sweden (7), United Kingdom (8), Portugal (8), Spain (9%), Turkey (14%), Argentina (14),

Furthermore, a network of scattered systems could better handle the question of harnessing and recycling residual heat for other energy uses, as against the prohibitive costs of channelling the residual heat dispersed by large power stations over distances (Butera, 2007).

*4.2. Reduction of network overheads*

The self-contained energy within the local systems will mean less drain on the public univeral grid (lines and transformers), and consequently a reduction in overheads for the grid itself (ESG, 2014). In time, the local networks could gradually replace most of the public global grid.

*4.3. Reducing pollution*

The key feature of local energy systems is the opportunity they provide for harnessing renewable energy sources.
It is common knowledge that traditional power plants employing fossil fuels (in particular coal, natural gas, and oil) cause the emission of billions of tons of CO2 into the Earth's atmosphere per year: in the year 2012 that quota reached 34.5b (Oliver et al. 2013). Of the 14,000 billion Watts that the Earth's inhabitants consume every year, some 25% currently derives from coal, 20% from natural gas, 33% from oil, and 7% from nuclear; whereas from sunlight or other renewable sources, such as wind-power and geothermal, that quota stands at a meagre 0.5% (Kaku, 2011). Confirming the global intransigence in the use of fossil fuels is the fact that the percentage recorded forty years ago (1973) has remained the same: world 91%, and OECD countries 95% (Fig 3).
Also worth noting is that our cities use 80% of that energy (Butera, 2007). Furthermore in Italy and Europe, greenhouse gas emissions stem largely from urban areas and residential use (ISPRA, 2013; EEA, 2012). The reason for this is the continued poor implementation of the technological know-how for the use of on-site cogeneration plants and the continued use of old plants running on fossil fuels. As underlined by Akorede et al. (2010), it has been shown how the "*adoption of distributed generation technologies in power systems can play a key role in creating a clean, reliable energy with substantial environmental and other benefits. For example, a British analysis estimated a reduction of about 41% of CO2 emissions in 1999 when a combined heat and power (CHP) based distributed generation (DG) technology was adopted. In the same vein, a report on the Danish power system, observed a cut of 30% in greenhouse gas emissions from 1998 to 2001, with a widespread of DG technologies*."
Furthermore, distributed plants of this nature slot far more readily into the territory and landscape, with far less physical and visual impact on the environment.

*4.4. Reduction of electromagnetic radiation*

It is important moreover to take into account the other negative side-effects of large power transmission systems, such as electromagnetic pollution and the consequent risk to health. As noted by Akorede et al. (2010) *"the magnetic field directly underneath a transmission line is in the range of 300 and 600 mG, and has a field strength of between 10 and 100 mG at some 61 metres away"*. An investigation made by Draper et al. (2005) shows a 70% increase in childhood leukaemia for those living within 200 metres of an overhead transmission line, and a 23% increase for those living between 200 and 600 metres, both of which are statistically of crucial significance.
The health risks from electromagnetic radiation would be dramatically reduced with the introduction of a polycentric network based on local energy systems.

*4.5.Reduction of blackouts*

The presence of multiple local energy systems will also greatly reduce the risk of network power outages typical of the current unified grid system, which affects all users alike (with heavy economic consequences). In the case of distributed energy production units, the vulnerability of the entire system decreases because of the independence from the global electricity distribution grid.
It is worth noting also that the proposed distributed system would be far less vulnerable to possible acts of sabotage.

Brazil (16%) (http://data.worldbank.org).

*4.6. Increase in self-sufficiency for consumers, and differentiated and tailor-made solutions*

The distributed generation systems would promote the creation of non-hierarchical and competitive networks, with an increase in local self-reliance and a greater range of solutions (tailored to individual and small groups needs). Observe how this may also positively affect consumer awareness, and hence consumption behaviour patterns (Alanne and Saari, 2006). Furthermore, this type of system would be more flexible.

## 5. A framework for the diffusion of local energy systems: market, rules, and organisations

Infrastructure is only one part of a far-reaching system composed as follows:

- the economic sectors, such as transport and petrochemical;
- national and international markets;
- specific industries that produce energy plants running on traditional or renewable sources;
- institutional, regulative, and fiscal frameworks.

Recent research has shown that technologies co-evolve with the institutions, and the social and political, forming a socio-technological system, as it were (Goldthau, 2014; Geels, 2002).

The current institutional and regulative system has most certainly played in favour of the large technological systems, establishing a framework of rules that have fostered the emergence of a superstructure of giant energy providers cohering in a single global mega-network.

The traditional model of centralised technologies is so deeply embedded in the system of norms governing industry ad society that attempts to introduce changes of any kind – let alone radical ones – are strongly resisted. In the course of time this entrenched model has spawned mammoth sector monopolies and consolidated the mechanisms that preserve the status quo.[5] In the case of the energy grid, it largely functions as if it were a "natural" monopoly. The combination of economies of scale and subadditive firm costs prevents any new operators from gaining a foothold in the market, and their attempts trigger new preventive regulative barriers that favour the monopolistic powers (Gomez, 2013; Joskow, 2007). Here and there, efforts to support local energy production has threatened the profit margins of the incumbent giants (Crouch, 2014), unleashing waves of sector lobbying activity with the regulating bodies (as regards Germany for instance, see Vasagar, 2014).

In short, the major centralised energy plants using traditional technologies have created solid bonds with the socio-economic and geopolitical authorities. "Present regulation often does not allow nor gives the right incentives to the network operator to interact with generation, storage, flexible loads and aggregators in order to harvest the efficiency benefit they can provide" (Friedrichsen et al, p.266).

Italy for example, in 1980 still had 91% of energy production in traditional fields, falling to around 70% in 2013 (UP, 2010; IEA, 2014). In the first quarter of 2015 the country's renewable energy sources accounted for almost 31% of the net domestic energy production (Terna, 2015); given that almost half of this figure is owed to large hydro-electric plants, it becomes patently clear how far we still are from establishing a network of distributed small energy production units (based on renewable sources).

The current energy production framework with its entrenched reliance on traditional sources is drastically at odds with recent EU energy policies (in particular as regards the 2020 climate and energy package; EU, 2011; da Graça Carvalho, 2012), which are aimed at reducing CO2 emissions (reducing 20%) and at promoting a changeover to renewable energy sources (raising to 20% of the total) for the year 2020. Goals of this nature cannot be reached without somehow getting round the reigning monopolies, and without forming regulative frameworks that facilitate decentralisation and the creation of new legal arrangements for the transition from a *passive* energy society to an *active* one.

This transition is made possible by the continuous advances of technology, which now justify investing in

5 As shown by the reports of Transparency International on lobbying (Transparency International Italia, 2014), and by the overview proposed by Foldvary and Klein (2002).

polycentric units of energy production, in particular in solar-based systems (Farel, 2012). On this subject, there is a crucial need for the statutory energy utilities to reposition themselves on the market and in the production and distribution chain in light of the potential arrival of new competitors such as the Community Energy Enterprises (Vasagar, 2014).

The current regulatory framework in Italy and in most EU countries is focused on creating incentives for individual technological solutions, such as "Titoli di Efficienza Energetica" (Energy Efficiency Tokens) or "Conto Energia" (Energy Account) (ESG, 2014), by-passing the idea of collective solutions.

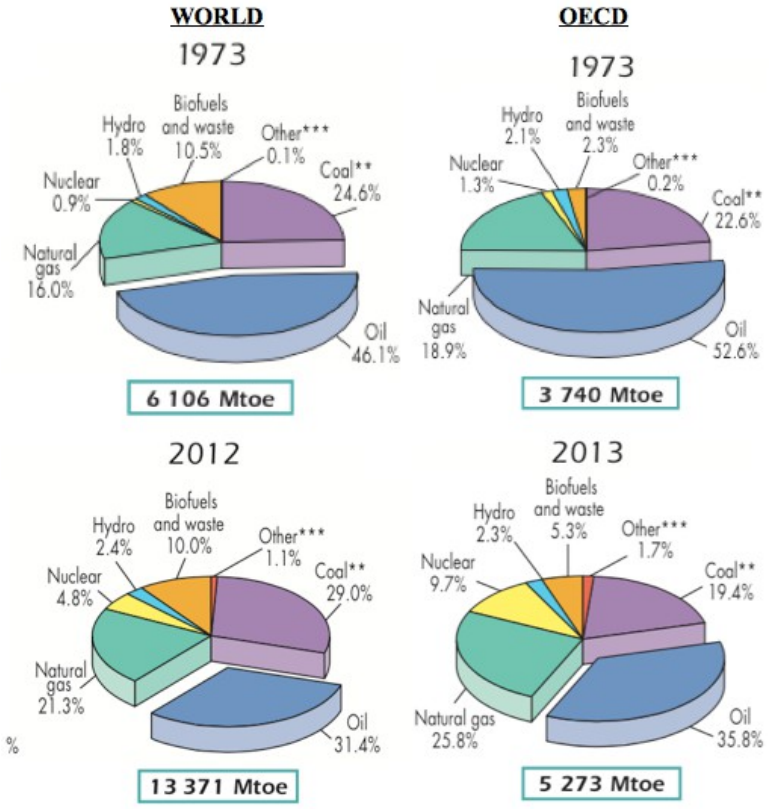


Figure 3. World and OECD area energy primary production supply sources percentage after 40 years (IEA, 2014).

In terms of public decisions and governance, the diffusion of local energy systems poses something of a challenge. Despite the steady fall in investment costs, it is essential that incentives and tax cuts are applied for the creation of local energy production networks, which will also guarantee solar grid parity (SGP), whereby the cost of on-site energy production through renewable sources (e.g., solar) is lower or compares favourably to the average costs currently available on the traditional utilities market.[6]

Among the policies for promoting a widespread access to energy self-sufficiency, some of the most important are new forms of ownership of the installation themselves. For example, third-party ownership (sometimes referred to as "solar leasing") is a long-term contract between individuals and a third party that installs, owns, and operates the solar electric system on your property. "The third-party ownership is able to

6 This approach aims to foster new arrangements or incentives in order to create the conditions for affordable and efficient local energy systems. It has been tested out by several local American municipal councils in tandem with the Institute of Local Self-Reliance, a research body for local energy systems advocacy. The policy changes proposed in the document entitled "Rooftop Revolution" (Farel, 2012) cover several important features of the approach: "*Rooftop solar transforms Americans from energy consumers into producers. Each house with a solar rooftop has (on average) two voters who will strongly support smart solar policies. When half of Americans can install solar for less than the cost of grid electricity (in 12 years), it makes a political majority that favors local ownership of localized energy production long before solar power becomes a significant portion of total electric generation*."

capture the federal tax incentives (including depreciation, otherwise not available to individual residential users) and therefore can compete favourably with those making cash purchases of solar power for their homes" (Farel, 2013; an example of this kind is described below in chapter 6).

In general, it is important to note that the cost of photovoltaic modules dropped about 80% between 2007 and 2012, and prices are continuing to fall (Newcomb et al., 2013). So called "soft-cost" (namely, all other costs beyond the module itself: installation, and permission and inspection procedures) can be significantly lowered by streamlining public procedures (ibid.).

## 6. Community Energy Enterprises: two types and examples

The composition of Community Energy Enterprises can vary as follows:

- a coalition of local public authorities/governments;
- a coalition of private individuals/groups forming an innovative unit that offer an alternative to local authorities for proposing new formulas of urban growth and energy supply (Bailey, 2012; Brunetta e Moroni, 2011; Tricarico, 2014).

### *6.1. First case: local energy systems as local government coalitions – the Cogeser Group*

*Cogeser* was set up in 1986 as a Consortium between the municipalities of Melzo and Vignate (near Milan) to manage the supply of domestic gas (Lombardia Region, Italy). Since the year of its foundation up until 2001, a total of seven separate municipalities adhered to the consortium.
Some time later the consortium became a quoted company, Cogeser Spa, and an offshoot of the new company took over handling the distribution (Cogeser servizi Srl).
Since 2007 the company has consisted of three operational branches:

- *Cogeser vendite srl*: for the sale of gas and electricity;
- *Cogeser servizi srl*: for the management of street-lighting, the gas distribution network, and the management of new energy production services through renewable sources (photovoltaic and solar thermal), along with the co-generation of remote heating for a segment of the member municipalities (Fig. 5);
- *Cogeser servizi idrici srl:* water mains services and distribution utility.

The utility's ownership of the distribution and production system, together with the sales network, has enabled Cogeser to optimise its management performance: +11.8% profits in 2013, entirely redistributed among the member municipalities (Turati, 2013). At the same time, the cost of utility bills has dropped significantly, and Cogeser has guaranteed utmost transparency to the user community, along with all information regarding management policies and production (publishing its annual report). In addition, special local policies are put forward such as "gas bonus", namely a discount on utility bills for large low-income families, a perk that in 2013 alone benefited some 1,164 clients, to the tune of around 30 thousand euros (*ibid*.). Moreover, the group effects numerous special initiatives in its catchment area, such as sponsoring cultural events, or raising awareness in schools on environmental issues, and internships within the company for students from the area's high schools.

Figure 4. Maps showing the member municipalities of the Cogeser utility network (http://www.cogeser.it)

The success of the investments completed on the local dominion stems from the astute formula of integration between service management and ownership of the distribution network, which has enabled investment in cogeneration and district heating systems, along with photovoltaic plants in schools and other public buildings in the member districts. Recent years have also witnessed the outlay of interest-free loans for upgrading heating plants in the individual homes and condominiums (Lojola, 2008).

*6.2. Second case: local energy systems as private community coalitions – the Melpignano "Comunità Cooperativa"*

Among the examples on Italian context, the CC (community cooperative) of Melpignano near the southern city of Lecce (Puglia) has provided a significant yardstick for of collaboration, in this case between the Legacoop (a nationwide network of cooperatives) and the local municipal councils. As a working concept, the CC was created to handle a network of solar energy production via photovoltaic panels mounted on public and private buildings across the city; endorsing this was a third-party ownership scheme in the form of a community cooperative, namely an experimental form of organisation entrusted with managing the local council assets and services (Bartocci and Picciaia, 2014; Tricarico, 2014; Legacoop, 2011). According to the CC's statute (art. 5), this organ was appointed to install the plants and see to their upkeep, managing the production of energy via smart metering tailored to the needs of the end-users, and selling any excess energy back to the market. In truth, the company offers a potential multi-utility structure, inasmuch as its activities include the distribution and supply of combustible gas and water resources, along with the management of the services offered by the energy grid. From a legislative viewpoint, the setup could be reconfigured as a normal mixed cooperative (which would comprise production and consumption at the same time).

The participation of the various members of the cooperative is discretionary, depending on the duties they perform: autonomous worker members who supply technical know-how and actually build the plants; user members who are grouped into "host" members (i.e., citizens who host photovoltaic panels on their roof), and "simple" members who subscribe to the project via a fee in order to benefit from energy discounts; and subsidising?? members, namely those opt to invest in the project by contributing capital for its completion.

Thanks to the joint efforts of three partners, a unit was set up to run operations through a signed agreement, comprising the municipal administration of Melpignano (which oversaw the general scheme), the Officina Creativa of Lecce (which coordinates activities), and Salento university (which drew up a feasibility study for installing banks of photovoltaic cells on rooftops in Melpignano – identifying around 180 households with a suitable roof – and a schedule for implementing the project).

The successful realisation of the CC plants in Melpignano was feasible thanks to the detached single-unit housing typology, with accessible roofs (each of which ceded the use of their roof to the cooperative for a period of 20 years, whereby they receive free energy in return).

As for the financial resources needed, these came from the "Copfond" (one of the Legacoop's ventures), the "Banca Etica", a third-party owner (the cooperative itself), and partly through a subscription fee paid by members. Through these funds the cooperative has managed to repay the interest on the initial outlay, and also create its own savings fund. How the earnings from investment are employed is decided by the members, and so far goes toward urban requalification, such as improving greenspace, resurfacing roads, school bus services, and school cafeterias.

## 7. Closing remarks

A look at the situation in Italy shows that in the last twenty years there was been a steady increase in utility costs (NE, 2013), largely due to a dependency on imported raw materials, the lack of market liberalisation, a thorough overhaul of the national energy grid (Bitetti and Rocca, 2014), and not least to the government's resorting to energy taxation as a way of harvesting public money. This situation could lead to a worsening of the what is know as "energy poverty" (Faiella and Lavecchia, 2014; Oldfield, 2011), whereby some members of the population are not able to purchase the necessary minimum of energy assets and services.

For this reason it is critical that we question the present framework of state control over the energy grids and

infrastructure, which is currently configured on a centralised model of production and distribution.[7] As Nele Friedrichsen et al. (2014, p.273) write: "*Decentralization is changing the structure and operation of electricity distribution. Consumers, generators and other stakeholders become more active participants in the electricity supply system and thus challenge the traditional responsibility and scope of action of the network operator*."

It goes without saying that a distributed energy system must likewise establish a set of safety and security standards. In this case, the principal "infrastructure" that the State can offer is the guarantee of universal legal safety and security standards, stable and impartial, that will guarantee equal access to new options and a "framework for utopias" (Nozick, 1974).

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7 To stem this phenomenon, countries such as the United Kingdom – where the problem has been studied at length (Boardman, 1991) – tax breaks have been introduced to increase the efficiency of local energy systems in areas where a greater quota of low-income families reside.

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# UNPACKING THE GOVERNANCE OF ENERGY TRANSITION. A CONCEPTUAL FRAMEWORK.

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## Abstract

*There is a deep relationship between energy transition and the governance of contemporary societies. However, while existing governance literature has gone a long way to accommodate complex and heterogeneous problems, it has so far fallen short of entirely dealing with the human, social and cultural challenges that this topic incurs. In particular, the deep relationship between energy transition and political dynamics at large has important connections to social, cultural and personal issues that remain underattended in theories of energy transition governance. As a matter of fact, in more or less direct ways, any event moving in the direction of energy transition requires sophisticated levels of coordination among the many actors involved in governance, and mobilizing a wide range of interests that are likely to produce conflicts, tension and resistance. Building on the interim results of the MILESECURE-2050 FP7 project, the authors reflects upon constitutive elements of energy transition regimes, i.e. more or less stable clusters of individual and collective actors, institutional or not, that can develop plans of action, activate social norms and standards and mobilize resources to encourage, manage, anticipate or direct the dynamics associated with energy transition. Theseelements are presented against existing, more abstract and generic approaches to governance of complex problems, in order to position them as potential operationalisations. Overall, the proposed contribution aims to derive general principles for the governance of Energy transition and Energy security, using both empirical material and existing scholarship on governance of complex problems.*

## Keywords

Governance, low-carbon transition, energy security

## 1 Introduction

This contribution aims at a problematisation of the governance of energy transition and the multiple challenges surrounding the latter. It does so by putting together a conceptual framework that integrates multiple modes of governance into an organized toolbox, from which some of those may be selected and mobilized jointly towards a successful governance of energy transition. In particular, it shows how the clustering of modes of governance may help devising strategies to attain energy security as well as an increased use of renewable energy sources, while at the same time stimulating a much stronger mobilization of the general audience with its social-cultural capital that most often still remains elusive to grasp and address.

In the following sections, we first present our understanding of energy transition, as developed within the activities of the MILESECURE-2050 FP7 project[3]. Then, we discuss in more detail how

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[3] The present paper is indeed based on the interim results of the FP7 Project MILESECURE-2050: Multidimensional Impact of the Low-carbon European Strategy on Energy Security, and Socio-Economic Dimension up to 2050 perspective (www.milesecure2050.eu). Overall aim of the project is to understand and overcome the political, economical and behavioral traits and trends that led Europe to its difficulties in reducing fossil fuel consumption, and in diversifying its energy balance at rates which guarantee European energy security in the next years (more specifically at the horizon 2050), reduce the threat of climate change, and diminish the risk of an energy gap in the coming decades. The MILESECURE-2050 consortium is led by Politecnico di Torino (Italy), and composed by ten project partners: Instytut Energetyki IEn (Poland) EnergSys (Poland);

complexity arises in energy transition and how this complexity stretches beyond the epistemological ambiguities that have been observed already in policy studies. The third section focuses on how approaches to governance of complex problems still offer some ground work for dealing with these particular issues. More specifically, we offer an inventory of modes of governance that bring out qualities of specific modes that serve the mobilization of citizens in different ways. In the penultimate section, a brief outlook will be given of how such governance could work in practice. Finally, a conclusive section rounds off the contribution, reflecting onthe possible implication that the propose discussion may have for further research in both the fields of energy transition and governance.

## 2 Socializing energy transition: knowledge, politics and the 'human factor'

Energy transition is the result of a set of complex, heterogeneous, long-term and reflexive processes. Governance studies have produced sophisticated perspectives on the societal management of such processes. These have addressed challenges such as value pluralism, uncertainty, contested expertise, and the changing role of the state (Enroth 2014, Bressers and Kuks 2003, Florini and Sovacool 2009, Guston 2013, Termeer et al. 2013). Yet, the resulting governance frameworks are not per se apt to address the issues that come about when energy security and low-carbontransition are implemented in a social context, and in particular the mobilization of citizens who are the ones supposed to enact the eventual changes.

In this contribution, energy transition is understood at a conceptual level as a set of structural changes in the energy system, with the aim of both achieving energy security as well as of moving towards an increased use of renewable energy sources.This usage is adopted from the conceptual framework developed in the context of the MILESECURE2050 FP7 project. As the changes constituting energy transition concern the structure of the energy system, they are highly consequential: subsystems may become obsolete as they become poorly aligned with new system standards (they become 'reverse salients', see Hughes 1987). Insofar as incumbents depend on these particular subsystems, their competitive position will change. This is one important reason for changes to breed resistance.

Changes also protrude into the private life of citizens: modern life is inextricably connected to energy consumption, and effectuating changes in private lives requires a high degree of willingness for it to happen in the first place. The connection between changes in the energy system and the lives of citizens are manifold. The most radical change seems to be that the role of citizenschanges from mere energy consumers to potential energy producers, since their small scale photovoltaic (PV) installations and the energy buffer offered by the accumulator of their electric car will at times have a surplus rather than a shortage of energy. Moreover, in a less radical sense, citizens' approach to energy consumption is required to change: either as a consequence of legal enforcement, of economic conditionality mechanisms, or by means of 'fun' applications that render energy frugality a competition, decisions on when to use energy and how much will change. This 'human factor' (cf. Caiati et al. 2014) of energy transitions is in the centre court of this paper.

While important challenges in the governance of energy transition still stand, governance studies have already gone a long way in dealing with complexities in a more generic sense. In particular, attention has been paid to the mobilization of science and expertise to abate policy problems. The traditional notion of scientific knowledge and evidence informing political decision making in a neutral way, as 'speaking truth to power', has long been refuted (Brown 2009). The most important arguments are that it would be naïve to believe that scientists and experts do not have political interests or at least a particular, value-ladenperspective, and it would be equally naïve to believe that politicians have no

ENEA (Italy); Laboratorio di Scienze della Cittadinanza LSC (Italy); Maastricht University MUSTS(The Netherlands); The University of Salford USAL (United Kingdom); Paris-Lodron Universitat Salzburg – PLUS (Austria); EU Joint Research Centre JRC (EU); Ecologic Institute (Germany); Société de Mathématiques Appliqués et de Sciences Humaines – SMASH (France)

access to knowledge without help (Brown 2009, Palmer 2012, Adams et al. 2011). Additionally, the whole idea of science informing political power from a neutral ground presumes that such political power is available in a single site such that it is receptive to the sayings of science.This is clearly a questionable presumption to the backdrop of modern, democratic societies.

A first move in the direction of a more sophisticated connection between knowledge production and decision making has been the introduction of the very notion of 'governance'. For one thing, it holds a refutation of the presumption that politics in clearly defined and limited sites, and instead presumes that power is distributed over many formal and informal institutions throughout society (Barben et al. 2006, Rip 2010, Peters 2004). This entails that decisions are made at numerous places. Also, with this vastly expanded space (compared to conventional notions of politics) in which governance takes place, both the range and heterogeneity of relevant bodies of knowledge proliferate. Not least, it becomes to include the knowledge otherwise confined to private life just explained[4].

Yet, it has been observed that even in its distributed and democratized forms, explicated notions of governance and the way these notions mobilize knowledge still seem to be modelled after scientific ideals of qualified knowledge. That is to say, the more knowledge resembles in content and method the kinds of knowledge produced by (chiefly natural) sciences, the higher its chances to find entrance to governance decisions (Schomberg 2011). Knowledge production aimed at informing governance and modelled this way may make highly valuable contributions to governance, but it is hard to see how it deals with the issue of enrolling citizens.

In addition to the enrolment of citizens, also the problems themselves with which governance is confronted, sometimes resist the simple structure of scientifically informing politics and then taking a decision. In identifying such complex problems, one categorization has been influential. Uncertainty can occur on two dimensions. On the one hand, there can be uncertainty with respect to the facts. In this case, expertise could be consulted so as to reduce this uncertainty. On the other hand, uncertainty can be situated at the normative level, if there is no clear position on which value should be realized. In that case, political and moral debate could possibly be conducted to come closer to a consensus. If neither dimension is particularly ambiguous, we could speak of 'puzzles': these problems are sufficiently structured and can be approached as implementation problems of which the solution is principally within reach. Quite the contrary, especially difficult or 'wicked' problems occur if uncertainty exists on both dimensions.[5] In that case, normative uncertainty renders controversial or ambiguous what kind of expertise should be enrolled, and the factual uncertainty renders unclear what the political debate should be conducted about(Hoppe 2002, Ezrahi 1980). These problems are unstructured, and resist strategies that approach them as puzzles.

[4] For a further discussion of the relation between knowledge and power, check the 'Territorial knowledge channels' framework developed by Adams et al. 2011 Adams, N., Cotella, G. and Nunes, R. J., 2011. Territorial knowledge channels in a multi-jurisdictional policy environment: a theoretical framework. *In:* Adams, N., Cotella, G. and Nunes, R. J. eds. *Territorial development, cohesion and spatial planning. Knowledge and policy development in an Enlarged EU.* London Routeledge.

[5] Prior definitions of wicked problems Rittel, H. W. J. and Webber, M. M. 1973. Dilemmas in a General Theory of Planning. *Policy Sciences,* 4, 155-169, Termeer, C., Dewulf, A. and Breeman, G. 2013. Governance of Wicked Climate Adaptation Problems. 27-39. use different specifications, but the overall characteristics of the current class of problems are much alike.

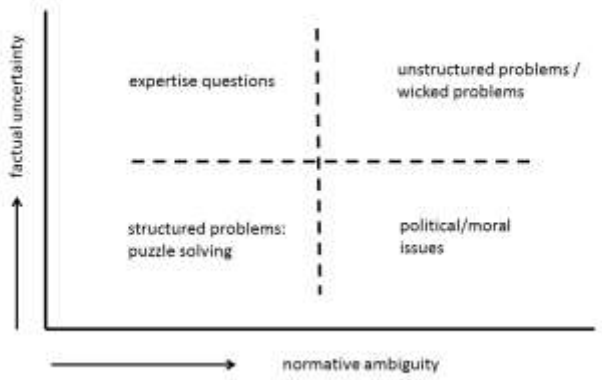


Figure 1: the structure of policy problems (modified from Hoppe and Hisschemöller 1996)

In the upper right quadrant of Figure 1, many problems have been identified over the past decades that are subject to strong controversy and contestation while uncertainties cannot as yet be reduced by scientific research. This is often the case of uncertainties linked to energy security and transition, where the weakness of scientific evidence over long-term issues such as peak oil and climate change impacts hampers the reconciliation of opposite political positionson various matters. For such problems, new modes of knowledge-intensive governance have been devised. On the one hand, it is certainly valuable to bring in many different perspectives, including the perspectives of citizens who are in the end important actors in the effectuation of transitions. On the other hand, as will be developed at length in this paper, to actually transform their positions and mobilize them is entirely another kettle of fish.

Many of the challenges that concern energy transition can be classified along theaforementioned epistemological lines. However, some difficulties remain anomalous in face of this classification. Notably, the fact that energy transition renders the private lives of citizens part of the object space of governance raises ambiguities that are not simply resolved by either conducting further debate, nor by conducting further research. After such epistemic endeavours, considerable ambiguity remains. Most importantly, considerable effort is still to be spent on actually mobilizing citizens, on committing them in the transformations needed. This is not an epistemic affair, but a matter of empowerment, enrolment, activation, and engagement. These dimensions defy the classification of problemsin terms of normative and empirical uncertainty, andremain anomalous, because the classification is chiefly epistemic.In order to shed some light on the matter, the following sectiondiscusses first in more detail how the complexity that arises in energy transition stretches beyond the epistemological ambiguities that have already been observed in policy studies.

## 3 The complexity of energy security and energytransition

Thus, energy transition derives complexity from three kinds of sources. First, energy transition is complex because of the heterogeneity of relevant values. This concerns both conflation of notions of energy security with notions of sustainability, and a broader range of social goods such as freedom of movement, security of subsistence, and the exercise of democratic rights. These may each entail different and conflicting demands for the energy infrastructure. This is the aforementioned normative ambiguity. Second, energy transition is complex because of factual uncertainties. It is as yet unknown what kind of energy technologies will be successful in the future, how energy needs will exactly be shaped, etc. Also, the influence of carbon emission on climate change remains swayed by large margins of uncertainty, which determines part of the urgency of energy transition. This is the factual uncertainty mentioned earlier. The third kind of complexity is of an entirely different nature though:

the difficulty of societal mobilization. It is different because it is not a knowledge-driven problem in the sense that it can be solved by either moral-political or techno-scientific intellectual effort. It needs something to be 'done'.

An example of a difficulty brought about by a failure in efficiently enrolling citizens in a specific initiative, that is difficult to solve by merely acquiring additional knowledge, could run as follows.It could happen that producers of consumer appliances that have some sustainable energy aspects have wrongly estimated the impact of a particular technology on the private life. They have devised a new laundry machine that directly communicates with real-time energy markets, and takes its own decision as to when the laundry is to be done. It strikes a balance between determining the cheapest moment and meeting some basic level of convenience. However, making use of the machine requires that people may have to wait up to 48 hours until their laundry is finished. Even though this was considered a reasonable 'operational cost' by the developers, it turns out in practice that people after a short while start overruling the energy trading mechanism and tell the machine to do the laundry immediately after loading.

This example tells that the designers had wrongly assumed that people will simply reschedule their laundry during the week, if this yields a financial benefit. To some extent, of course, this is exactly a knowledge deficit in the sense mentioned before. Methods of bringing in user perspectives into the innovation process could indeed help prevent part of such misfits between everyday life practices and novel technologies.The introduction of such new technologies can be supported by roping in relevant expertise and by allowing the public involved to generate relevant perspectives on how things are likely to operate when implemented in the social practices they know so well. But it is hard to see how such perspectives relate to actually 'doing' the work of enrolment – getting citizens to 'do' something – and engagement – getting citizens to care about something and voice their concerns.

It was already pointed out above that transitions involve a reprioritization of values that each on their own have a legitimate claim to realization; that is to say: even if we know what the goods are that deserve our pursuit, we clearly cannot pursue them all at the same time (Caiati et al. 2014). In a governance perspective, such value conflicts would be delegated to the domain of political debate (of whatever sort), in which consensus can be tried to achieve. However, in the case of the laundry machine with sensitivity for the energy market, it is unclear what kind of political question is to be put on the agenda, and in which sort of political or ethical forum. The value prioritization is in the first place a private affair, and it requires specific mechanisms to connect in any democratically legitimate way between such public and private spheres. Such connections can be technologically mediated (Marres 2009), but this in itself not a direct resolution of the problems of enrolment and engagement (for the implementation of those technical connections would themselves face exactly the same challenges of engagement and enrolment).

An additional complexity derives from the reflexivity of the entire system that, in turn, generates additional uncertainty. In other words: we don't know how the future system will behave, since we cannot be entirely sure what system we will build for the future.This is especially true for transitions with their upheaving changes: given the fundamental levels at which changes take place, we are gradually *de facto* building a new sociotechnical system, which means that it is not entirely known how the future system will behave. This holds *a fortiori* for the human factor. In practice, this means that we cannot easily predict the exact social situation in which future technologies will be embedded. This is not only about social and institutional arrangements, but also about the whole axiological scale of private moral concerns, habits and life-style related norms, political ideologies, etc.

This reflexivity holds for all the uncertainties mentioned so far, which adds to the difficulty of challenges being not clearly of an epistemic kind. In general, the reflexivity of transitions and their management has been recognized, and taken to call for an iterative and learning way of management (Kemp and Loorbach 2006, Stirling 2014, Rotmans and Kemp 2008). At the same time, it has been argued that hitherto, important normative questions have been neglected, including the question of

how to 'live' under sustainable transitions, and how the inclusion of this private sphere can be shaped in any democratically sensible way (Shove and Walker 2007).

In the following section, we will explain how governance theory has approached complex problems. The complexity is of a different kind there, and we will thus show how these approaches offer a misfit with the problems of transitions. These misfits will then in the next section be explored proactively, reflecting on how different modes of governance can be mobilized in a way that fills in part of the lacunae.

## 4 Governance of complex problems

The intricate balance between maintaining (central) public control over matters or delegating decision and policy making powers and competences toagents distributed at the different territorial scales and in and outside the public sectors has long been recognized and captured through the concept of 'governance'. Where the traditional notion of 'government' referred to the control exercised from within a polity's institutions, 'governance' generalizes this control and also includes all the forms of control that take place outside those formal institutions. Thus, forms of citizen participation, production and mobilization of expertise, and self-organization within professional and commercial sectors, to name only some, come to be recognized as important elements not only of the management of a society, but of the evolution of the various institutional mechanisms that shape the latter.

However, the meaning of governance is not univocal and evolved through timein many different, more or less normative understandings. In its broadest, more neutral sense, governance includes all structuring that has consequences and legitimacy (cf. Rip 2010). In a general way, governance is presented as a bottom-up alternative to top-down modes of command and control, that complements the latter without replacing them by any mean (Barben et al. 2006).Some authors often presents it as adding democratic quality to governing a society (Le Gales 2002), while others contest these claims as uncritical, by opposing the blurred features of legitimacy and accountability that the new governance beyond the state often brings along with it (Smismans 2006, Swyngedouw 2000, Swyngedouw 2005).

Whatever conception of governance we adopt, it is likely for there to be problems that are too difficult to resolve. As explained above, Hoppe (2002) has identified two dimensions along which problems can be 'difficult': their normative and factual ambiguities, respectively (see also Hoppe and Hisschemöller 1996). These two dimensions together determine the degree of 'structure' of problems, or the extent to which they can be approached as puzzles to be solved. If problems score high on both axes, they are unstructured, which means they cannot be approached as puzzles. They are likely to be wicked problems: the definition of the problem itself may be ambiguous, there is no clear point at which the problem can be seen as solved, there is no test-site in which a manageable version of the problem can be tried to solve, there are no clearly good or bad answers, etc. (Rittel and Webber 1973).

An approach such as *post-normal science* (PNS, Funtowicz and Ravetz 1993) has prescribed how such wicked problems necessitate the expansion of practices of knowledge production beyond traditional forms of expertise. This 'extended peer community' needs to include a broad range of stakeholders, which are needed to bring a sufficiently wide range of perspectives to bear on a particular problem. While this approach, together with many other approaches to governance of complex problems, has accomplished a democratization of some sort, it has not explicitly engaged with the 'engagement' part of dealing with energy issues.

It is vital to recognize that both the axiological and empirical dimensions of wicked problems are epistemic:[6] they relate to particular forms of knowledge about the world. Even though the distinction

[6] 'Epistemic' is used here as referring to 'knowledge', in particular knowledge of any sort. Thus, it includes normative knowledge. This is different than how Funtowicz and Ravetz Funtowicz, S. O. and Ravetz, J. R. 1993. Science for the post-normal age. *Futures,* 25(7), 739-755. use it. They oppose 'epistemic' with 'axiological',

between these two realms seems fundamental, the categorization is incomplete as, as problems are not always possible to reduce to a knowledge deficit (whether axiological or empirical). Also the PNS approach is ultimately directed at the expansion of knowledge. But knowledgeis only part of what makes this class of problems complex. Complexities of geopolitics and marketsare neither reduced by expertise nor by debate. Also, as Guston (2013) has noted, seeking resolution within a mere epistemic realm would arrogating to (social) scientists the ability to determine what is good, as they will always be in a prioritized position when it comes to adducing knowledge.

True enough, inclusion understood as the inclusion of a sufficiently broad range of perspectives on a problem, what could be called *epistemic inclusion*, is important both from the perspective of democratizing decisions and from the perspective of capacitating actors to cope with complex problems. An approach such as PNS is indeed in principle open to any sort of knowledge, including the human aspects of energy transitions. But exactly because of this fundamental openness, the approach is less capable of identifying problems that are outside the epistemic realm. Also, not all sorts of knowledge can be expected to be equally able to 'speak truth to power' and get their particular truth over the footlight. As Adams et al. (2011) pointed out, when aiming at influencing policy and decision making through the production of knowledge, individuals are more likely to be successful when clustering more or less formally in knowledge communities (may their nature be epistemic, linked to a specific practice or set of values).

At a more philosophical level it can be argued that governance as an alternative to government offers a reversal of the primacy, from a top-down central government to a bottom-up approach (Van Zeijl-Rozema et al. 2008). This changes the subject of governance – who does it – but it does not significantly alter the *object* of governance – what needs to be governed. This is, though, exactly what becomes destabilized in the context of energy transition. Perhaps, additional insight on the modes through which governance actually operates may contribute to unravel the conundrum, and this is what the following paragraph tries to do.

## 5 How governance operates: modes and regimes

We speak of governance as all those activities that are consequential for how life in the polity is organized. Straightforward examples of modes of governance are political debate, public debate, the installation of market incentives, public education, and self-regulation of professional groups.In a general way, governance is presented as a generalized alternative to classical notions politics and government, which is able to accommodate more of what actually matters in the management of a society. It thus has an inherent promise of democratization, even though Smismans (2006) as convincingly argued that such promises are often made too uncritically.

Classifications of modes of (conventional understandings of) governance have been suggested along various dimensions. As Treib et al. (2005) review, modes of governance can be classified to their degree of coercion, the degree of openness of implementation of decisions, the presence of sanctions, their involvement of actors, their dependence on market mechanisms, and some more. Such classifications are typically one-dimensional and, due to their nature, often sacrifice complexity to the altar of clarity. In this light, it may be worth to put together, on the basis of existing studies, a classification of modes of governance along two dimensions instead: the level of inclusion, and the level of coercion.

The first dimension captures the extent to which modes of governance are socio-spatially distributed and mobilize agency of a broad variety of actors. This *level of inclusion* is low if only institutional and political actors matter, and high if the general audience and market players etc. matter as well. Political debate in parliament is a fairly exclusive, centralized affair. So are taxes, since there is only one authority that executes them. In contrast, grass-root initiatives, interest groups, and public information

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where the latter is exactly the realm of values. Thus, epistemic uncertainty with them is only empirical uncertainty.

are much more distributed and inclusive. They are accessible to many or all citizens, and their execution or effectuation is importantly done by many. This dimension conflates several aspects of what may, in certain conceptualisations, count as 'democratic'. It includes the enrolment of citizens in effectuation of a policy. It includes citizens' access to the institutions where the policy is created and implemented. It includes the extent to which something pertains to all members of society. And it includes the degree to which things are physically distributed and pervaded through society. Thus, this distribution is comparably intuitive, and leaves intact some underlying heterogeneities and ambiguities. However, a further analytic specification of the concept is not needed for the argument of this paper.

The second dimension captures the extent to which propositions are open to negotiation, or instead have closed down and become inevitable. This *level of coercion* is high if things are settled and/or institutionalized and decisions are binding, and low if they are still debated and contested, and decisions dependent on voluntary action. Political debate, conducted within the confines of political institutions that eventually produce laws and other authoritative policies is ultimately capable of coercively taking decisions. In contrast, public debate as such is not. It may generate new ideas and perspective, it may generate support for a particular case, and it may in the end breed acceptance for laws to be adopted, but in itself it is not able to issue binding rules. Yet, the fact that public debate can have important consequences for how life in the polity is organized, makes that it clearly belongs to the sphere of governance.

Following distinctions along these two lines, a collection of modes of governance – by no means meant to be complete – can be arranged in Figure 2.

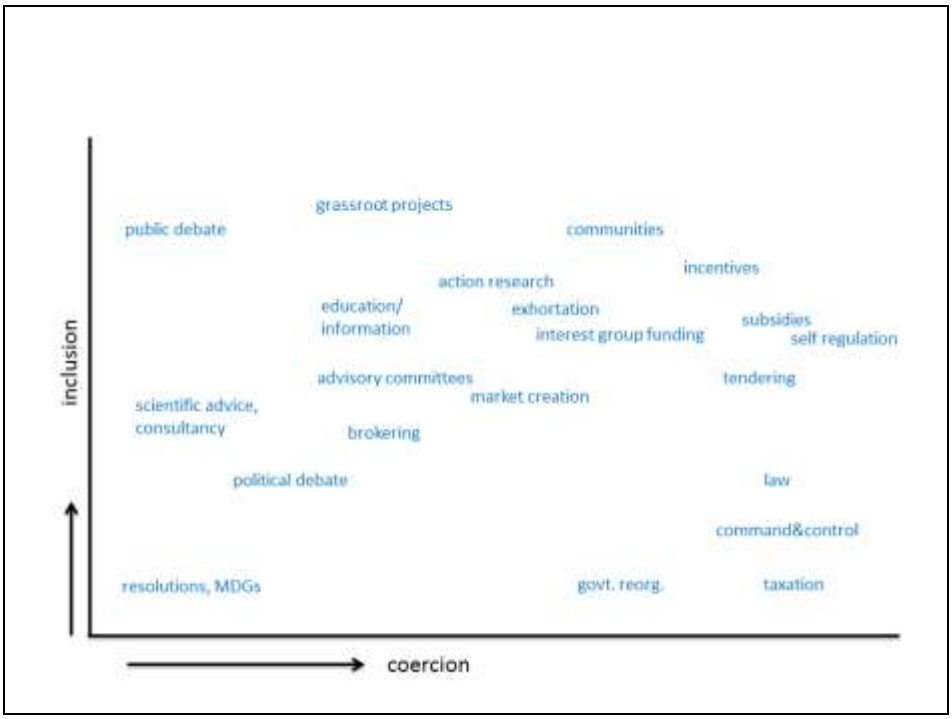


Figure 2: A two-dimensional classification of conventional modes of governance (original)

The combination of these two dimensions produces a field in which the complete range of modes of governance can be charted. At the same time, the field carries a gradient towards both engagement and enrolment of the general public. This is a democratic enrichment, and one that offers more substantial specification than the naïve hopes debunked by Smismans (2006). As will become clear onwards, this classification explicitly engages with the agency of individual actors and how this is arranged, whereas existing approaches often see agency as a systemic feature (Lockwood et al. 2013).

However, in modern, technological life, choices between technological options can be very consequential and binding for the citizens living with them. Therefore, notions of governance should importantly include all those decisions that are consolidated into the techno-scientific infrastructures upon which we live our lives. This holds maybe even more strongly when it comes to energy security and transition towards a low-carbon society, processes that are very much influenced by variable linked to technology. In this light, it is worth to include in the classification more technology-based forms of governance, as the setting of standards, the implementation of infrastructures, the installation of research and development incentives, but also the mere development of new technologies and the abolition of obsolete ones. Thus, innovation and technological design are important forms of governance, even if they are not typically reckoned as such in governance studies.

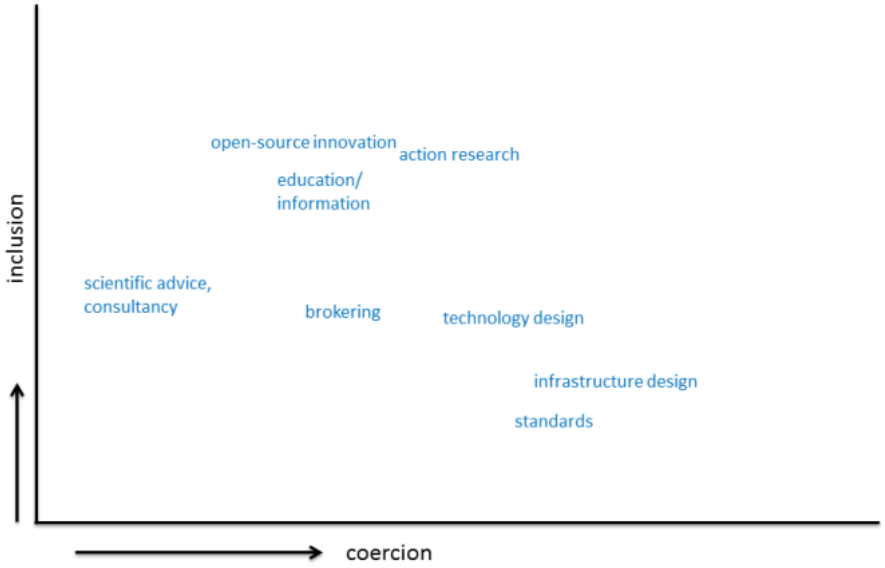


Figure 3: Techno-scientific modes of governance (original)

Principally, governance is about making decisions, the effects of which are imposed on society at large. This is not only done through formal, binding decisions, but also through breeding particular commitments and voluntary behaviour. This entails that the field of modes of governance harbours a general gradient towards the upper right corner. In the end, decisions should produce an impact on everyone (or at least on a high share of the chosen target), and decisiveness requires that the openness to negotiation is ultimately reduced.

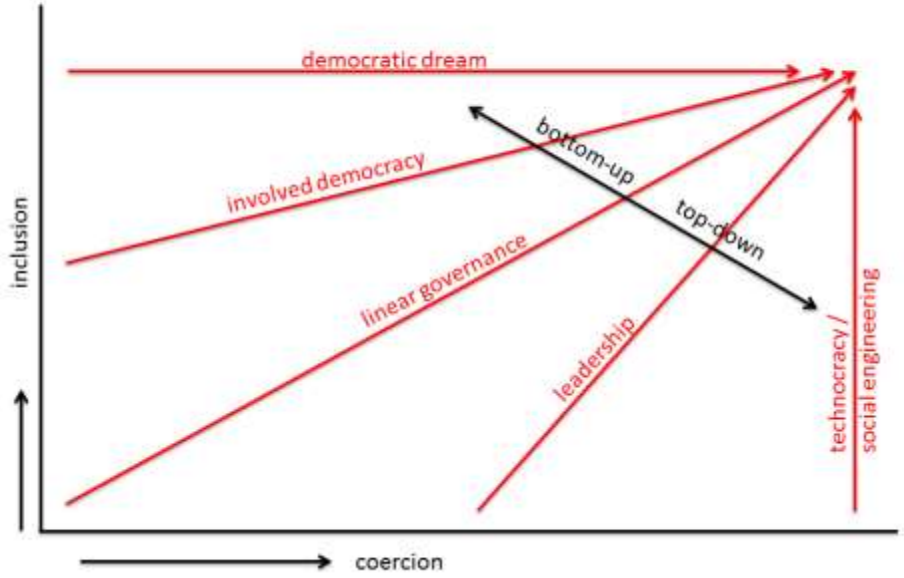


Figure 4: Regimes as gradients in the field of governance (original)

Given this gradient, different 'governance regimes' can be discerned,and represented as stylized trajectories through the field of modes of governance (figure 4).The three trajectories at the centre seem most legitimate and realistic. The most straightforward form of governance, termed 'linear governance' here, starts from a political situation, increasingly enrols and engages more parties so as to include more distributed forms of agency, and eventually ends up in a situation where a policy is well-developed, and generally accepted and applied. What we have termed 'leadership' and 'involved democracy' principally do the same, yet they importantly differ in their starting position. Leadership starts from a position that is stronger on authority while building participation from scratch, whereas involved democracy starts from a position that is stronger on involvement but has no a-priori authority. The extremes of 'democratic dream' and 'technocracy', while theoretically possible, are left out of the following analysis, because they are unrealistic or morally undesirable, respectively.

While the above subdivision of policy problems into the classes of political/moral issues, expertise questions, puzzles, and wicked or unstructured problems remained largely epistemic, the classification of modes and regimes of governance as exposed above adds to this the dimension of process: how issues are circulated, how actors show agency, how actors are positioned in power relations, and how outcomes are never merely determined by knowledge positions. Only through this expansion of the scope can it be possible for the human factor in energy transitions to be incorporated and mobilized. The trajectories towards the upper right corner of the inventory of modes of governance show exactly the enrolment of forces outside institutional politics, and moreover in a way that pays tribute to the fact that such processes are more than an epistemic affair. As a matter of fact, the presented trajectories, but also the many other trajectories that may be drawn in the diagram as linking various modes of governance towards the reach of a specific achievement, when carefully thought, may actually provide a preliminary representation of the involvementof more or less stable clusters of individual and collective actors, institutional or not, that jointly develop plans of action, activate social norms and standards and mobilize resources to encourage, manage, anticipate or direct the dynamics associated with energy transition.

At this point, the important question can be raised of why developments typically start somewhere in the lower left quadrant: with a small degree of participation and a small degree of enforcement. One simple answer is that sustainable transition is an imperative, and institutional politics is a good place to

start implementing such an imperative. A more complex answer is that even if considerable support of the programme exists outside institutional politics, and even if the actual initiative for sustainable transition is taken elsewhere than in parliaments, then still coordination of some sort is needed. For sustainable ideas to be implemented, it is necessary to pass them through political institutions to make sure they become authoritative. De facto, institutional politics will thus always be involved, and pivotal at that.

## 6 Governing energy transition

As empirical work in the MILESECURE2050 project shows (Caiati et al. 2014), the enrolment and engagement of citizens is most important throughout the whole trajectory of a transition. The empirical material consists of pilot-scale projects. While most of them show characteristics of radical innovation, they are too much limited in scale to count as systemic changes (even though at the level of local perception, they may appear so). Nevertheless, the material clearly shows the value of the gradient-field grouping of the modes of governance. First, it serves as a heuristic to increase our understanding of energy transition and how their governance unfolds. Second, it provides advice on how such governance could be arranged, provided that indeed the gradient as explicated is appreciated.

First, using the framework as a heuristic, the following becomes clear. On the one hand, the empirical material seems to suggest that transition succeeds best if social dimensions are mobilized first, then to be followed by technical and economic arrangements. However, such a conclusion would suggest that the whole transition starts somewhere in the upper half of the field. This is unlikely from the perspective of the field itself, and indeed it should be expected that transitions in reality do not start from scratch. They are typically prepared 'backstage' in policy rooms, political forums, or even spontaneously in public debate. The gradient field suggests that some more centralized form of governance is required upstream, so as to provide some stability and legitimacy to the very direction of the transition. While the gradient field is merely speculative (i.e. based on conceptual ideas, not meant to constitute an empirical or ontological claim), it offers a perfect heuristic reason to look for such more centralized modes of governance. And indeed, at closer look, such modes of governance are actually found in the empirical material. For example (p. 99) [7], it is observed across a variety of case studies that think tanks often play a role in preparing the activation.

Second, the framework seems to make sense as a tentative guideline for selecting relevant modes of governance. For instance, it is observed in many pilots that acceptance of lifestyle changes (p. 46) strongly depends on cultural backgrounds, and how valuations of specific forms of behaviour are made. In many situations, owning a car has a value beyond the mere economic. Owning a car is also about status, comfort, and about a seemingly self-evident conception of 'normal'. Similarly, changing behaviour in heating, for example if an innovative system uses lower reference temperatures than conventional heating systems, is difficult if the whole perception of what a proper reference temperature is, and how this perception is to be changed, are not taken into account. The regimes that were identified in the gradient-field already show which modes of governance are likely to be mobilized if we want those social-cultural aspects to be changed. If an informed guess is made that trading the car for public transit is likely to meet resistance, then it might be naïve to hope for strong participative governance in the initial phase. Instead, the 'leadership' regime might be the trajectory of choice, building on modes such as infrastructure and technology design and the creation of markets. Conversely, if it is expected for any substantial reason that revision of heating behaviour will meet with great initial public support, the 'involved democracy' regime is likely to be successful. This means that scientific advice can easily be consulted, to be followed by public information campaigns and incentives – to mention of course only a few of the many available options.

## 7 Conclusions

[7] Page numbers in this section refer to the MILESECURE2050 deliverable by Caiati et al. (2014).

The gradient field of modes of governance helps operationalizing the idea that the solution of complex problems requires that multiple perspectives are brought to bear on the very problem. In particular, to existing approaches to complex problems, which engage with epistemic lacunae of normative and empirical nature, it adds sensitivity towards diverse ways of mobilizing and engaging citizens.

Through the three regimes of leadership, linear governance and involved democracy it offers three ways of giving a particular direction to transitions. Clearly, these three regimes are only stylized trajectories, and in practice there is no limitation on the combination of modes of governance. Yet they offer, as shown in the examples in the previous section, some guidance on which modes are likely to be effective. Regardless of the exact choice of modes, the trajectories also reflect that building legitimacy is at least as important as is building engagement. Such legitimacy is built in the left half of the field, and requires argumentation of why a particular transition is needed. This point is vital: as earlier critique has pointed out, many approaches to transition take too easily for granted that the direction of transitions will be a good or benevolent one (Shove and Walker 2007). The current approach highlights what it takes to add democratic legitimacy to such directions. That is why the lower left corner of the field plays an important role in any evolution of a transition.

It is to be hoped that this approach, of arranging modes of governance in the field spanned by the level of inclusion and the level of coercion, can be developed further. Given that the regimes move in the upper right direction, which is a direction of increasing legitimacy, one follow-up question would be how each mode of governance contributes to the further production of legitimacy. A second line of research would be a more substantive specification than could be given here of how modes of governance actively contribute to the engagement and enrolment of citizens. Currently, in fact only a match is made between such levels of engagement and the seemingly appropriate mode of governance, but this requires more specification.

Finally, this production of engagement and legitimacy must be connected more explicitly to the ideas of learning that are central to existing approaches to transition (see sections 2 and 3), which in turn are strongly connected to the notion that transitions, as are contemporary societies at large, are highly reflexive processes. Feedback loops render the prediction of future behaviour of systems (whether technical or social) unpredictable. The production of engagement and legitimacy are themselves interventions in the sociotechnical system, and reflexive at that. The current contribution helps mobilizing learning processes to deal with this reflexivity.

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# TRACK 10

# Planning in Weak Institutional Environment

## Track description

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Many countries and regions struggle with weak institutional environment. In some countries, institutional planning effectively controls only a fraction of development. In other countries, shrinking public budgets negatively affect the operation capacity of planning. Under those circumstances, questions arise about the opportunities and limitations for undertaking urban planning. Congress participants are encouraged to explore some of the following questions.

- What kind of contexts characterizes a weak institutional environment? Assess the importance of political system, legal framework, economic model or social capital among other contexts.
- Are there differentiated weak institutional environments so as to establish diverse typologies? If so, can we segment urban planning policies and methods according to those typologies?
- Is acceptance of informal planning processes a sound solution for those cases? Would a trend towards informal planning be another feature of governance? How would be the responsibility for planning and development distributed in these cases?
- What kind of governance model would be appropriate for countries with weak public institutions? Discuss the role of political leadership and technocracy, stakeholders' involvement, citizen participation, inter-governmental coordination, public-private partnership and Third Sector involvement.
- Are the responsibilities and commitments of actors in the weak institutional context different from a "standard" institutional environment?
- Can "smart technologies" reinforce weak institutions or build institutional capacity?

Draft version_ to be improved

**DRAFT VERSION_TO BE IMPROVED**
**COMPLEXITY AND RESPONSIBILITIES IN THE PUBLIC-PRIVATE PARTNERSHIP. CONSIDERATIONS FROM AN ITALIAN CASE STUDY**

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Keywords: Public Private Partnership, Urban Regeneration, Italy

*Since the 90's, urban projects based on partnerships between different kinds of stakeholders, both market or public-oriented, were spreading in the European Countries in order to face EU policies. In the current economic and financial context, these experiences are becoming more relevant than ever with their complexity, fuzziness and multiple-player nature. Therefore it seems now crucial to understand limits and possibilities of PPP's projects (notably about urban regeneration) and the issue of balancing contraction of public finances and private stakeholders' involvement.*
*In this framework, the paper presents investigations about the nature of each "P" involved in the process by the analysis of a case study in urban regeneration in Italy which has shown negatives features, especially considering the role played by the public administration. Particular attention has been paid to understand how the allocation of risks and responsibilities and the definition of the final purpose affected the final outputs and outcomes. The paper argues that PPPs need to be analysed beyond biased literature and useless generalization, setting up a sort of database of practical experiences, examined and classified also through the point of view of practitioners, in order to relate outcomes with institutional environment, typology of partnership, role of each stakeholder, relationship between public interest and private benefits.*

## 1.What can't be cured must be endured? Observations about Public Private Partnership

Summary of the section

The term Public Private Partnership refers to a general approach to urban transformation, involving several policies, tools and devices. In the current frame defined by social and economic crisis, PPP's gain a leas role both in governance mechanism review and in the production of new paradigms and operational tools in order to study, manage and intervene on urban transformations.

The urban transformations' background came under deep change, in the last decades, in Europe as in Italy, considering social, political and economics aspect.

It's possible to number among the expressions of change the spreading of policies and practices of urban regeneration based on a PPP's approach (Sagalyn, 2011, EC 2004). Nowadays more than ever is important to consider the occasion that drove, since the early 90's, the migration and diffusion of PPP's procedure, also linked to European policies aimed to reach stability of states through a limit in use of public assets.

The whole spectrum of PPP's practices is a new market up to, virtually; find a balance between the reduction of public finance, the need to renew collective services and of urban renewal and the incentives to private stakeholders. In a context of scarcity, both in public and private sector, PPP's could be read as a laboratory to investigate and change links and connections among different stakeholder with different interests and aims. In the meantime, there are several cases with negative outputs dued to the lack of dialogue between actors or to the unclear purposes. Therefore it's crucial to understand if and how they could be successful and beget urban transformation and regeneration, towards a just city.

PPPs stay as a problematic topic, often analyzed from biased points of view, mostly because economic and financial issue. Is PPP only a way to extract money from the community or is it a way of reallocating risks and responsibilities? (Hildyard, 2014) Discussion on this tools has to be observed by different perspectives: on the one side we have PPP's as symbol of neoliberal city (allocating resources to private actors, privatization, selling-off of public goods), in a sort of ideologization of critical analysis upon an approach strongly interconnected with debate on economic and social aspect of contemporary cities (Le Galès, 1995; Sagalyn, 2011, Swingedow Moulaert Rodriguez, 2002, Miraftab2004). On the other side there are also several studies and handbooks describing PPP's as a

miracle cure for infrastructures, services and urban transformations urbane (Hodge, Greve & Boardman 2010.)
PPP can be the place for dialogue as it can be the place of conflict; that's why; biased approach is confusing in the reading of such practices and, thereby, frustrates the improving of best practices in Public Private Partnership.

**2. Research questions**
Summary of the section
The first question of this research is about who takes the risks and for whose benefit, beyond the ideological position, in order to read the relationship between public and private interest without the lens of a supposed necessary dualism (Alexander 2001).
In a wider point of view, the interaction between public and private actors in urban transformation starts a lively and open debate, since it involve different discipline. The research of a new paradigm in the definition of PPP tools has to be supported by the research on the evolution of economic and politic paradigm, nowadays in the spotlight.
The power of each actor and stakeholder involved in Public Private Partnership is a crucial guideline to investigate how the process develops in planning and design phases in order to build different kinds of approach and definitions of public interest (which is supposed to be, anyway, the final aim of PPP's introduction)
In the current times, PPP tools, mainly in Italy, are in crisis, both considering the number and the value, because of the credit crunch after 2008 crisis, bad communication with local communities, and fuzzy definition of the final aims.
This work is part of a bigger research aimed to understand whether PPP could be a real opportunity for cooperation to create a synergy and more inclusive processes for urban regeneration, to be an exchange between different stakeholder, or, on the other side, if it's only a financial device to sell commons and public goods to private developers and investors.

**3.European institutional environment and PPP regulations**
Summary of the section:
Before taking into consideration concrete experiences that can put in evidence possible virtuous uses of the PPP, it is essential to consider either the directives and the community recommendation that favored the diffusion of the collaboration between public and private subjects from countries where that approach was already strengthened (such as United Kingdom and France) towards the other countries of EU.
In the past 25 years we observe a trend of reorganization of the public sector in various parts of the world. This phenomenon affects particularly the european countries, where, starting from Maastricht, the use of private and financial resources to optimize the realization or the management of infrastructure and supply of services have been made necessary.
Since the green book of PPP until the newer European directives, the European Union, supported the diffusion of subsidiarity in urban transformation. But at the same time, the isn't an unique definition and procedure for the Public Private Partnership in all the European countries; the role of the public stakeholder and the kind of private stakeholders differs from a country to another. So it's important to describe the institutional environment in which the investigated PPP take place.
Description of laws and procedure of PPP in Italy and comparison with other countries' laws and institutions which regulate and improve partnership between different actors

**4.Urban transformation in Naples, an attempt of urban renaissance**
Summary of the section
Short description of urban policies, urban marketing and urban transformation of Naples, related to the change in institutional framing (new role of the major and of local administration in Italy in the early 90's). Good and bad experiences
Large urban regeneration, new public transport and the network of intervention in the east of the city (Naplest).

**5.The case of the "Centro direzionale" completion**

Summary of the section.
Centro Direzionale is a district in Naples mainly devoted to business and services, planned at first in 1964 and designed by the Japanese architect Kenzo Tange in the early 80'. The construction of the huge district, with some of the tallest building in the south of Italy, was interrupted half way. While a part of the project is completed and working, there is an empty or under-used area at the east, in a marginal and peripheric area of the urban conglomeration.
Description of the Project Financing proposed to fill the empty area, with a new project and new function (streets, park, schools, social and private housing, leisure and tourism infrastructures).
History of the project, since the early public proposals in 1999 until the starting of Project Finance initiative in 2004, which lasted until the final approval of project in 2011. At the end of this process, also dued to long and difficult procedures (not fully regulated by the Italian Law at the time) and to critical partnership between public and private stakeholder, the construction of the new urban development haven't yet started, even if it's not officially abandoned.
In this part, the evolution of the agreements between public and private promoter of the whole operation is descripted also following the evolution of the urban design and of the actual project.

**6.From synergy to compromise**
Summary of the section
The development of the project financing, which was carried out during more than a decade, perverted and twisted the procedure of the public private partnerships. The core of the proposal had some point of interests : the private developer wanted to build private residential building to payback the costs of public works in the same area, so there was a gain in both part from the achievement of public interests (even for the economic purposes of the private stakeholder)
In this section we describe the causes of the deep changes in the project, connected to the weak leading role of the public administration (which changed during the year) and the role of the private stakeholder who was no more interested in creating a real reallocation of responsibilities and risk, but looked for the most convenient way to finalize the works.

**7.Consideration about the role of public administration in PPP**
Summary of the section
The output and outcomes of PPP operations, mainly in the urban regeneration program such as the one we are talking about, depend on the cooperation and togetherness of all the actors involved. While the role played by the private developer is to pursue its own interests (except for the third sector actor, whose role in PPP will be briefly investigated), it's up to the public administration and to the institutional stakeholder to coordinate the sum of the private interests and drive them through urban transformation. It's up to the public actors to go beyond the dichotomy between public and private. That's why it's important to investigate the role of public entities in the building of PPP in different countries, and short comparison between other experience of PPP in Italy (Civic Center of Scandicci, Florence, designed by Sir Richard Rogers) in France (Caserne de Bonne, Grenoble) and in Spain (Renewal project Ciutat Vella district), with a special focus on the role of public actors in the good quality of the physical outcome.

**8.Conclusions**
Summary of the section
The accountability and the strength of public administration is the key to read the urban transformation through Public Private Partnership. This section is going to explain how a weak institutional environment, also on the side of the law and of regulation, affect the output (or the lack of implementation) of PPP project. The lack of vision and of legal device to coordinate complex programs between the main reason why the public stakeholders lose the opportunity to create an innovative urban transformation.

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## 2 Conclusions


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# STRATEGIC LEADERSHIP AND PLANNING IN A LOCALIST AGENDA: LESSONS FROM THE NORTH WEST OF ENGLAND

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## Abstract

Following the 2010 election, the new Coalition government in the UK abolished the English regional (planning and development) institutions and their strategies, establishing business-led bodies of Local Enterprise Partnerships (LEPs) at the city regional scale, and a cross-local authority 'Duty-to-Cooperate' to feed in informal strategies and deliver projects around cross-boundary issues such as housing, transport, the environment, and strategic sites. Given the non-statutory status of the LEPs and the loose framework for the Duty to Cooperate, this paper draws on empirical case study research undertaken by the authors in three city-regions of North West England to investigate whether strategic spatial priorities can be effectively planned and delivered under this highly neo-liberalised and localised system. In other words, it asks whether strategic thinking can still take place in a weak strategic / sub-regional environment. In examining the inclination and ability of LEPs for spatial governance, we identified three typologies of their roles in the city-regions studied: *'expedient leader'*, *'ambitious mediator'*, and '*political and functional rival'*. These findings, along with those of the Duty-to-Cooperate in cross-local consensus building and delivery, result in lessons about building corporatist institutions of strategic governance as well as the institutional and legislative contexts of 'bottom-up' strategic planning.

**keywords**: Localism; City-Regional Leadership; Strategic Planning; LEPs, Duty-to-Cooperate

## Introduction

Given the traditional lack of a directly electoral tier, the story of English regionalism is a recurring roll-in and roll-out of state apparatus (Roberts and Baker, 2002). The most recent wave of regional planning and institution-building was arguably the strongest and lasted for two decades from 1990 (Pearce and Ayres, 2006; Swain, et al., 2013). The peak of this wave involved the creation of a formal regional planning body, called the Regional Assembly (RA), which comprised 70% local authority members and 30% regional representatives of the voluntary and business sectors (Cullingworth and Nadin, 2006). They were subsequently put in charge of preparing statutory Regional Spatial Strategies (RSS) involving a cross-cutting and inclusive agenda (Riddell, 2013). The Government's National Planning Policy Statement (PPS) 11: RSS (ODOM, 2004) required local authorities' Development Plan Documents (DPDs), including Core Strategies, to be in conformity with RSS, thus establishing a cascading hierarchy of spatial planning policy from the centre to the locality.

Although generally known as regional planning bodies, Regional Assemblies were not the only organisations preparing regional plans. Regional Development Agencies (RDAs) were another institutional innovation whose business led and centrally appointed Boards were tasked with producing Regional Economic Strategies (RESs) (Shaw and Lloyd, 2000). In addition, the Government Offices for the Regions (GOs), which had been created in 1994 to act as integrated branches of central government (Pearce, et al., 2008; Sandford, 2013), played coordinative and mediation roles between RAs, RDAs, local authorities and other stakeholders whilst trying to empower the grassroots in regional decision makings (Baker, 2002; Pearce, et al, 2008). However, there were still issues around power relations, authentic consensus building and involvement of weaker parties in regional planning which surfaced in some regions such as the more prosperous South East and East of England (Hager, 2012; Allmendinger and Haughton, 2012).

Helped by the dissatisfaction of some local authorities with the so-called 'democratic deficit' of the top-down apparatus and the associated regional imposition of housing numbers, the 2010-elected Conservative / Liberal Democrat Coalition government embarked on the abolition of regional plans and institutions in England (House of Commons, 2011, Haughton and Hincks, 2013). The new government's institutional alternative was city-regional and informal; the *Local Growth* White Paper (2010) introduced Local Enterprise Partnerships (LEPs) of business and civic leaders to undertake the strategic steering of transport, housing and planning (HM Government, 2010). It was announced in the White Paper that these LEPs would be expected to fund their own day-to-day running costs, but they now receive core funding from the government (HM Government, 2010; DBIS, 2012).

While the abolition of the regional planning apparatus was not surprising, the Coalition government also abolished the GOs and all this created another strategic vacuum to be filled by central and local governments. In 2012, the Coalition's *National Planning Policy Framework* (NPPF) was published, replacing the former series of detailed PPSs with just one document. The NPPF requires local authorities to work collaboratively, especially with their neighbours, on strategic planning priorities such as housing, infrastructure and the environment. Local authorities are expected to demonstrate they have fulfilled this *'Duty to Cooperate'* when their Local Plans are submitted to the government's executive agency, the Planning Inspectorate, for public examination. This could, for example, be via a joint policy making / planning committee, a memorandum of understanding, or a joint strategy (DCLG, 2012). In contrast to New Labour's enthusiasm for spatial strategies as visionary, broad-ranging and integrative frameworks (Nadin, 2006; Haughton, et al., 2010), the NPPF uses the term '*spatial*' only once in connection with Local Plans and this comes with an emphatic '*realistic*' (DCLG, 2012: 37). So the basic form, and probably the most practical expression, of a joint strategy, as envisaged by the new Coalition government, would be some kind of supra-local land-use plan involving neighbouring authorities working together. Under these reforms, the Local Plan is thus expected to engage in a range of contentious decisions which used to be made at the regional level through RSS procedures. These include, for example, the scale and distribution of new housing, strategic transport and provision for gypsies and travellers (ODPM, 2004; DCLG, 2012).

A raft of experiments has subsequently unfolded in the context of the Government's quick establishment of the localism project, particularly in the two core areas of city-regional leadership and 'bottom up' strategic planning. These initiatives have received mixed but mainly negative scores in subsequent evaluation studies. For example, Lowndes and Pratchett (2012) argue that the Coalition's reforms show traces of an ideological commitment to localism which has the potential to deliver a radically different form of local governance. Putting forward a socially and geographically expansive alternative called 'progressive localism'. However, Featherstone et al. (2012) are less optimistic and suggest the current austerity localism can have pernicious consequences. Lowndes and Pratchett (2012) see austerity as a political expediency of Government, while Haughton and Hincks (2013) talk about austerity politics. Nonetheless, these studies are unanimous about the potentially detrimental impacts of austerity on territorial management at the local and supra-local scales, especially for less affluent areas. Similarly to Gallent et al. (2013), Boddy and Hickman (2013) raise concerns about the loss of strategic planning objectives, for example in housing policy and delivery, under the new localist arrangements. The former authors (Gallent et al, 2013) observe a need to embed localist arrangements into a more vibrant local democracy to counter the loss of the 'stick' of regional planning by reshaping the relationship between communities and development. Meanwhile, Boddy and Hickman (2013) argue the Duty to Cooperate represents a problematic and reductionist view to the functions of the abolished regional strategies. Some shortcomings, they suggest, include: the need for a phenomenal political leadership to reproduce the inter-local housing exchanges of RSS; a lack of meaningful collaboration at the city-regional level despite the existence of LEPs and a range of other voluntary partnerships amongst localities; limited scrutiny of the Duty to Cooperate; and its inadequacy when there is no appetite for collaboration.

This paper therefore aims to contribute to this emerging literature by presenting empirically-based insights from one of the biggest regions in England (the North West) in which regionalist

arrangements have been replaced with localist alternatives. It is intended to examine (a) the extent to which the new architecture of city-regional governance, primarily based around the newly created LEPS, appears capable of exerting proactive territorial leadership at the sub-regional scale and (b) in terms of cross-authority cooperation and collaboration, whether the statutory 'Duty to Cooperate' is helping to reconcile the '*strategic*' with the '*grass-roots*'. In terms of case study selection, it was recognized that the chosen region and the local case examples needed ideally to exhibit a degree diversity in their socio-economic, institutional and political circumstances to increase the validity of the findings whilst, on the other hand, the chosen localities should be reflect similar governance arrangements to those in place in other English regions to provide transferrable lessons from the empirical findings.

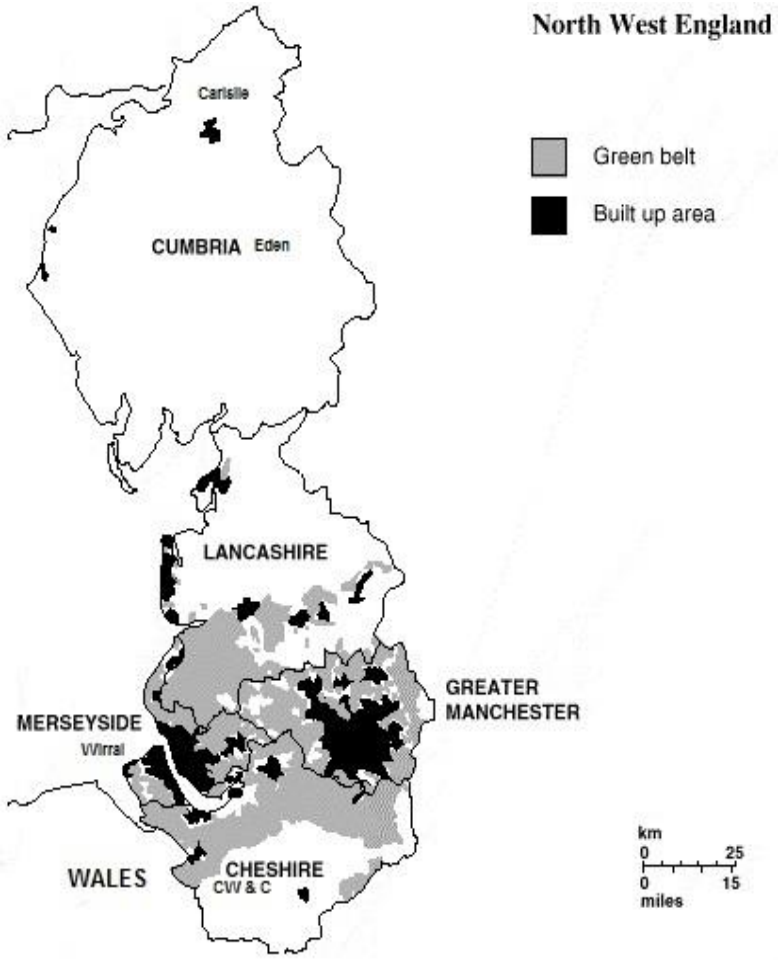


Figure 1: The North West Region (Source: House of Commons, 1998)

The North West region of England has a population of 6.9 million - the highest after London and the South East - of which around three-fifths live in the major conurbations of Greater Manchester and Merseyside or Liverpool City Region (see Figure 1) (Wilson and Baker, 2006;Young and Sly, 2011). Three of the five sub-regions of the North West are located on the national borders: Cumbria, which is largely rural with sluggish growth, borders Scotland to the north; Cheshire, which accommodates some of the region's wealthiest wards, neighbours Wales to the west; and the Liverpool City Region borders Wales by water to the south. Administratively, the region comprises two counties (Cumbria and Lancashire), six unitary authorities, and 15 metropolitan districts within Greater Manchester and Merseyside (Young and Sly, 2011). In order to examine strategic leadership within the sub-regional geography of Cumbria, and to gain a bigger-than-sub-regional insight, Cheshire and Merseyside were chosen for more in-depth study. Cumbria has a two tier local authority system (county council and

district councils) and is located in the more isolated and self-contained northern parts of the region whilst Cheshire and Merseyside are made of one tier authorities and form two of the region's political and economic heartlands in proximity. These areas represent two extremes of political attitudes towards regionalism and localism. While in the regional planning process '*Cumbria in particular felt excluded and were "seeking equal status".'* (EiP Panel, 2007: 40), Merseyside was steering the decision making process and Cheshire were at the centre of the previous regionalism era's cross-border experimentations under which it signed up to a deal with North East Wales (see Cheshire County Council, 2006). However, these areas represent similar governance arrangements to many other English city-regions. Unlike Greater Manchester, which since 1986 and the abolition of metropolitan county councils has been partly governed by a powerful voluntary body called the Association of Greater Manchester Authorities (AGMA) (Leach and Game, 1991), the selected city regions have had less of a tradition of collaborative governance and it was felt could thus reveal more traceable impacts of post-Coalition central institutional innovation.

Based on 28 in-depth interviews with a wide range of policy actors, complemented by textual analysis of key policy documents, the next sections of this paper discuss developments in sub-regional governance and the role of the new Duty to Cooperate in two chosen case study areas: firstly, Cheshire and Merseyside and, secondly, Cumbria. At the more local scale, four neighbouring local authorities were selected in order to examine the effectiveness of the 'Duty to Cooperate' in more detail; one was in Cheshire (Cheshire West and Chester), one in Merseyside (Wirral), and two were in Cumbria (Carlisle and Eden).

## Case Study Area One: Cheshire and Merseyside

Cheshire West and Chester is a unitary authority area that was established in 2009 from the amalgamation of some of the districts of the former county of Cheshire (Young and Sly, 2010). Bordering the Welsh local authorities of Wrexham and Flintshire to the west, Cheshire West and Chester constitutes the main English part of the West Cheshire / North East Wales sub-regional geography of housing and employment (see Figure 2). In order to address the policy-making and governance implications of this functional area, a non-statutory spatial strategy was published in 2006 as a result of cooperation between both Welsh and English local authorities, sponsored by the North West Regional Assembly and Welsh Development Agency / Welsh Assembly Government (Cheshire County Council, 2006; Wrexham Council, 2009). Among the wider referenced areas of this strategy in England is the metropolitan district of Wirral which is part of the Liverpool City Region. Wirral is a peninsula bordering Cheshire West and Chester by land, and other local authorities of the Liverpool City Region, as well as parts of north east Wales, by water.

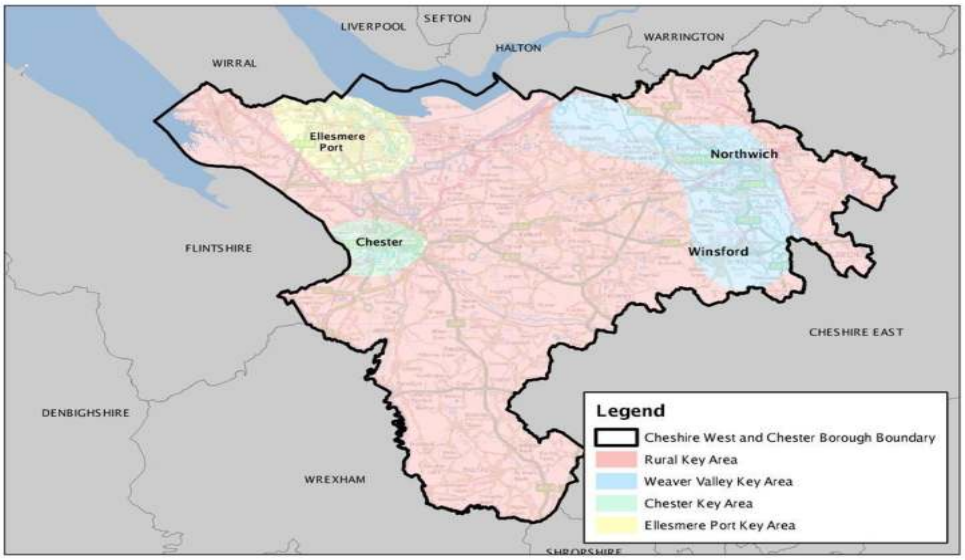


Figure 2: Cheshire West and Chester

***Sub-Regional Governance***

The process of preparing the West Cheshire / North East Wales Sub Regional Spatial Strategy is arguably at least as important as the final document itself, since it involved innovative consensus building that, for example, required Welsh authorities to provide for some of the housing demands of the English side. Indeed, despite initial tensions, it was the significant 'relation-brokering' aspect of the process that turned the initial cross-national study into an emerging spatial plan. As one interviewee commented:

> *"At the start of the process … it was that fractious the relationships, and that was between Welsh authorities, between English and Welsh authorities, and between English authorities … At the end of the process we got a lot of agreement on the high level principles, the way forward, and they were enabled to embed that into local development plans, LDFs and so on. I think that was a success and the fact that a piece of … research evidence-gathering project turned into a strategy-making project probably shows the progress that was made there in those relationships."* (Interview R8, regional body, 2012).

Although the scrapping of the West Cheshire / North East Wales Sub Regional Spatial Strategy in 2011 (Bangall, 2011) meant the end of its lifespan as a decision framework, its institutional legacy, namely the Mersey Dee Alliance (MDA), is still active. The original MDA was a cross-local authority organisation covering parts of Cheshire and Merseyside (Wrexham Council, 2009). The cross-national *'4 Counties Partnership'* (the core local authority alliance engaged in the strategy making process) merged with the original MDA in 2007 to create a more powerful organisation to deliver the published strategy and act as an influential lobby at the regional and national levels (Wrexham Council, 2009; Celtic League, 2011). The recent tough political and financial circumstances have hindered the MDA's visionary territorial leadership but it has nevertheless continued to act as a cross-national facilitator for officer-level meetings, as observed by a planning officer from Wirral: *" that is one of our main means of engaging with Wales … it probably struggles from the lack of resources in terms of being able to do much, other than have meetings."* (Interview L12, 2012).

Since the LEP and the Duty to Cooperate do not include Welsh territories, the MDA is the only governance arrangement covering the whole area, but it currently has a more sectoral focus and is not dealing with unresolved issues around the imbalanced distribution of development costs and benefits between the Welsh and English neighbouring authorities (see MDA, 2012a: 4): *"it is increasingly important to focus available resources (people and money) in support of a limited number of deliverable projects"*. However, this is not the only barrier to adopting a more proactive leadership approach to this dynamic area as the political mood in Wales has become even less favourable. The West Cheshire / North East Wales Sub Regional Spatial Strategy has thus been seen by some Welsh community organizations and politicians as a means of making parts of North East Wales a suburb of Cheshire and Merseyside (see Celtic League, 2011; Deffro'r Ddraig, 2012).The Deffro'r Ddraig campaign, run by the People's Council for North Wales - which ultimately managed to get the strategy scrapped (Bangall, 2011) - is now becoming even more assertive. The second phase of the campaign wants to eradicate the housing policy legacy of the strategy from existing Welsh local plans. Indeed, their aim is to recall all Local Development Plans across Wales and to scrap the use of the housing formula applied by the Welsh government which would supply for more than local needs (Deffro'r Ddraig, 2012).

The MDA is now a locally funded, cross-national, partnership whose political and financial fortunes has been decided by the same reforms that established LEPs and put them under the policy direction of the state. Considering the structural role of government in creating sub-regional divisions through its funding and political apparatus, it is tricky for the MDA and the two LEPs operating in parts of the same geographical area, to build any joint partnership. The Cheshire and Warrington LEP, which has been established in a relatively more open institutional culture than has been the case with other LEPs,

has managed to take a step beyond its initial institutional engineering by giving a board seat to a social partner. The aim is to: *"Develop an strategic alliance with other LEPs and North Wales via Mersey Dee Alliance."* (Cheshire and Warrington LEP, 2012: 8). But there are few signs of a welcoming reaction by the MDA. Despite the new emphasis on acting as a network for business, employment and skill actors, the MDA's Business Plan 2012- 2015 (MDA, 2012a) is silent as to how common concerns can feed into partnerships with the LEP.

Subsequently, in this highly connected functional area, the Cheshire and Warrington LEP has not developed ties with its counterpart in the Liverpool City Region or with neighbouring Welsh authorities. This inter-LEP governance failure is also related to their economic-output design; indeed, the LEP's non-statutory status and central expectations (see HM Government, 2010) seem to have contributed to the effects of their core business membership so that: *"What they have promoted is greater competition between local authority areas and between Local Enterprise Partnerships,[but] far less incentive to cooperate"* (Interview E6, environmental leader, 2012). The Cheshire and Warrington LEP has so far failed to use the potential of the MDA to resolve its frictions with local authorities. For example, a partnership between the Cheshire and Warrington Enterprise Commission and the three local authorities of Cheshire West and Chester, Warrington and Cheshire East published a sub regional strategy in 2010: *'Unleashing the Potential of Cheshire and Warrington'* (Cheshire East Council, et al., 2010). This growth strategy is now the key reference point for the LEP in their housing and employment policies (Cheshire West and Chester Council, 2011) and the strategy has acted as a point of difference between the LEP and the accountable body for the MDA, namely Cheshire West and Chester Council (MDA, 2012b).

The LEP would like Cheshire West and Chester to be more ambitious in its housing targets but the council is looking at 1050 dwellings per annum in its emerging Local Plan (Cheshire West and Chester Council, 2012a), which is nearly a third lower than the target of the sub regional strategy (Cheshire East Council, et al., 2010):

> *"One of the challenges we've got is that … organisations like the Local Enterprise Partnership… private sector interests like Peel Holdings who obviously have quite a key interest around this part of the world, there are sort of competing strategies… 'Unleashing The Potential' was very much the sort of economic strategy and it's still being used as a sort of driver to say 'well, this should be our ambition for housing, this should be our ambition for economic development', which currently, in terms of what we consulted upon with regards to local plan policy in Cheshire West, they don't match… There might be aspiration for higher numbers but the delivery is going to be tricky."* (Interview R11, local government, 2012).

The situation in the neighbouring Liverpool City Region is complicated; the only significant sub regional body when the LEP was being introduced was The Mersey Partnership, a business network which subsequently merged with the LEP (Bartlett, 2012). This void was less tangible than in the previous era as the Liverpool City Region, along with Greater Manchester, were the main actors in the regional planning body which also had an explicit sub-regional mandate (see ODOM, 2004):

> *"I think what we have really seen is a Balkanization of local government and strategic government from which a strong sense of direction is yet to emerge… the institutions we have … are quite incapable of giving the integration and strategic leadership which is needed especially as the regional tier has been abolished."* (Interview R7, regional body, 2012).

Some stakeholders we interviewed were excited about the LEP and believed it would provide the answer to the affliction of strategic leadership: *"there's a real prospect of let's say in three, four, five years time people saying 'well the Local Enterprise Partnership made all the difference to the Liverpool City Region'."* (Interview B2, business stakeholder, 2012). Others, however, suggested LEPs do not have the powers and resources to function in this way. On the other hand, any increase in

the LEP's strength could fuel further divisions and objection as some argue that: *"in the main, they consist of ad hoc groupings of business people who happened to be around in the right place at the right time."* (Interview V2, voluntary sector, 2012). There is also the question of whether the governance vacuum in which the Liverpool City Region LEP was created could gradually lead it to gain a territorially assertive position; amongst the challenges are that such position would require the LEP to open its Board composition to socio-environmental partners and to adopt a broad-ranging framework to guide partners' activities. However, these are clearly in conflict with the government's intention in putting forward, and funding, LEPs as primarily growth promotion partnerships (see HM Government, 2010).

The second challenge to an assertive leadership by the Liverpool City Region LEP comes from within its own Board. On 7 February 2012, it was confirmed that Liverpool City would receive new money and powers following its *City Deal* with Government. On the same day, the city council voted to have an elected mayor to lead the changes. Amongst the incentives is an Enterprise Zone for North Liverpool and the Central Business District (Liverpool City Council, 2012). However, the Enterprise Zone's prospectus (DCLG, 2011) says Enterprise Zones will be geographically defined areas, agreed between the "Local Enterprise Partnership" and government. This example of bypassing of the LEP, along with the city's distinctive growth arrangements such as Liverpool Vision, alarmed other localities and even the business actors of the LEP for a stronger governance arrangement.

Reporting on an independent study to address similar issues, Lord Heseltine and Sir Terry Leahy (2011: 13) argued: *"A metro Mayor is the best single solution to the leadership gap that currently afflicts the city region and constrains its growth."* But a Liverpool Mayor leading the entire metropolitan area was not the type of strategic compromise to which other localities were prepared to sign up and this recommendation was therefore shelved (Liverpool City Council, 2012). However, the idea of a combined authority, the Government's second favourite alternative (see HM Government, 2012), gained the support of some local authorities and major business stakeholders of the LEP, leading to the submission of a recent proposal to Government for the establishment of a combined authority responsible for transport, regeneration and economic development (see DCLG, 2013b) . The director of the Mersey Gateway project, which is the largest private-led development in North England, for example, suggested: *"A combined authority could attract that investment more so than an individual local authority."* (InvestSefton, 2013). Liverpool City, which has lost the opportunity to represent the whole metropolitan area, seems to have been on the compromising side of this deal which is supported by the government and business partners. The initiative would harness the city's economic and political maneuvering space since a combined authority means any decisions would have to be approved by a simple majority of the members (Wiggins, 2013). This could be well understood by the following statements of the Liverpool City Mayor:

> *"The government are clear that this is a model of governance that will put regions ahead of the game in the race for funding. For me it is an absolute no-brainer and merely lays down the existing positive, informal, arrangements that already exist."* (BBC, 2013).

Given the core interests of the Liverpool City Region LEP and the proposed combined authority are similar, especially in regeneration and economic development (see Liverpool City Region LEP, 2012; DCLG, 2013b) and because the businesses and central forces have been crucial in overcoming local political differences, it appears the LEP will exert significant influence over its indirect institutional product, namely the combined authority. A combined authority could adopt stronger positions, on behalf of its peer LEP, without facing the opposition of socio-environmental partners, especially as the Greater Manchester Combined Authority has provided an economic success story in which issues around governance representation have been overshadowed.

***The Duty to Cooperate***

The preparation of a *Core Strategy* for the Wirral started in 2005 in response to the then PPS documents and the RSS. Nine years on, the final draft was expected to be published for public comment in early 2014 before being submitted to the Secretary of State for public examination (Wirral Council, 2013). Despite starting later than Wirral in 2009, Cheshire West and Chester has now finished consultation on its final draft and was anticipating the examination stage in mid-2014 (Cheshire West and Chester Council, 2013). In the interviews held in Wirral, local planning officers believed that the emphasis of the Inspector would be on the outcomes of the increased frequency of meetings following the introduction of the Duty to Cooperate. Such an expectation could not be fulfilled in the political geography of Liverpool City Region by the introduction of general memorandums of co-operation as these would be regarded as a step back from what has already been achieved:

> *"we have a sort of structure of meetings set up as what's called the District Planning Officers Group, which is all the local authorities of Liverpool City Region…our main political links are really with the Liverpool City Region but, because of where we sit, we do have links with Cheshire West and Chester, and we share a border with Wales so we have to be aware of what's going on there as well."* (Interview L12, local government, 2012).

However, all the partnerships and planning initiatives that the Wirral officers mentioned as evidence of their fulfillment of the Duty to Cooperate with the rest of the metropolitan area were established under the previous era of government and were usually initially sponsored by the former regional institutions. One example which indicates how a third party influence provided a context to extend networks beyond traditional political partners was a 'needs-and-supply' study of housing and employment land. The study was based on an innovative partnership between the districts of Liverpool City Region, Cheshire West and Chester, and West Lancashire, called *'Liverpool City Region Partners'* (GVA, 2010; Liverpool City Region Partners, 2011). Similar to the West Cheshire / North East Wales initiative, the support of regional institutions was pivotal; the regional Leaders Board for the North West (4NW) and the GO supported the partners to commission the consulting company in 2010 (GVA, 2010). The *Liverpool City Region Overview Study*, which was published in 2011, forms part of the evidence base for subsequent local development plans (Liverpool City Region Partners, 2011; Sefton Council, 2012). Planning officers at Wirral Council considered the study as a demonstration of cross-boundary cooperation. However, the NPPF does not mention either study networks or a jointly prepared evidence base as fulfilment of the Duty to Cooperate. This opens a wide gap for discretion and might distract local planning authorities from more fundamental cross-border studies which could have lasting political, institutional and planning yields similar to that of the West Cheshire / North East Wales study which turned into a strategy with lasting governance impacts: *"we are now looking over our shoulders and saying what we need to do [is] to avoid being challenged, rather than [saying] what we need to do[is] to work together effectively."*(Interview R9, local government, 2012). Wirral MBC has some other joint initiatives with its political and economic partners in the Liverpool City Region which again started before the Duty to Cooperate was introduced. In this context, a big ticket item for its *Core Strategy* examination will be the *Joint Merseyside and Halton Waste Local Plan* which began much earlier in 2006 (Halton Borough Council, et al., 2013).

Beyond the Liverpool City Region, Wirral will probably find it more difficult to demonstrate two of the three NPPF-envisaged outcomes of the Duty to Cooperate: namely, a joint planning committee and a joint strategy (see DCLG, 2012). Wirral planners have struggled to produce noticeable outcomes from their more frequent meetings, but when it comes to links with Cheshire West and Chester, "*there is more liaison than joint working*" (Interview L13, local government, 2013). Facilitated by good officer-level relationships, the two planning departments engage in regular communications regarding the evidence base and policies with cross border impacts, particularly on

housing, transport and out-of-centre retail. Nevertheless, as the following examples suggest, it has proved difficult to take these discussions to the level of strategic cooperation. Local authorities are not directly responsible for some of the strategic issues they commonly grapple with and therefore need to act in a lobbying capacity, for instance, concerning the future capacity of the M53 motorway and improvements to the rail lines from North Wales, through the north of Cheshire West, into the Wirral and to Liverpool. This needs close cooperation at the political (Councillors) level as planning officers do not have the means to lobby the Department for Transport. Since even such non- controversial alliances have not formed outside the MDA arrangements, it was not surprising to hear from a Wirral planning officer about their refusal to take up the housing burden of their neighbour: *"We have also formally responded to a request to make up a short term shortfall in housing land supply in Cheshire West and Chester to say that we could not help."* (Interview L13, 2012).

The Duty to Cooperate-induced consultations of Cheshire West and Chester are, however, not likely to progress to more serious stages as, in any case, the Welsh side is not covered by the Duty. The Welsh local councils have no reason to move against the core values of nationalist parties that are getting more vocal in the Welsh Assembly (see National Assembly for Wales, 2011). Since transport policies which can encourage population movements into Wales have been shelved, it is hard to imagine discussions of planned settlements:

> "*They see themselves very much part of the Welsh scene and want to work with their Welsh counterparts but not necessarily their English counterparts, particularly on transportation. One of the focuses that the Welsh authorities and the Welsh members have is north-south links within Wales itself rather than east-west links into England."* (Interview L7, local government, 2012).

So Cheshire West and Chester is proposing to release land for up to 2000 new homes from the green belt around Chester in its emerging Local Plan (Cheshire West and Chester Council, 2012b) - a decision in which the NPPF pressure to identify sites for five years' housing supply (see DCLG, 2012) was critical. The halting of cross-national governance and the pro-development national planning policy therefore seem to have displaced conflicts to the English side where there is no longer the necessary funding and institutional arrangements to help with conflict resolution:

> *"they [Welsh opponents] were kind of trying to force Chester down the green belt release route but obviously that is a very contentious route and is being very heavily challenged at the moment from groups like CPRE."* (Interview L7, local government, 2012).

The strong language used by many commentators against green belt revisions around Chester (see, for example, the consultation document: *Green Belt Background Paper* by Cheshire West and Chester Council, 2012c) as well as campaigns by some residents, voluntary groups and politicians such as the Member of Parliament for Chester suggest the plan and politics behind it might be challenged through non-planning routes after the green belt release appears in the adopted plan.

Similarly to Wirral, planning officers in Cheshire West and Chester believed the Inspector would look at things beyond just officer meetings. However, the latter had a more vivid and ambitious vision of central expectations, helped by a meeting they had with the Planning Inspectorate and Planning Advisory Service:

> *"there was a lot of emphasis there on it's not just about having a few face-to-face officer meetings, it's if there are particular issues that need dealing with, you have got to demonstrate if there are political decisions to be made, that you've got your various politicians together, so in other words, our senior politicians to meet senior politicians in the Welsh authorities and, if needs be, to thrash out agreements about 'well, this is what we're doing, you're happy with it and vice versa'. Or if there are actual joint initiatives, that those are set down in proper terms"* (Interview R11, local government, 2012).

Whilst the Government is alert to the need for engaging local politicians if genuine and practical consensus building is to come out of the Duty to Cooperate, it appears less realistic to expect planning officers to convince politicians to talk, let alone sign off agreements on highly contentious issues, especially when officers have a more pragmatic interpretation of their role under the '*localist*' arrangements: *"so yes, you've got to keep your head down and get that plan produced."* (Interview L10, local government, 2012). Besides, not even a single department at, or between, the local councils studied has been established to embed the Duty to Cooperate; neither has an officer been designated to broker relations, especially at the political level: *"There's not a specific officer who's being given responsibility for undertaking this cooperation work and there's no new institutions being created."* (Interview L12, local government, 2012).

## Case Study Area Two: Cumbria

Cumbria is a non-metropolitan county comprising six districts. The District of Carlisle incorporates the largest settlement in the county - the City of Carlisle - with its wider urban and rural areas. The District borders Scotland to the north via two unitary council areas: Dumfries and Galloway, and the Scottish Borders. Carlisle's Cumbrian neighbour to the south, Eden, is the district in which the first Neighbourhood Plan in the country was adopted; this plan, for the upper Eden valley, was approved by 90 percent of voters and was commended by the Communities Secretary (DCLG, 2013a). Carlisle and Eden have many common strategic grounds on which to work – these include the impact of the M6 motorway, especially in terms of transport and employment sites, rural affairs and the function of Carlisle as a service hub for the area. In the wider context, the isolation and relative deprivation of Cumbria made its relationship with the Regional Assembly and the RSS procedures problematic. Local politicians interviewed believed these arrangements worked to the benefit of stronger localities, most notably the metropolitan ones: *"Cumbria, because it is so large and so sparsely populated…we found we were not being listened to"* (Interview L9, local politician, 2012). This section examines how the 'usual suspects' of regionalism are now responding to the ostensibly opposite localist paradigm of the Coalition government.

### *Sub-Regional Governance*

In the *Local Government Act* (2000), local authorities were given the duty to prepare community strategies, in consultation with other stakeholders and the community, as an agreed basis on which to join up partners' activities (Jones and Stewart, 2009; Geddes, Davies and Fuller, 2007). This was a responsibility which they often undertook through a Local Strategic Partnership (LSP) (FoE, 2005). These non-statutory LSPs were promoted by the GOs to provide an umbrella for a variety of partnership structures and to bring together different elements of the public, private and voluntary sectors (Pearce, et al., 2008; Jones and Stewart, 2009). In Cumbria, this was a remit in which the North West GO was considered by some of the interviewees to be particularly effective:

> *"we got a lot of help from the Government Office when that was in Manchester, we got an awful lot of help from them – more from them than we did from the regional government [Regional Assembly]; the Government Office were very good to us. It tailed off towards the end. We built up this Cumbria Strategic Partnership, we had a number of other offshoots – JoPO, one was called, which was Cumbria Joint Planning Officers Group"* (Interview L9, local politician, 2012).

The Cumbria Strategic Partnership (CSP), which basically depended on the GO and Cumbria County Council, published its community strategy in 2008 (CSP, 2008a) simultaneously with a spatial strategy to deliver it: the *Cumbria Sub Regional Spatial Strategy* (CSP, 2008b). In other areas, where there was a better relationship with the Regional Assembly, the sub regional dimension of the RSS (see ODOM, 2004) was taken forward by the regional planning body (see, for example, Cheshire County Council, 2006). Although the *Cumbria Sub Regional Spatial Strategy* replicates its main policies from the RSS (for example in setting out locations for major, moderate and small scale

development), it appears to distance itself from that of a sub-regional stem of the regional plan; indeed, there is only one mention of the RSS in the document (see CSP, 2008b).

After the 2010 election, and with the termination of the grants and functions of LSPs, the CSP underwent a period of inactivity. It was then re-launched in 2012 as a consultative network called the Cumbria Partnership Forum (CPF). With the GO no longer in place, the county council reached out to new partners, most importantly the LEP. The CPF also includes social partners such as the Third Sector Network (CPF, 2012a). Despite major changes, the CPF has maintained Cumbria's strategies as its mobilizing vision: "Membership of the Full Forum is open to any organisation entity or body which is actively supporting the delivery of outcomes in the *Cumbria Community Strategy*." (CPF, 2012b).

Theoretically, membership of the LEP in the Cumbria Partnership Forum could help secure the weight of the business sector alongside other partners to deliver Cumbria's strategies but there are indications of an opposite move. Rather than putting forward a more inclusive and sustainable alternative for sub-regional governance, agreed by partners through consensus building, the dominance of the LEP and its growth discourse is mainly driven by a sense of economic urgency as well as a reaction to the marginalization of the former collaborative regional procedures. The LEP has understandably adopted a business plan (see Cumbria LEP, 2013) which verifies the argument of a planning officer that:

> *"if the Cumbria example is typical, then LEPs are focused on particular things, putting money into business development, skills development, things like that, and they haven't really got to grips with strategic spatial planning."* (Interview R6, 2012).

While the interviews in Carlisle and Eden suggest a low profile for Cumbria's strategies, the pursuit of the LEP's priorities is facilitated by the expertise and connections that sub-regional networks provide. Some of these networks were developed in reaction to the dominance of the metropolitan authorities (especially Greater Manchester and Merseyside) in the former regional planning body. For example, an institutional legacy of the CSP, called the Cumbria Strategic Planning Partnership (CSPP) and comprising the county council, district councils and the Lake District National Park Authority, is still to be seen in the LEP's Planning and Housing Expert Group. CSPP is engaged in brokering cross-border agreements to relax planning and boost development. A CSPP representative, for example, suggested:

> *"the Chairman of what they call the Expert Group is a very large developer … he says 106 Agreements are stopping him building to the extent he would like. He would like to see 106 Agreements throughout the whole of Cumbria which says these are the things that you can ask for, I would agree with him… The [Cumbria] Strategic [Planning] Partnership at the moment is looking at having a pro forma [setting out what] you could ask for in a development on a 106 Agreement"* (Interview L9, local politician, 2012).

***The Duty to Cooperate***

The *Draft Carlisle District Local Plan (2015-2030)* has now passed the consultation stage and, at the time of the research, was due for submission to the Secretary of State in mid- 2014 (Carlisle City Council, 2013). Being in the production stage of the Core Strategy at the time of the interviews, the main concern of the Council was how the independent Inspector would assess the soundness of the document and its compliance with the newly introduced Duty to Cooperate. Carlisle has held officer-level meetings with Dumfries and Galloway and the Scottish Borders to discuss cross-boundary issues as part of its Duty to Cooperate. Whilst these meetings were a response to the new procedures, planning consultations with neighbouring Scottish community councils had been running for some time. Surprisingly, despite the positive signs of Carlisle's cross-national policy communication, the District's relationship with Eden has been negatively affected by financial and political factors since 2010. Eden has placed most of its services that used to be executed by Carlisle (such as waste

services, transport and highways services) out to contract and previous cooperation on environmental issues has also stopped. Also, since the political balance in Carlisle Council changed in the May 2012 election from a Conservative / Liberal Democrat majority to Labour, cooperation between Carlisle and Eden - which has a Conservative / Liberal Democrat majority - has reduced and Carlisle is currently working more closely with Allerdale and Copeland than with Eden. These interview findings were later verified by the Carlisle statement of the Duty to Cooperate; the statement involves three counts of joint policy development (conservation and land-use agreements) but Eden is not present (Carlisle City Council, 2013).

When interviewed, a local politician from Carlisle responded to the question of whether the Duty to Cooperate is making real impacts on the level of strategic cooperation with Eden: *"The short answer is no. Eden is more rural and we have quite a lot of rural areas within Carlisle, but I don't think it will, and I don't think it will for political reasons rather than anything else."* (Interview L9, 2012). Although there has been an agreement between Carlisle, Eden and South Lakeland to support growth on employment sites along the M6 Corridor (Eden District Council, 2012), there is a long way from ad-hoc to more holistic partnerships and from land-use to spatial deals.

The Core Strategy of Eden District was adopted in 2010. The Inspector's report at that time argued that the '*encouragement to cooperate*' had been fulfilled:

> "In line with the encouragement given in PPS12 towards joint working and addressing cross boundary issues, I consider that such shared interests have been satisfactorily addressed by the Council through various mechanisms including; reciprocal consultation on DPDs, regular meetings of Cumbria-wide officers' groups…and through the joint production of key aspects of the evidence base" (Bussey, 2010, p.9).

This is similar to the cooperation evidence that Carlisle has produced in the absence of regional arrangements (see Carlisle City Council, 2013). One exception appears to be the preparation of a joint evidence base with other Cumbrian districts for travellers' accommodation needs. However, the county council will have the main role in the proposition of indicative allocations across different districts. While other contentious, but territorially essential, debates around housing policy / number exchanges, provision for a manageable number of inward investment sites and alike remain untouched, even in raised subjects such as traveller sites, the Duty to Cooperate:

> *"doesn't solve the problem of where people don't want to cooperate … I want you to take my housing [numbers]; you're going to tell me you can't for very good infrastructure and sustainable development reasons. It's not a duty to agree and as a result of which you can pass through the Duty to Cooperate without confronting strategic planning issues."* (Interview P7, professional body representative, 2012).

A 'duty to agree' was considered a strategic necessity by some planners, but it was also accepted that this would create political, and even judicial, complexities around 'who needs to agree with whom' and the limits and interests conflicts in such a duty. Regardless of how this duty would apply to local authorities on national borders, there would be a danger of sub-urbanizing some localities to the benefit of economically growing districts instead of moving activities to less advantaged areas. Without having a supra-local spatial plan and its governance context, a heavy handed approach might actually lead to the opposite of what it is designed for. Holistic agreements could set a proper consensus building context in which the losses of local authorities hosting unwanted development are balanced out with a range of incentives, whereas an unsystematic duty with an agreement obligation is bound to steer backlashes against strategic thinking.

## Conclusion

This paper started with two core questions about the Coalition Governments' recent changes to the regional and sub-regional policy landscape in England: firstly, the extent to which the centrally re-

designed city-regional governance structures in the case study areas, primarily based around the introduction of LEPS, appear capable of territorial leadership and, secondly, whether the statutory 'Duty to Cooperate' appears capable of reconciling the '*strategic*' with the '*grass-roots*' at the local authority scale? Based on the empirical findings of the case study areas in North West England, this concluding section of the paper thus aims to address these questions and reflect on some more general points about institution building and 'bottom-up' territorial management.

***Territorial leadership and the role of LEPs***

The three LEPs in the case study areas that were investigated in the research are not currently involved in strategic planning as a broadly conceived 'place making' tool. Given they are in an evolving state and primarily designed to serve an explicit growth leadership agenda, this is perhaps not that surprising. However, in more broadly examining their capability in providing territorial governance at the sub-regional scale, one interesting aspect was that the three LEPs appeared to differ in their approaches to engagement and interaction with the wider governance context in the three sub-regions studied. This may sometimes have been based on the political reception given to the newcomers in the existing governance context, but it also appeared to reflect the level of leadership ambition and/or interest in longer-term strategic planning by the LEPs themselves. In summary, three typologies appear to emerge from the case studies:

***(a) Expedient leadership.*** At the top of the hierarchy in terms of leadership roles is the LEP for Cumbria. Here, the evidence suggests a relatively high degree of receptiveness of the existing local authorities and sub-regional networks to the potential steering role of the LEP, particularly in the absence of any other obvious alternatives or rival sub-regional institutions. In this sub-region, support for the LEP comes from the County Council but also appears to originate from the remnants of the former local-central institution building in the pre-2010 Labour Government era as a local alternative to the earlier Regional Assembly-centred regionalism which was perceived as marginalizing the Cumbrian sub-region in favour of the metropolitan cores of Merseyside and Greater Manchester. The LEP appears to be taking on the role of an 'expedient leader' in this sub-region. Rather than seeking unified political ties with the new central Government vision, the main incentives for alliance building with the LEP, and the provision of expertise and relation brokering support for its agendas, include a common sense of regional marginalization under the previous administration and the need to address the current economic urgency. Since this typology is essentially based on responses to economic crisis and feelings of peripherality and exclusion, the ability of the LEP in taking on a sub-regional leadership role relies on extensive dialogue and consensus building with the other local stakeholders. At present, there appears to be much local support and the LEP might therefore be expected to further consolidate its leadership position. However this could, of course, still be challenged if the LEP is not ultimately seen to be delivering the desired economic growth on behalf of Cumbria.

***(b) Ambitious mediation***. In contrast to the picture of generally shared consensus in Cumbria, there is evidence from our empirical research that the Liverpool City Region, which used to be amongst the main regional policy actors in the RSS era, has descended somewhat into a number of internal conflicts post-regionalism. The introduction of the LEP as the only city regional network of localities has, however, potential support from some of the metropolitan authorities who were concerned with the stance that Liverpool City Council was seeking through its individualistic growth approach. While the socio-environmental profile of the LEP appear low, and the City Council seemed initially less inclined to play by the LEP rules, the wider government and business stakeholders retain vested interests in a stronger city-regional (rather than City Council) leadership. So, following an initial role in networking localities and business partners, the LEP has arguably performed a mobilizing and mediating role for more formal institution building and, mirroring earlier moves in Greater Manchester, the latest moves have been towards the establishment of a formal combined authority as a potentially

more effective way to create collective commitment to strategic decision-making and business certainty than would otherwise be the case if the only institutional development at the city-region scale was the creation of the LEP.

(c) ***Political and functional rivalry.*** Despite the tendency of Cheshire and Warrington LEP to extend its network and play a stronger leadership role, the concurrent existence of the Mersey Dee Alliance (MDC) provides a rival sub-regional governance architecture and the MDA's lack of vocal support to the creation of the LEP further suggests their coexistence is not necessarily going to be a reciprocal and supportive one. Since both the LEP and MDC arguably owe their fortunes and misfortune to the same localist reforms, the LEP has not been able to take advantage of the extensive consensus building skills of the MDA and has struggled to exert a strong sense of direction within its boundaries and resolve its differences with some key local authorities. Nor is there yet evidence of much success in establishing cross-LEP ties with the Liverpool City Region or in building networks with its Welsh neighbours. Given the MDA's recent move towards the adoption of similar priorities to the LEP, it is likely that the governance landscape will be characterized by more rivalry in the future. Even if some kind of consensus-building deal is brokered to resolve political divisions through the central recognition and sponsorship of the MDA, functional rivalries will still be dominant, thus leaving the LEP in the role of a political and functional rival to alternative governance arrangements.

***Cross-authority collaboration and the 'Duty-to-Cooperate'***

Especially in cross-border areas, the introduction of more regular planning consultations, and more frequent dialogue between the various authorities, are important initial achievements as they open institutional gates for the gradual building of more holistic networks and higher levels of engagement. But our two cross-border cases in which such links were initiated by the Duty to Cooperate do not show such promising signs. The establishment of planning consultations between Carlisle and its Scottish counterparts was facilitated by a relatively neutral political context, but functional relations do not seem to be substantial enough to provide incentives for more ambitious steps. On the other hand, although there are more significant employment, housing and infrastructure ties between Cheshire West and Chester and its Welsh neighbours, these currently suffer from divisive cultural and political agendas either side of the English-Welsh territorial borders.

With an inability to provide incentives for, and overcome fundamental barriers to, building supra-local alliances and strategies, so far the main outcome of the statutory 'Duty to Cooperate' in the four local authorities studied has been the coordination of planning policies for the avoidance of conflictual decision-making. Beyond its limited performance to date, there are however reasons to argue the 'Duty to Cooperate' is proving to be an insufficiently comprehensive piece of legislation which is prone to 'lowest common denominator' outcomes. It represents a static and simplistic understanding of how planning polity and networks develop. Ignoring the fact that *"political accountability is demanding different things for different parts of a joint committee"* (Interview P7, professional society, 2012). All this is exacerbated by a decline in localities' access to the required level of cross-local negotiation skills, for example, through job cuts under public sector austerity programmes. There are also political forces at the community and central levels putting pressure on local planning authorities to be less outward looking.

Nevertheless, there is an increasing local need for the consensus building and conflict resolution skills of strategic planners for several reasons. One of these concerns the rescaling of decision making on inter-territorially contentious policy areas (such as future housing figures and locations, inward investment sites, and provision for gypsies / travelers) from the regional to local level. Secondly, central funding is being reduced and local authorities are having to tighten their belts, be more competitive and explore new sources of revenue all of which might trigger cross-border friction more readily. Thirdly, the bidding mechanism of some major funding schemes, especially in employment,

such as Enterprise Zones (see DCLG, 2011) and the Regional Growth Fund (see DBIS, 2013), as opposed to the formulaic approach, creates a difficult context for relationship building between local authority groupings: *"we have to speak direct to central government as part of a number of often competing consortia from across the country for a scarcer pot of funding"* (Interview L13, local government, 2012).

However, despite this context of increasing demand for skills, local authorities will have lost a third of their budget by 2015, slashing as much as 58% from their planning budgets between 2012 and 2014 (Taylor, Murdoch and Butler, 2013; Booth, 2013). So in probability:

> *"at the end of this process, which has only just started, the councils will be severely disabled because they will have had to lose an awful lot of capable staff so they won't be able to play the kind of leadership role in the future that they have done in the past"* (Interview R7, regional body, 2012).

It is hard to imagine that a possible shift of strategic planners to the private sector will deliver the same quality of relation brokering services which would have been rooted in their daily engagement in planning politics within and across local authorities.

In a Ministerial Statement in 2013, the Secretary of State once more highlighted the government's discourse around transferring powers to local people and making the planning process more accessible to local communities (DCLG, 2013c). Although the government appears to be getting more wary of its wording, local authorities have now started grappling with the consequences of what they consider as unrealistic community expectations regarding planning freedoms under localism. Concerns were even evident in the interviews with Conservative councillors who tended to see this phenomenon as a result of ill-managed localism and hasty announcements:

> *"we've had quite a few announcements from the Coalition government which seem to be saying communities can basically do what they wish... the Coalition government make announcements ... but they didn't tell you how in the planning context you could come to that... there is a danger that people will feel they have more freedom than they actually do have... that is a difficulty in itself, because people think 'oh, just put a planning application in, it'll be granted', and then, when it isn't granted, it has to come to the Development Services Committee or whatever, they want to know why.* " (Interview L9, 2012).

It is not only developers and land owners that have been pitched against local authorities; had those putting forward their abstract ideas in Whitehall conducted detailed discussions with experienced local politicians and planning officers, they would have probably faced the unfortunate fact that: *"people tend to make representations opposing or objecting to development rather than supporting it"* (Interview L8, Conservative local politician, 2012). But, the *'muscular localism'* (see Wintour, 2012) of the Secretary of State wants local government to move against the wishes of communities by accelerating decision making on planning applications with a pro-development approach. Those councils that show a '*poor-quality*' or slow decision making record will have their planning powers handed over to the central Planning Inspectorate (Wintour, 2012).

On the other hand, community expectations from the three-way pressure on local authorities (central government, developers and landowners, and local nimbyism) to focus on internal priorities make it a political gamble for them to adopt a strategic approach in a time of economic hardship. So there is not much that local authorities can contribute in city-regional leadership or can offer in the fulfilment of the Duty to Cooperate, especially when some of their resources are engaged at the neighbourhhood level to make sure *local* strategic priorities are taken on board:

> *"I know the people that I'm dealing with who are trying to do Neighbourhood Plans, they're not interested in strategic issues… the people in [neighbourhood A] are not even going to think about the people in [neighbourhood B] - two Neighbourhood Plans in our*

*district - because they want a Neighbourhood Plan because they want to say what they want to happen in their parish." (*Interview R6, local government, 2012).

Ultimately, the wider lessons of this paper could be considered in relation to the two basic tenets of the localism project: 'bottom-up' territorial management and city-regional leadership. Our empirical research highlights the very fact that, paradoxically, a genuine bottom-up management of space cannot be achieved through a purely self-help approach. Indeed it is, arguably even more than top-down system, dependent on public spending and, therefore, the comprehensive sponsorship of the state. The downscaling of strategic decisions to the local and neighbourhood levels increases the need for institutional, financial and intellectual resources at these levels. Even more planning freedoms would require stronger incentives to establish a community mandate for supra-local considerations. So, in order to prevent a crisis of strategic territorial management, it is inevitable to have an element of centralism in the context of 'austere localism'. But even this combination has proved largely ineffective in the case studies, leading to a tick box and lowest common denominator attitude by some localities to the 'Duty to Cooperate' and discouraging them from genuine involvement in supra-local affairs. As regards city-regional leadership, it is argued that building new institutions of governance, such as seen with the LEPS, might be effective in areas where established arrangements are failing to secure local prosperity, or local political rivalries and differences thwart the exercise of strategic governance. Otherwise, it will almost certainly be more appropriate, and cost effective, to persuade and better equip the existing networks to double their efforts in relation to addressing new priorities, rather than usher in further institutional churn and uncertainty in an attempt to build new alliances from scratch.

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# CENTRAL TRAIN STATION AREA DEVELOPMENT PROJECTS AND THEIR STRATEGIC POTENTIAL, REFLECTED IN STRATEGIC DOCUMENTS. CASE STUDY OF PRAGUE.

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## 1. Introduction

In my previous work I have explored the specific nature of central train station area development projects as projects of strategic potential (Čechová, 2014). Based on the findings, this paper first gives a brief overview of what a strategic urban project is, what its specifics when realized on a centrally located railway brownfield are and what kind of strategic potential these projects have. The following section presents these findings in the context of urban development of Prague in the past twenty five years with focus on three specific sites within Prague. The core part of this paper looks into the strategic documents, issued by the government of Prague, and explores how the documents reflect the previously identified levels of strategic potential of central train station area development projects in Prague. Its aim is to identify the attitude of the city representation towards the active policy of strategic urban projects and outline the chances that the strategic potential of these projects will actually be fulfilled. The methodological approach taken in this study is a mixed methodology based on existing literature research and qualitative content analysis of the strategic documents. This paper constitutes part of my dissertation thesis, which is dedicated to potential of central train station development projects.

## 2. Strategic urban project – theoretical framework

There is an important recent phenomenon creating a base for the transformation of cities throughout urban Europe: The emerging autonomy of urban regions on the central state power. (Salet and Gualini, 2004). Within newly established global economic networks, it has been cities rather than states looking for new strategies to increase their competitiveness, most recently through smart, more sustainable and inclusive economy, as promoted by the EU (European Commission, 2012).

Strategic urban projects, or large-scale urban projects, are increasingly regarded as vehicle of urban transformation in metropolitan regions across Europe. There is apparent shift from master-planning to strategic planning, realized through (among other tools of operation) strategic urban projects (Carmona, 2008). According to Salet and Gualini (2007), large urban projects are strategic in their nature, because beside the impact of their own mass there is also an impact on symbolic level, since the projects also manifest "...the commitment of a local society to invest deliberately in a certain direction for the future" (2007, p.4). The authors succeed in framing the „strategic" dimension of the projects, claiming that the "strategic devices (…) attempt to settle or stimulate certain joint courses in individual actions. (…) The strategic dimension lies in the transcendence of individual horizons in scope and time – i.e. in exceeding the reach of single actors, single-purpose behaviours,..." (2007, p.3).

Numerous studies have attempted to often critically explain increasing expectations of strategic urban projects on the background of principles of neoliberal capitalism (Carmona, 2008, Swyngedouw, Moulaert and Rodriguez, 2002, and Fainstein 2009). The essential difference from both the welfare-state in western Europe as well as socialist-state driven projects in the countries of central and eastern Europe is the new role of fundamental actors involved: local governments, producers, the knowledge-industry and community (Carmona, 2008) Especially high demands lie on local governments and their institutional framework, expected to foster collaboration between stakeholders rather than to hold a central control over the whole process. This paper explores this particular niche when focusing on the perspective of local governments through the research of strategic documents they issue.

## 3. Central train station area development projects

### **3.1.** *Theoretical background*

As I argued in my previous research (Čechová, 2014), Central Train Station Area Development Project is a special kind of strategic urban project, defined by three distinct features:

- the location of the development site within the urban core of an European metropolis
- current and usually well-established node of public transportation
- railway station building as a unique typology

This classification is based on the work of Peters and Novy (2012), describing strategic integrated mega-projects of train station area development projects as "…projects that combine the (re)development of station facilities with significant urban development and transportation infrastructure investments, most notably national-level investments in new high-speed rail nodes and networks. They are strategic in nature in that they typically form part of wider planning initiatives at different policy levels and aim at triggering multidimensional changes far beyond the geographic confines of the projects themselves" (2012, p.17).

Another important perspective offered Bertolini and Spit (1998) through the concept of "node and place," combining the transport development perspective and the perspective of property development. According to their research, any significant transport node in the city should ideally be a significant place as well, and they demonstrate this principle on several case studies.

These two studies remain up-to-date the only comprehensive and systematic researches, dealing with specifics of train station area development projects and with their strategic dimension. Their scope is limited to selection of highly visible projects in the west European metropolises, which are generally well covered by partial case study researches (Wolff, 2012, Edwards, 2010). However, very little is known about the development of train station area development projects in central and eastern Europe.

### **3.2.** *Central train station area development projects, their strategic potential and key actors*

The strategic dimension, as defined by Salet and Gualini (2007) and indirectly, without calling it so, confirmed by Peters and Novy (2012) and Bertolini and Spit (1998), consists in the „transcendence of individual horizon in scope and time" (Salet  Gualini, 2007). Based on this finding, in the farther work

I refer to strategic potential as to unrealized ability that goes beyond horizon of single action and that is inherent in central train station area development project due to size, number, scale, cumulation, concentration and intensity of single aspects of the project. The inevitable interactions of single aspects might be in vain when unrecognised, or they might be faced actively: through the support of the beneficial mutual effects the synergies might evolve and the potential conflicts might be prevented.

Building-up the site of central train station area does not only mean there are more offices, residences and facilities close to the infrastructural node, it also means the urban pattern on the regional level is shifting, the society is sending a signal about its values and commitments, it also means new participatory partnerships are being established and the local environment is being enriched with new layers. On the other hand, the same under-pressure cumulation of effects causes massive gentrification and social division, conflicts of scale of the new and old constructions or poses a threat to public as well as private budgets.

In next section I identify crucial strategic potentials, coming out of the specifics of central train station area development projects and general features of strategic urban projects. The identification is based on case study research, conducted at the Faculty of Architecture, CTU (Fialová and Čechová, 2015). Farther on, the key players with capacity to recognize and fulfil the strategic potential on single levels are identified.

3.2.1. Strategic potential realized on the symbolical level

I identify three general ways, in which society manifests the will to invest in certain directions for the future:

- through the functions important on the city-scale
  such as objects for representation, culture or sports
- through architectural design
  which serves as a vehicle of place-marketing and image delivery, yet the image it delivers can still be quite diverse: from iconic cultural objects to super-modern corporate international architecture, symbolizing the connection to the global network of business, and hence competitiveness
- another way
  for example through conveying the image of sensitive reuse of the railway past and historical heritage or through sustainable development

The strategy of place-marketing is embraced by both, the public as well as private sector, yet each of them in a specific way. Typically, the public sector´s action would rather target the objects of important functions with additional symbolism of iconic design, or an alternative way of representing the general values, while private sector would use a strategy of capitalization on an unique architectural design.

3.2.2. Strategic potential realized on the transport-functional level

On the transit-related level, there are two general ways to realize the strategic potential:

- through an efficient multi-modal node of transportation
  with convenient transfer between single modes and incorporation of facilities for pedestrians and cyclists. The node would combine infrastructure of global reach, typically connected with airport or other metropolises via high-speed rail, and with local flexibility
- through transferium
  constituting enormously commercially attractive location, incorporating besides the transit also additional functions, travel-related as well as unexpected ones (Klokočka, 2013).

In continental Europe, the construction and mostly also operation of various modes of public transportation is the responsibility of various institutions of public sector. On the other hand, the

reconstruction of the railway station with its constant flow of passengers is commercially attractive for private investors.

3.2.3. Strategic potential realized on the spatial-functional level

On the spatial-related level, there are two general ways to realize the strategic potential:

- through active policy of urban development
  giving chance to the city centre to regain a leading role within the urban region, chance to counter the sprawling residential areas or development of edge cities
- through realization of good quality environment
  according to the principles of good urban design, regarding scale, capacities, landmarks, spatial integration and materials, and contributing to the genius loci; enter the existing rich environment with a layer of contemporary architecture while creating a dialogue of past and present

The only types of real-estate development, generating significant profit, are large-footprint offices, shopping malls, high-end hotels and housing. Any development aiming at going beyond that calls for establishment of a direct partnership of private and public actors, or setting up clear development conditions. The development of partnerships as well as regulation establishment lays mainly in the hands of local government: the regulations concerning capacity, functions and spatial design, given by the local plan, but also housing policy and real-estate policy based on demographic predictions.

3.2.4. Strategic potential realized on the level of partnerships

- institutional partnerships and establishment of efficient platforms for collaboration of stakeholders
  ability to create functional partnerships and learn through the process of making the development project happen increases the institutional capacity and in a long-term period contributes to city´s competitiveness; partnerships of public and private sector combine the advantages of stability of the former and flexibility of the latter and helps to finance innovative solutions
- participation of community and establishment of mutual trust
  apart from being a keystone of successful project, public involvement in decision-making process helps to build a mutual trust between community and public representation and as such builds the capacity to deliver complex projects in the future

3.2.5. Strategic potential realized through the prevention of conflicting situations

The most obvious dichotomy lies in the immediate proximity and intense contact of global and local, of mobile and immobile, of existing and new. The same effect of synergy might become a conflicting situation for different actors or even for the same actors in different roles. The anticipation and prevention of potential conflicts is a domain of public sector.

- symbolic expression misrepresenting local society
- unattractive symbolical expression
- railway stations becoming more of a shopping mall, loosing the sense of public space
- increasing social gap – gentrification, missing facilities for local inhabitants, character of public space
- conflict of old and new environment – tabula rasa, conflict of scales
- financial impact on public sector

## 4. Post-socialist Prague and the socio-political conditions of strategic urban projects

After 1989, the whole society was going through major political and economical transformation and at

the same time through the process of internationalization and globalization. Regarding the urban development, new institutions, rules and key players came into being. The processes of democratization and decentralization of the decision-making processes, dissolution of the state and its monopolistic corporations´ control over the land and housing sector, privatization and restitution, emergence of market-oriented actors and establishment of the new role of municipal governments in the development took shape.

Parallel to that, post-socialist cities started to re-emerge on the international scene. After forty years of isolation from the western world there were foreign investors and developers, enterprises and their employees, students and tourists present in the everyday activities. Capitalising on the beauty of historical centre of Prague, tourism, congress industry and related business became soon one of the main economic activities and one of the most prominent signs of globalization taking place in the city. Rapid internationalization exposed the will of Prague to learn about urban development from the experience of cities abroad: foreign experts were engaged for the preparatory phase of strategic and planning documents, international conferences and design workshops were taking place.

New spatial patterns started to emerge as a result of rapid social, economic and political changes. According to Tosics (2005, p.64), the newly built shopping centres became one of the most visible signs of the market-oriented development of the post-socialist cities. Shopping centres were followed by office development in spatially limited zones – either in the very centre of the city or in the green-field areas in the so-called edge cities. The establishment of residential real-estate market took relatively long time, despite the great demand of early 1990s, and in general took form of suburban residential sprawl. The development of shopping malls, green-field offices and suburban residences considerably accelerated the city´s reorientation towards individual transportation and raised the concerns about negative consequences of suburban sprawl.

In the first years of democracy, there was the highest pressure put on the historical city centre. After decades of socialism the historical centre of Prague was severely neglected, resembling ghettos, yet well preserved in its urban structure (Musil, 2005a). Its reconstruction went hand in hand with strong commercialization, reduction of residential function and increase of individual transportation. At the end of 1990s, the development in the city centre was virtually saturated, and the attention of developers has turned to traditional 19$^{th}$ century districts with their industrial and railway brownfields as well as to the edge cities. While green-field commercial and office development were relatively easier to develop, the central brownfields, including central train station area development sites, remain derelict with an exception of Anděl development in Smíchov.

During the socialist period, housing and construction policy was completely subordinated to a centralized, party-ruled, planned economic system. State interventions in housing and construction served as a tool to achieve political objectives, planning was attached to power and as such regarded as a source of regime legitimization. Post-socialist transformation brought about the need of new efficient and less direct planning tools, more of a framework-type regulations, limiting density or excluding specific effects. New planning system had to take into consideration the decreasing share of public finance and significantly increasing share of foreign direct investments, domestic entrepreneurs and private investors on the investments in the urban areas.

## 5. Central train station area development projects in Prague

There are three central train station development areas in Prague, conforming to the distinct features defined in the previous sections: Masaryk Station, Smíchov Station and Holešovice-Bubny Station.

Each of them consists of a potentially important multi-modal transit hub with railway as a superior mode of transportation, and the transformation site of the size of tens of hectares, situated in the vicinity of the historic centre of Prague, within the buffer zone of the world heritage property. Due to the topography of Prague and railway´s limitation concerning ascent and radius, these sites occupy rare plains within the Prague basin and they are surrounded by the traditional and increasingly popular mixed-use quarters (Figure 1).

For last ten to fifteen years, the developers have been seeking to abolish the building closure, an institutional mechanism restricting construction on the large development sites in Prague. Since two of them have recently succeeded and the third one is on the way, the process of development of these sites is open to transformation, which brings up the question: will their transformation reflect their strategic potential?

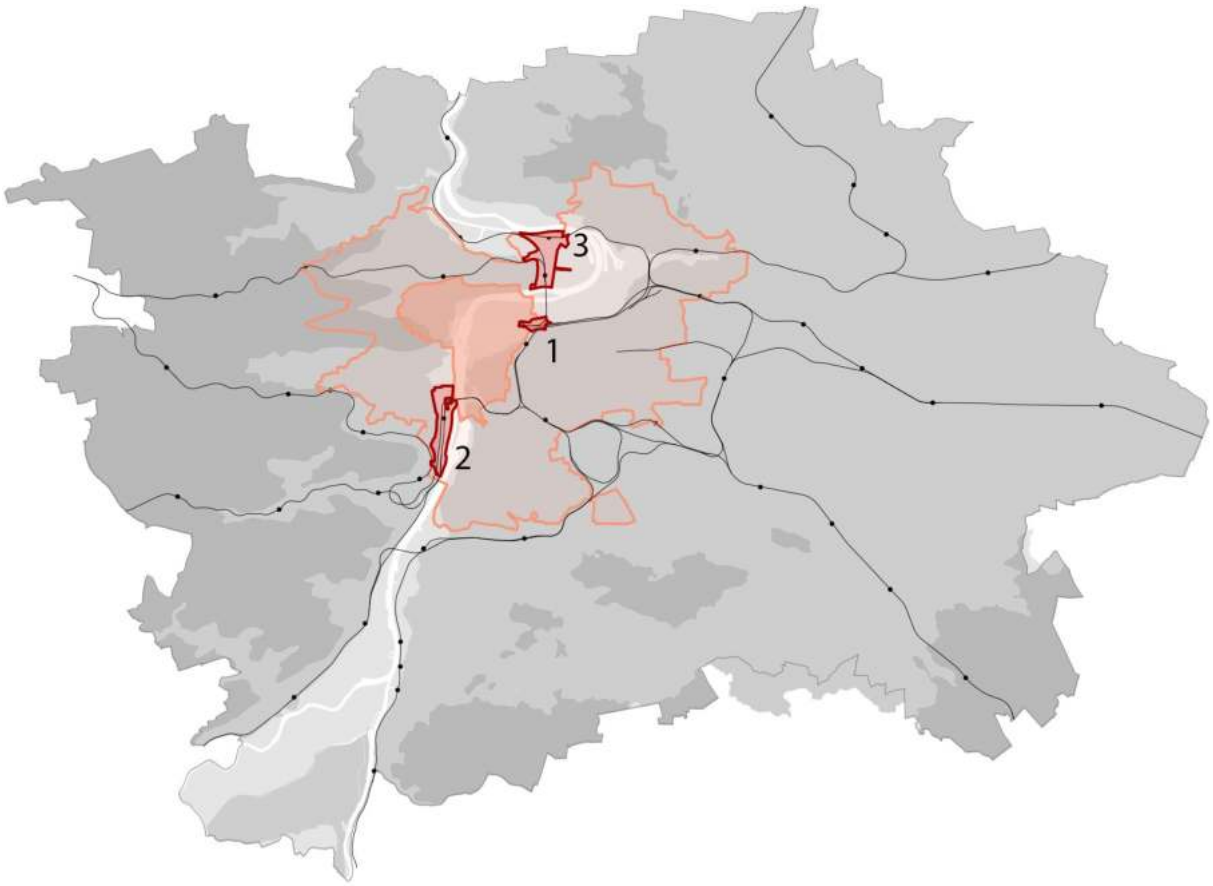


Figure 1: Central train station development areas in Prague – (1) Masaryk station, (2) Smíchov station and (3) Holešovice-Bubny station in relation to world heritage property zone of Prague, buffer zone of the historical city centre, railway network and overall topography. Source: Author

**5.1.** *Masaryk Station*

The first train station in Prague was opened in 1845 as a terminal for the railway connecting Prague with Vienna, the capital of the empire at the time. The terminal, nowadays called Masaryk Station, was built in a unique position: station building with platforms was within the city fortification, in the

immediate vicinity of important facilities such as post office and customs office, while the marshalling yard and facilities ground remained in the scarcely populated area outside the walls. Both parts were connected through six new gates constructed in the city walls. Soon there was another line constructed, connecting Masaryk station with North Bohemia and Dresden. This line crossed the Vltava river to Holešovice-Bubny on a 1 110 m long Negrelli´s viaduct, a great achievement of engineering of mid-nineteenth century. The fortification was demolished thirty years later and the technical facilities of the railway operations were transferred over the river to Holešovice-Bubny, yet the three surrounding quarters – historical quarter "Nové město," industrial-residential Karlín and residential Žižkov – have never been connected. By contrast, new barrier in the form of elevated highway crossing the twenty-hectares site from north to south in the trace of former fortification was constructed in 1970s.

There are two objects declared as state cultural heritage: The neo-renaissance building of the terminal, the only original one of the first generation of grand terminals in Prague, as well as the former railway workshop and locomotive shed are objects. While the station building serves its original purpose, the workshop and locomotive shed are intended to become the Railway museum of the National Technical Museum.

The location of the train station has certain limits and opportunities: It is situated right in the centre of the city, with major historical sights and various work opportunities within the walking distance. The station as such is a minor hub, but it is in the walking distance to the Main station Prague with the distant train connections and to Florenc, important metro lines crossing and bus terminal. The train station serves the regional transit, and it is currently considered to become a terminal for connections to Václav Havel Airport. Nevertheless, it´s location only makes the transit suitable for two lines – northern and eastern – and impossible for the through transit, therefore in the long-term there is an option of transfer of railway operations from Masaryk station to a single railway node at the Main station Prague (Masaryk Station Development, undated).

The story of transformation started in 2004, when the association of Masaryk Station Development (MSD) was established in order to develop the land not necessarily needed for the railway operations. This association consists of Czech Railways (ČD), a public limited company, and Masaryk Station Investment (MSI), a join-stock company of private investors, whose property shares have been changing since 2004. Since 2011 the majority owner of MSI as well as MSD is Penta investment group. The majority land-owner, ČD, is nevertheless legally bound to certain procedures, concerning the sale and development of the property.

In 2004, the building closure was declared on the Masaryk station, restricting construction on the site. The local plan change, allowing development, was finally approved in 2013, after several unsuccessful attempts based on various urban studies. The final study, as well as most of the previous ones, was worked out by the FNA studio. Due to the change of the local plan, the site does not have a status of large development area any more, and as such is developable in the parts dispensable for the railway operations. Due to unclear future of the railway transit and the character of urban study, a piecemeal development rather than an overall transformation is being realized. The transformation of the area already started with the construction of Florentinum, 50 000 sqm office complex completed in 2013, standing right opposite of the station and developed by the main investor of the property, the Penta investment group.

**5.2.** *Smíchov Station*

In Smíchov, rapidly developing industrial quarter at the southern left bank edge of the city, the second

railway station in Prague was constructed in 1862, serving as a terminal for western railway connecting Prague with Pilsen and further with Bavaria. In 1870s the importance of the station increased when two freight railway companies built their premises nearby and the original railway line was extended to what is nowadays the Prague main railway station. Over the following century the station has remained important point of traffic, serving regional as well as long-distance trains to the south-west of Prague, neighbouring to important bus station for local and long-distance buses Na Knížecí. According to plans, the original line to Pilsen is about to become one of the future high-speed railways of Prague.

Due to attractive location in the vicinity of the Prague city centre and already dilapidating industrial grounds, Smíchov was one of the first locations subjected to the interest of international developers in the early 1990s. Several urban design projects were worked out for Smíchov, nevertheless, the focal point of following urban transformation was at the former Tatra Smíchov plant in Anděl, an area north of the Smíchov station. At the turn of millennium, the construction of commercial and entertainment centre Nový Smíchov and building of the iconic office building Zlatý Anděl (Golden Angel) designed by architect Jean Nouvel represented a strong statement about the urban development in Prague. The development only concentrated around Anděl, while the south part of Smíchov, adjacent to the train station, has remained neglected, even more so in the contrast to the booming urbanity of Anděl.

A public-private partnership company Smíchov Station Development, similar to that of Masaryk station and connecting Czech Railways and a Sekyra Group development company was established in 2005 in order to jointly develop the site. Nevertheless, the construction on the site was restricted since 2002, when the building closure was declared. As was the case of Masaryk station, several urban design studies followed, but non of them succeeded in getting approval. Finally the Smíchov City project, designed by A69 architects served as a basis for the change of local plan and hence for the cancellation of the building closure in the mid-2014.

The current transformation site of the size of 106 hectares has been divided into two parts: easily developable rectangular area on the north of the site, adjacent to Anděl, and the southern part, squeezed on a narrow strip between Vltava river and city highway, overwhelmed with traffic. Whereas the urban design of the northern part has been a subject of an invited architectural competition in late 2014, in the southern part it seems to be hard to imagine its potential beyond its traffic use. In recent past a construction of multi-modal transit shed of city-logistics was considered for the Smíchov station.

**5.3.** *Holešovice – Bubny Station*

Holešovice, the almost perfect geographical centre of Prague, marked by the meander of Vltava river, was cut by three different railway lines in the past 150 years. Two historical lines connecting Prague Masaryk station with Kladno and northern cities (Ústí nad Labem, Dresden and Berlin) and the late 20th century relocation forming the Holešovice Station at the very north of Holešovice meander. They created a no-man´s land, separating two 19th century districts: traditionally industrial yet rapidly gentrifying Holešovice and traditional high-end residential quarter of Letná.

The vast railway yards with numerous railway sidings served as a technical background of the Masaryk station and related industry of Holešovice, including the city-wide facilities such as slaughterhouse, power plant and port. For decades, the railway station of Holešovice-Bubny was important due to great amount of commuting workers, nevertheless in the late 20th century affected by massive industry decline its importance has diminished. However, its potential for the future has been revived through the reconstruction plans of Kladno railway line and its prospective extension to

Václav Havel Airport, the only major airport in Europe not connected with the city centre via rail transport (CEDOP, 2011). This transformation would give the whole 78 hectares large transformation site a new perspective: The now-divided quarters of Holešovice and Letná would get a new common centre with mutual connections and the size and position of the new quarter within the city would allow for significant city-wide functions, while the existing multi-modal nodes of Vltavská and Holešovice station would get a significant upgrade through new railway and tram lines. Holešovice-Bubny has a chance to become the most attractive development location in Prague due to the vicinity of the city centre and direct connection to international airport.

The land of the transformation site is currently divided among tens of property owners. The former majority owner, state organization Railway Infrastructure Administration (SŽDC), sold about 25 ha of developable land to private company Orco Property Development group in 2006. The new owner has been fighting to overcome two major complications: the building closure declared in 2000 and a cultural heritage status for the complex of railway station buildings, pronounced in 2004. Considering the latter, the administration revised the decision and despite the protests of public as well as professional organizations cancelled the heritage protection in 2008. As in previous case studies, a variety of urban design projects followed, aiming at change of the local plan, and hence abolition of the building closure. The last such project is an urban study designed by CMC architects in 2013, currently seeking approval.

Meanwhile Orco Property Developer established a joint-venture with commercial property company Unibail Rodamco in order to develop 3,7 hectares of their site as a shopping mall. Parallel to feasibility study of the rail connection to the airport, a non profit organization Memorial Shoah Prague currently transforms the railway station Bubny into a memorial, an exhibition and event place dedicated to tens of thousands of Jewish residents, transported from this station to concentration camps during the second world war (Památník Šoa Praha, 2015).

## 6. Planning documents

The essential document studied was the Strategic plan of Prague, updated version approved in 2008 (Hlavní město Praha, 2009) and its predecessors: First the preparation phase "Praha 2010" (EcoTerra, 1994a,b), concluding the collaboration of hundreds of experts and identifying the complex issues of early post-socialist city, followed by the second stage of preparation which resulted in 1996 under the title Praha budoucnosti – Cesta ke strategii (Útvar rozvoje hlavního města Prahy, 1996). This document was based on series of workshops and conducted by professional body in charge of strategic planning, newly established under the Department of City Development. The first Strategic plan of Prague was approved in 2000 (Hlavní město Praha, 2000) and updated in 2008. The latter included the Programme of implementation of the Strategic plan for 2009-2015 (Hlavní město Praha, 2009), which was also surveyed. Since 2013 the strategic plan has been thoroughly updated, the works still going on. The basic aim of the Strategic plan is to set a framework that enables all actors to achieve synergic effects and as such represents an agreement on midlle- and long- term goals for the development of Prague (Institut plánování a rozvoje hlavního města Prahy, 2013). Another essential document, the local plan (Útvar rozvoje hlavního města Prahy, 1999), is among important tools serving to implement the strategic concept, as the Strategic plan states (Hlavní město Praha, 2009, p.10). Its main function is to set the development goals, determine land-use regulations, basic spatial regulations, delineate the technical and traffic infrastructure and publicly beneficial constructions (Institut plánování a rozvoje hlavního města Prahy, 2013). Its temporary predecessor, in 1994 approved Land-use plan of stabilized areas only depicted the land-use of the stabilized areas with indisputable current use, while other areas (such as the three inspected areas) were included in the white spots of the city, referring to future

solutions. Currently, new local plan under the title "Metropolitan plan" is being prepared. There has been additional documents under scrutiny, though in limited extent, such as the agenda of city council (Magistrát hlavního města Prahy, 2015) or The annual report of technical administration of communications (Technická správa komunikací hlavního města Prahy, 2014).

**6.1.** *Strategic plans*

Across the strategic plans, there are several issues that could be considered to be related to the problems of central train station area development projects, yet there is no comprehensive section focused on them.

Since the the preparation phase of the strategic plan (EcoTerra, 1994a,b) there has been a focus on the potential development of polycentric urban structure. In the following material the location of the potential alternative centres was specified: besides the peripheral housing estates, the crucial type of alternative centres was defined as an extension of historic city centre, namely in Smíchov, Holešovice and Karlín. These locations were not explicitly related to the train station areas but due to the transformation sites available in these locations, they were most likely meant to be (Útvar rozvoje hlavního města Prahy, 1996, p.V). The main argument for development of secondary centres at that time was the prevailing perspective of overloaded historic city centre through commercialization, tourism and individual traffic, whereas the importance of city centre extensions for the regeneration of affected quarters as well as its relation and potential synergy to redevelopment of railway lines was rather overlooked.

From the first Strategic plan on, the transformation of Anděl was mentioned as an example of how the city centre could expand. In the following update of Strategic plan however, the southern transformation site adjacent to the actual railway station Smíchov ceased to be considered for city-wide functions expansion (Hlavní město Praha, 2009, p.135), which is an odd fact given the acknowledged success of Anděl development.

The overall good will of the city representatives concerning the development of strategic urban projects is clearly stated in the first Strategic plan (Hlavní město Praha, 2000, p.76): The city will use its authority and public investments to give a direction to development of the above mentioned centres (Smíchov, Karlín, Holešovice and Pankrác). The city will actively support the realization of these projects, place the municipal and state institutions, headquarters of international institutions, banks and commercial headquarters, commercial functions, cultural, social and educational centres, suitable sport facilities and so on. The municipality will set up the phases and prioritize the development, regulate the limits of development in terms of capacity, based on market analysis and impact of construction on existing public services.

Another issue tackled by strategic plan was the formation of partnerships, whether among single bodies of public sector or among public and private actors. The city representation is aware of the necessity to launch the transformation of the sites in collaboration with private sector, since the public sector as such has withdrawn from the actual construction. In order to become a reliable partner, the city found necessary to create a real-estate property policy, prepare a stocktaking of the city´s property and set the basic strategic directions of property management (Hlavní město Praha, 2009, pp.51-55). Whereas the strategy has not been worked out yet, city´s property is continuously being sold out. As we saw on the examples of single central train station areas development projects, the strategic partnerships are formed among the Czech Railways company and private developers, without engagement of the local authorities.

Another key topic, declared in the strategic plans, is the development of public transportation, which is seen as a solution to negative side-effect of the individual transportation, such as alarming quality of air or frequent congestions. Despite the pressure on development of public transportation, at the same time the strategic documents insist on individual traffic regulation only when the ring roads are completed. According to Duchoňová (2014), the inability to prioritize the public transportation over the roads construction drains the financial resources from the public transportation. In addition, the effect of induced demand makes the public transportation uncompetitive.

The issues of public traffic support and establishment of partnerships meet in the concept of multi-modality. Greater integration of single transportation systems has started in 1993 with establishment of Prague integrated transport (PID) and its manager ROPID in 1996 (ROPID, 2013). Since then, the railway traffic shows highest deficiency of integration from all modes of traffic. Both strategic plans declared necessity to increase the share of railway transportation on the overall volume of public traffic, to offer attractive headways in the regional transportation in the open mode (fares through the city, without terminals in the city centre), to integrate the high-speed trains or combined freight traffic. Despite no major interventions in the railway network have been achieved, the number of passengers slowly increases. In the absolute numbers, the overall railway passengers´ volume is hardly comparable to tramway, whereas its actual capacity is multiple (Figure 2). Larger integration of railway is a prerequisite for the full use of strategic potential of the adjacent transformation sites.

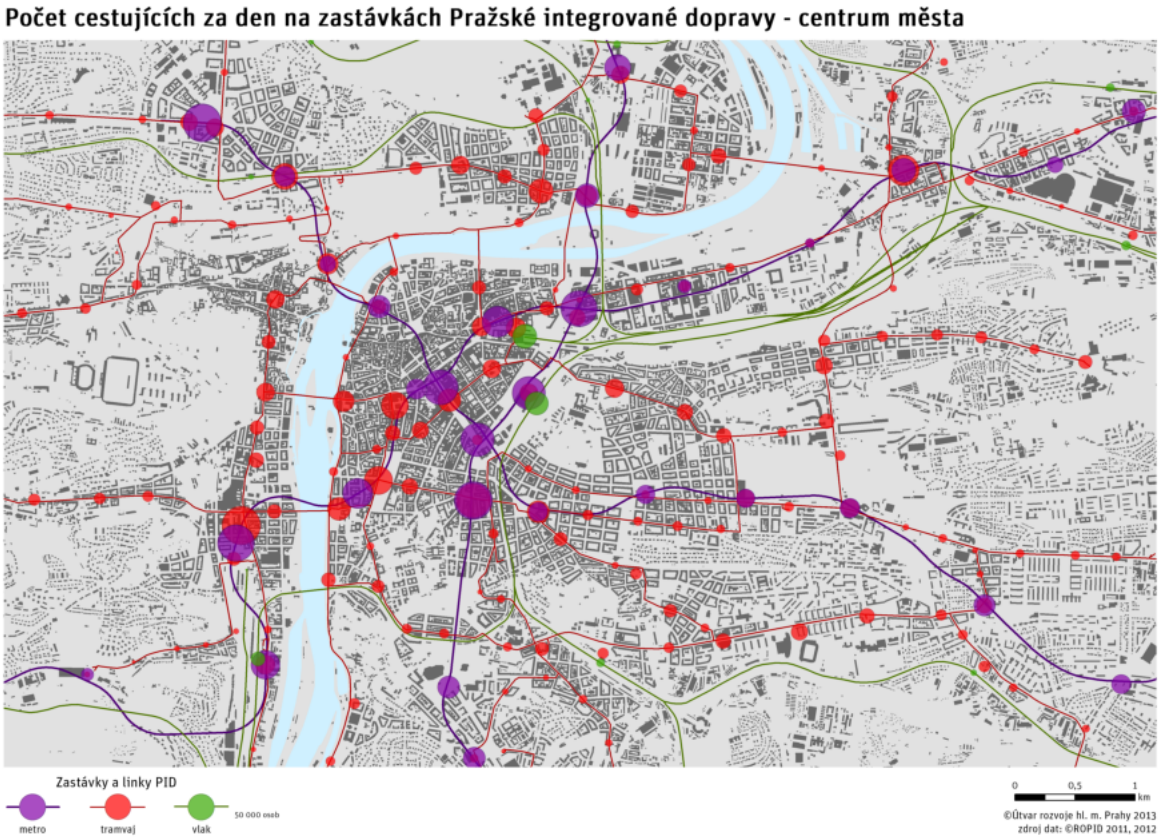


Figure 2: The number of passengers per day on single stations in the frame of Prague integrated transport: violet – metro, red – tramway, green – railway. www.geoportalpraha.cz

Since the issue of railways is primarily in the agenda of Ministry of Transport, transmitted to the Railway Infrastructure Administration, state organization (SŽDC), greater integration of railways into the public transportation in Prague would require close collaboration of Prague with these organizations. The necessity of this collaboration is declared in a memorandum of future cooperation, signed by Prague mayor and the minister of transport and in a commitment of the Prague council to work out the metropolitan strategy of multi-modal mobility (Rada hlavního města Prahy, 2013), nevertheless, the latter has not been accomplished. In this case, it seems that Prague reached the limits of partnerships it is able to initiate.

**6.2.** *Land-use plans*

The first temporary land-use plan of stabilized areas from 1994 indicated "white spots" on the sites of yet unclear land-use. The first local plan, approved five years later, classified stabilized areas, development and transformation areas and un-development areas. In the local plan, the prevailing poly-functional use (residence, mixed-use, production or services) or mono-functional use (public facilities, technical facilities, mining, water surfaces, landscape and agricultural land) is ordered by delimitation of the land-use zones. Within the development and transformation areas, the spatial regulation is represented by the code of land-use. This code limits the maximum capacity of the new development through the maximum of build-up areas and minimum of green-land areas. The local plan also limits the height of new buildings through the delimitation of a zone in the proximity of Prague heritage zone, where the prohibition of high-rise construction is declared. Both Smíchov and Masaryk station, as well as the southern tip of the Holešovice-Bubny station, are within this zone, whereas most of the Holešovice-Bubny area is in the zone, requiring detail inspection of a prospective high-rise building in relation to various vistas. More detail spatial regulation is a question of urban studies or other detail planning material. The local plan also introduced the concept of large development areas, where the building closure was declared until a more detailed planning documents will be worked out. This arrangement aimed for maintaining the city´s control over these important sites, nevertheless there has never been a mechanism within the local plan, that would encourage the local authorities to actively shape this control.

In the proclamations contained in the strategic plans, there is clearly an intention to give the transformation sites a symbolical meaning through an important function. Nevertheless the local plan only shows preference in positioning of specific functions by indication of special complexes within the poly-functional land-use zones. In the past experience from discussions about new national library or a new concert hall, an important building with an effect on the scale of the whole city can fetch up virtually anywhere, without any relation to the transformation sites.

As in the case of strategic plans, the systematic approach to transformation and development sites is missing. In these terms a change is expected based on the updated spatial-analytical materials (IPR Praha, 2014), where the transformation and development sites are classified according to their potential to be developed. This material should serve as data for farther work on the strategic and local plans.

**6.3.** *Capacity of strategic documents to reflect strategic potential of central train station areas*

What is the capacity of strategic plan and local plan to fulfil the strategic potential of the Prague´s central train station area development projects on single levels?

6.3.1. Symbolical

The values indicated by the strategic plan are too little specific and not related to single development

projects. The strategic plan declares the will to place important buildings on the development sites, and the local plan opens-up the opportunity for local authorities to do so, but in reality, the missing capacity to build partnerships and initiate activity prevents it from happening.

6.3.2. Transport-functional

There is a good will declared to support public transport and multi-modality, yet the follow-up phases lack behind, since no strategic partnerships with the presence of local authorities have been formed. In the local plan the development sites are divided between single owners along the line of transportation land-use and other land-use and developed piecemeal, which prevents the integrated multi-modal node – a transferium - from being developed.

6.3.3. Spatial-functional level

The strategic plan defines locations, where the development should happen and a will to play an active role in the development, but in reality, the city´s role is passive. Good quality of urban design is a question for single urban design studies, which have not been reviewed in this paper.

6.3.4. Partnerships

The strategic plan promises establishment of partnerships, leading to realization of the development projects, yet it failed to establish the property management policy as well as engage in any of the partnerships formed on the basis of strategic urban projects.

6.3.5. Conflicting situations

The strategic plan acknowledges a social conflict in the city centre, but it does not anticipate the future conflicts in the large development areas.

**Conclusion**

On one hand, the local authority clearly declares the will to become an active leader of urban transformation. Most of the strategic potentials of the central train station area development projects identified in this paper are at least partly reflected in single goals set up by the strategic plan or in the tools incorporated in the local plan.

Yet, there is a wide gap between the long-declared goals and the actual deeds. In the strategic documents there is a general lack of concentrated systematic focus on the issue of strategic urban projects and their development potential for the city. The chance to actively enter the process of realization partially ceased to exist when the central train station areas were removed from the poll of large development areas and the building closure was cancelled.

There is an implementation problem, and exploration of its roots lies beyond the scope of this paper. Possible explanation could lie in the process in which the strategic documents are worked out and approved: There is no general consensus on the goals stated in the strategic plans, and hence there is no will to work-out implementation strategy, to follow up and regularly revise the results. Another contextual explanations could be offered by related literature: Duchoňová (2014) in her analysis of transport-related strategic documents in Prague identifies strong implementation deficiency based on conflicting criteria and contradicting instructions. Horák (2014) explained that the unstable and institutionally incoherent environment of early post-socialist Prague prevented the city representatives from taking strategic long-term decisions about important issues of urban development, and how this institutional environment made the patterns of behaviour deeply rooted. Tosics (2005) and Musil (2005b) described the general reluctance of the new Czech democracy to any state control mechanisms, including spatial planning and regulations, and the existence of the negative liberty

concept, that allowed to conceive the democratic system as a freedom from the state control and its implications, rather than a freedom to fulfil its potential.

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# Fuzzy Approaches to Industrial Land Conversion in Weak Institutional Environment

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Keywords: Fuzzy Governance, Industrial Land Conversion, Weak Institutional Environment

## Abstract

Currently, the maximum tenure of industrial land use in China is 50 years, which far exceeds the manufacturing life cycle. In the absence of an effective exit mechanism and serious supervision, a large number of manufactories are waiting for land value-added income or illegal sublease for commercial use rather than returning the land-use rights for urban redevelopment. As one of the urban central areas in Shanghai, Hongkou District is facing a serious challenge on land scarcity and impending speculative inflows during the critical period of rapid transition.

The objective of this research is to explore fuzzy approach to industrial land conversion in weak institutional environment, eventually strengthening the initiative of land-use cycling of the governments for a better adaption to the changing demand in the future. So the research mainly consists of two parts. (1) Find bottlenecks. After deep investigation and analysis on the causes which restrict land users' access to land transfer, the findings reveal that profit mechanism, no alternative policy for land-use change, low compensation, low costs of illegal behaviour and high rate of planned non-profitable land on these industrial land blocks are the main bottlenecks. (2) Break bottlenecks. The following fuzzy governance approaches are discussed: fuzzy profit distribution mechanism, fuzzy exit mode, priority compensation, trans-regional land supply and combination of regular review and public supervision, as well as their application value and feasibilities.

## 1. Introduction

With the rapid economic development in China, the gap that system reform lags behind economic development has seriously hampered China's sustainable development. Taking land system for example, the maximum tenure of industrial land use in China is 50 years now, much shorter than the life cycle of most manufactories. As a result, a large number of manufactories are waiting for land value-added income or illegal sublease for commercial use rather than returning the land-use rights for urban redevelopment. This phenomenon forms obstacles to the government for the regulation of industry and space planning, which leads to low efficiency of land use. This is also against government's original intention of providing land as one of enterprise's essential productive factors.

Since the development stage of every city varies a lot, Shanghai as one of the representative of the Chinese first-tier cities is the first to face the issues that are specific to the transition period. One of them is how to make full use of limited land resources, look for further space stock possibilities and provide necessary space for development. But the situation that industrial land-use rights cannot be returned easily aggravates the shortage of land resource objectively and restricts the space supply for building industrial system of the service economy in Shanghai. As one of the central districts with good economic foundation and historical cultural resources, Hongkou District is facing high land prices, which increases land value-added income and illegal sublease for commercial use. This situation also leads to an even more serious challenge on exit strategy of industrial land.

## 2. Development overview of industrial land in Hongkou district

Based on industrial land and factory survey table of Hongkou District (2006) and author's added research in 2013, the status of Industrial land development in Hongkou District is as follows (statistical units in accordance with the streets administrative divisions of Hongkou District in 2009).

*2.1Spatial distribution*

There are 170 blocks of industrial land with 111 hectares in Hongkou District. Its main distribution trends are: in the southern area, smaller block of industrial land scattered layout. While in the northern area, industrial land appears relative agglomeration. In addition, around the boundary of Hongkou and Zhabei Districts, it has linear distribution trends.(Figure 1)

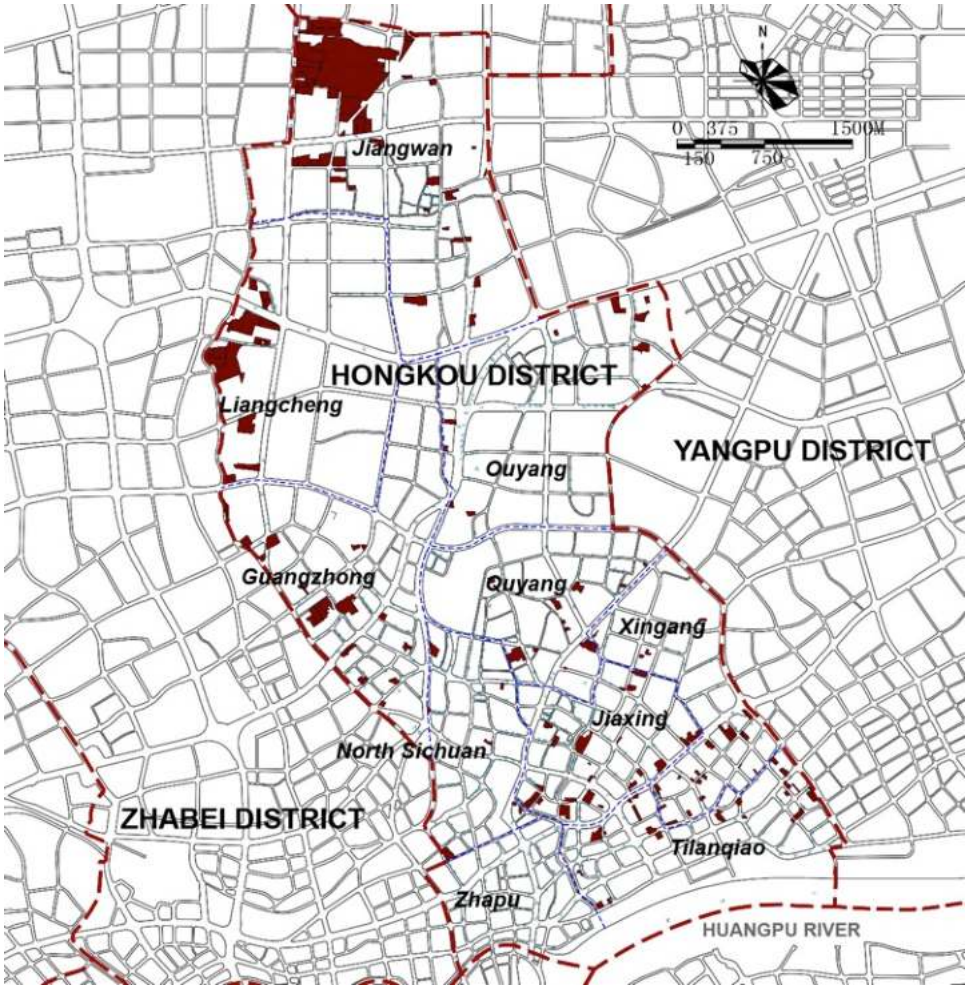


Figure 1. Spatial distribution of industrial land in Hongkou District
Source: Shanghai Tongji Urban Planning & Design Institute

*2.2 Functional analysis*

In weak institutional environment, from functional perspective, only 25.8% of industrial land blocks in Hongkou District are still used for production activities and 5.3% of them are idle, while up to 68.8% are used for other purposes, such as commercial uses and business, which contains a high rate of illegal sublease. (Figure 2)

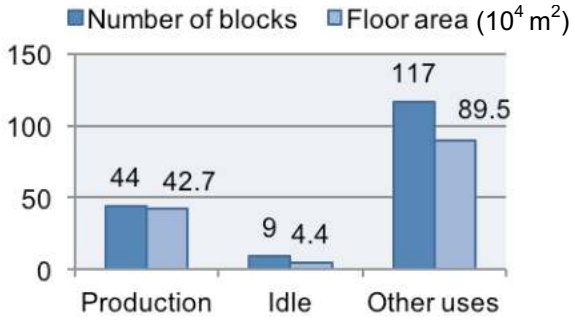


Figure 2. Functional analysis of industrial land in Hongkou District
Source: Hongkou District Government

*2.3 FAR*

To most of the industrial land in Hongkou District, economic feasibility of redevelopment is quite positive (FAR<2.0). Effective use of these redevelopment resources may relieve the critical situation of lack of commercial land and create good conditions for the restructuring and redevelopment.(Figure 3)

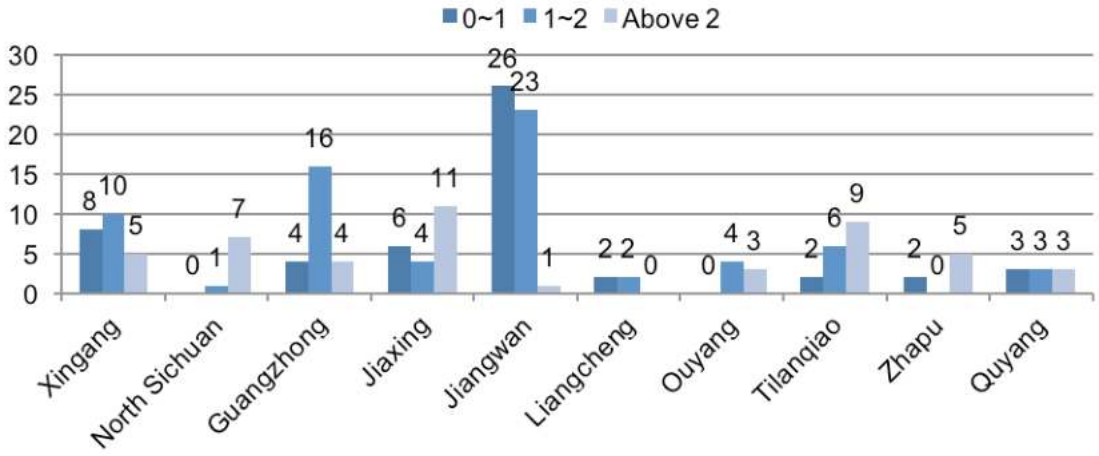


Figure 3. FAR of industrial land in Hongkou District
Source: Hongkou District Government

*2.4 Possibility of land transfer*

According to official statistics and forecasts, only 31% of the industrial land in Hongkou District may exit in the next five years. While this critical situation does not match the planning intention: master plan of downtown Shanghai (2010 combing Edition) mentioned about the replacement of industrial land in Hongkou District for other kind of land uses. (Figure 4)

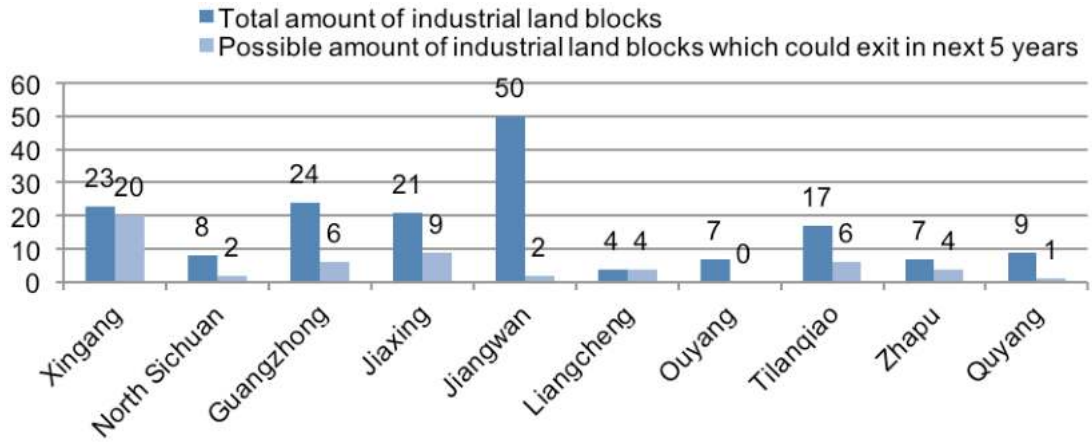


Figure 4. Possible land transfer of industrial land in Hongkou District
Source: Hongkou District Government

## 3. Bottleneck and constraints of industrial land conversion in Hongkou district

### *3.1 Huge speculative arbitrage*

68.8% of the industrial land in Hongkou District is used for commerce rather than industrial production. The most important reason is that with land price continuously rising in Hongkou District and differential land benefits increasing, it makes bigger profits from value-added income or illegal sublease for commerce.

### *3.2 Low compensation of land requisition*

The current land requisition compensation standard is primarily based on the provisions of Article 47, Land Administration Law of the People 's Republic of China (2004 revised version): land requisition and compensation refers to the original land use. Because industrial land price is usually not high enough, this means that the land-use right owner may not be satisfied with the price government departments could offer, which also cannot help break the existing solid interest group.

### *3.3 Low illegal cost*

As to such private rental behaviour, the relevant regulatory authorities have difficulties in ascertaining rights and executing the law. In addition, policy easing during the rapid transition period indirectly contributes to such speculation.

### *3.4 Rigid procedure of land-use change with no alternatives*

Normal procedure of changing land use of the existing industrial land needs public bidding, auction or listing. As a result, the land-use right owner who has demand to upgrade their industries will face three “Uncertainty”: Uncertain about the future land cost, uncertain about the possibility of getting the land, and uncertain about the time the project could get started. So, it will take high risks to change industrial land to commercial land through official procedure on the practical level.

### *3.5 High ratio of planned non-profitable land*

Around 40% of the industrial land in the regulatory detailed plan is all or part of non-commercial land (including park, public service facilities, etc.). Therefore, the economic motivation of the government and developers is limited. So is the land requisition compensation.

## 4. Fuzzy Approaches to Industrial Land Conversion in Weak Institutional Environment

*4.1 Government-dominated profit distribution mechanism*

The distribution of benefits and gap between huge speculative arbitrage and low compensation of land requisition are the critical problems to be solved when we talk about exit strategy of industrial land. As to the belonging of the value-added part of land, there are usually three arguments: private benefits, government's benefits or sharing benefits.

On one hand, unauthorized renting by the enterprise itself can be recognized as private benefits, but this doesnot match the land property and business scope. In addition to the existing low FAR, outmoded of buildings and unfit space for commercial needs, the land value has not been fully realized. On the other hand, if we expropriate and redevelop the industrial land with the low price in terms of the Land Management Law, which can be recognized as public benefits，it seems unfair and the land-use right owner will not endorse at all. Therefore, the simple distribution of land value to the private or the public is unfair, inefficient and hard to operate. As a result, only through reasonable benefits balance and promoting efficiency of land use, could our land-use right owners have the initiative and intrinsic motivation to return the land-use right.

Considering the benefit-sharing thoughts (benefits conclude economic, social and cultural value increment), it is advised to take the following two fuzzy compensation models in order to embody the original owner's right of sharing the fruits of redevelopment.

*4.1.1 After-compensation mechanism (for planned land property of the profitable uses)*

In addition to the land compensation in accordance with the standard, the District Government could withdraw an appropriate proportion from land-transferring fees and return it to the original land-use right owner or establish a special fund to encourage reinvestment in Hongkou District.

*4.1.2 Transfer payments (for planned land property of the non-profitable uses)*

In the regulatory detailed plan, a lot of land for public service facilities, green spaces and municipal facilities is planned on these industrial land blocks, resulting in great economic pressure on the implementation level. Hence, it is encouraged to have transfer payments or package sell with planned land of the profitable uses at the district level.

*4.2 Fuzzy exit modes*

*4.2.1 Traditional mode (current mode)*

Take changing land-use property from industrial land to commercial land for example (Weiwei Yu 2008). First, changing land property for commercial use must comply with the master plan, and have the approval of the planning authority. Second, if the changing for commercial use complies with the urban planning, according to the provisions of the current approach to land transfer, the transfer should be open to the public by bid, auction or listing. And the original owner and the buyer will not be allowed to conduct this trade by their own. Third, usual practice is that industrial land user contacts with the local land authority and land-reserving institution makes the reserve, according to the annual purchase and reserve plan.

4.2.2 *Fuzzy modes*

For the various needs of industrial land exit, especially for the enterprises which have a strong willing of self-update, industrial transformation or temporary land-use change, the existing changing process is too rigid with no alternatives, which restricts the initiatives of industrial land exit through a legal channel. Thus it is advised to have multiple fuzzy exit modes for enterprises to choose under fuzzy

policy framework, eventually achieving a win-win situation of the government and enterprises.(Table 1)

Table 1. Comparison of exit modes of industrial land

| | | **Traditional mode** (Bid, auction or listing) | **Fuzzy mode 1** (Enterprise self-update agreements) | **Fuzzy mode 2** (Temporary change of land-use property) |
|---|---|---|---|---|
| **Applicable target** | | -Strong willing to transfer the land | -Self-update demand<br>-No willing to transfer the land by bid, auction or listing | -High historical and cultural value<br>-Strong temporality of land use<br>-No willing to transfer the land |
| **Common character** | | Functional exit of industrial land | | |
| **Difference** | | -Have initiative to transfer land by bid, auction or listing | -Self-update demand<br>-Conditional agreements | -Functional update by utilizing original plant |
| **Land property** | | Change | Change | No change |
| **Building property** | | Change | Change | Change |
| **Structure** | | Change | Change | No change |
| **Property relations** | | Change | No change | No change |
| **Rights of Spiting, transferring and Conducting warrants** | | Yes | No | No |
| **Benefits distribution** | **GOVERNMENT (Land owner)** | -Land transfer fees under new land use by bid, auction or listing.<br>- Subsequent land tax. | -One-time land transfer fees for price difference in according with remaining years.<br>-Subsequent land tax. | -An annual portion of the land fees for temporary change of land-use property in according with land price difference.<br>-Subsequent land tax. |
| | **ENTERPRISE (Land-use right owner)** | Compensation of land, buildings and other fixtures | Income after renovation or reconstruction | Income after renovation |
| **Typical case** | | | China Publishing Blue Bridge Creative Industry Park | 1933 SHANGHAI |

Case 1: China Publishing Blue Bridge Creative Industry Park (enterprise self-update agreements)

The owner of the park is China Book Import and Export Company, one branch of the China Publishing Group in Shanghai. It used its own land and planned a Creative Industry Park oriented by content industry and new media, featured by digital publishing. Formerly known as Shanghai Jing Cheng printing factory, it was primarily used for rental before the transformation. The total area of the park is 31,000 square meters. The occupancy rate of the park was 100% with over 70% industry concentration. Its 2011 annual park operating income was CNY37.85 million, while cultural enterprises' total income was CNY22.19 million.(Figure 5)

Figure 5. Design sketch of China Publishing Blue Bridge Creative Industry Park
Source: http://finance.eastday.com/hdqxb/lq/index.html

Case 2:1933 SHANGHAI (temporary change of land-use property)

Built in 1933, the main building was originally used for slaughter for the Municipal Council with land area of about 15,000 square meters and construction area of 26,300 square meters. It was known as the most modern Far East slaughter field at that time, which was selected as one of the outstanding historical buildings in Shanghai.

The property of the building belongs to the Shanghai Great Wall Biochemical Pharmaceutical Factory. However, the building could only be on lease as a general warehouse before renovation. The total rental income was only about CNY2 million per year. Shanghai Creative Industry Investment Company rented the building with overall CNY10 million yuan a year for 15 years and invested more than CNY70million for renovation, which finally made this unique historic site reborn as a landmark of creative and fashion industry in Shanghai. Economic benefits of the project are quite significant - rental in 2007 reached CNY5yuan per day per square meter, higher than the overall rental level of the North Sichuan Road office area. In the recent years, only the round show site on the third floor of the main building charges more than CNY20million yuan.(Figure 6)

Figure 6. 1933 SHANGHAI and its round show site

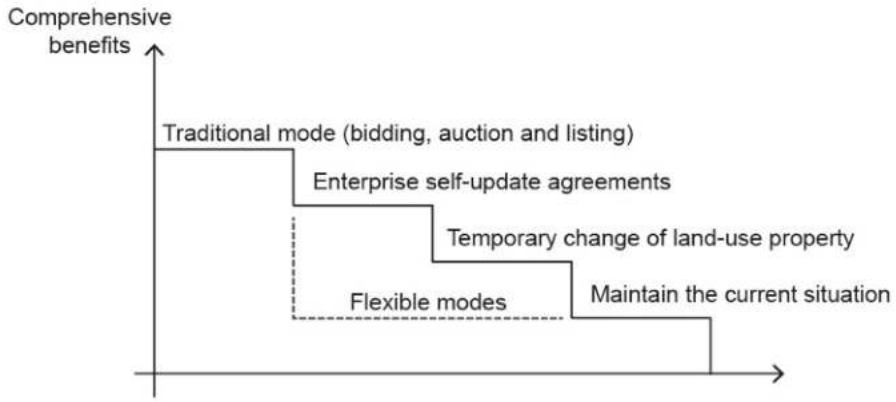


Figure 7. Comprehensive benefits comparison of exit modes

Regardless of the transaction costs and property rights system, the comprehensive benefits of traditional bid, auction and listing is the highest under market mechanism. But in such case, enterprise self-update agreement and temporary change of land-use property are more feasible options than maintaining the current situation. Therefore for Hongkou District, the long-term goal is to abolish the industrial land and accomplish industrial land exit completely. In addition, the short-term goal is to encourage traditional bid, auction or listing by preferential policies or subsidy. In case any difficulties exist, it should be considered toconduct guide according to applicable condition of enterprise self-update agreement and temporary change of land-use property.(Figure 7)

*4.3 Six Priorities*

Due to limited local funds and realistic conditions, Hongkou District is suggested to take exit strategy in turn. Based on industrial land and factory survey table of Hongkou District (2006) and the Twelfth Five-year Plan, the following six types of industrial land should be encouraged to exit by priority compensation.

*4.3.1 Exit priority of Industrial land near key development areas*

Main content about spatial planning of the Twelfth Five-year Plan of the Hongkou District is “one region, one street, one circle" development model: North Bund Shipping Service area achieves major breakthroughs； Sichuan Road business, travel, culture & leisure Street makes new achievements; Dabaishu knowledge innovation and service trade circles developes rapidly. Therefore the industrial land relevant to these three areas should be encouraged to exit first. From the research investigation, the removal process of industrial land in Dabaishu area is at a fast pace and those in radiation circle can be removed step by step; industrial land around North Sichuan Road is relatively less and small but hard to be removed due to high FAR. Considering surrounding traditional urban context and texture, it is suggested to conduct fuzzy mode 2 (temporary change of land-use property); industrial land in North Bund is extensive with high FAR. But considering the long-term income of the North Bund development and high cost of land acquisition compensation in the future, the recent land acquisition seems to be a sensible choice in the medium or long term.(Figure 8)

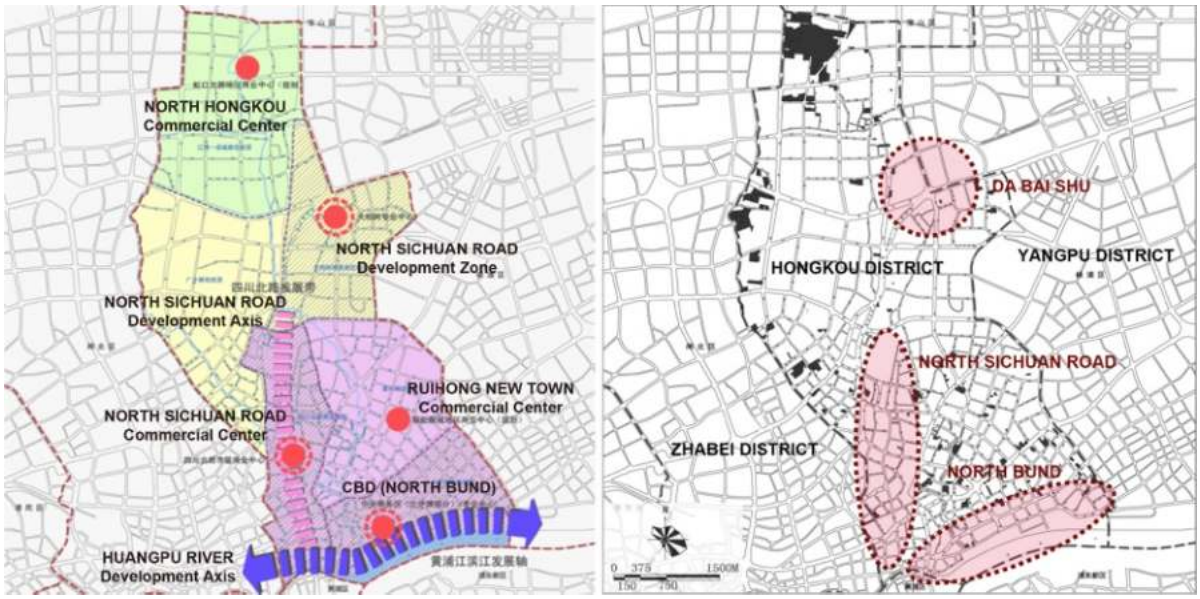


Figure 8. Key development areas and relevant industrial land in Hongkou District
Source: Shanghai Tongji Urban Planning & Design Institute

*4.3.2 Exit priority of larger industrial land*

Due to historical reasons, industrial land property rights in Hongkou District are dispersed and the size of industrial land varies significantly. In addition, from previous experience, small acquired industrial land can not form industrial agglomeration. Thus, from the view of redevelopment, regardless of the demolition or the update of the original plant, a certain land area is the threshold of highly efficient re-use. Priority should be given to large block or a certain land scale after joint land transfer with adjacent block, which may eventually form a tiered compensation system and encourage exit strategy of industrial land along with old residential district renovation (Figure 9 Left) and the municipal facilities relocation (Figure 9 Right) simultaneously.

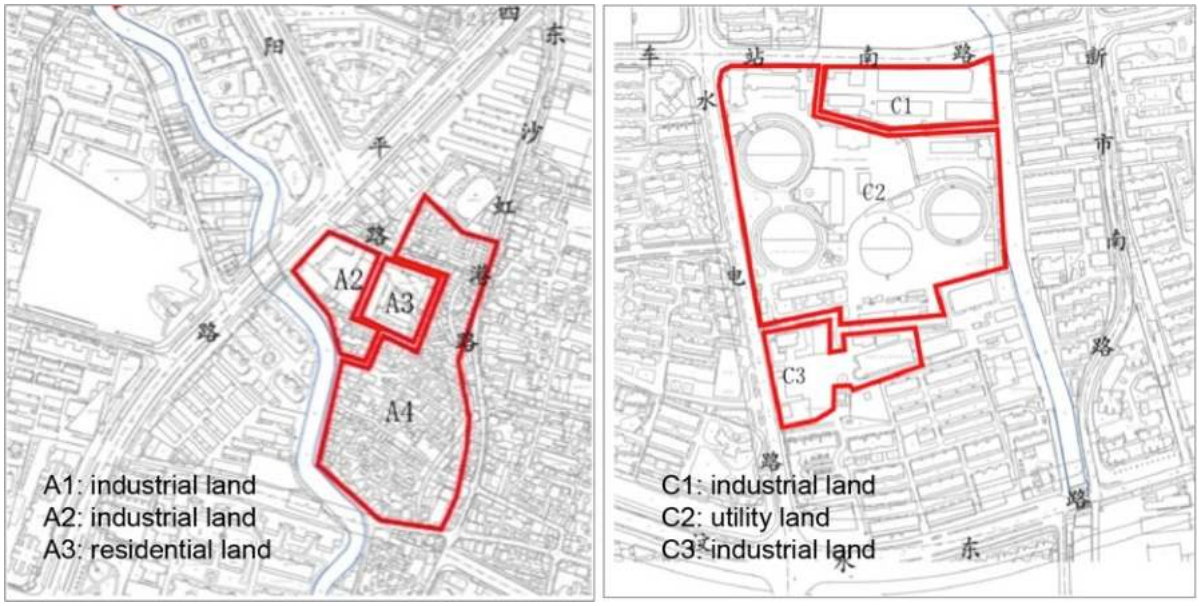


Figure 9. Joint land transfer

*4.3.3 Exit priority of industrial land with poor building quality*

The building ages, initial investments and maintenance managements all make the differences of building quality. Taking economic costs into account, owners of dilapidated flats are generally more willing to transfer the industrial land. In addition, the early-built flats are always with dirty and messy characteristics, which have a big impact on the living environment of residents nearby. Taking Shanghai Huaguang Instrument Factory (Figure 10) for example, after the production ceased, it was used for accommodation and bathing, which had a negative impact on the lives of residents. Later on, it was planned to conduct removal after negotiation by Hongkou District government.

Figure 10. Shanghai Huaguang Instrument Factory

*4.3.4 Exit priority of industrial land with low FAR*

Considering economic feasibility for redevelopment, those industrial land blocksof which original FAR is more than 2 are of low redevelopment economy, so priority should be given to those with lower FAR. The amount of industrial land in Hongkou District with FAR from 0 to1 and 1 to 2 is 53 (31%) and 69 (41%) respectively. Among them, FAR in Jiangwan, Xingang, Guangzhong is generally less than 2, so it is should be prioritized to exit in these areas.

*4.3.5 Exit priority of industrial land controlled by the easy-negotiators*

During the process of the Game and negotiation between government and enterprises, the existing relationship of government level structure makes it difficult or even impossible for the government to negotiate with enterprises with higher or lateral background level. The transaction cost is relatively high in this situation. On the contrary, when government negotiates with enterprises with lower background level, the transaction cost is lower and acquisition is normally easy to conduct. (Figure 11)

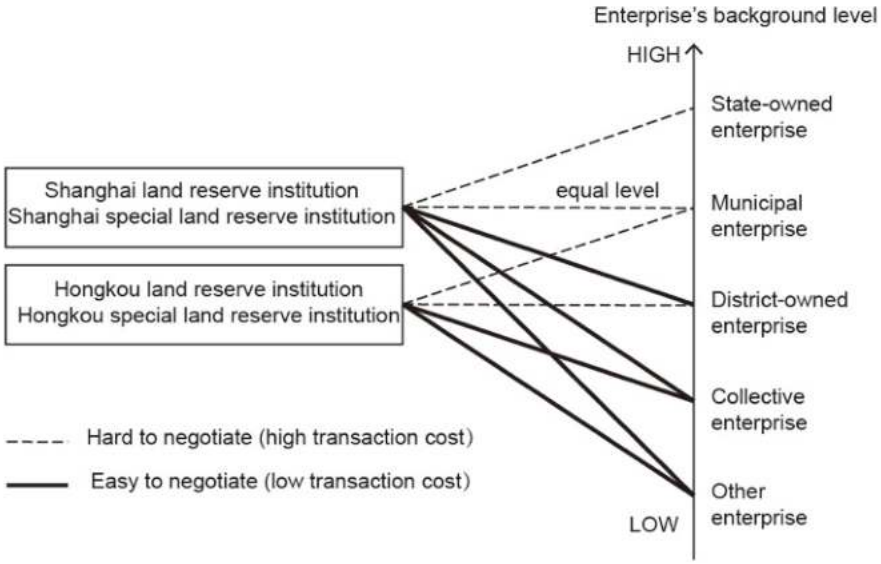


Figure 11. Government-enterprise relations Game from the perspective of administration level

*4.3.6 Exit priority of industrial land with planned commercial projects*

Based on the planned land property from industrial land and factory survey table of Hongkou District (2006) and relevant supporting list, related industrial land is suggested to be transferred first under the principle of "industry development priority and social driving effect priority". In addition, compared with planned non-profitable land, land acquisition compensation of industrial land with planned commercial intention or profitable project is considerable and exit strategy is easy to implement.

*4.4 Regional coordination and cross-district transfers of land*

For enterprise's owners who are willing to reproduce and conduct gradient transfer of industrial land, it has not been relevant preferential policies in Hongkou District to encourage industrial enterprises to be removed from the central area to industrial park. By comparison, some of the suburbs of Shanghai have more abundant land stock and more willingness to import "high, new, top" industrial projects into the industrial park. So, if region coordination and cross-district transfers of land are implemented, huge difference of land stock, land composition and facing problem in every district will be planned as a whole. Meanwhile, for Hongkou District government, this behavior also benefits the negotiation between government and enterprise's owner. Besides, the specific transfer destination should be included 104 industrial blocks mentioned in 2009 Shanghai "two planning in one". (Figure 12)

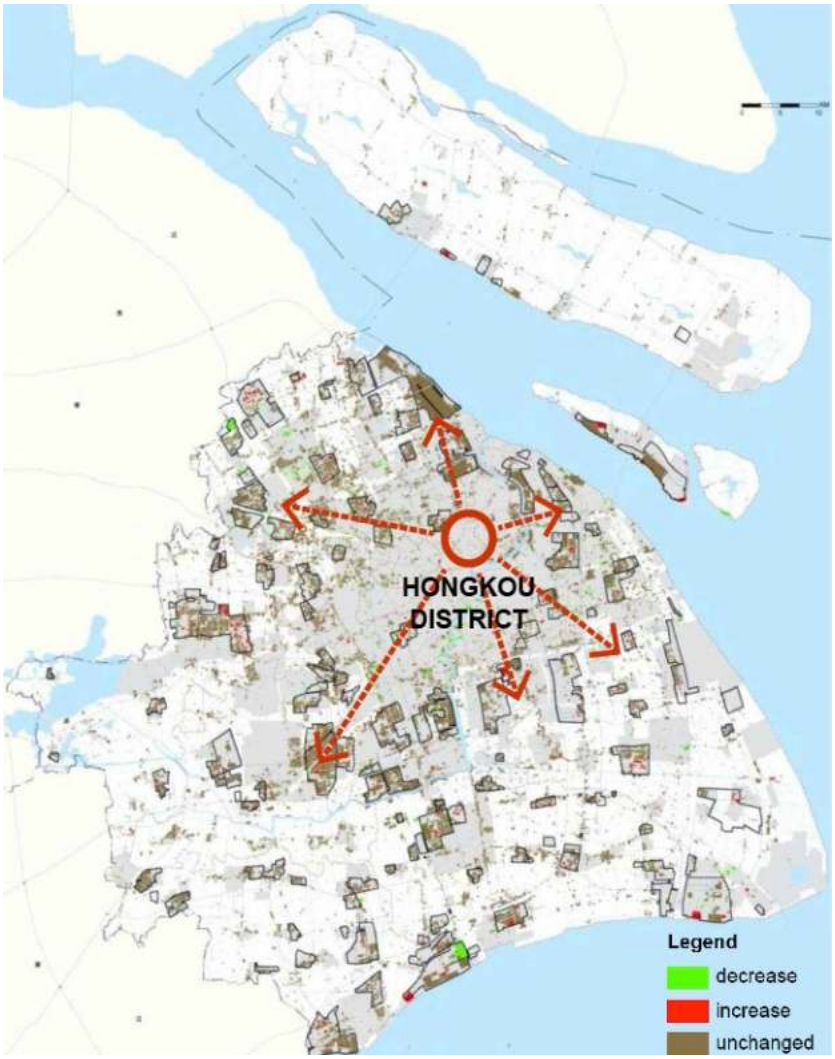


Figure 12. Gradient transfer of industrial land in Hongkou District

4.5 *Regular inspection and public supervision*

*4.5.1 Regular land inspection*

For unauthorized plant rental and lack of supervision, the relevant department of the district government should strengthen the regular land inspection. One is to check whether the enterprise has privately changed land-use property and do business out of the authorized business range. The second is to check whether the enterprise breaks the rules of environmental, safety, health or fire-fighting requirements.

*4.5.2 Public supervision*

The introduction of public report and media exposure should be encouraged to enlarge the channels of supervision in order to reduce the cost of government enforcement and increase the enterprise illegal cost. Since industrial land rental is normally accompanied by a large number of floating population and instability, residents will have enthusiasm and initiative to report illegal rental, which may force residents to be active stakeholders on exit issue of industrial land.

**5. Conclusion**

During the critical period of innovation drive and transition development, whether we can make full use of the limited land resources and explore efficient fuzzy policies, concerning exit strategy of 111

hectares industrial land, is a prerequisite for the future space development in Hongkou District. Only by innovative system and policies, could we break the passive situation of the government nowadays, turning from the passive to the initiative.

Firstly, it is proposed that under the government-dominated profit distribution mechanism, after-compensation and transfer payments should be implemented to promote benefits balance of industrial land exit among the various stakeholders and to ensure initiative of returning the land-use right and intrinsic motivation of cooperation. Secondly, instead of rigid exit mode with no alternatives (only by bid, auction and listing), it is suggested to encourage Fuzzy policies such as enterprise self-update agreement and temporary change of land-use property for various demands of different enterprises. Thirdly, "six priority" strategy should be implemented to ensure Hongkou District to make full use of limited resources and give priority to the development of the most potential industrial land. Fourthly, regional coordination and cross-district transfers of land should be implemented to guarantee the productive land demand of enterprises for further production. Last but not least, it is proposed to combine with regular land inspection and public supervision, in order to restrict enterprise's illegal arbitrage and add government's chips for negotiation.

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# THE URBAN PLANNING IN A NEOLIBERAL POINT OF VIEW: LESSONS FROM PORTUGAL

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*Abstract*

*The State contraction is a process that was felt in the 90s of the last century through the modalities of concession and public-private partnerships in response to the deep financial constraints of public institutions either for investments either for the maintenance and operation of their services and equipment. However, the context of serious financial crisis we are experiencing since 2008, particularly in southern European countries, allowed to accelerate the reduction of the State's role without resistance than in previous years had yet been offered.*
*At the local level, this narrative has more precise and deeper aspects, and even areas considered untouchable as urban planning, because it considered that the conditioning of rights and the imposition of responsibilities on owners could only arrive from an entity with democratic legitimacy to eliminate or, at least, make arbitrary decisions an exception, maintaining all the time the public interest over private interest.*
*This communication aims to illustrate, in Portugal, the extent, forms and consequences of outsourcing multifaceted process of urban planning, which now escapes from the democratic legitimacy, which before was considered essential, making it more difficult to discern the separation between private interest and the public interest.*
*The Communication also contributes to the discussion of this process effects on the reduction of costs and public employment, the civic participation, the decision's legitimacy in urban management and the term effects of this change in the future of the territories.*

Keywords: Neoliberalism, urban planning, legitimacy, urban management, Portugal

## 1. Introduction: "Neoliberalisms"

The finding that justifies this communication is that much has been changing in spatial planning policies but the economic, social and political consequences have not, in our view, sufficiently debated. The aim of this paper is, thus, contributing to feed this debate beyond to make a ranking of modalities in Portugal have been taken to dismantle the architecture of adopted planning system until a few years ago.

However, before changes in urban planning occurred other changes had already existed questioning the welfare state and the keynesianist state, removing them gradually from the economy and invading areas traditionally not "commodified". That instrument for the new capitalist relation in society is called "neoliberalism". Harvey (2005) said that "neoliberalism is the intensification of the influence and dominance of capital; it is the elevation of capitalism, as a mode of production, into an ethic, a set of political imperatives, and a cultural logic. It is also a project: a project to strengthen, restore, or, in some cases, constitute anew the power of economic elites" .

It was between 1978 and 1980 which triggered the change with the convergence of events that took epicenter in different parts of the world:

- In 1978, China began its singular path of liberalization of the economy within a totalitarian regime, bringing the country a few decades after the impressive growth rates;
- In 1979, the US began a battle against inflation, regardless of the social costs that this would entail;
- In the same year was elected Prime Minister of UK Margaret Thatcher, with one of its principals objectives curb trade union power (especially miners);
- The following year it was the turn of Ronald Reagan was elected US president, and, with the president of the Federal Reserve, begin an intense process of reducing labor's power, deregulation of economic activity and increase the financial power.

Thios is why "Neoliberalism is, in the first instance, a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices" (Harvey, 2005, pp. 2).

Deregulation, privatization, and withdrawal of the state from many areas of social provision have been all too common.

And it was in this way that neoliberalism came to the territorial planning.

## 2. The local government as laboratory

The logic of "Less State, Best state" relations between the sphere of public and private are central to the strategy followed in public administration in general and the municipal urban management in particular. The range of possibilities of these relationships is, however, tapered by convergence, both in form and content, the organization of the economic system and the need to compete in a global capitalist market (Jessop, 1997).

Therefore, and starting from this convergence, there is a double link:

- Among the validity of neoliberalism and the consequent need to implement a local administration "minimal", managing more than provisora;
- Among private management as a solution to the problems of municipal urban management and the abdication of the "dictatorship" of public administration.

Neoliberalism thus appears as a viable, seductive and widely accepted solution to the "failure" of the welfare state and the contract of modernist city.
Against this background, and looking recognize the passivity and the slowness of the public administration, this seems bent on copying based business management models now in the 2008 "crisis" hangover are systematically undermined by the economic operators themselves . Some of the recent corporate failures and procedural - detected and disclosed - warn of the risks associated with breakneck attempt firms - such as municipalities - in being globally competitive.

Incidentally, one of the processes by which the Central State is planning to migrate to the minimal state is through the transfer of competencies to the local level. It is not, until now, to have a real business outsourcing is actually a change that could end up there. The program "Aproximar" (Approximate, in english), recently approved, plans to achieve this goal by promoting the extension of decentralization of powers of the Central Government to Local Government.

Local authorities are widely covered in the Portuguese Constitution. Therefore, there is the difficulty in analyzing through a quantitative perspective the effect of minimal state at the local level because the changes that are taking place, and will predictably occur, do not allow serious temporal comparisons when generate-systematic changes in skills that authorities have to meet. The evolution of functions (powers and tasks) based on successive powers of delimitation laws have been made mainly through transfers to the state-owned enterprises; transfers to the private sector (out of the public sphere); and transfers from central to local level.

Figure 1 only want to portray the alternatives that have been studied and tested, at least since the end of nationalization.

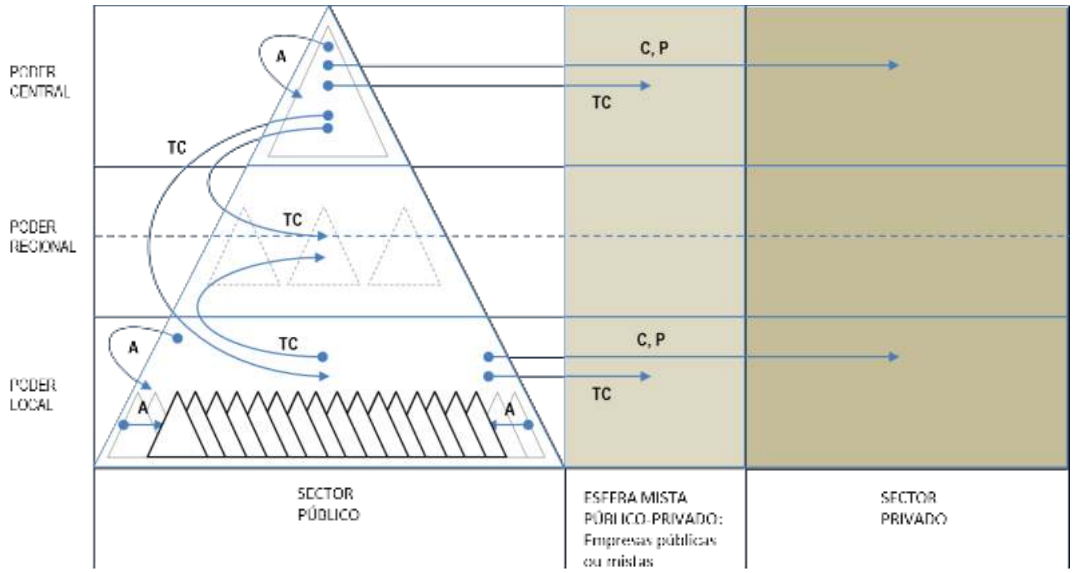


Figure 1. Types of Reconfiguration of the Public Administration

Legend: TC- Transfer of Competences; P- Privatisation; C- concession to private sector;
A- Joining services and / or local authorities or, in the complementary sense, creating new and subdividing.

The rescaling, ie, the adjustment of the state machine with their real capacity, this process can happen both at the administrative level, the applied levels of local government, as the sectoral spreading to more and more areas of activity once secured exclusively the public sector. The basic principle is, maintaining the statutory task, finding less expensive ways to provide the same social responses.

Ferrão et al. (2014) referring most matured process, as with the Big Society in UK, confirm that exists, in the short term, public expenditure decreases when transferring state level services to the private sphere but in the medium term "the transfer of responsibilities to local authorities, communities and individuals, who in most cases lack the financial and human resources and faced with a framework of strong reduction of public support, puts them the burden of having to look for new sources of financing "(p. 175).

Another indelible mark of neoliberalism is trying to make this invisible administrative process for participation and discussion where the deconcentration and decentralization are imposed and justified by the imperative of fiscal restraint: "Started a new municipal cycle, the government should not let isolated reform of parishes, and should open a dialogue with the National Association of Municipalities, aiming at: the institution, preferably with as

much as possible cross-party consensus, a process of reform of open and continuous municipalities, which facilitates and promotes its aggregation; prepare new Central Administration skills transfer process for municipalities and intermunicipal entities: "(...) The program"Approximate", in progress, will help consolidate this ambitious decentralization process. Without prejudice to other areas to be identified by that program should be able to be considered transfers in areas such as education, still under central responsibility, local health services, development contracts and social inclusion, culture, participation in public service network services the State, transport and traffic policing (...) " (Governo de Portugal, 2013).

Incidentally, this imposition occurs not only between different levels of government and between horizontal levels between the various ministries, as can be seen in the ongoing process of rationalization of the supply of equipment, where everyone acted so completely oblivious to what others were cuts also do. It is the effectiveness and economic efficiency to command the transformation of the territory, which can not be denied their relevance would have to be combined first with the various players and later in their relationship with "justice, cohesion and social and territorial development" (Ferrão, 2013, pp. 185).

Analyzing the different laws that defined the reconfiguration skills of Local Government, we can see there has been a cycle of about 15 years on relocation and refinement assignments over time to lower levels of the hierarchy of power going against the satisfaction of the subsidiarity principle. However, the transition of responsibilities to the municipalities no match in funds raises the aggravation of the problem of local finances and correlative strategies to address it.

In the Portuguese case, for now, are 29 municipalities that have a debt higher to three times the average of the current net revenue in the last three years and, therefore, are forced to use the Municipal Support Fund approved in 2014. For the 23 municipalities whose debt is between 225% and 300% the feature is optional required getting the same to adopt a financial recovery plan. It is understood, so the temptation to look at the municipal level to outsource services traditionally offered by the public sector but with the risk that, over time, to check the worsening financial situation because they were not evaluated all the consequences of those decisions. It is, moreover, why Peck (2004) states "the financial crisis of 2008 and the wave of municipal insolvencies que have occurred in its wake have thrust a new generation of 'model cities' into the spotlight" (p. 36). Emerged already emblematic cases of cities where there is an almost complete privatization of municipal services.

## 3. Spatial planning in a dangerous times

Spatial and land use planning are the answer to “the problem of coordination or integration of the spatial dimension of sectoral policies through a territorially-based strategy” (Cullingworth and Nadin, 2006:91). But spatial planning is also the result of the application to the territory of a wide-ranging set of values of a specific society in a specific moment in time, as many authors have shown, both from a positive perspective (Alexander et al., 2012; Friedmann, 2011; Davidoff, 1965; Harper and Stein, 2006) and from a more critical viewpoint (Fainstein 2010; Yiftachel 1998).

In this historical and social trajectory between the definition of rules and the perception of the difficulties involved, awareness of the need for change does not emerge during the tendentially conservative planning process (Alexander et al., 2012; Santos, 1998; Moroni, 2010), but in the moment in which the inefficiencies, perversities and inadequacies generated by the process become intolerable (McClymont 2011). Spatial planning thus reveals itself as the imposition of a socio-spatial order that is continually challenged by the tensions it creates for the various stakeholders involved.

But these questions on the principles and processes of spatial planning have not emerged out of the blue. The world has been marked, albeit unequally, in recent decades by the passage from a regulated economic and financial system to a different form that is highly flexible and in which the states' power of control over financial processes is greatly reduced. These financial processes in turn take on the role of influencers of policies (and politics), society and the economy (Harvey 2000, 2010; Jessop 2008; McCarthy and Prudham 2004).

This generalized change has manifested itself in various areas and spatial planning has not been an exception. The linear and pre-determined future proposed by the rationalist paradigm has lost credibility and, with it, the spatial planning that was associated with it, understood as a process that was continuous (development, execution and assessment) and cyclical (restarting at the end of the period of validity or due to structural changes in the objectives or the context) (Pereira, 2009).

The shift away from a Keynesian social model to a Neoliberal model that has been abundantly characterized elsewhere (Harvey, 2013; Waley, 2013; Kamel, 2012; Albrechts, 1992) is reflected, in spatial planning terms, in the changes in terms of the content, methodology and objectives of planning instruments (Sager, 2011; Prato, 2007).

Thus, it is common to find references to the current weaknesses of the public regulated spatial planning system and the emergence of trends that seek to reformulate it. Lovering (2010) very clearly stresses that the "'Neoliberal turn' was reflected in, and in turn encouraged by, the reinvention of planning as a service to special interests, especially property owners and boosterist politicians. Discursively, this led to a new orthodoxy focused on the vacuous (but politically useful) concept of 'competitiveness'" (Lovering, 2010:1).

There would thus seem to be no doubts that land use management that once derived from rationalist, technocratic and regulatory planning (McLoughlin, 1969; Faludi, 1973) is today subject to enormous pressure as a result of the diminished role of the State in relation to the power of employment and competitiveness that is only guaranteed, in the Neoliberal view of things, by the market and the private sector (Pereira, 2009).

This increased competitiveness is essentially achieved by bypassing the traditional planning processes, which are considered too rigid and formal, in order to achieve better capital turnover rates (Peck, Theodore, and Brenner 2010). There thus begin to merge more clearly the principles of change, first and foremost the idea that planning should be a circular (continuous), participative (open) and prospective process (the future as uncertainty and construction) (Fernandez-Guell, 2006).

In the following the three principal sets of strategies that have been developed to achieve this are identified:

i. due to limited resources, there is an openness on the part of the public system to the possibility of developing some planning instruments with the active participation of the stakeholders, both in terms of financing the processes and conducting them (Moroni, 2010; Waley, 2013; Lovering, 2010), whilst requiring compliance with all the legally imposed rules and, in particular, the monitoring, appraisal and approval by the relevant public authorities;
ii. the development of instruments for spatial and sectorial planning that are not regulated by any legal framework. They are therefore not subject to any rules other than those defined by the developers and partners. Given these characteristics, it has become common to refer to his trend as alternative planning (Ferrão 2011; Gonçalves 2010). Indeed, the restrictions applied by the classic spatial planning process, which is very much marked by the capacity for leadership and realization

by the public sector, has rendered it necessary to come up with alternatives expeditely and, at the same time, to bring to this new context the stakeholders that can conduct it and, more importantly, implement it. Strategic plans are perhaps the instrument that best illustrate this form of "tailor-made" planning by the partners involved in their development, but several others can also be identified (De la Espriella, 2007; Todes, 2012). In this process usually exists, beyond stakeholder's involvement, an intense citizen participation to inform, validate and legitimize the Plan. Throughout its implementation by stakeholders the community should be informed of the degree of implementation of the Plan and there are regular public sessions for Strategic Plan monitoring and evaluation.

iii. the increased incorporation of the strategic component in spatial planning carried out by public authorities, which now also has increased legitimacy by means of a process of consultation and participation of the agents of change in diverse areas of local life (Albrechts, 1992, 2006, 2012). This is a hybrid spatial planning model in which the general principles of the development of strategic spatial planning instruments (particularly with regards to their methodology for defining targets and the discussion and perfecting of them together with the local private, associative and public stakeholders) are retained. Citizen participation in spatial plans is usually confined to special moments (before the beginning and end of the plan) although there are cases where municipalities lead the discussion of the strategy to the inhabitants. It announces the transition from a hard planning process (one that is very regulated and centralized) to a soft planning process (i.e. consensus-based and agilized).

We must call attention to that between ii. and iii. there are very important differences that can never be undone. Firstly, because the strategic plans are indicative only, depending on its implementation mainly on the willingness of its promoters. In the case of spatial planning their rules have to be strictly respected because it is binding. Secondly, strategic planning can only be achieved over a wide time scale (15, 20 or more years) through a good and sectorial integration (social, environmental, territorial and economic) supported by local and sometimes regional and national stakeholders. In spatial planning we can not see this dynamic because it is traditionally a more passive process. Finally, a very important difference relates to the obligation to draw up the special plan unlike the strategic plan that is optional. Therefore, in the absence of a strategic plan to support the spatial plan is very important to strengthen this strategy.

The tensions that generate change, the principles that characterise that change and the forms it takes seem to configure the emergence, in Healey's (1997) view, of a systemic institutional design for collaborative planning where it is possible to integrate the role of the stakeholders (soft dimension) into the already existing formal planning system (hard dimension).

For this reason it is likewise necessary to take into consideration the practice and legitimacy of governance, which is understood as a set of mechanisms and relationships between public and private entities and associations capable of generating and managing policies and actions for the territorial context (Asher, 1995). It is evident that the openness of the public bodies and the level of development and commitment of civil society will have an effect as to the difficulty or ease of applying this more cooperative system.

With the affirmation of neoliberalism being reflected in the growing commercialisation of all aspects of daily life (Luxton & Braedley, 2010), a trends that goes hand in hand with a corresponding reduction of the State's role and its influence and decision-making role, matters related to the involvement of citizens in the decision-making process have also undergone change.

However, problems began to merge in organising the pillars of participatory democracy, given that civil society had become apathetic over the lengthy period in which the role of the State was dominant. When participatory democracy finally developed, it ended up not generating the desired effects (Swyngedouw, 2010 and Swyngedouw, 2011). In the case of the collaborative planning paradigm the literature has highlighted how Neoliberalism has made use of this situation to "maintain existing power relations, protect market-centric state agenda, annul possibilities of counter-hegemonic developments and therefore consolidate the current post-political condition of neoliberal governance" (Roy, 2015:59).

A weakened and pliable State and easily manipulable public participation, even if the latter maintains the outward appearance of a credible instrument, are the perfect context for guaranteeing maintenance and even strengthening the hegemonic power held by Neoliberal entities, both public and private (Swyngedouw, 2009).

Things such as public-private partnerships, urban governance and involvement of residents have come to dominate spatial planning processes, becoming a way of agilising the realisation of investment and spatial transformation plans, leading to the emergence of the romantic idea of a side-by-side approach instead of bottom-up processes (the interest-free and collaborative convergence of all stakeholders). This has enabled large-scale urban projects to effectively circumvent the formal planning system frequently and escape the tight control over spatial planning and the public and political scrutiny that the planning process would require (Swyngedouw et al. 2002). The problem has been that the methodology applied for the involvement of the public has steered towards assuming deliberative capacity. Cases of participatory budgets would seem to indicate a move in this direction (Fung, 2006).

This situation demonstrates that collaborative planning and its new rules, by partly replacing representative powers derived from the electoral process, only appears to empower people to make decision on their everyday spaces. In reality, however, it has proven to "not only [be] incapable of resisting neoliberal hegemony, but can potentially help reinforce it" (Roy, 2015:60).

These trends have been accompanied by other trends taking us in the same direction. The growing importance of informal planning (Gonçalves, 2003; Ferrão, 2011), which includes, by way of example, strategic plans for cities and municipalities, is explained by an also growing difficulty on the part of spatial planning to respond to the galloping demands of investors seeking to accelerate their capital turnover, which so frequently gets stuck in the red tape and constraints of the formal process.

This is a time of the assertion of financial might and the weakening of public powers. This is a time of a shift from a Keynesian economic model to a Neoliberal model (Kamel, 2012; Albrechts, 1992, Harvey, 2013; Waley, 2013), with the corresponding impacts on the contents, methods and objectives of planning (Sager, 2011; Prato, 2007).

This development manifests the current deficiencies of the planning system and the emergence of forces aimed at reformulating it. Lovering argues that Neoliberalism has brought about a reinvention of planning in the service of special interests – in particular those of investors and politicians. The focus has more or less always been on the private sector, but the new Neoliberal wave has also affected the public sector, which is reflected in the multiplication of municipal companies and other corporate forms to carry out, with supposedly greater efficiency, what was once public or state responsibilities, the main consequence of which has been the loss of public control of spatial transformation.

In the public discourse, this reinvention has led to the emergence of a new orthodoxy focused on the politically useful concept of "competitiveness" (Lovering, 2010).

There would seem to be no doubt that traditional rationalistic, technocratic and regulatory land use management (McLoughlin, 1969; Faludi, 1973) is today subject to a great amount of pressure as a result of the diminution of the role of the State vis-à-vis the power of job creation and competitiveness, which can only be guaranteed, according to the Neoliberal point of view, by the market and the private sector (Pereira, 2009).

This competitiveness requirement is met by circumventing the traditional planning processes, which are deemed too rigid and formal (Peck et al., 2010). The signs of change then emerge more clearly in the form of the idea that planning should be continuous, participatory and prospective (Fernandez-Guell, 2006).

We are thus heading towards a post-political or post-democratic scenario, where collective interests can be better protected through new forms of urban governance (Mouffe, 2005). For this reason one can easily argue that whilst "debate and disagreement is possible within these post-political/post-democratic governance arrangements, they operate (without questioning) within the given hegemonic socio-political and economic context" (Roy, 2015:61).

This consensus around the much celebrated economic growth, supported by a growing number of local governments oriented towards entrepreneurism, job creation and competitiveness, has led to this paradigm of post-political urban citizens being able to establish itself without much resistance (MacLeod, 2011).

## 4. Urban planning at a local scale

### 4.1. General framework

Both in Portugal and in the European Union the local expenditure weight in relation to total public expenditure keeps on average virtually unchanged in the last five / six years being the difference between the weight of this expenditure in Portugal (around 15 %) and the EU (around 24%) also keeps unchanged since 2007. This measure, not telling us anything about the transformation process at local stresses, however, the degree of departure from the Portuguese reality in the face of European and, in particular, the difficulty of national authorities cope with assignments that do not walk away from that exist in Europe but with far fewer resources.

One way we tried to organize the municipal action was by externalization via local business sector. After a huge boom in structures of this nature, the weight of services and/or given competencies to municipal services and/or municipal/intermunicipal services companies has decreased very significantly in the last five years.

In late 2014, the number of these entities will be substantially 30% lower than in 2009 (less 100 entities). The most significant reduction there is in local companies of which were dissolved in 2013 and in dissolution process 67 entities. The lack of profitability of these entities and the proliferation of cases where not treated more than financial engineering processes to subtract the control of municipal assemblies surveillance of some investments and expenditures led to the bankruptcy of this idea.

In fact, the difficulty of adjustment is evident in Figure 2 where the sharp fall in employment in the central public sector has not matched pattern identical on site sector where the decrease is very slight or when we focus on the amounts (Table 1). The multiplication of municipal companies and other bodies not served to shrink, in fact, local governments being many of these workers on mobility schemes.

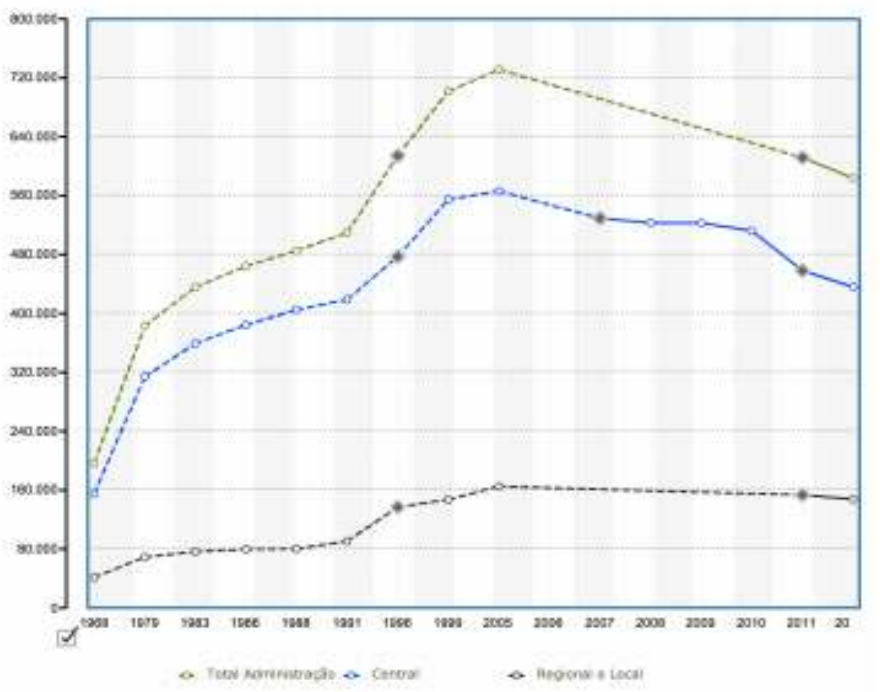


Figure 2. Evolution of public employment in central, regional and local government
Source: Pordata (2013)

Table 1. Current and capital expenditures in the central administration

Unidade: milhares de euros — Unit: thousand euros

| | Despesas correntes | | | | | Despesas de capital | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | das quais | | | | Total | das quais | | |
| | | Despesas com pessoal | Aquisição de bens e serviços | Juros e outros encargos | Transferências para freguesias | | Aquisição de bens de capital | Transferências de capital | |
| | | | | | | | | Para freguesias | Outras |
| Portugal | | | | | | | | | |
| 2000 | 2 794 480 | 1 394 397 | 1 288 112 | 59 767 | 64 270 | 2 477 043 | 2 153 380 | 136 763 | 182 286 |
| 2005 | 4 056 378 | 1 955 825 | 1 384 294 | 102 815 | 115 828 | 2 749 145 | 2 301 256 | 182 277 | 246 492 |
| 2006 | 4 223 433 | 2 029 672 | 1 421 601 | 129 395 | 103 432 | 2 385 211 | 1 993 444 | 118 955 | 236 308 |
| 2007 | 4 595 746 | 2 075 006 | 1 626 900 | 182 481 | 116 268 | 2 393 495 | 1 990 876 | 124 315 | 256 170 |
| 2008 | 4 932 136 | 2 154 478 | 1 782 719 | 224 735 | 127 292 | 2 558 468 | 2 089 509 | 147 316 | 277 857 |
| 2009 | 5 260 870 | 2 397 839 | 1 859 620 | 189 195 | 135 397 | 2 598 602 | 2 065 336 | 182 872 | 250 408 |
| 2010 | 5 037 017 | 2 451 019 | 1 731 123 | 104 681 | 132 176 | 2 227 304 | 1 782 319 | 129 674 | 247 425 |
| **2011** | **5 032 643** | **2 365 017** | **1 789 426** | **141 517** | **135 274** | **2 042 387** | **1 670 162** | **115 234** | **219 944** |

Source: INE, 2013

The fact is that the delay in implementing the reduction in public employment has not made impossible the contraction in spending (by imposing new limits on municipal debt and a reduction of the wage bill) and the increase in revenues from new taxes, new values to existing rates and even the very slight decrease in revenue from existing taxes and that accrue to the local authorities. It is noteworthy that since 2008 (the year associated with the beginning of the "crisis"), and despite a marked decrease in urban dynamics (urbanization processes, licensing of buildings and real estate transactions) taxes derived from real estate (property taxes (IMI) and Council Tax Transactions (IMT)) hardly decreased. The justification for this apparent contradiction lies largely in the recent review process of these taxes has meant a gradual increase in their nominal value.

This indicates the distance between two processes in the Portuguese Municipalities: the reconfiguration of the skills intended to be accelerated and the reconfiguration of the funding

system that remains unchanged since it is evident, even in a deep period of low activity related the universe of "construction", which own revenues continue to strongly result from this universe. This growth in expenditure on goods and services in the municipalities in financial contraction period can prove lack of resources and internal expertise to perform some of the tasks. Clearly the universe well beyond the urban field but this will also be one of the net contributors.

## 4.2. Outsourcing in territorial Planning: Causes and modalities

If so far only sought to establish a global framework for transformation of the state to the local level, is justified at this point a similar breath of reflection for urban planning. And in fact, dismantling the structure of the municipal urban and regional planning has undergone a remarkable set of loose but usually convergent strategies in its effects:

**Human resources structure.** The structure of municipal human resources and especially their poor qualification in the field of urban planning does not allow them to start properly carrying out studies and territorial plans and even assess and monitor their performance. Even in the case of larger municipalities is often this be done by outsourcing this kind of specialized work;

**Outsourcing services.** It occurs for the reasons stated above and for other reasons specific times. This hiring plans and projects to outside entities is a practice that does not expand the staff but implies gains and losses: can be achieved effectiveness in achieving and external incorporation of knowledge but at the same time does not contribute to the development internal skills and not allow a sufficient degree of monitoring of the work of external teams;

**Development of instruments and studies by stakeholders.** The law allows individuals, interested in urban development in a given area (or even in urban regeneration processes), producing, in compliance with the current regulations and under monitoring by the competent authorities, the IGT and necessary studies. This question incorporates large areas still poorly defined because the respect for the rules does not mean immediate respect for the collective interest and the monitoring of consistency is very dependent on the available resources;

**Preparation of informal planning studies.** The preparation of studies and tools that do not directly affect the materials of urban management but have on it a significant effect determines the creation of an informal system of planning and management. And these effects are mainly one-way, ie, urban planning is only designed to conform with the strategic, economic and political guidelines, stripping it of the role it once had in municipal management. These non-formal documents for its specificity, importance to the sound advice of private investment and to ensure compliance with planning tools (often supporting applications to obtain EU funds) are often acquired externally to ensure more experienced teams and better results. May have the consequence of not internalize an important competence with direct influence on the efficient execution of plans especially when it is intended to guide private action;

**Urban Management Companies.** These municipal enterprises were created locally to accelerate the model of economic growth and social development, considering that when undertaken directly by the local administration did not provide the best answer to the needs of urban management (urban cleaning service, public green spaces maintenance, etc.). A major problem is their type of management that has so far generated, in general, huge financial problems even using the human and material resources of the municipality.

ECONOMIA/POLÍTICA 13 MAR 2015

# Primeira falência de uma empresa municipal abre porta a novos casos

LÍGIA SIMÕES E PAULA CRAVINA DE SOUSA
13 Mar 2015

**Tribunal de Amarante decretou a primeira falência de uma empresa municipal. A Câmara de Paços de Ferreira, que detinha a PFR a 100%, não vai assumir a dívida.**

Está em curso o primeiro processo de insolvência de uma empresa municipal, abrindo um precedente no que toca à

Figure 3. Recent news (March 13, 2015) about the bankruptcy of an urban management company Paços de Ferreira

**Society of Urban rehabilitation Companies (SRU).**
When a company of the local business sector has as exclusive purpose the urban rehabilitation operations management adopts this designation. The DL 104/2004 of 7 May and the Law 32/2012, of August 14 makes it clear transfers of municipal competencies for a business entity of the local sector of the urban licensing processes in areas subject to urban renewal and even enforcement of the obligation to rehabilitate and enforcement works, among others.

The transfer of powers of this type and in this way could then move on to a different scale city which can not in itself negative. The role of SRU turns out to still exceed the legal texts to take, as stated Silva (2007), that "urban renewal is an urban policy that seeks the rehabilitation of the existing city, developing multiple intervention strategies, which give rise to a set coherent actions and programmatically, aimed at maximizing the socio-economic, environmental and functional values of certain urban areas, in order to raise the quality of life of local residents, improving the physical conditions of their building stock, habitability levels and endowment in community facilities, infrastructure, facilities and public spaces. "For this works by using Base studies that are not foreseen in the legal framework and eventually justify the delimitation of areas of priority intervention, the methodology and the means to be called for that purpose.

They are therefore both diagnostic instruments and norms. The depth of this diagnosis ends up legitimizing "intervention strategies that can encompass several aspects from the definition of housing types to develop, to identify potential partners, through the definition of target markets and the level of infrastructure needs. These studies base takes different forms and is sometimes the responsibility of the SRU's own, sometimes from outside entities hired for this purpose "(Floret, 2009).

Remind also that these entities can hire the procurement of goods and services will therefore be to admit that the licensing process can be awarded to private entities.

**Intermunicipal communities (CIM).**
The article 81 of Law No. 75/2013 of 12 September establishes the tasks of the Intermunicipal Communities. Its objectives also make clear its relevance in these matters addressed here: "The intermunicipal communities are for the pursuit of the following public purposes:

a) Promoting the planning and management of economic development strategy, social and environmental dimensions of territory covered
b) Articulation of municipal investment intermunicipal interest;
c) Participation in the management of support for regional development programs, particularly in the context of the NSRF;
d) Planning of actions of public authorities, in supra-municipal character"

Almost all assignments have a direct or indirect involvement in territorial matter and urban as it is for the intermunicipal communities ensure coordination of actions between municipalities and government departments in the following areas:

a) public supply networks, sanitation facilities basic treatment of waste waters and municipal waste;
b) Network health equipment;
c) Network educational and vocational training;
d) land use, conservation of nature and natural resources;
e) Security and civil protection;
f) Mobility and transport;
g) equipment procurement networks;
h) promotion of economic, social and cultural;
i) Network of cultural facilities, sports and leisure.

**POLIS Societies**
The Polis Programme - Programme of Urban Rehabilitation and Environmental Improvement of Cities - was created by the Ministry of Environment and Spatial Planning in 2001. Its main objective is to improve the quality of life in cities, by performing a set of urban redevelopment and environmental enhancement operations, developed based on partnerships between local authorities and central government.
The idea was fundamentally expedite rehabilitation interventions and rehabilitation of public spaces in various aspects including the riverfront, which typically involve different types of actors, negotiation, different degrees of commitment and fundamentally urban redevelopment projects.

It is recognized the diversity and persistence of the program (taking up various legal settings) watch out immediately in the design of purpose: "The Polis Program aims requalify Portuguese cities ... on partnerships between city councils and the state. Not intended to be an instrument to solve all environmental and urban problems, Polis has been designed to have a demonstration effect of what you need to change and simultaneously provide a local and regional development engine, consolidating and strengthening the National Urban System ".

Assuming the goodness of the Programme purpose is nonetheless symptomatic that they are framed in a specific way and confined to specific territorial areas and not common denominator to all the urban territory. Moreover, the fact has become necessary to achieve these purposes, the application of a set of exceptional regimes thus making it clear that there, at that time, two urban management schemes, "the Polis territories" and "others. "

These "territories Polis" were constituted a set of enforcement tools based mainly on two vectors: the public-public partnerships and the empowerment of territorial planning and urban management of these "territories" from the rest municipality:

Urban Intervention Instrument - it was decided that the urban redevelopment would be preceded by a Strategic Plan, and made through Urbanization Plans, or Detailed Plans.

Business Instruments - generally were created entities with legal, constituted with the majority interest of the State and the participation of local authorities involved.

filing Instruments with the municipalities - essential in order to substantiate the relationship between local authorities and central government MAOT.

structure and management tools - creating a dynamic structure and monitoring of the Polis Program, known as Office Coordinator of the Polis Programme and working in parallel to the internal services of municipalities.

legal instruments - were created a set of documents necessary for the smooth implementation of the program and thus created an exceptional regime.

**Potential projects of National Interest (PIN).**

As the Polis program, also called PIN initiative on (national interest projects) laid the design and implementation in structuring a regime that has a direct impact both on territorial planning and urban management at the local level.

the PIN of the case is a special case where the Central Administration avoca to you, (instead of Local Government) the power to assess and authorize a certain private initiative investment, for obvious national interest, which runs out to the materialization investment. Although outsourcing to private projects of interest to which it is also recognized an alleged national interest has limited duration territorial consequences at the local level can have on very long-lasting rule;

Given this analysis and survey it is legitimate to consider that we can find three types of outsourcing situations of central government services (Figure 3):

**i. Timely Outsourcing services**

The production / delivery of the good or service is outsourced planning for the private sector or other levels of administration for a short period or too short by contracting it can, however, be renewed; PIN is a special case where the Central Administration avoca to you, (instead of Local Government) the power to assess and authorize a certain private initiative investment, for obvious national interest, which runs out to the materialization investment. Although outsourcing to private projects of interest to which it is also recognized an alleged national interest has limited duration territorial consequences at the local level can have on very long-lasting rule;

**ii. outsourcing extended**

Outsourcing skills for mixed entities, whose justification is based on the complexity of the project and the need for agility. It can be prolonged, depending on the nature of the projects in question, but it is not permanent (POLIS, SRU);

**iii. permanent outsourcing**

It is an externalization of responsibilities to public bodies, municipal or possibly supra-local for the purpose of more operational management (in the case of Municipal Services) or articulation of actions and investment, lasting which is expected very prolonged or even permanent (CIM) and is equivalent in practice to an effective transfer of skills.

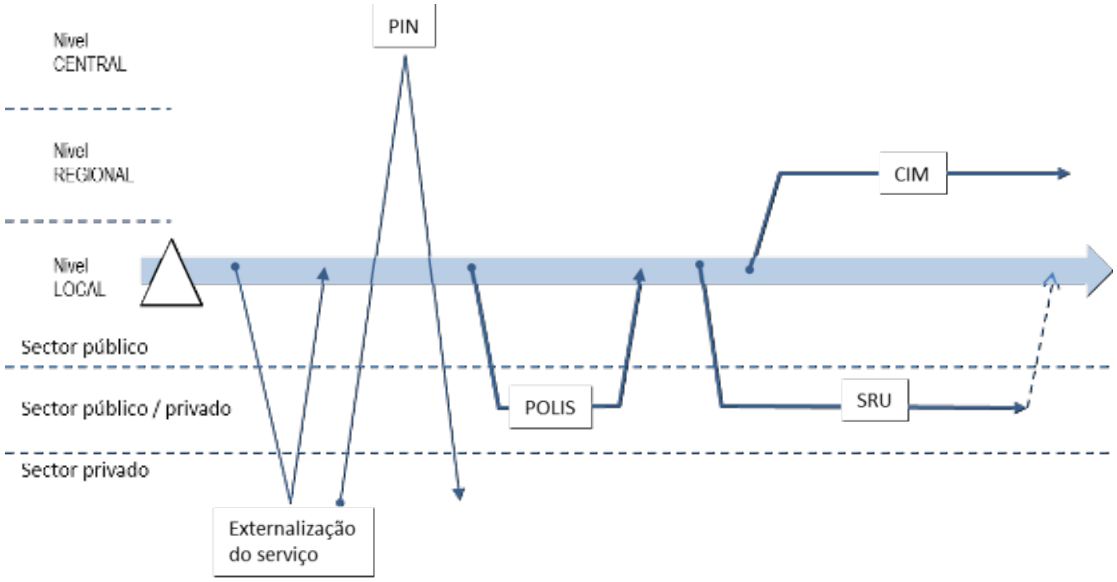


Figure 3. Outsourcing arrangements and respective territorial levels

## 5. Conclusions

Outsourcing is here seen as the key brand of neoliberalism presence in territorial planning. Its justification under the general principle that almost everything can be commodified and thus commodified. Not only expand the economic opportunities for domains before sealed as promotes another fundamental principle that is the diminuiçãoo the power of intervençãoo public administration, reducing her skills and resources.

This exit, slow but progressive, raises other questions and in particular on: the quality of territorial management; the fulfillment of the objective of reducing the state machine; the regulatory role of the state; the renewed role of public involvement.

We could not, of course, discuss all these materials, or for those who were selcionadas the intensity was similar but this is a work in progress for what we believe to have given very assertive and important steps for the future.

Thus it was confirmed from the Portuguese experience, the existence of a wide range of modalities followed by central and local government to subtract urban planning to bureaucratic control but legitimized techniques and machines to traditional policies. The justifications can spend or lack of agility (which can can carry risks of private investment losses) or the limited financial and technical resources (which justifies the adoption of private solutions or at least external).

All these transformations have come up with a repeated political and economic argument but it's been hard to counter and that is the lack of an alternative to the imperative of economic rationality and freedom of markets. This lack of alternatives continues to sow the neoliberal practices in land management has nevertheless effects far more funds coming to question the democratic system itself. If this is based on the idea that there are alternatives that ultimately are not credible or are even absent then the sitema can collapse. So the idea is gaining breath the city post-polítca or post-democratic, that is, the city one way: the neoliberalism.

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**UNLIKELY SIMILAR – FORKING PATHS AND PATH-DEPENDENCY IN TRANSPORTATION STUDIES OF HELSINKI AND MELBOURNE**

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Keywords: Metropolitan Planning, Transport Planning, Institutional decision- making

*Our paper examines the differences between institutional bases and metropolitan scale transportation planning in Helsinki, Finland and Melbourne, Australia. The starting point of the exploration is two transportation studies on opposite sides of the world in the late 1960's by Wilbur Smith & Associates. The Helsinki Metropolitan Transportation Study (1968) and the Melbourne Transportation Study (1969) were produced simultaneously from an almost identical value base. Not only the starting point of the studies, but also their structures, were strikingly similar. All modes of transportation (Cars and Trucks, Heavy Rail, and Buses and Trams) were analysed as a part of a metropolitan long-term development plan and even the proposed freeway/highway system follows the same, more elongated grid-like pattern rather than the currently popular orbital pattern. Differences can be found in the emphases of the work carried out. The Helsinki study is characterized by major restructuring of the highway system, while the Melbourne study appears to focus more clearly on the parking and public transportation side. Since this time the development of these cities has taken different courses. We take a closer look at the key points of decision-making, the institutional characteristics of the planning system and important differences in the starting points. By so doing we seek to understand the uncertainties, dynamics and path-dependency which evidently form the gaps in rational planning studies and systems.*

## 1. Introduction

What stimulated this research was our understanding of public transport accessibility in Helsinki and Melbourne in 2014. We discovered that Helsinki was a leader in delivering a world class public transport system, whereas Melbourne truly the poor cousin. Helsinki provides a public transport network coverage that serves 83% of its population, compared to 46.8% in Melbourne (Curtis and Scheurer – see www.snamuts.com). This prompted us to question how metropolitan transport planning, and its associated institutional base, had influenced this outcome. The starting point of our research is the finding that both cities were subjects of major transportation studies conducted in the late 1960s by Wilbur Smith and Associates, the American consultants. Our questions were – how similar were these studies in character, value base and with regard to existing spatial plans and configuration. How influential was the transportation approach alien to both countries, at that time and now? While this sets us a large research agenda, in this paper we focus only on an examination of the two transportation studies.

There are, and have been, differences in the sheer sizes of the two metropolitan regions and the geographical boundary conditions. The Helsinki study covered some 300 km and the Melbourne study some 500 km of freeway structures across the respective areas (in Melbourne 464 km of other arterial roads were proposed in addition to the freeways). Melbourne is roughly three times the size of Helsinki in terms of population. In the mid 1960s Helsinki had 640 thousand and Melbourne 2 million inhabitants (WSPP 1968, 131). Today the cities are twice as big, but the proportion is roughly the same: the Helsinki study area contains about 1.1 million and Melbourne some 4 million inhabitants. Despite the fact that the Helsinki CBD is located on a peninsula and Melbourne in the centre of a bay, both study areas are roughly semi-circular in shape. The extent of each city's urban development area in the 1960s plans was 77,021 ha in Helsinki and 116,550 ha in Melbourne (MTC 1969). Despite many similarities, in the late 1960s transportation planning in these metropolitan regions developed quite differently.

**Figure 1. Urban structure of present-day Helsinki and Melbourne** (Modified from Google Maps)

Despite quite obvious differences in the size of the cities, the transportation studies contain striking similarities – likely the result of having been accomplished at around the same time. Both of the proposed transportation plans are formed of a large scale grid of motor and expressways of roughly 5-8 km net size. It is also noteworthy that both studies included an extensive public transportation plan, by far more ambitious than what seems to have been implemented. In the Helsinki study the public transportation plans reflect the work of the Helsinki Metro Planning Office since the late 1950's. Melbourne was already well-supplied with an extensive radial rail network by the end of the 1880s, built ahead of urban development (Mees 2000). The plans included electrification, new express tracks, duplication of single track lines, three new rail lines and the extension of existing lines, together with a CBD underground loop (MTC, 1969). Like Helsinki, some of these proposals had been mooted many years earlier.

The years following the completion of these transportation studies also resemble each other. The studies were completed at the dawn of global political activity against freeway-building. In 1973, inner-city sections of the Melbourne plan were removed (Morton 2014; Mees 2010) and the same happened to the Kuningasavenue/Vapaudenkatu section in central Helsinki a few years later. The era was characterized by massive public transportation investments in the inner city. The Melbourne study introduced the Melbourne Underground Rail Loop that was completed by 1981 and the Helsinki study proposal included a similar circular connection compiled from several intersecting metro lines. For the past 15 years Helsinki has been planning its own loop – Pisararata (*droprail*) – to operate commuter trains under the CBD.

Yet the implementation of the public transport system was slow. In Helsinki the first line towards the east from the CBD was opened in August 1982 after a 13-year construction period. In Melbourne the development was hardly any faster with the underground loop completed in 1981 and the proposed three new lines never realized (although the Doncaster line serving eastern suburbs continues through periods of being on and off the books). In Helsinki the extension towards the west in only now under construction and scheduled for completion in 2016. Two northern branches were never built, but instead covered partially by commuter train connections.

There was great optimism regarding growth that created an overwhelming expectation for transportation investments that only later were realized to be financially unrealistic. The Melbourne study concerned 1985, the Helsinki study 2000, yet both sets of plans contain transportation network sections that are still today under major debate. It appears that in recent decades urban transport planning has transformed from 'solving' problems to lagging behind but continuing to offer outmoded and financially challenging solutions. Despite public opposition to inner city freeways, the sections removed in the 1970s and 80s have returned in tunnelled versions. The Big Dig of Boston has its counterpart in Melbourne's East-West link and in Helsinki's Keskustatunneli (*Centre tunnel*) that some transport planners are expecting once again to solve the assumed congestion problem of the

CBD. Worse, by planning an urban structure in the 1960's predicated on continuing mobility, especially to the CBD, rather than on accessibility and proximity, those freeways plans that have been implemented (based on a philosophy of meeting demand for transportation) have not only fixed a template for urban structure today, but also a 'way of doing' transport planning for those planners.

In spite of these great similarities in the initial metropolitan scale planning exercise, Helsinki and Melbourne took quite different development paths. Curtis and Scheurer in their SNAMUTS studies found that these cities in fact lie at opposite ends in terms of public transportation accessibility. From the present day perspective the alleged major disgrace of both transportation studies is their effect on car-oriented travel patterns and diminishing shares of public transportation. During the 1960s studies the public transportation share of Melbourne was 38% and Helsinki 64% (WSPP 1968, 134). It is important to realize that there was a target: the estimated share of public transportation in Helsinki was to be around 38% (2000) in all planning options evaluated (WSPP 1968, 208). In Melbourne the estimate (1985) was 21.6% (MTC 1969, 22). By the mid-1980s the share of public transportation had decreased in Helsinki to 42% and in Melbourne to 10%, since when the decrease has been minor - the current figures are: Melbourne 7%; Helsinki 41%. Major decisions have thus been made within 10 to 15 years after these transportation studies which steered cities further from public transport use and resulted in higher levels of private car use. Our aim in this paper is to trace where these development paths actually departed and speculate on the proper role of these so-called comprehensive transportation plans in actual development.

## 2. Proposed transportation networks

*2.1 Characteristics of alternatives assessed in the Melbourne study*

The Melbourne study led with public transportation analysis and proposals and coined the term 'balanced transport' as a euphemism to downplay the major role of road-building. Two preliminary scenarios were tested – one for "maximum development of roads and freeways, together with a relatively smaller expansion of the existing public transport services"; one for "considerably less development of roads and freeways but greater expansion of public transport" (MTC 1969, 32). The outline of the survey on existing transport conditions was carried in the same way as in the Helsinki study (WSLT 1969a). It was supported with an extensive study on parking (WSLT 1969b), which played only a minor role in the Helsinki case, where most of the suburban area was still undeveloped. It is interesting to note that at the time of study the public transportation situation was considered fairly good and the main focus was on capacity. The study notes,

> "Because Melbourne already had this comprehensive rail network, one of the prime objectives of planning was to introduce improvements to the rail system to enable it to effectively carry out its 1985 transport task" (MTC 1969, 33).

Little or no effort was invested in arranging active suburban characteristics predicted as non-CBD person trips (MTC 1969, Figure 4-8), commercial vehicle trips (MTC 1969, Figure 4-12) or private transport travel desires (WSLT 1969b, Figure 5-11).

A critical issue was pedestrian congestion at Flinders Station in the CBD. This problem, however, had been around for decades. In the Plan for General Development 1929 it was stressed:

> "The Commission considers that the most suitable way of overcoming the present pedestrian congestion in the vicinity of the Flinders-street Station, and as a means or avoiding much more acute conditions of congestion in this area, is by the construction of further city stations which will encourage a distribution of the pedestrian traffic, not only in the vicinity of the stations themselves, but also on the footpaths in the whole of the city area" (MTPM 1929, 130).

The proposed underground loop would spread the load and deposit people closer to work locations in the CBD. The loop needed to cope with in increase in trains (service frequencies – from 108 trains in 1964 to 181 in 1985) in the rush hour through the two main stations (MTC 1969).

Besides the Underground Loop, the Melbourne study proposed three larger new rail connections: the 9½-mile East Doncaster Line, the 12-mile Huntingdale to Ferntree Gully Line, the 14-mile Frankston to Dandenong Line. The last two of these were peripheral loops connecting radial rail branches. The

parking study supported a park-and-ride principle that made station areas mainly for transfer use - "It is part of the recommended plan that parking facilities at railway stations should be kept under regular review and expanded as demand for parking grows" (MTC 1969, 39). From the image below it is easy to realize that the rail network had been planned prior to the 1969 Melbourne study.

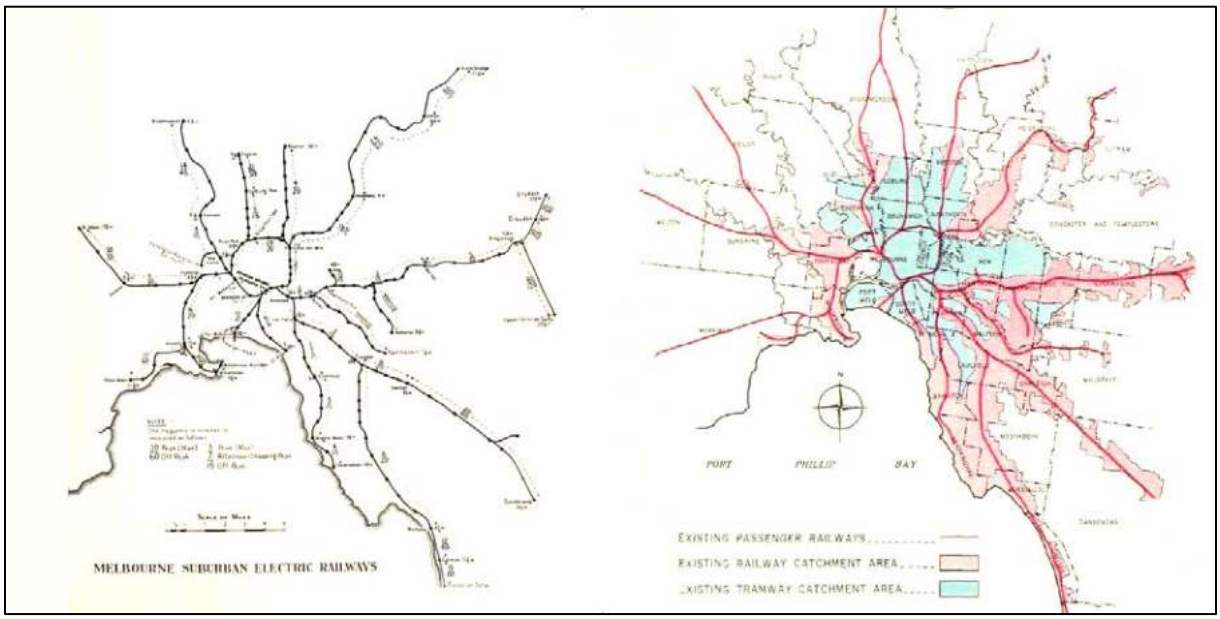


**Figure 2. Rail network of Melbourne Plan for General Development 1929 (left) and Melbourne Metropolitan Planning Scheme 1954 (right).** (Modified from MTPM 1929, 129; MMBW 1954, 108)

The road network was designated for major change. A three-fold increase in the number of private cars was predicted,

> "…road proposals assume that the public will want road construction to keep pace with travel demand…" (MTC 1969, 47).

The number of person trips by car each day was expected to grow to more than three times the 1964 figure. From 1964 to 1985 the average trip lengths were expected to grow from 4.8 miles to 7.1 miles (MTC 1969, 47). Based on these assumptions a novel freeway road typology was introduced to Melbourne. In the 1954 plan the intersections of the main arteries were mainly imagined to be roundabouts and occasionally flyovers, while the 1969 plan introduced fully matured multi-level clover-leaf intersections to retain flow capacity and speed. While the design and speed represented a significant change, as with public transport much of the road network had already been mooted in earlier plans - half of this road network follows reservations already in the 1954 metropolitan planning scheme. As we later learn, the shape of Melbourne owes much to the influence of these road proposals rather than to the influence of land-use planners at this strategic level (McLoughlin 1992). Indeed, it is odd that, despite the 1954 Metropolitan Planning Scheme proposing District Centres as a means of decentralizing from the CBD, this direction is not addressed in the 1969 Plan.

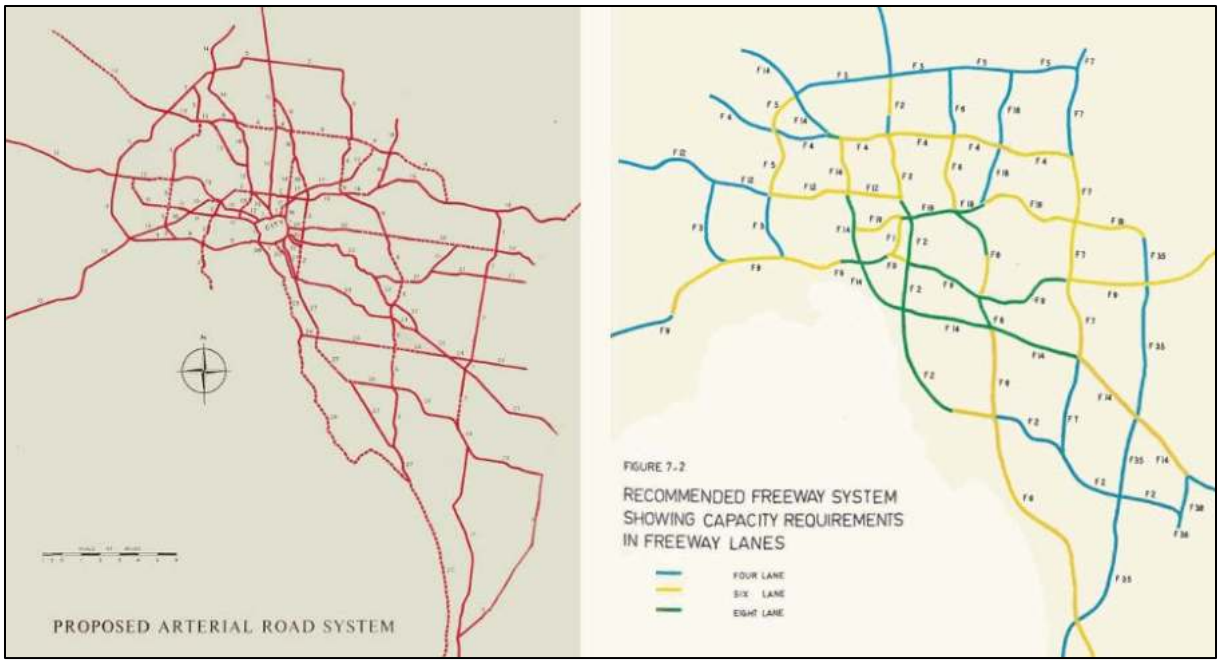


**Figure 3. Road network of Melbourne Metropolitan Planning Scheme 1954 (left) and the Melbourne study 1969.** (Modified from MMBW 1954, 97; MTC 1969, Figure 7-2)

*2.2 Characteristics of assessed alternatives in the Helsinki study*

The Helsinki study consists of three preliminary options named 0, A and B (WSPP 1968, 224). These planning options were created as combinations of wide and shorter alternatives of road network and public transportation networks. The option where both road and public transportation networks were short was not introduced. Options C and D were created to alleviate the problems found in the three earlier options. It is important to realize that there was no variation in the land use even in the improved versions C and D (WSPP 1968, 231), as was also the case in Melbourne. Table 1 presents a summary of all assessed options.

**Table 1. Size of transportation networks in the Helsinki study alternatives** (WSPP 1968, 243)

| **Size of road network** | **0** | **A** | **B** | **C** | **D** |
|---|---|---|---|---|---|
| Large (329 km) | X | X | | | |
| Medium (309 km) | | | | X | X |
| Small (236 km) | | | X | | |

| **Size of public transport network (rail + bus lines)** | **0** | **A** | **B** | **C** | **D** |
|---|---|---|---|---|---|
| Large (90 + 560 km) | X | | X | | |
| Medium (60 + 710 km) | | | | X | X |
| Small (37 + 345 km) | | X | | | |

The assessment criteria serve as a perfect example of how the desired planning alternatives of planners themselves can always be made to look the most favourable. The created multi-criteria frame of assessment looks ambitious and professional containing separate sections for efficiency, performance, community impact and financial consideration. At first sight the evaluation frame looks extremely detailed, but when tabulated as we have done in Table 2 the true nature of evaluation becomes apparent. Most of sub-criteria in each category become meaningless and a single evaluation criterion may dominate the result of the entire category.

**Table 2. Weights of various assessment criteria in the Helsinki study** (WSPP 1968, 243)

| **Criteria** | **Criteria impact** | **Category impact** | **Overall impact** |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1. Efficiency criteria | | 30% | - |
| 1.1. User Costs | ~80% | | **24%** |
| 1.2. Public transport operating costs | ~9% | | **2,7%** |
| 1.3. Road maintenance costs | ~0,1% | | **0,03%** |
| 1.4. Parking costs | ~1,9% | | **0,57%** |
| 1.5. Capital costs | ~9% | | **2,7%** |
| 2. Performance criteria | | 25% | - |
| 2.1. Reliability | 30% | | **7,5%** |
| 2.2. Flexibility | 30% | | **7,5%** |
| 2.3. Preservation of capacity | 10% | | **2,5%** |
| 2.4. Comfort and convenience | 15% | | **3,75%** |
| 2.5. Mode option | 15% | | **3,75%** |
| 3. Community impact criteria | | 20% | - |
| 3.1. General economic benefits | 30% | | **6%** |
| 3.2. Employment opportunities | 25% | | **5%** |
| 3.3. Temporary disruptions | 5% | | **1%** |
| 3.4. Relocation of families | 5% | | **1%** |
| 3.5. Neighbourhood identity | 10% | | **2%** |
| 3.6. Aesthetic considerations | 10% | | **2%** |
| 3.7. Noise and fumes | 10% | | **2%** |
| 3.8. Opportunities for social interaction | 5% | | **1%** |
| 4. Financial considerations | 25% | 25% | **25%** |

An additional difficulty of the assessment is seen in the rank-based evaluation. Even though the differences in each category are small, the planning options are graded from 1 to 5. So, for example, in the category Efficiency, the cheapest alternative was 95% of the costs of the most expensive one but got five times more points in the final evaluation round. Not that this was an overly generous benefit; it was doubled in the category Financial considerations, which analysed largely exactly the same costs.

Two other assessment criteria were topics of more subjective evaluation. Even though performance may sound like a very rigid transportation quality less than half a page was devoted to describing what it meant. Finally the phrase somewhere in-between seems to indicate what type of assessment they were talking about: “Table 10-12 indicates the rating and evaluation of each system in a subjective evaluation based on the Consultant's opinion” (WSPP 1968, 278). The community impact category is equally subjective, but the stated emphasis is said to be on general economic benefits and employment opportunities, which in fact are completely outside the study focus and also left undiscussed in the report. This is interesting since this category became a dividing criterion between options C and D. It looks very much as if option 0 had to be better than option D merely to avoid a tie.

**Table 3. Total rating of alternative transportation systems** (WSPP 1968, 282)

| **CRITERIA** | **WEIGHTING** | **RANK ORDER** | | | | | **EVALUATION** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **0** | **A** | **B** | **C** | **D** | **0** | **A** | **B** | **C** | **D** |
| Economic evaluation | 30 | 1 | 3 | 2 | 4 | 5 | 30 | 90 | 60 | 120 | 150 |
| Performance rating | 25 | 2 | 3 | 1 | 5 | 4 | 50 | 75 | 25 | 125 | 100 |
| Community impact | 20 | 4 | 2 | 1 | 5 | 3 | 80 | 40 | 20 | 100 | 60 |
| Financial considerations | 25 | 1 | 3 | 2 | 4 | 5 | 25 | 75 | 50 | 100 | 125 |
| **TOTAL SYSTEMS RATING** | **100** | **8** | **11** | **6** | **18** | **17** | **185** | **280** | **155** | **445** | **435** |

In addition to this clearly unsound overall assessment, a typical error in transportation assessment caused by a static land use alternative is clearly pointed out in the Helsinki study Figure 9-7 (WSPP

1968, 244). It shows that the overall costs of road building remain static regardless of the proportion of public transportation and exaggerates the estimated travel time costs. Since public transport in a non-congested optimal planning situation is always slower, the higher the proportion of public transport the higher the costs lost in travelling. In these single-constrained model settings (see e.g. Joutsiniemi 2010, 119-125) it is possible to seek optimal network configurations as the Helsinki study options C and D clearly indicate. In the real- life adaptive land use settings this is naturally nonsense.

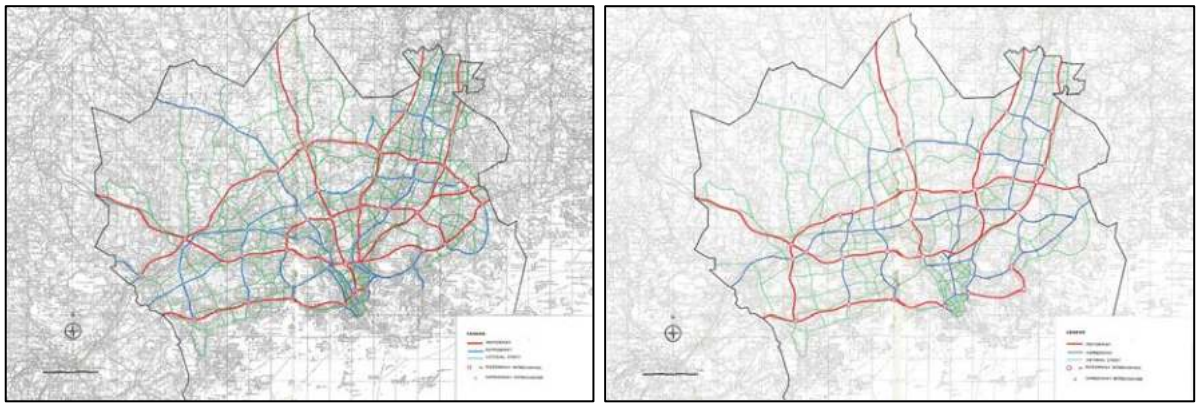

**Figure 4. Options A and D of the Helsinki Transportation Study** (WSPP 1968)

## 3. Transportation networks realized

Comparison of the Helsinki and Melbourne studies reveals some differences in the transportation systems realized and the proposed and existing road categories. In the Melbourne 1954 plan the road categories and geometry are slightly different from those proposed in the 1969 study. In the 1960's maps the emphasis in both cities is on 4-, 6- and 8-lane highways and the smaller Expressway category seems to indicate a minor road. Closer scrutiny of the proposed road sections (WSPP 1968) and detailed plans (WSPP 1969) shows that these both are main arteries with multi-level intersections where the right-of-way varies between 50 and 100 metres – not so very different from the roads actually built in Helsinki or Melbourne.

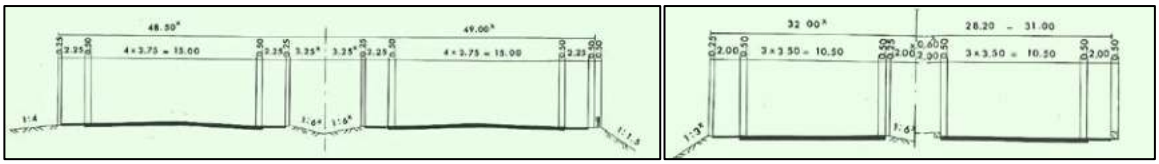

**Figure 5. Variations of a 98-metre wide highway cross-section (left) and a 63-metre expressway road cross-section (right) in the Helsinki study** (WSPP 1968, 300)

Melbourne in its 1929 plan had already shown its appetite for large-scale road widenings in the central area based on Haussman's Paris (Mees 2000, 170). The 1969 Recommended Plan does not provide cross-sections but indicates an adopted design standard of 49 metres (160 feet) for the freeways (MTC 1969, 49). The Melbourne study also recognized the following lower standard arteries: Major Divided Arterials, New Arterials, Widened Arterials, Widened Arterials to accommodate both public transport movement and increased travel by private car. A comparison of these two study areas shows how the Helsinki study tried to adapt road widths from American highway standards, while the existing land subdivision forced the consultancy group to use narrower road types. Therefore the width of the selected road type and its actual capacity to accommodate traffic flow do not go hand in hand.

In its day the Helsinki study was considered extremely radical and was in fact never brought into the official decision-making process. Similar to the Melbourne plan, a major public concern was the inner city highway connections that were later removed. In 1967 planning for the Helsinki metro was

transformed to become more characteristically a heavy rail system and adapted as such in the ongoing Helsinki transportation study.

It is unknown to most of the critic that option D of the Helsinki study was almost identical to the proposed option C, the only difference being a reduction to car-based traffic in the CBD (WSPP 1968a, 231; see also Figures 9-5 and 9-8) i.e. to avoid suggesting the destructive solution shown in Figure 6. Moreover, it is disturbing to realize that the difference between options C and D is marginal and closely connected to the assessment frame based on a comparative ranking of options (WSPP 1968, 282). It is ironic that in the Helsinki study the proposed option C was ranked best in the assessment category "Community Impact". With a just a little bit more game-sense and alternative tweaking in favour of option D, the development of Greater Helsinki might have been different.

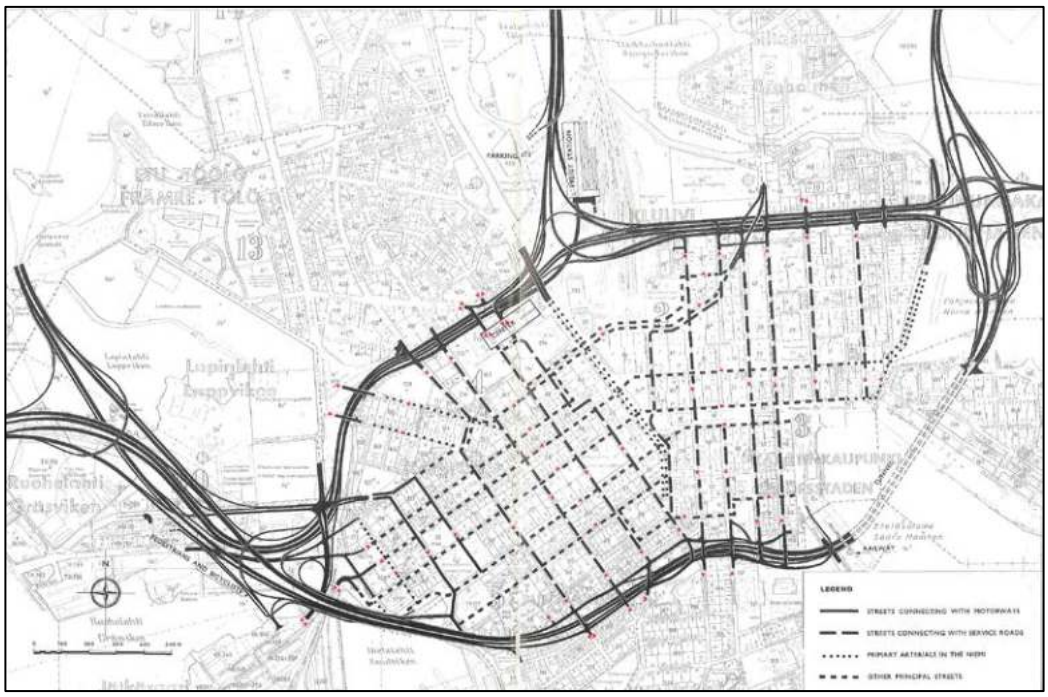

**Figure 6. Proposed street circulation plan for Helsinki CBD** (WSPP 1968, Figure 11-4)

It is interesting to note that even though there is general agreement among planners and planning historians that the Helsinki plan was never realized, one of authors of this text has shown elsewhere (Joutsiniemi 2006, 145) that the development of the road network in Helsinki has taken a course nearly identical to that of option A proposed in the Helsinki study. Option A was characterised in the study as follows: "The road component of the transportation system (...) was developed by combining a conglomeration of local roadway plans from various planning authorities, which were generally prepared in conjunction with individual neighbourhood plans. Since many of these planned street systems were not wholly compatible, numerous adjustments in alignment and standards were necessary to achieve a practical network for the whole metropolitan region" (WSPP 1968, 225). It is easy to see that the option A road network was mainly documenting the existing incremental planning phases rather than offering a comprehensive understanding of large-scale transportation needs.

In the following images we have highlighted the road sections included in the Helsinki and Melbourne studies that have been realized in the course of time. Both cities have created a highway structure that resembles a more orbital than a gridded structure. The larger number of "completed" sections in Helsinki is natural, since the Helsinki study had several alternatives – one of which was documenting the ongoing institutional trends. In Melbourne, too, several of the realized sections are those which can already be found in the 1954 plan. In Melbourne some of the suggested freeway segments have been built in using a lower arterial road standard or adjusted to the existing road structure which follows the chess board like land subdivision pattern typical of Australia and the USA. Therefore it

seem that the greatest impact on the road network introduced by the Helsinki and Melbourne studies is not to be found in large scale road geometry, but in novel high velocity standards that were adapted to existing route plans.

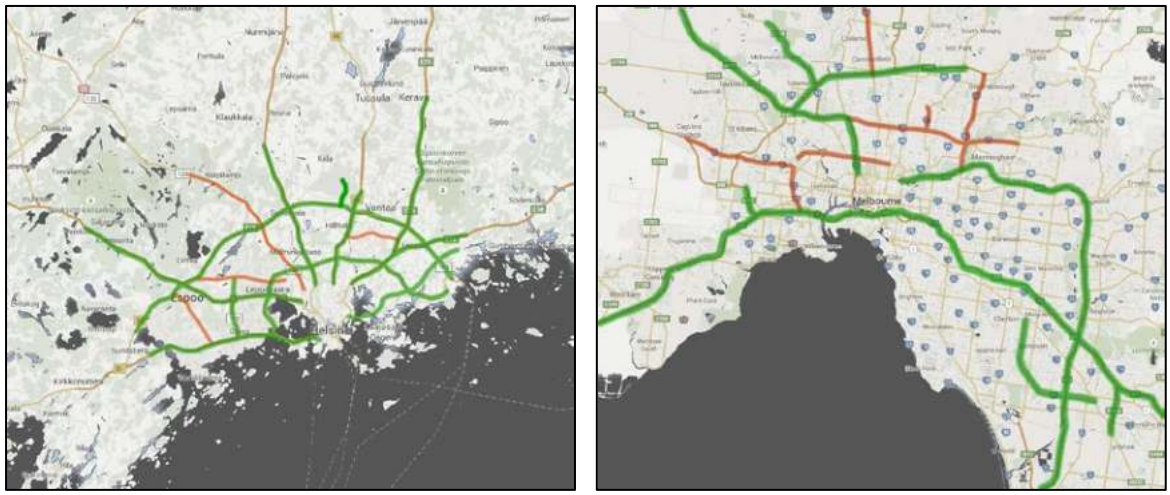

**Figure 7. Road sections in the Helsinki and Melbourne studies overlaid with present day road network.** Green lines indicate Highway, Expressway and Freeway sections included in the studies. Red lines are sections that are included in a study but eventually built according to lower arterial road standards.

## 4. Crucial assumptions made in the studies

After cross-reading multiple documents by the Wilbur Smith Associates it seems clear that the novel theory of car-based transport had made a couple of major shortcuts. In the Helsinki studies there is a well-documented section on the background theories the consulting group had created. This is clearly indicated in Figure 8. In this scheme it is very difficult to achieve a comprehensive transportation perspective. Highway design that originates from the demands of inter-city movement is mute to several intra-metropolitan movement characteristics like public transport and polycentricism. In the Helsinki study two items of this theory are found. In Figure 8 we have included two major background assumptions derived from the profoundly static land use scenarios and congestion-free transportation ideal. The only important variable for the road network size is the size of the CBD and increased time cost of accessing it if public transportation is chosen.

In addition to these oversimplified assumptions, an overview of the Helsinki and Melbourne transportation studies finds three types of assumptions that had a significant impact on the implementation of the transport plans: false expectations regarding traffic growth, an exaggerated role of long-distance transport, and a monocentric urban structure. In the following sections we summarize these briefly.

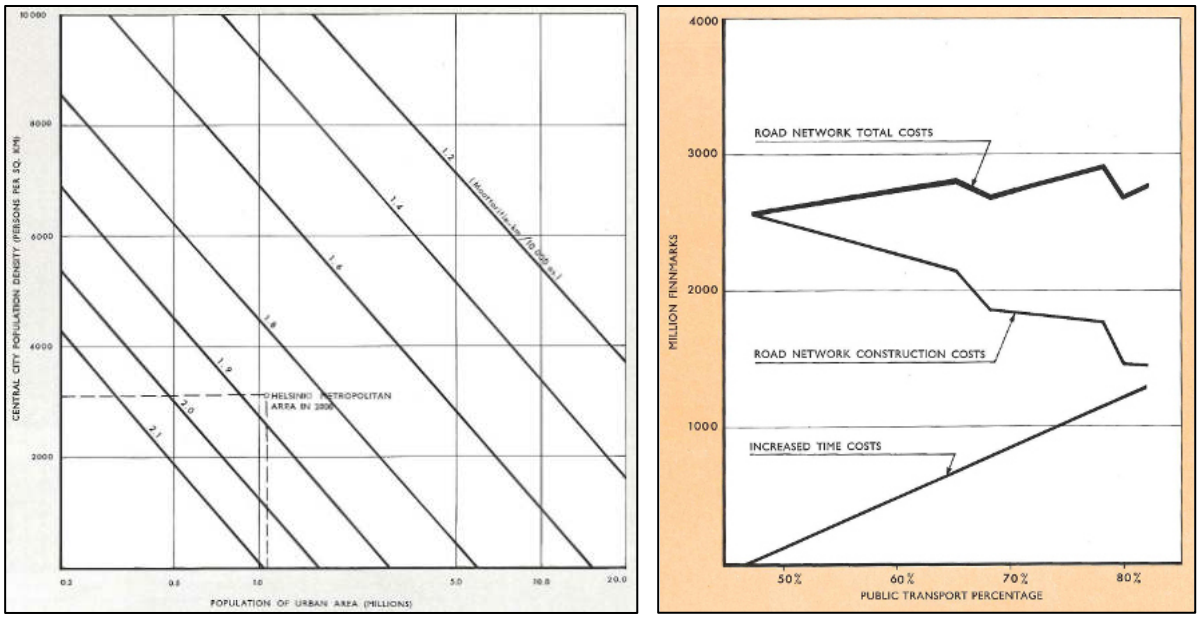


**Figure 8. Illustrated correlations between the size of the city (x-axis), the CBD density (y-axis) and required freeway kilometres per 10,000 inhabitants (diagonals) shown on the left.** (WSPP 1968, 388) and on the right the correlation between the share of public transportation (x-axis) and the transportation costs (y-axis). The upper graph illustrates the overall costs of the road network, the middle one the construction costs of the road network and lowest the cost of time expenditure on travel. (WSPP 1968, 242)

*4.1 Erroneous traffic growth expectations*

The Melbourne Plan, like many transport studies of that time, was focused on catering for travel demand for car use (Gleeson et al 2003; Curtis and Low 2012). Indeed, the Melbourne Plan itself alerts us to the problems of other western cities and affirms that road construction is the only viable solution. Traffic congestion and the cost of time lost in slow moving traffic were held up as concerns only to be addressed by road construction rather than any other transport or indeed land use solution,

> "The recommended plan has the task not only of making provision for the expected trebling of 1964 volumes, but also of providing the means by which these greatly increased volumes can be handled at higher service standards. This is not a matter in which there are alternatives…traffic congestion and greatly increased transport costs would become chronic features of the metropolitan road system. Other western cities faced with the same rapid growth have had to cope with similar rapid rises in the demand for road travel. They have had to become involved in major road construction problems. Now Melbourne has to face the same problem" (MTC 1969, 47)

The Melbourne Transportation Study was based on a plan to increase the area of urban development by 49% – presumably this was based on the 1954 Metropolitan Plan although this is not specifically stated. There is no debate as to whether this is the best way forward or if other choices are considered. With population of 3.7 million by 1985 forecast in the Plan, this suggests an average gross density of 21.3 persons per ha in the 1985 urban development area. The predicted average household size in 1985 was 3.3 persons, implying an average housing density of 6.4 dwellings per ha, although this is never directly articulated. Designed in this way the study not only locked in extensive road proposals that proved financially unrealistic, but it also locked the city into extensive urban sprawl which has also proved financially unsustainable (among other measures of unsustainability). The cost of the Melbourne Transport Plan proposals was $2.6 million (based on 1968 costs) of which 86% was allocated to highways and parking. It is interesting to note that there was no discussion of different urban form or land use configurations – this was very much an era of assumptions based on demand-led planning – for both housing and modes of transport – but it is nowhere evident that the public were apprised of this. McLoughlin's (1992) account sheds some light on the trends at that time when the

population was deserting central Melbourne in favour of the suburbs, but what role should urban planners have played in restricting this in favour of more sustainable development?

The Melbourne Committee estimated that this population of 3.7 million would make 2.5 times more daily trips by 1985 and that the average trip length would be longer. While it is clear that trip lengths would be longer, given the planned extensive spread of the urban area, it is unclear why trip making per capita was expected to rise. People's daily activity patterns remained constant.

*4.2 Priority for long distance transport.*

Following on from above, with the urban area forecast to spread, the priority was on longer distance transport – this despite land use plans of the 1954 Metropolitan Plan arguing for decentralisation and the creation of District Centres,

> "the recommended plan places major emphasis on bus/rail coordination and the complementary role of feeder buses in making rail more attractive to the public" (MTC 1969, 41).
>
> "It is part of the recommended plan that parking facilities at railway stations should be kept under regular review and expanded as demand for parking grows." (MTC 1969, 39)
>
> "Experience shows that construction of commuter car parks leads to additional demand…this further emphasises the need to keep parking facilities under continuing study" (MTC 1969, 9).

In both cities trams were considered obsolete and an impediment to car travel. In Helsinki only planning options O and B preserved the existing 17 km tram system. In Melbourne the existing 323 km tram network was more difficult to tackle. The committee considered scrapping trams but decided this was unrealistic. They were concerned that,

> "a fixed rail system in the middle of streets already inadequate to handle motor traffic, contributes materially to street congestion (MTC 1969, 42)"

They cited the example in Swanston Street, a major CBD, where free-flowing trams would place limitations to cars on cross-street movements. Six options were considered, some aimed at removing trams but interestingly not cars (which is the case today). The policy recommendation of the 1969 Plan was that trams be placed underground or replaced by underground trains in the future and that trams be have their own separate right-of-way, including,

> "Provision for such rights-of-way will be made in appropriate cases in the widening of arterial roads proposed in the plan (MTC 1969, 42)."

The tendency seems to be that cars must be kept moving and public transport moved out of the way of cars.

Again the theoretical background of the consultancy group reveals some major differences between the Helsinki and Melbourne proposals and gives some indications to why public transport fared better in Helsinki than Melbourne. The schematic representation of suburban transportation alternatives also summarizes our previous findings. If the ultimate aim of public transport is to access the CBD then the alternatives shown in Figure 9 all seem equally feasible. Both the studies discussed emphasize the structure shown as number 1. In both studies the backbone of public transport was a heavy rail system that was to be supported by local buses and trams. In the Melbourne study it was explicitly mentioned that,

> "the recommended plan places major emphasis on bus/rail coordination and the complementary role of feeder buses in making rail more attractive to the public" (MTC 1968, 41).

In the Helsinki study the improved planning options C and D contained a 150 to 200% larger bus network than the other options. In reality the choice was not so clear. The Melbourne study contained major parking facilities in transfer terminals so in schematic representation it was much closer to option number 2 in Figure 9. The private car and feeder station combination unfortunately did not prove very successful and people already sitting in cars saw no major point in changing to the train unless major congestion occurred, the catering for parking demand in the CBD also facilitated car over public transport choices. In Helsinki the high investments required to build the extensive metro network were postponed and only partially resolved with commuter trains when funding was available

from central government. Large portions of the Helsinki metropolitan region were operated using schemes numbers 3 and 4 in Figure 9, since it was considered the only feasible way to operate on the low density suburban fringe. It is also noteworthy that these assumptions remain valid only if assumed trip origins and destinations are either at the CBD or the remotest branches of suburbia.

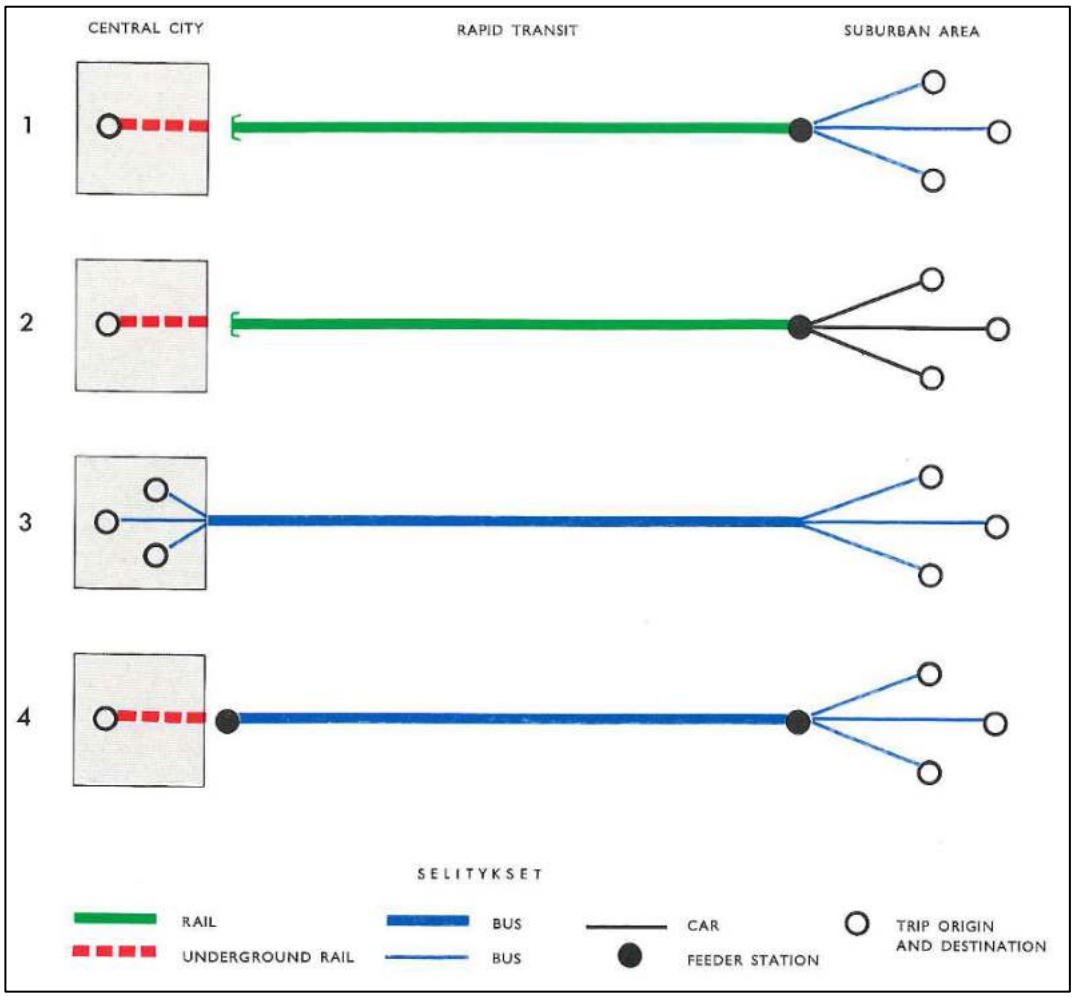


**Figure 9. Schematic representation of public transportation system alternatives** (WSPP 1968, 390)

*4.3 Monocentric urban land use structure*

In Melbourne there was already a firm intention to decentralize the congested city and develop local district business centres (MMBW 1954, 51), yet the preference for the American type of mall development was not kept secret (MMBW 1954, 60). The railway system is radial, with all routes leading to the CBD, and this is still the case today. The freeway proposals that have been constructed (Figure 3) are also predominantly leading to the CBD. Thus despite the Melbourne study being initiated ten years later than the 1954 land use plan, which argued for decentralization, the public transport system continued to focus on the CBD.

The same assumptions are to be found in the Helsinki study area. In fact, they are here even more evident since in the 1960s major parts of the current metropolitan area were in agricultural use. The only assumption the consultancy group was able to make was that in 1966 the monocentric city would only grow into a bigger monocentric city by the year 2000. This is clearly seen from the assumed location of workplaces that were used to populate the transportation network (Figure 10). Unfortunately the reality could not be more different. Somehow the simplified assumption made in the studies on land use size seem strange. In their 1961 book (WSA 1961, 37) the consultants seemed to have a clear understanding of how accessibility changes land use, so possibly the limitations on the

computation side or the demands of the client determined the course of the study. This is especially interesting in the case of Melbourne, which ten years earlier already had a strong drive for district centres. The proposed freeway grid structure of the study obviously served other areas but the CBD.

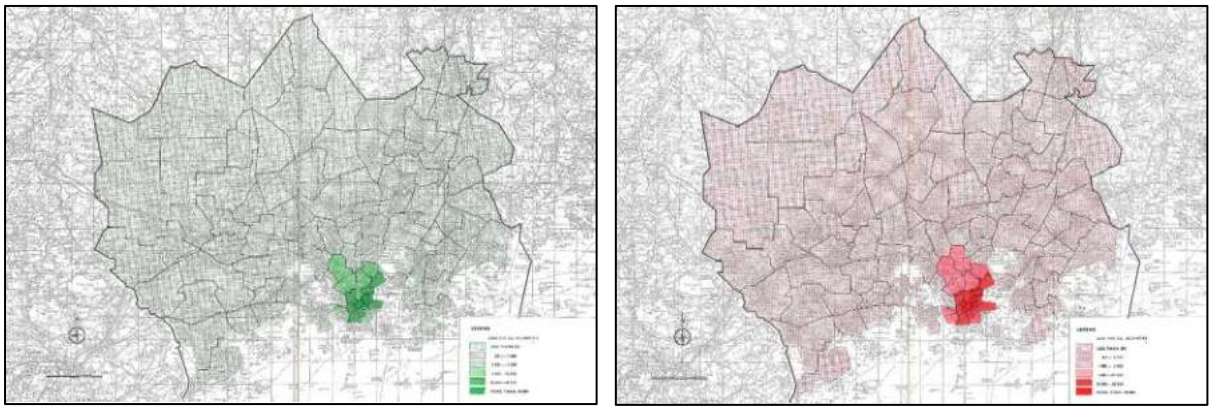

**Figure 10. Workplace locations in 1966 (left) and 2000 (right) Helsinki** (WSPP 1968, Figures 7-8 and 7-10)

## 5. Discussion and Conclusion

We entitled this paper 'Unlikely Similar', and in many respects it seems that the two cities, despite being both peripheral and on opposite sides of the world, have experienced similar trajectories in both transportation planning and the institutional response, at least in the past. We find three key points of interest.

First, we find that path dependence of planning solutions was present in both cities. However this is not so much the primary result of the Wilbur Smith studies. It seems that it did not matter entirely what the Wilbur Smith studies proposed, ultimately the institutions in the respective countries did what they had already planned to do – they continued to implement transportation plans devised prior to the Wilbur Smith studies. In the case of Helsinki this was true of both the road and the metro system, even though the plans back then were extremely weak; in the case of Melbourne this was a road network based on a system of arterial and orbital roads quite similar to that proposed in the 1954 Plan.

Second, we find that the notwithstanding the above, the Wilbur Smith studies had a major impact on the approach to road design which was to have far-reaching consequences for both cities by locking in the car as a major transport mode. Excessive designed standards adopted as high speed, friction-free roads in the form of freeways were new to both cities and saw the car given priority as a mode of transport over everything else. In Helsinki public transport remained important in radial connections, but the service in the orbital direction is practically non-existent, and despite being partially recognized in the Melbourne Plan it was never implemented. The tram was questioned for its suitability since it held up car travel. Cars were selected as the mode to interchange with rail – likely resulting in the choice to travel by car for the whole journey rather than to transfer to rail. Even road designations included "widened arterials to accommodate both public transport movement and increased private car travel". The attitude to urban structure largely ignored the possibility of polycentricity even though district centres were proposed and favoured by some local governments. That railway stations were seen as transfer points from car to rail rather than destinations in their own right also supports this. Clearly this new approach to road design and network structure has seen a new path-dependence locked in and maintained today. This approach had a profound effect on car dependence.

Third, we find the first major difference between the two cities. In public transport Helsinki's local government were able to promote their own policies. Helsinki was eager to keep its CBD liveable and

made a major decision only five months after the Helsinki study was made public to finance the construction of the first metro line even without support from central government. In Greater Helsinki the local government consisting of only three cities has relatively greater power over infrastructure investments and they were able to compete with regional level planning, which for its part has only a minor role in the national legislation, whereas in Melbourne the regional tier of planning was much stronger than the local level, at least as regards transportation planning.

From this analysis, triggered by the Wilbur Smith studies, we have yet to find the full set of reasons as to why, today, Helsinki and Melbourne are at opposite ends of the spectrum on public transport accessibility. What is clear is that the initiation of a major freeway network via these Wilbur Smith studies resulted in a profound turnaround in the mode share. Both plans assumed a drop in the public transport mode share, but it plummeted in both cities and in Melbourne it has not recovered. Groenhart and Mees (2014) note that,

> "Melbourne has built more lane-kilometres of freeway and tollways since 1976 than any other Australian city, but has not constructed a new suburban line since the Glen Waverley line opened in 1930 (although some lines have been extended)" (MTC 1969, 125).

Funding has been more easily obtained for road projects, with considerable support from the federal government (Curtis and Low 2012). Public transport has suffered from a lack of federal funding and an attitude by the State government of 'public transport deficits' (Curtis and Low 2012) since the 1970 'Lonie' inquiry into public transport, which proposed radical public transport service reductions (Mees 2000, 276). At the institutional level the Melbourne road agency has consolidated whereas the myriad of public transport agencies has seen fragmentation and weak financial support (Curtis and Low 2012).

In Helsinki the situation appears different, at least institutionally, since the municipalities have pressed ahead with joint public transportation planning throughout the Greater Helsinki area. In Helsinki all modes of public transport now have unified ticketing, priority lanes on main arteries and highways since the beginning of the 1980s. It is also important to realize that in Helsinki car-oriented development started much later than in Australia – after World War II private cars remained a regulated good and were not released onto the open markets until the early 1960s. Therefore the public transportation share was very high when the Helsinki Transportation Study was initiated. It would be an exaggeration – although probably favourably for some – to say that the Greater Helsinki Area succeeded in its public transportation policy because they did not implement the proposed planning solution of the late 1960's. As we have shown, Helsinki in fact chose an alternative that was not only among the worst of the alternatives assessed, but also the one which by rough measures contained most highway kilometres and effectively supported a sprawling urban structure.

These are only preliminary conclusions, further research questions arise relating to the role of path-dependency and organizational structure that, in both cities, have constantly over-ruled the seemingly rational argumentation of the comprehensive transportation plans of the 1960s and 70s. There seems not to have been a single ideological feature introduced in the two studies examined here. More likely there were certain aspects of the plan that were adopted only if there were fertile institutional grounds for it.

No matter how distorted the assessment of the Helsinki study was, a detailed analyses of it indicated that the priorities of transportation consultants are not necessarily those of the decision-makers or even planners in their role as civil servants. It is clear that in the municipal decision-making process road maintenance costs play a more important role than 0.03% of overall costs. In the Helsinki study it became painfully clear that in a democratic political process the societal impact was playing a far greater role in evaluation. During the Helsinki study this was completely surreal to the team of professionals, as can be sensed from the following quotation from their proposed planning option C considering the CBD location at Niemi.

> "Disadvantages of the »C» system are noted to be temporary disruption of normal activities during the construction period and the relocation of families caused by the southern motorway in the Niemi. However, in the Consultant's opinion these disadvantages will be far outweighed

by all of the advantages gained from other community impact criteria, so as to become minimal" (WSPP 1968, 280).

In Melbourne it is not so easy to separate the role of the transportation consultants from the decision-makers in this desk-top study since the Transportation Plan is a product of a committee composed of decision-makers from the various transport modes and land use planning. Wilbur Smith Consultants effectively reported their surveys and modelling through this committee.

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# Interactions between strategic spatial planning and local state in weak institutional settings

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## Abstract

*The pressures of globalization have ushered in new supranational and sub-national governance arrangements. Cities and urban regions have been perceived as the optimal spatial units in which local competitive advantages can be cultivated and combined to the benefit of local and, in aggregate, national economic growth. In line with this tendency strategic spatial planning, in its widely accepted theoretical conceptualization, became a terrain for balancing decisions about consolidating a city's international competiveness and its role in a wider international context. Thus, it emphasized shared responsibilities between the public and the private sector in economies where the roles between the public and the private sphere are visible in their complementarity. In countries with weaker institutional settings such distinctions are purposely obscure as both spheres are enmeshed in statist and rent-seeking structures. Often in these contexts strategic planning has been principally connected with an external necessity of Europeanizing of planning policies. Based on an investigation of the strategic spatial plans endorsed in the past 15 years in the city of Thessaloniki, the present paper attempts to explain the specificities and the failures of strategic spatial planning in the Greek institutional environment in the context of four defining features of the Greek local state: the centralization of the Greek government, the financing arrangements of the local government, the nature of the local institutional interlocutors and stakeholders and the political economy privileging consumption over the production of internationally competitive goods and services which would necessitate the marshalling of location-specific assets by the local state.*

## Key words

Strategic spatial planning, local state, weak institutional environment, Thessaloniki

## 1. Introduction

Strategic spatial planning in its widely accepted theoretical conceptualization during the last 20 years has been very much concerned with the creation of strategic visions, designing city-wide spatial strategies, developing common assets in a city and becoming a vehicle for the city's transformation along with the globalized spatial development trends (Salet and Faludi, 2000; Albrechts, 2004 & 2006, Healey, 2006). Based on this approach, strategic planning became a terrain as well as a process in itself for balancing decisions about the future of a city with particular emphasis on consolidating the city's international competiveness and its distinctive role in a wider international context. In its normative definitions strategic spatial planning is a transformative and integrative socio-spatial process through which a vision, coherent actions and means for implementation are produced to "shape and frame what a place is and what it might become" (Albrechts, 2006, p. 1152). In these definitions, such a process becomes an arena for public contestation and consensus building and

facilitates spatial 'governance' structures at the metropolitan level (Healey, 2006) as indeed has happened in many cities and urban regions.

Since the end of the 20th century many cities in Europe went on to produce city-wide strategies with various motivations (Albrechts et al, 2003). A mixture of factors is connected with the development of these spatial strategies, the city competition agenda standing at the top of the list. Through the actual production of strategic plans the concept of strategic spatial planning came to represent a diversity of multifaceted and fragmented practices often related to specific planning cultures (Walsh and Allin, 2012). There are certain common objectives in all these practices drawn from the most normative approaches that might be said to constitute a template for the spatial planning process. More specifically strategic spatial plans aim to articulate: (i) a territorial vision for a city's development with emphasis on place qualities, (ii) coherent spatial planning priorities for the integration of investments, (iii) a framework for specific development projects, and (iv) a terrain for consensus building to facilitate the sharing of responsibilities between the public and the private sector. On the whole, whatever the form they took in the planning practice, strategic spatial plans concerned the metropolitan level, pursued wider governance practices bringing together and in equal terms the two main parties of urban development, the public and the private sector (assuming that the roles between the public and the private sphere are to a large extent visible in their complementarity), and focused selectively on specific aspects of urban development leaving many decisions into "lower" levels of planning (Wassenhoven, 2010).

In this template, for the more classical approaches, the political role of strategic spatial planning is considered mainly through its function in strengthening the role and the voice of local government (Healey 2004). More recently, the study of specific cases, such as in the case of the regional spatial strategy experiment in England (Baker and Wong, 2013), conceives the political dimension as an important aspect in minimizing the role and scope of strategic planning. According to a more radical perspective, on the other hand, such practices of spatial planning actually 'neutralize politics' (Allmendinger and Haughton, 2010).

In order to understand both the specificities of the process as well as its different outcomes it is important to explore more thoroughly and based on specific experiences the interplay between the national and local state, the economy and the relative power of social actors embedded in the strategic planning process. A number of studies stress on this interplay arriving at different conclusions. For example, Walsh and Allin (2012) highlight the tendency of a sustained real estate boom to undermine planning intentionality and how this tendency is aided and abetted by administrative and thus political fragmentation at the local level of government. Macleod and Jones (2011) in their analysis of the "new urban politics" (NUP) argue and that NUP of local growth coalitions involve collaboration but also collusion between public and private entities. The analysis highlights that the need for local growth, as a compensating mechanism for a retreating central state which can no longer guarantee equity and affluence across the national space, marginalizes those most in need of state action (the underprivileged) and brings into being a coalition of the powerful and privileged in politics, business and society. Finally, Albrechts (2013) introduces the notion of co-production and posits it in spatial planning as a complement to representative democracy helping to utilize a precious asset, the people, which are also the purported beneficiary of such planning. As such, planning cannot be dominated by a technocratic elite under the direction of a political leadership to which only the strongest and most privileged of stakeholders have uninhibited access. This understanding even warrants from the democratic local state to spur and institutionalize coproduction with the average citizen, up to and including the underprivileged citizen, even if such coproduction will not be achieved spontaneously.

The case of Greece can enrich the above discussion by providing a further understanding regarding in particular the interactions between the national and the local state, local stakeholders and the failure,

manifested in the spatial planning process, to articulate and pursue a coherent vision of the common good at the local level. One of the common arguments concerning spatial planning in Greece, despite its important transformations that took place by the end of the 1990s (Giannakourou, 2005), has been the lack of the strategic dimension which is the corollary of the weak governance practices. However, this does not mean that the main cities lacked of specific strategic spatial experiments or plans. This paper analyses three strategic spatial plans elaborated in the city of Thessaloniki during the past 15 year on the grounds of a thorough examination of their documents, the procedures followed, the available consultation and public debate material as well as the authors' personal involvement in parts of these procedures. Situating as much as differentiating strategic plan-making in Thessaloniki in the above scholarly debates, this paper focuses on the defining features of the Greek local state, described in the second section of the paper, in the context of which it attempts to provide, in the third section, an account of the particular characteristics of the strategic spatial planning experiment in Greece.

## 2. The Greek local state: defining features and consequences

### *2.1. A classification of the main defining features*

The first defining feature of the Greek local state is the *centralization of the Greek government* (Hlepas and Getimis, 2010). Greek centralization has been shaped by forces of different vintage, overlapping and redefining, reshaping and renewing each other. In terms of sequencing, centralization is not only a function of historical reasons as commonly argued. It is also a function of an equality-seeking redistribution aligned with clientelism of the 1980's period when the Greek socialist party, PASOK, saw local government as a transmission belt for its egalitarian policies and for the expansion of a formidably effective clientelist machine. This centralization imperative has been manifested through (i) limited or nonexistent authority in spatial planning, transport, social and educational policy, and economic policy, in the municipal and regional tiers, (ii) the still the fragmented governance structure in the metropolitan areas of Athens and Thessaloniki, Greece's two big urban centers and (iii) in the overlapping and multiple jurisdictions between municipal regional and national governance structures.

The second defining feature of the Greek local state is its *financing arrangements* (Council of European Municipalities and Regions & Dexia Credit Local, 2012). What little the Greek local state spends is mostly derived from central government transfers. Greek local government exhibits one of the smallest public expenditures to GDP ratios in the whole of the EU while its meager financial resources, in terms of the percentage originating from central government, which exceeds 70% of the total, are at the extreme end of the range in the EU. Additionally EU program funding is run by the central government so EU programs, although they have indeed formed a policy framework and administrative units necessary for the creation of a 'local state', they have, at the same time, become a de facto element of central government vertical control, via financing, over the local state.

The third defining element of the Greek local state has been *the nature of its local institutional interlocutors and stakeholders* (Mavrokordatos, 1988). Associations (professional, chambers of commerce, employers and employees organizations etc.) were structured by the successive center left PASOK governments, via the instrument of proportional voting, so that they, as much as local government, operated under the same national-party dominance rhythm, making for coalitions driven by the imperatives of national parties as opposed to locally defined goals and priorities. This subordination of local stakeholders to national party purposes build, as much as governmental centralization, on the earlier traditions of right wing authoritarianism that mandated a controlled associational life.

Finally, the fourth element defining the local state, in the period under consideration, was a *political economy privileging consumption* over the production of goods and services, which would be internationally competitive and, as such, necessitate the marshalling and combination of location-specific assets, over time, by the local state (Bower et al, 2014). While Greece undertook in the 1990's major reforms of its national economy, so that it could enter the EMU, these reforms were geared towards fiscal consolidation and only indirectly and unintentionally had a spatial aspect and effect, relevant to Athens, by internationalizing Greek finance head-quartered in the capital and attracting shipping to the wider-Athens area. Post-EMU Greece once again reverted to a consumption driven economic model financed, this time, by eurozone low interest rates and ample international financing of the Greek state and financial sector.

*2.2. Consequences of the local state's structure*

Local government in the context that we sketched above did not feel the need to upgrade its personnel but rather build clientelistic machines, serving both local and national political machine imperatives, notwithstanding the fact that this choice further circumscribed its own competence and ultimately autonomy. In a vicious circle, this lack of administrative depth regrounded central government dominance with its, relatively speaking, superior administrative and planning resources.

Fiscal dependence, either through central government transfers or EU funding, circumscribed the autonomy of the Greek local state as these transfers have justified rigidly bureaucratic central government controls. EU funding has also necessitated time-consuming and access-based seeking of favours from the central government, long time leads from the time of application to the time of implementation and policy discontinuity as, due to the lack of own local funding, even successful policies funded by the EU could not be supported subsequent to the termination of such funding. EU funding made the local state a policy implementer, these constraints notwithstanding, but almost exclusively in the capacity of the policy-taker as opposed to that of the policy initiator. Additionally, the availability of EU funding weakened demands for local fiscal autonomy at the local level as this additional source of funding enabled local authorities to eschew the politically onerous task of taxing one's own voters. The lack of local government fiscal autonomy which, were it to exist, would make local contestation that much more critical, , has meant that the debate on the need to have a local economy robust enough to sustain a sufficient, for necessary public goods and services, tax base, has never taken place. Additionally, this lack of contestation, originating in near absolute fiscal dependency, has undernourished contestation in general on all other issues, whether they would be related or unrelated to local taxation (Kamaras, 2013).

In terms of the interaction between the local state and local stakeholders their respective structuring and orientation, made both for discontinuity as well as back-scratching. The objective has been to produce nation-wide winning political machines, that would then distribute the division of the spoils across the nation's localities, and not effective collective action, underpinned by long term local coalitions, geared towards locally originating wealth creation. More specifically such national party based coalitions would engender discontinuity at the local level as they would not want to strengthen politically and legitimize, through the fact and the consequences of jointly undertaken and completed projects, a local state that would be affiliated with a party opposite to the one they would support. This zero sum game would also engender, at the local level, an ethos of mistrust as opposed to an ethos of trust, as collaborative efforts would be few and far between, further undermining the capacity for local autonomy in the service of locally defined common goods, contested, defined agreed and acted upon: from the preservation of the environment to the promotion of local competitive advantage.

What does this politico-institutional reality mean for the creation of a single site of contestability, for the creation of locally-grounded legitimacy and consensus out of such a single site and the implementation of democratically endorsed policy priorities? The single site of contestation underpinning the creation of what Kafkalas (2008) calls the strategic parameter is of course undermined. Absent a single identifiable demos, an election process, local accountability based on locally raised taxation, a public debate, with the power and authority to resolve differences, issue rallying cries, create friends and enemies, articulate and pursue authoritative directions, there can be no strategic intent and implementation.

## 3. Strategic spatial plans in Thessaloniki in the period 2000-2015 and interactions with the features of the Greek local state

### *3.1. An account of the main plans and the planning process characteristics*

In the following paragraphs the three main spatial plans of a metropolitan scale and strategic nature that were prepared in the period after 2000 are examined: the Strategic Plan for Thessaloniki's Sustainable Development 2010, the New Master Plan of Thessaloniki and the Development Strategy of the Municipality of Thessaloniki 2006-2015.

*Strategic Plan for Thessaloniki's Sustainable Development 2010*

Efforts to shape a common strategy along specific strategic priorities for the city's development started in the 1990s with a couple of studies which attempted to bring into the city's planning agenda the major socio-economic changes of the 1990s (Kafkalas, 2008) that privileged geographical proximity to large markets accessible since the collapse of the Berlin Wall. It was in this period that the discourse about upgrading the role of the city in the Balkan region became almost a slogan in all relevant documents. However, the first strategic plan which was prepared following the lines and ideas of strategic spatial planning as presented in the relevant literature was the Strategic Plan for Thessaloniki's Sustainable Development (SPSD) 2010. This was an initiative taken in 2000 - in the middle of a period of high growth rates both locally and nationally- by the then Ministry of Macedonia-Thrace, a ministry with very few responsibilities, which functions as a central government agent in northern Greece and represents the earliest origins of centralism. The initiative was supported by the Region of Central Macedonia, at that time a centrally controlled administrative tier, and mainly by the Organization of Thessaloniki Master Plan ("Organismos Rythmistikou Thessalonikis" – ORTHE), a locally based governmental agency with important spatial planning responsibilities at the metropolitan level, which operated (until its abolition in 2014) under the supervision of the then Ministry of Spatial Planning and Environment. A team of planners from the Aristotle University of Thessaloniki, who actively supported the idea for such a strategic planning experiment, undertook the preparation of an initial draft report, an "action plan" as it was called, and the coordination of all the relevant procedures in cooperation with the above bodies. The main difference of SPSD 2010 from previous ones was that it emphasized the procedures to be followed and what was called at the time "social dialogue", in other words a consensus building among the stakeholders and various agents involved in the city's development (Kafkalas 2008). A number of forums were organized with the purpose to shape a final action plan where all central and local government authorities, as well as all main local agents and stakeholders took part.

SPSD 2010 suggested that a spatial strategy for the city should be prepared and shaped at the metropolitan level, instead of the persistent overlapping of the central and local bodies, while it acknowledged the failure of the local economy to move to a knowledge-intensive model capable of producing internationally competitive products and services with high added value. The plan identified

four strategic priorities (international role-national territorial cohesion, competitiveness-innovation, social cohesion-equal opportunities and ecological balance-quality of life) and a framework of actions for the year 2010.

The consensus building that was part of the official public discourse and officially adopted by a large number of the involved actors in the SPSD 2010 forums, revealed the diverging strategies, to the SPSD, of important local stakeholders. One characteristic example was the reservations raised by the local department of the Technical Chamber of Greece (one of the powerful local stakeholders which represents professional interests) as SPSD 2010 was a plan that, for the first time in the city's spatial planning, was not concluding by suggesting specific public infrastructure projects, some of which (such as the Thessaloniki metro, the undersea tunnel and the outer ring motorway) were for years in the official agenda of both the central and local urban politics and remained so in the years to come: "The process of the strategic plan can not in any case become a reason to renegotiate or delay the promotion of major projects"[1]. Essentially there was a differentiation between the academic team (which coordinated the SPSD project) and the professional associations, the former favouring not a large-public-projects-driven but a governance-driven plan (that also suited the skills of the academic planning community) and the latter, along with the local political community, favouring the economic opportunities to their members, the gains to the local economy, to politically well-connected contractors and design offices and so on. None of these stakeholders took the opportunity of the SPSD to promote the agenda of improved governance and performance of critical local assets – the port, the universities, the cultural heritage, the hospitals – for the purpose of city's economically profitable engagement with its surrounding region of South East Europe. .

An evaluation and updating of the action plan was suggested in the final draft report to take place in 2006, the year of the expected completion of the 3rd Community Support Framework. The plan also set as important milestones the years 2004 (related to the 2004 Athens Olympic Games and the nomination of Thessaloniki as Olympic city) and 2008 (associated with the claim of organizing the 2008 EXPO). However, the entire effort was completed by 2002 with a final report called "Results on the Social Dialogues", which actually was articulated on the lines of the initial action plan. Since then no action regarding the city's development was related to this SPSD although many of its ideas and priorities were used in later plans to come.

*The New Master Plan of Thessaloniki*

In 2003 ORTHE started officially a long promised project to update the 1985 Master Plan of Thessaloniki. Among the three plans examined in the present paper, the Master Plan of Thessaloniki (Rytmistiko Shedio Thessalonikis, RSTH) is the only officially endorsed plan, part of the wider national spatial planning system. Although it has been categorized as a strategic spatial plan (Kafkalas, 2008; Yiannakou, 2008; Thoidou, 2013), it is does not really fulfil what Albrechts (2006) calls "the hard core of the strategic" (selective, relational annex inclusive, integrative, visioning, and action orientated), as it rather follows the tradition of "the integration of nearly everything" of older decades (Albrechts, 2006).

The preparation of the main study report -funded by the 3rd Community Support Programme- was commissioned in 2006 and completed in 2009. The report for the new RSTH was divided into two main stages: An initial draft concerned only the so-called boundaries of the RSTH and was put into consultation in 2008. It should be noted here that for all the areas that fall within the boundaries of the

[1] Technical Chamber, Department of Central Macedonia, Position statement on the SPSD, http://teeserver.tee.gr/online/epikaira/2002/2189/pg108.shtml

RSTH, lower "level" plans as well as crucial environmental and planning permissions fall into the jurisdiction of the Ministry of Spatial Planning, instead of the locally based regional administration. Yet most local municipalities and other stakeholders gave consent to a proposal for much wider boundaries of the RSTH, covering not only metropolitan Thessaloniki but a large part of the Region of Central Macedonia. A year before the official onset of the crisis and at a time when the first signs of a significant decline of the dominant property development sector was becoming evident (Yiannakou 2013), local politicians were seeing in the new RSTH a chance to integrate their municipality into a permissive, for real estate development, RSTH, to essentially wheel and deal, in the context of the RSTH, with the Ministry of Spatial Planning so that they could determine the specifics of such permissiveness within their own jurisdictions. As for the Ministry of Spatial Planning and its local agent ORTHE, which over the years developed strong linkages with the local political and professional community (an interface with real estate development) thus becoming an agent with its own "autonomy" and mandate over crucial decisions, the geographical reach of the RSTH builds on the fragmentation of municipal jurisdictions and thus allowed for ad hoc decision making facilitative of rent seeking behavior. To clarify what is at stake, we only need to imagine a RSTH that covered only metropolitan Thessaloniki and a city of Thessaloniki being a metropolitan municipality as opposed to being divided into 14 autonomies municipalities (31 before the 2010 Local Government Reform). Were this to be the case, the Ministry of Spatial Planning and ORTHE could not avoid sharing and contesting responsibility for the RSTH's design and implementation, in a single public space, with a demos who would be democratically legitimated to have a view of the RSTH coterminous with its democratic mandate and the policy priorities that this mandate would be identified with.

Be that as it may, the final draft of the plan was put into public consultation in 2011. In the next couple of years the plan was modified without major changes but adopting certain objectives related to the crisis' onset and it was only in 2014, in other words after ten years of preparation procedures, that a Bill was introduced in the Parliament for the endorsement of the RSTH along with that of the New Master Plan of Athens. However, one of the coalition parties in government, the New Democracy Party, suggested the withdrawal of the RSTH on the grounds that some of the main Thessaloniki stakeholders, such as all the local chambers representing the industrial and commercial firms, objected to the plan. Thus while the new Master Plan of Athens was voted into law, the RSTH was withdrawn for a new round of consultation. For the first time, the above mentioned Thessaloniki stakeholders were strongly questioning the authority of ORTHE[2] to provide planning permission for all new installations of more than 5.000 $m^2$ considering it as another licensing layer for rent-extracting through planning and environmental permission procedures. In this new round of consultation certain municipalities as well as the local department of the Technical Chamber also questioned strongly the extensive boundaries of the RSTH referred above and suggested to be confined to the actual metropolitan area of Thessaloniki. So far, the new RSTH has not been voted into law.

*The Development Strategy of the Municipality of Thessaloniki 2006-2015*

A third strategic plan which is of interest to this review was the Development Strategy of the Municipality (DSM) of Thessaloniki 2006-2015. The Municipality of Thessaloniki is the main local municipality covering the central, older and most populated part of the city and naturally its priorities tend to be perceived as those of the city as a whole notwithstanding the fact that it is one of 14 municipalities of metropolitan Thessaloniki and possesses no municipal jurisdiction. This strategic plan was prepared as a prerequisite anticipated by the 2003 Local Government Law in order to shape a

[2] In 2014 the Organization of Thessaloniki Master Plan was abolished (as part of the reductions made in the public service following the fiscal measures of the period) and its responsibilities were transferred in the main administration of the Ministry in charge of spatial planning.

framework for the operational programming of the municipality, basically its public works programme. The plan has been drafted following the specific guidelines provided by law and sets a "vision" and specific "fields of actions" implying that these municipal strategic plans are by their guidelines oriented towards more selective principles.

The DSM compares the city of Thessaloniki with a number of other European cities of similar size, such as Barcelona, in an effort to set a more sustained vision for the city and its international role. Focusing on more selective fields of actions the operational plan that followed the preparation of the DSM specified a series of public investments of a renewal or regeneration based on property development character that had sufficient size to positively affect economic activity in the city, by stimulating demand caused by large projects. It also proposed the creation of new institutions such as the creation of an Agency for the Promotion of Tourism which, in synergy with the Municipal Authority and stakeholders, would give the opportunity locally to implement policies with a significant economic effect on the city of Thessaloniki. The DSM reviews all models of metropolitan governance in the European space and recommends, from the options analyzed, the weakest one, namely the creation of a consultative body that would bring all municipalities of metropolitan Thessaloniki to review and decide on issues that warrant metropolitan solutions. The DSM also lists all of Thessaloniki's assets – transport infrastructure, educational system, hospitals etc – that substantiate the city's ability to play a nodal role in the wider region of South Eastern Europe, according to the DSM, but does not recommend a strategy and performance goals that would commit all stakeholders to the fulfillment of this role. Thus on both sides of the equation – political structure of the city and governance and aims of its key assets – the DSM is not designed to facilitate change and implement the strategic direction that it is nominally committed to.

The preparation of the DSM was a completely internal process, confined to a study undertaken by a municipal development agency. The strategy was never put into any type of consultation and it was in fact prepared as a document-prerequisite for getting EU funding for specific municipal projects. Yet the proposed public investments reached at best only the study stage, as once again they were treated as centrally controlled public projects and not as locally formed processes for regenerating specific areas affecting the city's economic activity or re-designing its image.

### *3.2. Understanding the main interactions with the Greek local state*

The above account shows that strategic spatial planning in Thessaloniki was a fragmented process consisted of the preparation of various spatial plans with no connection to each other. These plans came into being either as an initiative of locally based agents of the central government (Ministry of Macedonia-Thrace, University of Thessaloniki, ORTHE in the case of SPSD) or as a "statutory planning" procedure under the traditional supervision of the central government, again through its locally based agents (Ministry of Spatial Planning and ORTHE, in the case of MPT), or finally as an internal prerequisite of the development planning incorporated in the EU funded programmes (Municipality of Thessaloniki, in the case of the DSM). Following the main common objectives of the strategic spatial planning as presented in the introduction -vision, strategic priorities, fields of action and consensus building- Table 1 provides a summary of the three spatial plans examined in this paper. All plans were nominally committed to a set of strategic priorities which were mostly similar.

Consensus building was an official target mainly of the SPSD 2010 but the 'owners' of the SPSD, and of its consultation process, the Ministry of Macedonia-Thrace and the academics who helped conceive it, and prepared it, had limited political legitimacy and non-existent executive authority. Thus the consultation process manage to elicit, through their criticism of the SPSD, the standard preference of local stakeholders for high prestige, expensive public projects, while not engaging them in the co-

articulation and concretization of politically difficult solutions to the strategic priorities that the SPSD itself recommended. Nor was the political owner keen to fully flesh these solutions and their implications themselves, enmeshed in a politico-institutional setting that did not prioritize, both nationally and locally, ambitious and politically risky change The RSTH followed a more statutory consultation process and was addressed to a very wide range of stakeholders in an attempt to get a wide legitimization especially regarding one main policy, that of the extension of the metropolitan area boundaries, in other words of the control over crucial decisions that produce rent-seeking benefits within a fragmented local state. Notwithstanding its sponsorship by a powerful, this time, Ministry, that of Spatial Planning, the RSTH never really acquired powerful political support, as local stakeholders either engaged with it to secure small-scale, opportunistic advantages or to resist yet more burdensome regulation. Thus the RSTH also revealed the lack of local ownership, as much as the objective inability for such ownership to be available, due to municipal fragmentation, resulting in its failure to be turned into law and to be implemented. Finally, the DSM illuminated the limitations of municipal governance itself, as it was an exercise in paying lip service to the metropolitan mission of Thessaloniki by a municipal authority that lacked metropolitan jurisdiction, did not see it in its interest to fight for such an authority and rather legitimized and operationalized, through its strategic planning, its limited public works programme and other operations of limited significance.

Table 1. A comparison of the 3 strategic plans against 4 main parameters of the strategic spatial planning process

| | Vision | Strategic goals or priorities | Fields of action | Consensus building |
|---|---|---|---|---|
| Strategic Plan for Sustainable Development 2010 | The document does not synthesize its priorities into a single vision | –International role – national territorial cohesion<br>–Competitiveness-Innovation<br>–Social cohesion-equal opportunities<br>–Ecological balance-quality of life | *6 Operational Plans (as key fields)*:<br>–Governance<br>–Competitiveness<br>–Employment<br>–Infrastructure<br>–Residential development<br>–Quality of life | –General and specified forums |
| New Master Plan of Thessaloniki | *Overall strategy*: Pursuing sustainable development where economic development, social cohesion and protection of the environment are integral parts | –Economic growth, competitiveness/ innovation and enhancing interna-tionalization<br>–Spatial and social cohesion and improvement of the quality of life<br>–Ecological balance and protection of natural and cultural resources | –*General and detailed guidelines on*:<br>–Spatial structure and organization<br>–Spatial organization of economic activities, transport, networks<br>–Urban planning and urban reconstruction<br>–Environmental policies | –Formal consultation procedures |
| Development Strategy of the Municipality of | Reorganize the structural characteristics, | *General development objective:* | –*Fields of action*:<br>–Urban | –Lack of any consultation |

| | | | | |
|---|---|---|---|---|
| Thessaloniki 2006-15 | infrastructure and production base for the advancement of Thessaloniki in the European hierarchy and operate as a regional metropolis in the area of Southeastern Europe and the Black Sea | –Convergence of urban competitiveness | infrastructure<br>–Quality Urban Living<br>–Urban Production Base<br>–Urban Governance<br>–International city image | |

Based on the four defining features of the Greek local state, the strategic spatial planning experiment in Thessaloniki can be summarized in the following points:

The *centralization of the Greek state* is expressed in the fact that strategic planning was mainly an initiative of the central government but with specific characteristics. The preparation of the two plans, the SPSD 2010 and the new RSTH, was managed partly in the former case and wholly in the latter case by a strong locally based agent, ORTHE, officially controlled by the central administration yet operating with an important degree of "autonomy". This "autonomy' was itself an outgrowth of centralization which is sustained by the fragmentation of municipal power within the limits of metropolitan Thessaloniki. The third plan, the DSM 2006-15, was prepared as an internal process by the central municipality of Thessaloniki which did not possess metropolitan authority and certainly did not result in any policies of metropolitan consequence being implemented. Within such processes it is characteristic that instead of debating on the consequences of local fragmentation and promoting the possibility of local political engagement though a metropolitan governance structure, the stakeholders who took part in the process gave consent to the most centrally based forms of decisions, such as the extension of the statutory metropolitan plan boundaries, seeking to gain access in the centrally oriented political agenda at a period of large expectations from the property development sector. Within this context the debate focused on the implementation of specific so-called large infrastructure projects which were either cancelled (ex. undersea tunnel) or have faced with serious delays even by the standards of projects of such scale (ex. Thessaloniki metro) So we have (a) plans that are enunciated but take extremely long time to be approved if at all (b) their own strategic priorities are not acted upon (c) and even those public works projects that have direct benefit to a critical mass of local stakeholders fail, by and large, to be executed. This is evidence first of the lack of both local power and autonomy and of the resulting ability and necessity to articulate and 'own' the strategic parameter. Second, it is evidence of centralisation's limited aim of managing rent-seeking relationships while only paying lip service to itself-proclaimed strategic intent.

The *specificities of the financing arrangements* run though all the planning process in various ways. Even in SPSD, which officially focused on a consensus building around the adoption of selective strategic priorities, the stakeholders involved considered it as a process concerning central government transfers for specific publicly funded projects. The RSTH handles more typical development or regeneration schemes as public works without providing any guidelines or necessary preconditions for the spatial development of large private investments. The DSM, although officially stated as a strategic plan, it is exclusively focused on forming a framework for EU funded projects, a tool for a local government which functions as a policy implementer of policies that are decided at the central level. Spatial planning, and strategic planning in general, does not concern itself, in substantive and tangible terms, with the issue of expanding the tax base of the local state, as this state is fragmented and financed via central government and EU transfers, and is thus devoid of a developmental

perspective and of the governance and overall performance criteria that can render such a perspective credible and actionable.

In the spatial planning procedures the most prominent *local institutional interlocutors and stakeholders* involved were the local municipalities and professional associations, chambers of commerce, employers and employees organizations governed by politicians or leaders with strong connections with national party politics who seek to play a role in the central politics. This feature in fact led to the subordination of local stakeholders to central politics, as much as to governmental centralization. Such stakeholders see this type of decisions as ways to update their ability to extract various benefits from the territorial extension of the centre's planning power. Furthermore instead of forming common visions for the city's growth and development, through this process of consultation and codetermination, what happens is to leave untouched critical public assets and goods which remain hostage to rent-seeking coalitions thus undermining growth and equity goals at the local and eventually at the national level. As we mentioned above none of the three planning exercises subjected to critical scrutiny the governance and resulting performance of these public assets and goods notwithstanding the fact that all three plans identified them, correctly, as critical to Thessaloniki's achieving its potential as a metropolis of regional consequence. Last but not least, a special type of "nimbyism" has become influential in resisting public/private partnerships, again hiding narrow as much as private interests under the guise of the public weal, to deny to the general public both growth, and its distributional potential, namely though the financing by this growth of desirable public amenities. This type of "nimbyism" blocked most of the investment proposals which had a regeneration dimension in different derelict sites of the city, regeneration that never took place eventually.

Finally, all three spatial plans were products of a period during which *the economy was based on consumption over the production of goods and services*, with the residential property development sector being the main driver of the urban economy which does not necessitate the marshalling and combination of location-specific assets, over time, by the local state. This boom was made possible by the easy financing conditions that Greece's EMU entry brought about, conditions which boosted state-led consumption across Greece, and in Thessaloniki, and allowed for mortgage and consumer credit to balloon. Thus all three plans do not incorporate clear proposals regarding the spatial dimension of strategic planning per se and as such do not place any restrictions on residential development. It should be noted here that, behind the notion of sustainability the RSTH conceals a policy of extensive releases of new land for development. This real estate boom (that tends to undermine planning in general) was aided and abetted by administrative and thus political fragmentation at the local level of government. Fragmentation also, in the case of Thessaloniki, entrenched the inability to offset the structural decline of the city's and the Region of Central Macedonia's economy, with the exception of the residential development sector, through the pursuit of structural, long term opportunities through precisely the utilization of multi-sectoral and multi-spatial coordination. The politico-administrative mechanisms which would undertake and execute such developmental commitments on behalf of a single metropolitan, political community simply did not exist. .

## 4. Conclusions

The above discussion is an attempt to highlight those aspects in the literature regarding strategic spatial planning that build on the interactions of the process with the local state as an interpretative path to understand its successes and failures in the specific institutional context of Thessaloniki, Greece's second largest city.

The strategic spatial plans under consideration reflect a reluctance, notwithstanding the strategic priorities that they set, both to diagnose the problems present obstacles to the pursuit of these priorities and to shape the policies within a lasting spatial planning process which aims to fulfill these priorities. In all the three plans under examination very little thought and effort was devoted to actual outcomes and to answering the question of how the city's assets can better utilized to the public benefit. As such, these planning exercises represent an effort to reproduce the main features of the local state and the way it interacts and is circumscribed by the central state. These strategic planning exercises legitimized statis by being strictly pro forma in the way they set about outlining the creation of an internationally competitive metropolitan production complex. Spatial planning, in turn, facilitated residential construction, through its ex post legalization, such construction being key to the consumption led model of the national economy funded indirectly by state expenditure and the financing that the national economy could attract from international money and capital markets. It may sound provocative but in the political economy of a bankrupt local as much as national state, when a system fails completely it seems that transformation or change is left not to extra-local but to extra-national agents, in our case Greece's Troika of lenders which have mandated to the Greek government the privatization of key local assets, such as the port, the water authority and the international trade fair in Thessaloniki.

Perhaps the solutions should be searched within the local level and to models of decision such as coproduction (Albrechts 2013), which may be proven useful for a local polity where vested interests have long claimed, with great effect, to represent the common interest, and as such it may allow, in times of crisis, a gifted local political leadership to share a vision with the general public and invite the general public to participate in the materialization of this vision, rendering redundant the claims of vested interests groups while also justifying the promise that co-productions defenders have claimed for it.

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# URBAN PLANNING LOST IN TRANSLATION: COLONIAL URBAN PLANNING SYSTEMS AND TODAY'S REALITY

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***Abstract***
*In Sub-Saharan Africa urbanization is progressing at a rate unprecedented in human history. In most countries, the state is not in a position to apply a responsive legal framework and to mobilize adequate resources to guide urbanization. A major obstacle are the outdated legal framework, its institutional set-up and the inappropriate planning concepts inherited from colonial governments which often contradict post-colonial policies and are unsuitable to respond to rapid urban growth.*
*The paper will present results of a joint research analysing empirically factors on space standards and land use in prevalent types of formally planned and informal settlements in Dar es Salaam as well as the stakeholders involved in planning decision. To understand the current urbanisation there is the need to understand its history: The paper will analyse the historical development of urban planning, its legislation and the physical outcomes as settlement pattern on the ground.*
*In Dar es Salaam, Tanzania, now informal settlements cover more than 70% of the city areas because the statutory system cannot provide sufficient building land and settlers have to find plots on the informal land market. It shows the need for a new approach to statutory planning in order to guide urban development effectively, to create more functional settlements, to assist the urban poor to access affordable plots with basic services. Or with other words, there is a need to rethink urban planning for a weak institutional environment and develop an idea and a model for urbanization Africa under poverty.*

## 1. Introduction

Dar es Salaam in Tanzania is among the fastest growing cities in Africa with 70% informal settlements. They have emerged because the statutory system cannot provide sufficient buildable land due to inappropriate inherited planning standards from colonial times and inefficient land allocation procedures. The author poses the hypothesis that a residential plot provides income and employment generation which can be supported or hindered by planning regulations. The study examines the land use changes taking place in both planned and informal urban settlements in Dar es Salaam. Its aim is to learn to what extent the formal planning regulations are applied and efficient; which current development processes are on-going; how these processes impact on the livelihood strategies of the residents; and which land use conflicts typically take place due to the lack of development control.

## 2. The planning system

In Tanzania, as in many other former British colonies, the British Town and Country Planning Act of 1947 was adopted in 1956 as Town and Country Planning Act. It is still the main legislation for urban planning in Tanzania and deals with the use of land and buildings, the intensity of use of land, the size, and form and construction materials of buildings. For public land uses it manages e.g. roads reserves and the protection of natural resources. The land use plans assign separate land uses (i.e. residential, commercial, educational, etc.) for an ordered physical development, as perceived by the statutory planning. The land use categories are a mean of territorialisation of urban land to create distinguish land use pattern by the separation of activities following a principle of order.

The planning legislation as well as its land use categories did not follow a process of translation and appropriation into local reality but rather reflect still an imported planning ideal of a small green city

with limited growth in Tanzania since colonial time without much dispute. Similarly, the three still existing different plot size standards (named today low, medium and high density areas) for residential areas thus resonate the former colonial principle of racial segregation by zones (zone 1 for Europeans, zones 2 for Asians and zone 3 for Africans) and even use still the same parameters (Scholz et. al 2015). The former racial segregation continues today as territorialisation principle along income groups in the three zones.

The planning system is organised on different levels and scales with regional and district plans and on urban level with General Planning Schemes and detailed layout and regularisation plans (for upgrading of informal settlements) on the neighbourhood level. Therefore, it can be assumed that the Town and Country Planning Act in Tanzania provides a statutory institutional framework to fully control and manage urban development and thus the production of space similar to European countries where it actually is coming from.

Local government units (district council, town authorities and Mtaa (Sub-ward) governments) have a full mandate for land use planning in their areas following procedures legitimised by the political power of the central Government over space. The central Government finally controls and approves local planning schemes (Scholz et. al. 2015). This final step guaranties the territorialisation of urban land by the Central Government.

A similar process of adaptation of colonial principles can be observed in the planning approaches still following mainly the standardised top down master plan approach aiming at a determined controlled urban development over decades. This approach favours a strong Government. It can be therefore interpreted that both planning legislation and planning approaches are used as a mean to territorialize urban land under control of the Government and follow the principle of an ordered and controlled urban development.

Another factor shaping the urban fabric is the land tenure system. During the socialist period of independent Tanzania, land became public in 1967. Actually, it can be said land became under the control of the Government respectively the ruling party in the then one party system (Kironde 1995). When land is needed for public purposes, including residential areas, it can be acquired by the President. If an agreement to acquire the land from the current land holder fails, then compulsory acquisition should take place. Originally the compensation was made on unexhausted improvements on land only, but since 1995 land has officially a value (Kironde 2006). However, the value of land is often under dispute between land holders´ expectation and actual compensation paid by the state. Land holders expect compensation based on future land value after being planned and developed while the Government pays only a compensation based on the current value as e.g. agricultural land. The expectation of the higher price is fuelled by the option of the land holder to sell the land on the informal land market for residential purposes to individuals. Also often valuation surveyors estimate total different prices for similar neighbouring plots which lead to mistrust of the compensation model (Mollel et. al. 2007: 6).

All these three issues, the planning legislation, the planning plot size standards and the land tenure system support the centralised power over land by the Government. However, actually they led to a loss of power of the planning machinery. Four interconnected reasons can be observed. The first is the current high urban growth rate which overstretches the capacity of the planning administration to produce new building land and to provide an ordered urban development according to its own ideals. Second, the inherited urban plot size planning standards require large plot sizes for housing (official minimum plot size is 400-800 m² for high density areas). These standards are today too expensive for the Government to acquire and to service the areas with infrastructure and unaffordable by most social groups, especially the urban poor. (Scholz et. al. 2013). Thirdly, the inherited top down master planning concept which has been the main planning procedure from colonial to post-colonial times has come in contestation in the early 1990s due to its negligible impact on urban development control and the lack of participation. And forth, the mentioned above option of land holders to sell land on the

informal market by by-passing the official procedure to acquire land for planned areas by the Government.

The high urban growth rate at about 5% in combination with the low rate of new statutory planned housing areas leads to a serious shortage of building land. Today, the unmet demand for affordable building land is largely covered by the informal land market offering also smaller plot sizes but no infrastructure services. Informally developed areas do not follow any planning scheme or building regulations. This creates a balance on the land market according to supply and demand but creates disorder in the urban structure at least in the view of the planning administration (Kombe and Kreibich 2007, Kironde 2006, Lupala 2002). In the informal land market, land under customary land tenure (former village farm land at the then periphery of the town but now part of the urban area) is subdivided and sold to dwellers at market prices and not at the lower official compensation rate. This system works well for both sides because it meets the expectation of a higher price for the land holders and provides access to land for residents. Security of tenure is provided by local officials and witnesses during the selling process (Kironde 1995: 81) undermining the power of statutory planning. It can thus be argued that the statutory planning machinery, the official procedure and loop-holes in the land tenure system and land management contribute to the problems of growing informal settlements (Scholz et. al. 2015). This informal urbanization leads to new forms and actors of territorialisation beyond the public domain.

The lack of building land provided by the formal system has also increased the development pressure on existing settlements. This applies to residential but also to commercial land uses. The growing commercial and service sector in the current market-led economy in Tanzania has given rise to land use changes towards commercial activities and redevelopment of residential plots towards multi-storey buildings in residential areas. An unguided development of commercial activities can cause land use conflicts among neighbours as described later in the case studies.

## 3. Dar es Salaam

Dar es Salaam in Tanzania serves as the case study area for these processes. It is among the fastest growing urban agglomerations in Africa, with about 150,000 new inhabitants per year and a total 4.3 million population (National Bureau of Statistics 2012). Dar es Salaam is characterised by low density informal settlements with mainly single storey houses shaping the urban fabric. Between 70 per cent and 80 per cent of the built-up areas of the city are informally developed residential settlements. Fig. 1 displays the different settlement types in the urban fabric. It was prepared by analysing satellite images and maps over the period of the last 20 years. Most of the urban development is informal (red) spreading into the hinterland along trunk roads and around existing villages under transformation (dark red) on former farm land under customary land tenure. Informal urbanisation is therefore the main factor of territorialisation of urban expansion. During the 1980s, some planned residential areas following the neighbourhood unit concept and developed as Site-and-Service-Scheme (among those the first case study of Sinza, orange, see below) were established. Only a few new housing areas under the 20,000 plot development scheme at the mainly unserviced periphery (orange) were established recently but not able to cover the demand. Inner city planned areas as well as informal settlements close to the centre face today a development pressure towards a vertical and horizontal densification as well as land use changes towards commercial activities (see case study one).

The following case study of the planned neighbourhood of Sinza in Dar es Salaam will display the outcomes and contestation of these densification and land use change processes (case study 1) while the second case of the informal settlement of Sandali displays unguided land uses changes (case study 2).

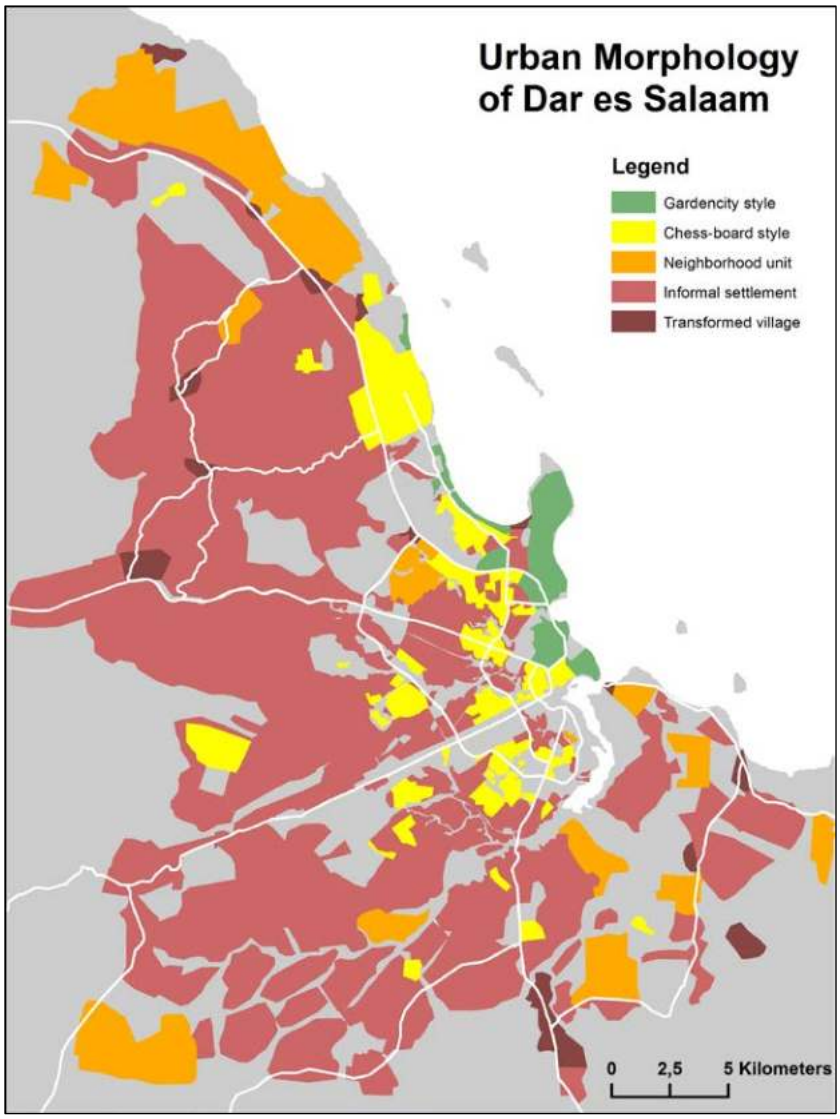


Fig. 1 Urban Morphology of Dar es Salaam. Source: Wolfgang Scholz 2014. Cartography Ines Standfuss.

### 3.1. Sinza

Sinza is a planned area developed in the 1980s with the support of the World Bank as Site-and-Service-Project. It is located about 10 km from the city centre at the then urban fringe. Sinza is subdivided into smaller neighbourhood units all well organised with a central open space in the middle of mainly small residential plots of 288 sqm. In Sinza tenants represent today a significant number of the residents. In the planning scheme, developed during the socialist period with restricted commercial activities, only a few areas were designated for commercial land uses (Fig. 2). The layout plan for Sinza, designed by foreign experts, follows the neighbourhood unit concept with clear ordering elements (standardised plot sizes, strict land uses categories, clear demarcation of private plots and public land for roads and open spaces) to have control over urban space by public authorities. Sinza can be seen as example to create order in the urban fabric.

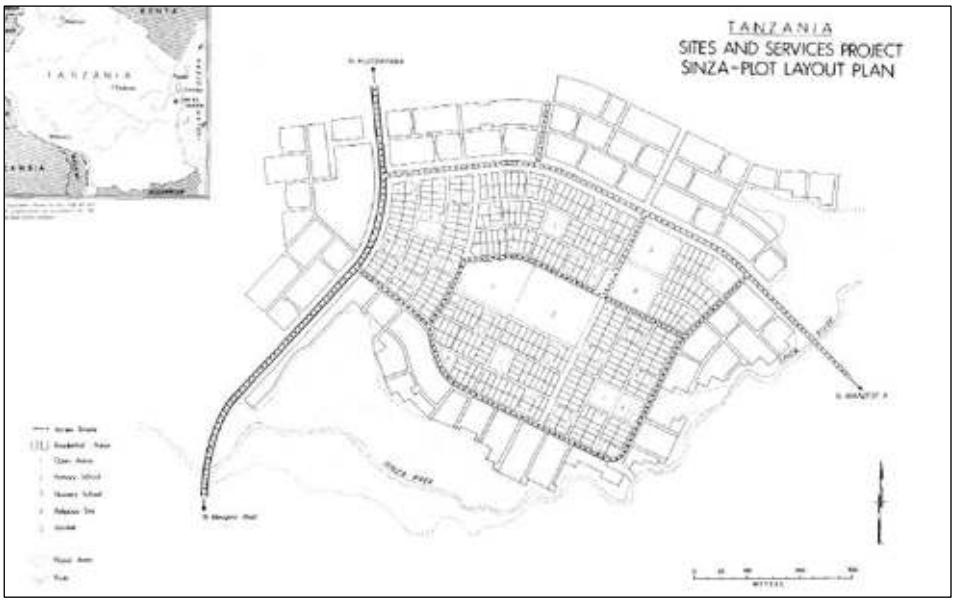


Fig. 2: Layout Plan for one neighbourhood unit in Sinza. Source: Worldbank Report 337a-TA, 1974)

However, the planning scheme came under contestation when new economic activities in the current market led economy came back to the stage and these actors demand their territory of urban space creating disorder. Sinza displays today, however, a high density due to extension of buildings and high percentage of commercial activities due to the central location in the urban fabric and good accessibility of the areas between two trunk roads. This reflects the development pressure on the settlement and the tendency to more commercial uses in the purely residential area. (Authors fieldwork)

The former planned residential area has become now a rather mixed use area. The planned order of a purely residential area is under contestation towards disorder of land use conflicts. About one third of the plots are turned into commercial. A growing number of commercial activities are today mainly located along main roads at the fringe of the neighbourhoods. Locational preferences of the operators of commercial activities along the main roads are based on the need to ensure accessibility and proximity to the major consumer flow channels. They follow their own logic and order of space due to economic forces. This causes severe negative impacts on the functionality of the settlements since plot sizes, parking areas and set backs of the former planned residential area are not designed for such commercial activities and their spatial and functional needs. Fig. 3 displays the recently developed commercial plots (blue) which has been originally designed and used as residential plots.

The following two examples represent cases of the contestation of urban space and how different actors try to achieve control over urban space in a situation where the layout plan and building regulations are either outdated or not enforced.

Sinza is increasingly becoming an area for hotels, bars and beer gardens (see also Mollel 2007: 3) which often disturb the residents. *"Sinza is the beer garden of the entire city"*, an old residents complained. *"Just behind me there is a bar which most of times play music up to midnight, so you can't do anything at night."*

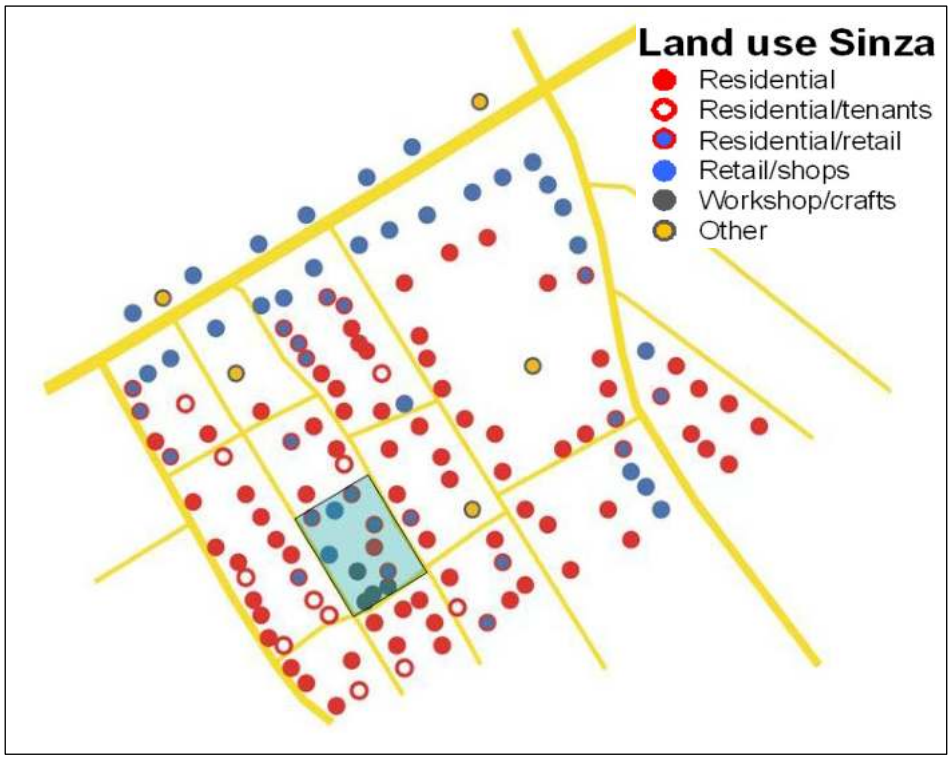


Fig. 3 Land use distribution in one neighbourhood in Sinza. Source: Wolfgang Scholz 2012. Cartography Ines Standfuss.

A bar in Sinza along the main road was playing loud music after midnight. Most of the visitors of the bar and the owner himself are not coming from Sinza. Adjoining settlers won a court case on noise reduction; however, it was only successful for a short time and music after midnight started again. *"We have problems here especially with the noise which come from the bars around here at night. I heard that the local government stopped them to play music without being sound proof, they stopped once but then they have started again"* a resident complained and another one added: *"We have tried to report them, they stopped only for few months but now the problem is the same."* The manager of the bar, however, is rather ignorant about complains from the neighbours: *"There are always problems when you run a business like this."* This example clearly displays land use conflicts caused by the change of land use and contestation over territory.

However, the outcomes of this land use changes towards more commercial activities are not always negative. Operators of businesses and workshops on the open space in the middle of the neighbourhood (see Fig. 4) are aware of the disturbances they cause (such as blocking access during delivery time, noise and dust production) and recognise the need to negotiate arrangements with the neighbours. The operators of workshops who have encroached upon communal open space in Sinza have started informal negotiations and agreements for a co-existence with the surrounding residents. *"No, we have no certificate for land use changing. We got an authority to change the use from the local government but it is only a temporary permit,"* one worker stated and a resident added *"During the day when they come to collect by lorries, they make a lot of noise, but it is for a short moment and usually we got informed, so it is fine with us.*" The operators are also fully aware of the fragile legal status of their presence. Therefore, they try to avoid open confrontation with their neighbours unlike the operator of the bar above. Although, their activities are examples of disorder in the residential settlement, they try to re-establish order by negotiations over territory.

Fig. 4: Workshops on the open space. Source: Wolfgang Scholz

The disturbances for residents by the activities on the open space are lower since they operate during daytime when residents are out at work while the bars and beer garden operate mostly at night and weekends.

### 3.2. Sandali

The informal settlement of Sandali is taking after an upgrading program introducing storm water drainage and basic access roads a similar path of land use distribution and new commercial activities (see Fig. 5). Besides bars there is another example in Sandali displaying the limits of local decisions. Workshops for used oil recycling are operating in a residential backyard. The surrounding residents have complained about the pollution of this dangerous activity but without any reaction from the operators. The sub-ward leader stated that he is not able to stop these activities since the operators are tenants only, and the landlord is living outside the settlement and therefore not accessible for the local leader. Only after termination of the current valid rental contract, would the local leader be able to guide new activities on the plot. This case shows the limitation of locally made decisions or local regulatory systems which are often based on a lack of knowledge and awareness, as well as being difficult to enforce (authors' fieldwork, 2011).

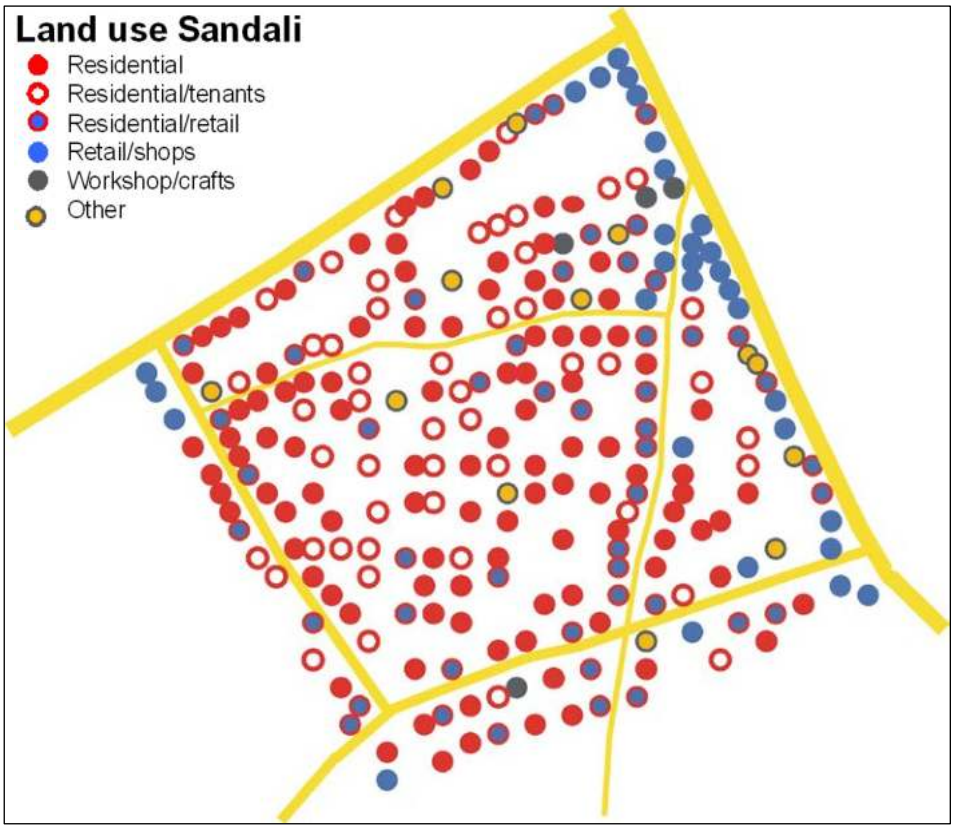


Fig. 5 Land use distribution in one neighbourhood in Sandali. Source: Wolfgang Scholz 2012. Cartography Ines Standfuss.

Fig. 6: Used oil recycling workshop in the informal settlement of Sandali. *Source: Wolfgang Scholz*

## 4. Findings

### 4.1. Conflicting land uses

The fieldwork revealed that disturbances for residents, both in planned and informal settlements, caused by conflicting land uses are mostly related to noise from bars, music halls and religious buildings, less from commercial activities like workshops or repair workshops. The main reason is that the latter operate during daytime when residents are out at work while the first ones also operate at night and weekends. Income generating activities such as shops, pharmacies, tailoring shops are generally more tolerated, while leisure activities, such as bars, and places of worship are less tolerated by residents because of their potential to cause disturbances. Problems in the settlements are mainly related to uncontrolled changes of the land use and the tendency toward mixed uses.

### 4.2. Planning regulations and decision-making

The interviews in the case study settlements, both planned and informal, revealed that there is hardly any sensitivity or adherence to planning regulations and land use categories among the residents. Only plot boundaries of neighbours are respected. Developers are only aware that structures can be demolished if built on the road reserves; however temporary encroachments, like the tables and chairs of bars, are common.

Most respondents state that they lack knowledge about planning regulations and the potential positive or negative impacts of the regulations. This is a contradictory finding since, in Sandali, planning instruments and urban layout plans were used during the formal regularisation process. In that process, intensive surveys, consultation with residents were undertaken and demolition of buildings executed to facilitate the expansion and construction of access roads and storm water drainage.

There is also lack of awareness of planning regulations at the institutions at the grassroots level of the Government (Mtaa, ward level). For instance, in the sub-ward office (Mtaa) of Sinza the copy of the land use and layout plan was missing. It seems that in the understanding of residents as well as local leaders, planning only focuses on the change of land use at the plot level approved individually by the local leaders and not according to the general planning scheme. Thus individual decisions do not correlate to the existing plans (Sinza) or general regulations (Sandali). Permission to build, extend or to change the use of a building are issued by local leaders based on the political influence of the applicant overruling a planner's technical statement and thus in disregard of public interests. Therefore, conflicting land uses easily emerge. Such permissions focus only on the plot itself, and ignore the neighbours' plot and the construction on it (concerning size, height, setbacks and land use).

### 4.3. Differences between planned settlements and informally developed areas

There seems to be little difference between planned and informally developed settlements in terms of adherence to planning and building regulations. Uncontrolled building construction, extension, in-fills and change of land use persist. The land uses are likely to be similar because of processes of gentrification and the pressure of the real estate market on these settlements which are often located in attractive areas of the city. Therefore, the distinction between informal and planned settlements is becoming rather an administrative term only, with less relevance on the ground. However, the planning authorities both at national as well as at local levels still consider informally developed areas as areas where no regulations can be enforced.

Horizontal densification is seen as one of the key future challenges in Sinza, especially because many individuals would like to build multi-storey buildings on the same plot that is today occupied by a single storey house. In Sandali the new, modern buildings which are replacing the old structures made of rather poor building materials are seen as a symbol of a better future. Most new buildings are fenced like in Sinza, which will create a higher "visible" density, may block footpaths since former shared

space between the buildings is becoming private space behind walls and can hinder ventilation. Both planned and informally developed settlements undergo processes of land use changes, densification and potential gentrification following the rules of the real estate market and seek more economic land use.

### 4.3 Land use categories do not support residents' livelihood strategies

The majority of the residents in Dar es Salaam are poor. However, as noted earlier there are no newly planned areas dedicated to low income residents. The rigid land zoning concept and land use categories (residential, commercial, and residential cum commercial etc.) does not reflect the reality of the residents' need for a flexible livelihood including changing employment and income generating activities.

Commercial uses are necessary in settlements to provide income and services for residents. However, there is a need to regulate and designate them in specific suitable areas in advance before they emerge uncontrolled.

There is no clear concept for the distribution and localisation of the emerging commercial and service related activities. They are spread haphazardly throughout settlements without a proper planning concept. This calls for the re-view of the current zoning concept which provides space for retail business in the centre of a neighbourhood regardless of the predominant traffic flow which is along the main roads between neighbourhoods. Thus, planning should consider locating disruptive uses like bars, warehouses, workshops along the main roads at the fringe of the neighbourhood on the one hand, and restricting the centre to purely residential uses. This means the spatial reversal of the neighbourhood design concept used in Tanzania and the development of new land use categories (disruptive/non-disruptive commercial activities) in combination with plot coverage rules and increasing setbacks according to the height of the building (authors' fieldwork).

## 5. Conclusions

Both planned and informally developed settlements undergo numerous transformations such as densifications and increases in commercial activities. This leads to problems in the settlements, mainly related to uncontrolled changes of land use. Some of the uses have a negative impact on neighbours (e.g. bars) while small corner shops or small-scale workshops have little or no significant negative impact.

The examples above also reveal that there is hardly any sensitivity or adherence to planning regulations and land-use categories among the residents, local leaders and operators. Most interlocutors stated that they lack knowledge about planning legislations and the potentially positive or negative impacts of regulations. It seems that residents, like many local leaders, understand planning only as focusing on changes of land use at the plot level and not as dealing with public interests or neighbours' rights. A resident from Sinza stated*: "If regulations are followed they are good, but people don't follow. That's why you find more complaints to the government. Also the government hasn't provided enough education concerning those regulations."* Thus, it is at the individual decision-making level where compliance with existing plans or general regulations fails. Permission to build, extend or change the use of a building is issued by local leaders and is often based on the political influence of the applicant, in many cases in disregard of public interests. So conflicting land uses easily emerge.

Titus Musoga, from the National Land Commission, Nairobi, Kenya summarized in an interview in 2013 the situation of urban planning in African cities: *"The perception of (urban planning) laws is that they only apply to the former colonial core city and not to the recent post-colonial expansions. Land-use regulations are perceived to be only applicable in the colonial city since they are a colonial construct."*

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# Impact of politics on the planning of the New Desert City of Toshka in Egypt

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**Abstract:**

*Through the last few years, Egypt witnessed turbulent political changes in the form of two successive revolutions in 2011 and 2013. This was preceded by several decades of a strong central ruling culture. Although, wide aspirations and hope for a new decentralized governance system have prevailed following the recent revolutions, much of the traditional central system still prevails. Such environment is strongly evident within the city planning disciplines. When it comes to planning new cities in different regions, decisions are still taken in Cairo. Such decisions are not correct all the time, owing to the argument that most Heads of the different planning bodies, do not really have a final say in the planning decisions even if these are based on solid contextual studies. Many of them are concerned from the consequences of defying the upper heads of the physical planning authorities. This paper attempts to analyze the dynamics of the urban planning decision taking when it comes to new city planning, within a highly central and bureaucratic institutional environment. The analysis is done within the case study of the New Desert city of Toshka in the South West of Egypt, intended to be the main service center for a new rural community that had been initiated based on a national project in the 1990s to transfer the Nile water to the desert through an artificial canal. The cycle of this project passed through different periods of stagnation and activity within three successive regimes in Egypt.*

## 1. Introduction

The population distribution since two decades earlier and until now in the Egyptian territories has been characterized by concentration of almost 93% of its size along the Nile Valley, which forms only 7% of the total area of the country, hence resulting in several problems of over crowdedness, shortages in services as well as environmental degradation (Serag, 2008). Accordingly several national projects had been launched in the attempt to create other inhabitable areas with good incentives to attract some of the Egyptian population. Such projects include but are not limited to the development of the North West coast in the 1980s, the development of the New Valley in the Western Desert in the 1960s, and the attempts to develop Sinai. Among such projects is the Toshka project which is a regional rural development project in the South West of Egypt that started in the second half of the 1990s and is still ongoing until 2015. The project aimed to establish new rural communities in the desert after transferring the Nile's water for cultivation activities. This paper attempts to analyze the flow and development of the project over the last two decades to examine the impacts of politics on the planning process especially after two successive revolutions in 2011 and 2013.

## 2. Methodology

This research work is based mainly on literature review to track down what happened in the earlier phases of the project and how it was initiated and perceived in the pre-revolution period and during the Mobarak reign. Since the author of the paper has been a member in the team responsible for the planning of the New city of Toshka since 2009 until early 2015, there is a strong reliance on the observation done during this period and the analysis of the process that took place during both the pre and post revolution period. In that sense a good insider perception and analysis is made. The research included also some interviews with involved planners and officials who would stay anonymous as per their request. The paper follows a straight forward chronological timeline with the main political events that took place through the duration of the project.

## 3. The Planning context In Egypt

Egypt has had a long tradition of comprehensive planning and top down decision making approach; this was coupled with the concept of the central government that prevailed in Egypt throughout most of the 20th century. This tradition drastically changed by the mid-2000s towards strategic planning and participatory planning approaches (Serag, 2008). However, this is argued to have been mostly applicable in the context of re-planning existing cities, where public participation is a key principle of the planning process. Through two main initiatives in the 2000s with the help of the UNHABITAT and the SIDA (Hassan et al, 2011), the shift towards strategic planning including citizen participation has been achieved.

Yet, when it comes to the spatial planning of new cities and regions, the top down approach is evident. This could be understandable as in many cases there are no inhabitants in the targeted areas especially if these areas are located in the desert, although in some cases some inhabitants may exist and might be neglected in the planning process. A recent interesting example on such a top-down approach is illustrated in the new capital for Egypt project, where the citizens were not consulted neither on the concept of having a new capital nor on the location, hence maintaining the long tradition of the top down decision as argued by Bhattacharya (2015). Within such context, the Toshka project was initiated in 1997 and continues until present. During the lifespan of the project it witnessed several phases of slow and rapid progress. This fluctuation depended mainly on the interests of the upper tiers of the government in most cases reaching the levels of the successive presidents and prime ministers, in such a way that the progress becomes rapid, if the upper tiers are interested in the project, and it slows down or even stops, if such tiers shift their interest.

## 4. The initial phases of the Toshka project 1990s – 2000s

The main objective of this project is to create another spine of water in the Western desert parallel to the Nile, starting near the Aswan dam lake and ending in the Frafra Oasis, which is foreseen to promote spatial regional development in this area. This is done through the construction of the South Valley Canal of Toshka, with Emirati and Saudi investments (Merdan, 1999). This canal would transfer the sufficient water to start a new rural development intervention in the desert, which will be the economic base to start

a tangible regional development in such location. This intended development was supposed to provide incentives and pull factors for job seekers from all around the country. A settlements pattern was introduced in that area to include a hierarchy of villages with the New city of Toshka on top of that hierarchy as the main service center in the region.

The construction of the canal finished during the reign of former president Hosny Mubarak, and few rural development interventions were realized and introduced. The target was to cultivate half a million Feddans[1], moreover, Mubarak saw the project as a new social contract with the Egyptian youth as he targeted that 20 percent of the Egyptian population will move to this region, however, corruption and mismanagement led to the crippling and slowing down of the project (Nelson, 2012).

Figure 1: Location of the Toshka Project
Credit: Kevin Uhrmacher/NPR, 2012

However, the project was and is still considered controversial. Some academic and professional opinions, on one hand, questioned the feasibility of this project in starting new communities in such a harsh desert environment from scratch and whether people will find enough incentives to go there or not, they also questioned that the project is based on political decisions, regardless the difficulties of conducting such a large scale construction (Serag, 2008).

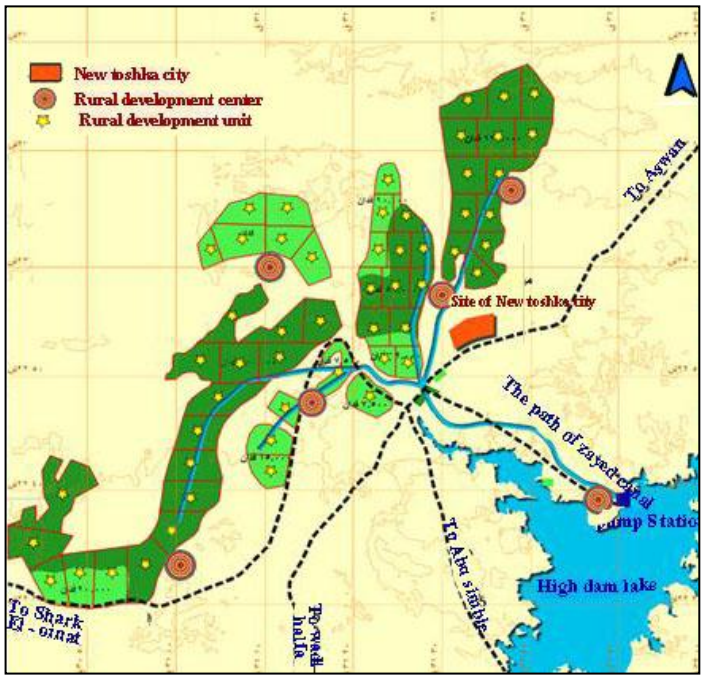


Fig. 2: The settlements pattern of the Toshka project
Source: GOPP, 2001

On the other hand, some opinions were in favor of the project and advocating it as both a mean to expand the populated area of Egypt and to help in its national economic development, substantiating this by the fact that that the experimental farm established by a Saudi prince is already functioning and exporting abroad as well as other thriving individual farms that started over there. Perhaps some logistical problems and constraints exist; however, the thriving of those farms remains an evidence of success (Nelson, 2012). The project had a fast momentum during its first few years starting from circa 1997, when Prime Minister Ganzouri was in

[1] A feddan = 4200 m2, an Egyptian unit for measuring large areas.

office and was the key supporter of the project, the momentum lasted until the PM was replaced in 1999 and the project slowed down afterwards (*ibid).*

The project slowed down; however, it did not fully stop, as the canal in Toshka was constructed as well as the giant water pumping station that would pump the water from Lake Naser to the Canal's level, as well as some farms. As early as 1999 the General Organization for Physical Planning (GOPP), affiliated to the Ministry of Housing, assigned urban planning consultants to prepare the structural plan for the city of Toshka which is said to be the main service center in the region (GOPP, 2002). In 2007, the attention towards the project was revived from government back then and once more was put on top of the agenda. The Ministry of Housing announced for a project tender to make the detailed plans for the city . The tender was announced by a different planning agency affiliated to the Ministry that is the New Urban Communities Agency, the project was to still be cosupervised by the GOPP. The Engineering Consultant Office for Planning and Architecture (ECOPA) was the consultancy firm that got the bid.

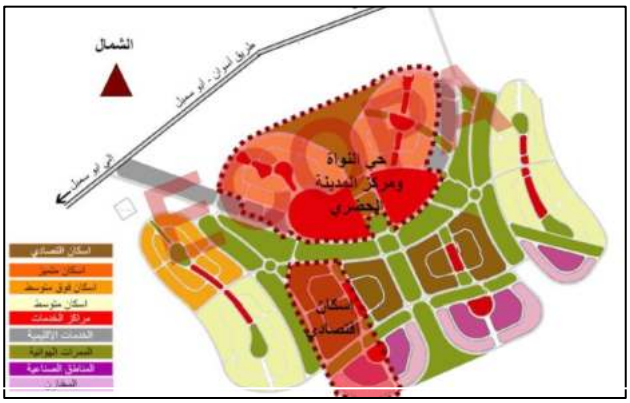


Figure 3: The Master Plan for the New City of Toshka
Source: ECOPA, 2014

Figure 4: Part of the detailed plan of the city
Source: ECOPA, 2014

In the period between the end of 2007 and early 2010, the detailed planning of the city was almost finalized including the infrastructure networks, road networks and housing patterns. The project witnessed the second phase of its rapid momentum ending with presenting the project to the Minister of Housing and the upper tiers of the government. At that time, it was argued that President Mubarak revived his attention and support towards the project. However, because of the bureaucratic procedure and mismanagement the project momentum was crippled.

## 5. Politics and Planning in Egypt Post January 2011

In order to be able to understand and analyze the impact of politics on the planning of the New City of Toshka, in the post January 2011 revolution period and the pre June 2013 revolution period, a general background on the impact of the political situation on the planning process is given.

Following the ousting of President Mubarak in February 2011, Egypt was administrated and governed by the Supreme Council of Armed Forces (SCAF). In that period there were no plans set to introduce new cities, however, there had been some promises made by the government to resolve the housing problem in Egypt by introducing 1 million residential units, as a consequence, the Ministry of Housing, whose Minister was once more replaced by an interim Minister, called for a competition to provide affordable housing prototypes in the form of housing neighbourhoods with the designs of apartment buildings (MOH, 2011). Despite that the competition was concluded by announcing the winners, the initiative was never realized and described by some critics that it had opaque results (Selim, 2011).
It is argued by some critics that the governmental announcement of building the million units and the competition were both launched for political reasons to gain public support for the interim government by demonstrating to the people that it is working on the ground for the people, in other words, the initiatives that were introduced are argued to be providing a **placebo effect** for the people to appease the Egyptian masses.

## 6. Toshka Project and the Inter-Revolutions Years 2011-2013

In the first few months of that period the Toshka project almost came to a complete stop. Perhaps the reason for this was that the Ministers and the government at that time did not want to take any crucial decision as they were considered an interim and temporary government that would leave office once a new president was elected. This period in 2011 after the revolution witnessed a strong situation of political instability with continuous changes in the government that was formed three times at least with a new prime minister each time. The last prime minister to rule during the SCAF was Dr. Ganzoury, who was the Prime Minister when the Toshka project was initiated during his office time in the late 1990s. The PM believing in the project and its importance to achieve economic development by providing job opportunities, once more advocated for the project and brought it back to the highlights (Nelson, 2012). Despite his beliefs in the project to the extent that he mentioned it as a reminder to the people in a public speech, nothing serious was done at this period as it was merely an indecisive period were no decision was taken because of the fear of responsibility during a transitional phase.

## 7. The one year rule of Morsi and the Toshka Project

Dr. Ganzoury continued in office until the new presidential elections were concluded in June 2012 and a new president was elected. Following the elections and after the new president resumed office, a new government headed by a new Prime Minister was formed who appointed a new Minister of housing. The Ministry of Housing during this period with its agencies perhaps were introducing new urban visions, and launching new calls concerning the development of the new Suez Canal corridor, deviated once more away from the Toshka project and other similar projects. During this period between June 2012 and June 2013[2], the tendency of the Ministry of Housing was to announce new initiatives for urban development; however, most initiatives did not go beyond media announcements. Nelson (2012) argues that during the rule of Morsi and because of his affiliation to the Muslim Brotherhood, there was no desire or tendency to revive the Toshka project, so as to avoid any remembrance to the Mubarak rule.

[2] The period between June 2012 and June 2013 witnessed the rise of the Muslim brotherhood group to power with President Morsi as the upper tier of the government.

## 8. Politics and Planning in Egypt post June 2013 revolution until June 2014

During the one year of the Muslim brotherhood reign in power, public anger and internal divisions built up in a very rapid way, as a result of the failed strategies and ideologies at that time. Egypt was suffering from striking economic conditions, as well as other internal social crises, together. A series of consequent events led to the second revolution of June 2013 when the president and his government were toppled (Friedman, 2013), and an interim government with an interim president and prime minister were set to power.

During the this interim period that lasted for one year, the interim government focused mainly into tackling the critical issues of the plunging economy, the deteriorated safety and security conditions, international diplomacy as well as confronting terrorism, while the other aspects took further priorities on the agenda. Due to the fact the Minister of Housing (Mr. I. Mehleb) of this period was a dynamic professional person who led an Egyptian contracting company that is considered among the largest in Africa and the Middle East, he aimed to reactivate and motivate the completion of several halted projects[3].

The Ministry of Housing at that period focused on ***reactivating the already ongoing projects*** mainly those concerned with the strategic planning of the "already existing" Egyptian cities that focused mainly on urban renewal attempts. However, the attention to establishing new cities or embarking on new mega national urban development projects had a low priority. It is to be mentioned that usually in Egypt, the commencement of new large scale projects should get an approval from the upper tiers of the government. And as the government at that period had an interim status, no such approvals could be obtained or given, especially when it was known that there will be presidential elections within a year that will be followed by forming a new government. In February 2014 a new government was formed with the then Minster of Housing as its PM, hence appointing a new Minister of Housing to fill in for his position.

During this period the Toshka project, was still being revised by the technical departments of the New Urban Communities Agency, which applied many red tape in this revision process. In some cases conflicts took place between the different governmental bodies with the main conflict was to find a source of power supply. This conflict took place between the public electricity company, and another Ministry, to the extent that the project continued in a stand still situation. The almost complete halt of the project continued with no desire to take firm actions.

## 9. Urban and Regional Development in post June 2014 onwards

Following the presidential elections of June 2014, president Sisi kept the Prime Minister who in turns kept most of his ministers, although in a later phase he made a partial change in the government, but the current Minister of Housing, kept his position.

[3] https://www.egyptthefuture.com/speaker/excellency-mr-ibrahim-mahlab/ , May, 2015.

The newly appointed president wanted to sustain his popular support, in doing so he wanted to achieve tangible actions on the ground. The government in return attempted to adopt a policy of materializing, different services, infrastructure, economic development and housing projects.

Mainly the Ministry of Planning (economic planning) as well as the Ministry of Housing introduced a spatial development vision to Egypt aiming the year 2030. Among the Vision for Egypt of 2030 is to work on developing the different Egyptian regions, including the marginal and desert regions, in such a way so as to introduce new urban communities with different economic bases (GOPP, 2014), in a way similar to that proposed almost 40 years ago in the New Map of Egypt during the Sadat Era (Attia, 1999). The development projects in this vision included ***Toshka***, Sinai, the Halayeb region close to the borders with Sudan, and the New Valley region in the Western Desert of Egypt. Parallel to this initiative, there was another initiative by the president to redraw the borders of the Egyptian provinces to enhance investment opportunities (Mada Masr, 2014). This is justified by the fact that the current borders of the Egyptian provinces included in some cases vast desert areas that are difficult to manage and develop or in other cases smaller areas with no desert or sea hinterlands.

As such several versions of the new administrative borders were discussed and the initiative was announced in the media. Although this initiative had been announced in the second half of 2014, a final official decision on the division has not been taken yet. It is to be mentioned that one of the versions for the new provincial borders introduced the Toshka region as a new Province (governorate) in the South of Egypt. The introduction of this new entity coincided with the new official will to continue the development in the ***Toshka project***. However, in later versions, the idea of having Toshka as a province of its own was abandoned.

Figure 5: A version of the new proposed borders of the Egyptian governorates, with Toshka as being one of them.
Source: www.madamasr.com, May 2015

**10. Mega Projects as Flag Ship projects**

As mentioned earlier, it is argued that the new president wanted to realize development achievements on the ground, to sustain national support. The adopted development strategy is then characterized by its speed and tangible effects. Accordingly, it could be argued that one of the components of the strategy is large scale (mega) projects that are considered as flag ship projects in the development process to generate jobs and tangible economic revenues. The main projects since August 2014 until March 2015 could be summarized as follows according to their sequence of appearance:

1- ***The New Suez Canal project***, which was inaugurated in August 2014. The idea is to use the existing asset of the Suez Canal and its capacity by adding to its naval passages and digging an extra canal to

increase its capacity in both ways[4]. The project duration initially was estimated to several years, however, the Egyptian administration and presidency asked for the completion of this project in one year by August 2015. The project is coupled with another development dimension that is the "Development of the Suez Canal Corridor", this tackles the urban development dimension, that includes the construction of new urban communities based on new economic, logistic and industrial projects

2- ***The Toshka rural development project,*** which is considered as a continuation of the old project that has been crippling for the last few years. The idea is to go forward in land reclamation and rural development and to proceed with the establishment of villages and their new service centre, the new city of Toshka. In this case the government will gain benefit from an already started project with most of its studies and plans ready for execution, as well as the already existing infrastructure that was build in the last decade (Ayyad, 2015). The continuation of this project was announced in August/September 2014. As part of the urgent phase of the project, the construction of the main district of Toshka city together with the main service facilities was considered a priority, to host the first wave of migrants from the Nile valley who would work in the project. A period of one year was initially given for this phase, however, it is said that it was later shortened to six months.

3- ***The reclamation of 1 million feddan (Feddan =4200m2);*** this project aims to reclaim 1 million feddans of desert land and transform them into agricultural fields. The project was announced also in 2014, promising to reclaim the Million Feddans by December 2014. The project would focus on reclaiming lands in the Western Desert of Egypt as well as Sinai to increase the agricultural production. It is to be mentioned that the area to be reclaimed in the Toshka project is counted among the Million Feddans. However, according to the Media only 50% of the objective has been realized (Alaa, 2015).

4- ***The New Administrative Capital of Egypt (CAPITAL CAIRO);*** in March 2015 and during the Egypt Economic Development Conference, the project for constructing a new Capital of Egypt was revealed. The intention of doing was announced earlier in 2014, however, the exact details of the project were blurred until the announcement date. The project aims to establish a new capital to the East from Cairo and about 60 kms from the cities of Suez and Sokhna (Williams, 2015). The announced aim is to integrate the new city with the development projects of the Suez Canal Corridor, to transfer most of the governmental buildings and facilities there, hence easing the pressure on Cairo[5]. The announced plans and perspectives of the new city, show a modern city with skyscrapers in a Dubai like image. Many argue that such an image gives a new branding to the city, hence attracting investments, with aspirations to several spin off projects that increase the economic competitiveness of the city. The

[4] http://www.suezcanal.gov.eg/sc.aspx?show=69 , May 2015

[5] The majority of the urban planning society learned about the details of the project after it was announced during the conference. To the dismay of many planners, the project was awarded to an International American firm SOM, hence, unfamiliar to the context.

project stirred several discussions about its pros and cons, however it is not the scope of this paper to discuss that in details.

There are of course other projects that the government is pushing for in present time, for example the 1 million residential units' project. And while having these projects as the main flagship projects in the development process, the government is also investing largely in infrastructure projects mainly in road networks and accessibility (Ayyad, 2015).

*As seen from the discussion, the government is pushing for the flagship projects to push forward the economic development in Egypt. This of course is reflected in the spatial interventions of new cities, settlements and reclaimed lands. It is argued that despite the fact that some of these projects are economically sound, there is still the trend of announcing large numbers (i.e. million Feddans, million units, etc.) to make a sound propaganda effect. It is also argued that sometimes the announced time frame of some of the projects might sound unrealistic in terms of making the sufficient studies and applying the necessary works.*

It is evident that the upper tier of the government and the presidency intend to realize swift results on the ground, which is welcomed by many segments of the society, owing to previous long periods of failed attempts. However, sometimes, high government officials who might also include the ministers fail to warn the upper tiers of the real time needed to carry on the projects and the consequences that might result from a hasty decision. In a recent discussion with a member of the presidential advisory council, it was obvious that not all the ministers, only few, would be frank enough with the upper tier of the government and the president. In many cases the advisory council would advise against the scopes of some of the intended projects. Accordingly it is argued that in some cases, some members of the government, i.e. ministers, tend to appease the upper tiers of the government and the president and attempt to realize the intended projects with their large scopes and scales within a proportionate timing or settings.

This section gave a brief overview of the general mechanism of spatial development in Egypt. The following section will focus once more on the last and most recent phase of the Toshka city project, to discuss how such settings were reflected on the decisions taken for the project.

**11. Continuing the Detailed Planning of the Toshka City- September 2014 – January 2015**

As mentioned earlier, the re-initiation and continuation of the Toshka project once again made it to the priority list of the development projects. The project became among the priorities of the president. The Toshka project lies among the responsibilities of at least three ministries, the Ministry of irrigation and water resources, to ensure the sufficient water supply for irrigation and living, the Ministry of agriculture to set policies for land reclamation and the Ministry of housing to provide the new settlements that will host the new migrants to this area. As such the Minister of Housing asked the New Urban Communities Agency to continue with the project, which in their turn asked the consultants (ECOPA) who finished the first phase of the project to finalize the remaining work of the infrastructure networks.

Despite that the remaining parts of the infrastructure works, mainly power supply was not among the responsibility of the consultants, they almost managed to reach a compromise to resolve the pending issues. While this stage has been going on, the consultants were informed by the agency that the Minister would like to set one of the districts ready for the construction process, as this comes in-line with the priority projects. The agency also asked the consultants to make the architectural design for the housing prototypes with its different levels as well as the designs for the main service and governmental buildings in the city centre. At this point the consultants were told that the time frame for this project is set for a year, after which preliminary constructions and buildings should have been realized.

**Planning under pressure**[6]

The detailed plan for Toshka city was already finished in 2009. The consultants at that time prepared the designs for the residential prototypes and introduced a general image of how the city centre should look like. The consultants also defined the different housing levels, and got an approval at that point from the agency. With the new revival of interest in the project in 2015 and because of the Minister's urge to start the construction process and the receiving of the migrants from the Nile valley, he asked for structural modifications in the master plan that critically differs from the one that was initially approved. The Minister is very familiar with the project since he was the chief of the General Organization for Physical Planning (GOPP) which was co-supervising the project.

In Egypt, it is argued that throughout most of the planning projects, the planning consultants are always in the backstage. The relationship with the Minister or any other upper tiers of the government is usually through the top management of the governmental planning agency, which in this case is the New Urban Communities Agency. As such, the consultants never get the chance, in most cases, to have an open discussion with the Minister to explain their point of views or object to any top-down decisions. Accordingly at this incident, the minister is under pressure from the president who set this project among the priority list. The planning agency is in its turn under great pressure from the Minister with its chiefs mainly working to appease their upper tier. Finally the agency would in its turn exert pressure on the consultants to do the modifications and to work in general under pressure to meet the set deadlines by the upper tiers, even if there are other constraints that should be considered when doing and finalizing the modifications for the city plan.

At this point the consultants decided to fulfil the demand of the Minister and the agency, as they are anyhow not represented with any of the discussions with the minister. The consultants were asked afterwards to prepare the designs for the main residential and service buildings. The consultants indeed did that. However, they wanted to examine more the building material in such a very hot arid zone in the South of Egypt in the Western desert as the temperature might reach 50 Celsius hence would need specific treatments as well as climate friendly designs, otherwise the project might turn into a total failure if the conventional concrete blocks were used.

[6] This section is based mainly on the personal involvement of the author with the consultancy firm ECOPA.

At this point, the time frame set for the project was even made shorter, causing a situation of panic among the planning agency and possibly the Minister who wanted to meet the deadline. A proposal was conveyed to the consultants to use a prototype of building that was used in another region in Egypt in South Sinai which is almost 550 Kms North to the given position, hence climatically unsuitable. The consultants at that point argued to the planning agency that negative consequences might result from this, making the buildings of the city uninhabitable. However, as the planning system in such cases leans more to the top-down settings, the consultants were asked to stop working in the designs, and the task was reinstated and given to another consultant who would accept to apply the other prototype. Ironically the original consultants spent almost 4 months in addition to the initial phase of the project working on such prototypes, as they restarted in September 2014 and were asked to stop in January 2015.

Figure 6: The consultants' vision and design for the housing district in Toshka.
Source: ECOPA, 2014

It is argued that the decisions made here were to catch the deadlines to start constructing the buildings of the city, despite the fact that these would be inadequate so as to appease the upper tier of the government and the presidency apart from being scientifically correct or wrong. The project continued to echo more in the media for three more months, after which the frequency of the project news, started to fade away, as if the priority given to the project is also fading away. As such the progress in such a mega project is argued to have been tied to the interests of the upper tiers of the government apart from being important to the regional and economic development of the country. Thus, a strong top-down decision was made in the project against the advice of its consultants.

## 12. Finding and Conclusions

This paper attempted to look at the impact of politics on the planning process in Egypt through analysing the New Toshka project. From the discussion it is evident that the planning process is directly affected by the top-down approach from the government, at least within the scope of new city planning and regional planning. The planning process within the scope of the New City of Toshka gained and lost momentum in accordance with the priorities set by the presidents and their governments. In most cases the performance of the responsible planning agencies fluctuated according to the pressure level and interest from their upper tiers. The momentum of the project was also subject to the will of appeasing a specific audience. This is evident during the 1990s and the 2000s when the line ministries were appeasing the president, then later during the inter-revolution years when they were appeasing the people to gain support and finally in the post 2013 revolution, when they are appeasing the new president who was interested in the project.

Unfortunately, it seems that the Mega projects in Egypt are affiliated with the interests of the presidents and the upper tiers of the government. Even if the project is strategically important and crucial, it proceeds according to the level of interest of the upper tiers. This attitude should be changed aiming to establish a more scientific and strategic planning approach in Egypt.

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# INSTITUTIONS, VERSUS THE REAL WORLD: PLANNING GREEK METROPOLISES IN THE CRISIS TURMOIL

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## Abstract

*The paper suggests that in Greece (taking the example of Thessaloniki and Athens) the conceptualization of planning is related to the cycles of the economy, while at the same time it does not really observe planning regulations and laws. The complex, mazy and very detailed planning system is rigid and at the same time weak to protect itself from violations. The end result, the planning product, i.e. the cities, is facing a multitude of problems, due to these planning inadequacies and to the course the accumulation regime of the country has taken over the last years.*

*Firstly, the paper draws from the example of Thessaloniki, highlighting the inadequacies of planning tools, budget estimations, social concern, and lack of realistic public consultation, with the end result of a city with stagnant infrastructure projects, poor peripheral communities and serious inner city issues.*

*Secondly, it draws from the example of Athens which has lately become a dense and problematic city with uncontrollable, partly unauthorized, sub-urbanization and severe social problems in the Centre.*

*In both cases, the perennial Greek planning weakness became evident, i.e. the controversial co-existence of physical planning and economic-social planning Community Support Framework style. Planning, being not cohesive and having embedded institutional pitfalls, has been proven to be inadequate to face the rapidly accumulating problems.*

*A deeper understanding of this development calls for a complex answer to the problems, a kind of multi-tasking exercise, an integrative plan which would be strong enough to set the rules even for the City Master Plans. However, for this to happen the institutional environment has to be changed; to become effective it has to become simpler, more comprehensive and above all realistic.*

Keywords: Athens, Thessaloniki, Metropolitan Planning

## 1. Introduction

The paper suggests that in Greece (taking the example of Thessaloniki and Athens) the conceptualization of planning is related to the cycles of the economy, while at the same time it does not really observe planning regulations and laws. The complex, mazy and very detailed planning system is rigid and at the same time weak to protect itself from violations. The end result, the planning product, i.e. the cities (though we cannot say that cities are products as they are subject to continuous change, therefore the notion of product should be relativized), is facing a multitude of problems, due to these planning inadequacies and to the course the accumulation regime of the country has taken over the last years[1].

Though I claim that the conclusion/ result of this paper has a diachronic validity and it is characteristic by and large of the theory and praxis of planning in modern Greece, for analytical reasons this paper focusses: a) on the scale of regulatory master plans of the major two Greek cities. These examples are more than enough in order to illuminate the argument; if I would go into the detailed level of smaller planning scales (physical city plans, etc.) the reader would be lost in a maze of legislative measures; b) on the two examples of Athens and Thessaloniki, drawn for the post 1985 period, as this was the year the only two regulatory master plans were passed in the parliament and became a Law; c) on big infrastructure projects of transport infrastructure as an example and not on all other aspects of planning, such as the development (evolution) of the urban fabric; d) on specific areas within the two cities that face problems which are related to the current crisis, namely on the centre of Athens and on the Lachanokipoi area in Thessaloniki.

The problems all Greek cities face are cause by the same reasons but of course have different yet similar manifestations. The problem of the cities lies in the rapid post war urbanisations caused by a complex set of primarily socio-economic but also political (related to the civil war 1945-1949) reasons. The result has been a rampant urbanisation of the major urban centres whereby most of the 52 prefecture capital cities are included in varying degrees. The country's administration, legislative system and formal economy were not in fact adequately prepared to face these waves, and the conclusion was the creation of large illegally built housing areas which planning laws and regulations were employed to legitimise in different waves of legitimisation over the years.

Apparently, this is a first historic picture of how any planning regulations were bypassed (and violated) by crude reality, the result of individual actions of big numbers of common people. Yet, this paper's concern, keeping this as a background knowledge, deals with the planning-wise second part of the post war period (as mentioned post 1985), as 1985 with the introduction of regulatory master plans and the establishment of ORSA and ORTH a new planning period was supposed to be inaugurated[2].

Firstly, the paper draws from the example of Thessaloniki, highlighting the inadequacies of planning tools, budget estimations, social concern, and lack of realistic public consultation, with the end result of a city with stagnant infrastructure projects, poor peripheral communities and serious inner city issues.

Secondly, it draws from the example of Athens which has lately become a dense and problematic city with uncontrollable, partly unauthorized, sub-urbanization and severe social problems in the Centre.

[1] For the (un-necessary) complexity problematic nature of the planning processes in Greece, see Economou, D., Coccossis, H., Deffner, A. (2005) and Lalenis, K. (2004).
[2] Law 1515/1985 for Athens and Law 1561/1985 for Thessaloniki

## 2. Thessaloniki

The diachronic attempt to plan the metropolitan area of Thessaloniki has only led to partial success and comprised fragmented projects, and lack of an updated regulatory plan that has not managed to appear to the parliament to be voted.

In terms of **metropolitan planning**, Thessaloniki being the major city of central Macedonia has a multidimensional impact on its national and international wider environment and develops a dialectical relationship with it. This applies to regions of neighbouring countries, for instance regarding the transport of goods from and to Thessaloniki's port, or Thessaloniki being a major shopping centre. Especially after the transition of the ex-socialist countries to the market economy (early 1990s), the aspiration of the Thessaloniki elite was for the city to become the capital of the Balkans.

These, in combination with the growing economy of the period and the CSF funds coupled with the accentuation of the cities' growing problems, were calling for a new wave of metropolitan planning. However, planning remained *in scripto* and actual planning was only done in the a-spatial context of the CSF programmes to utilize the funds coming from the EEC (and then EU). In this sense, numerous plans were elaborated and few were actually implemented (due to insufficient funds, unsatisfying appraisal, or lack of political determination). In this context the 1985 regulatory plan was not updated until the period of 2009-2012 when two new versions were consequently elaborated, but were removed and did not pass through the parliament in 2014 when the corresponding plan for Athens did.

In-between, a series of **transport infrastructure projects**[3] were planned to be materialised, the most important of which were the metro of the city, the subsea tunnel, the outer peripheral ring (motorway). Out of these, the latter two were foreseen in article 14 § [3.1.7.] of the 1985 master plan and only the western part of the outer peripheral ring was materialised until May 2015.

The metro was stalled due to unsatisfactory appraisal in terms of cost that resulted into facing important budget problems. Minor changes of alignment, delays in expropriations, change of methods, archaeological findings, all caused significant time delays and cost increases and became major problems besides the general economic crisis problem that itself caused dramatic delays to the project. As a result, the metro was delivered in 2015 and is not going to be for a few more years. In addition the local community of Thessaloniki is very displeased because the Athens metro company which is responsible for the project does not have an office in Thessaloniki at a high level and all decisions are made in Athens; hence there are further delays and relative unfamiliarity with the local situation.

The subsea tunnel was never constructed due to unsatisfactory appraisal regarding the cost and the archaeological risk. Archaeological findings required the tunnel to be aligned deeper which would have rocketed the cost. In addition, several sides argue that the planning of this tunnel not appropriate because it links two parts of the coastline which should have been at a larger distance, as well as because the completion of the metro and the possibility of the completion of the ring road should actually bring new data as to whether this project is really required. Yet the cancelling of this project has already cost the state several millions of euros as compensation to the contractor who had won the tender.

[3] For a general account of infrastructure projects in Greece, including Thessaloniki, see Skayannis and Kaparos, 2013.

The outer peripheral ring, leading to the area of the airport, was never completed (only the western part was), as the cost would have been huge because the missing eastern part requires several tunnels and bridges. It is not clear yet how this shall proceed.

A specific area which epitomises a series of problems that Greek cities face is **Lachanokipoi**, part of the (old) Western Entrance of Thessaloniki (WET) area. "This is practically a derelict space that could be considered as a brownfield. A number of significant old buildings, along with remnants of its industrial past, characterise the current image of the place that local authorities wish to regenerate. Plans that have so far been proposed have either been maximalist (especially if viewed in the light of the current crisis-ridden situation), or partial in their conception, being geared to one-sided architectural solutions" (Skayannis and Kyratzakos, 2015). "The problems with the area are that: a) in this period of crisis[4], development opportunities that can generate growth are urgently needed, i.e. investments and the promotion of economic activity that is, if possible, extrovert, innovative and with high added value. The WET area might offer the chance to host such activities provided there is a suitable and realistic plan in place; b) land is an asset that can be exploited to trigger development processes. Land in the study area is relatively cheap; and c) the area is dominant along the western entrance. Its current image as a derelict space is degrading the image of the city in an era when image is all-important for interurban competition" (Skayannis and Kyratzakos, 2015).

"The various plans made over a lengthy period of time for the area can be divided into both state plans (originating from the central government) and local plans (originating from the municipality of Thessaloniki and/or the adjacent municipality of Menemeni). In terms of thematic object, we can differentiate between plans dealing with the general planning of the area and plans that specifically deal with the transport aspects" (Skayannis and Kyratzakos, 2015). This is a clear indication that a series of institutions have taken planning action employing a corresponding number of planning tools (legislative instruments). But what was the result up to now?

As indicated in Skayannis and Kyratzakos (2015), in a study scrutinising the most important 15 post 1985 plans made for the area, the planning of the WE and the Lachanokipoi area of Thessaloniki has faced certain major problems:

"a) planning tools were not adequate enough and planning was taking place whilst only partly facing the problems i.e. from a general land use planning perspective in combination with transport plans (in the best case with a certain compliance with each other)[5];

b) though in some cases budgets were roughly calculated, the sources of the funds were by and large expected to be provided by external actors (besides the state, such as the EU), while the idea of fund leverage by private investors was not embodied into the planning processes;

c) questions of social concern, such as poverty, professions, etc., were not addressed under the understanding that 'development' will become a panacea and will solve the problems" (Skayannis and Kyratzakos, 2015).

These interesting planning studies were placed in the historical context of the three planning eras within which they were carried out. "They all have tried to tackle the problems, suggesting series of measures on several domains. Yet none of them has gone into the appropriate detail, hence none has proposed composite measures for the very same area on a small local scale from different perspectives

[4] In Greece the manifestation of the very significant public debt and budgetary crisis started in 2010.

[5] This has generally been the case in Greece. As Skayannis notes, there has been a multitude of proposals to face the problems of the crisis ridden Centre of Athens, yet almost all were partial, either purely 'sociological' or 'economistic' or of solely an urban design nature, seeming not to comprehend the complexity of the problems hence the requirement for composite solutions (Skayannis, 2013).

(something which in official planning terms has now become possible with the SOAP tool). Consequently, the policies (if any) that have been so far rolled out over the area have not managed to revitalise/regenerate it. The 'invisible hand' of the free market, in the absence of a robustly articulated policy, has provided its own solutions, creating a mosaic of conflicting land uses and maintaining pockets of poverty and derelict spaces adjacent to red light services, two high class hotels and cultured recreation facilities" (Skayannis and Kyratzakos, 2015).

According to this analysis, it would be reasonable to assume that though the WE of Thessaloniki was acknowledged to be a problematic area, did not become the focus of many plans, neither a special detailed plan was made for it. The problems were mentioned generally and proposals were made at a level of abstraction that could not provide specific interventions. On the other hand, whichever developments, besides an effort for the restoration of a few buildings, were not made after any plan in particular but rather in an emergent way by local actors.

## Athens

The diachronic attempt to **plan the metropolitan area of Athens** has been (marginally) more successful than the one of Thessaloniki in the sense that at last a new regulatory plan, after the initial 1985 one and the withdrawn 2009 one, was passed in the parliament (Law 4277/August 2014). However, this was only a partial success, as prior to the regulatory plan of 2014 a series of projects were implemented (more successfully than in Thessaloniki) that were not foreseen (at least in the form they were accomplished) by the previous regulatory plan of 1985, and actually pre-emptying the 2014 plan. This is because these projects eventually became parts of the Community Support Frameworks and were accelerated in view of the then upcoming Olympic Games (2004). This 2014 regulatory master plan reflecting the new realities of the crisis managed to include "extensive consultation with various social actors and stakeholders. However it did not include an effective system of public consultation with individual citizens" and faced three sets of contrapositions (Skayannis, 2013), that led to its resubmission before being presented for approval by the parliament (August 2014).

Athens in most plans has been defined and designated to play the role of a major pole in the eastern Mediterranean, supported at the spatial level, amongst other interventions, by the mentioned **transport infrastructure projects**. These projects have been the Athens Metro (basic project and extensions), the Attiki Odos (Athens ring road, motorway level), the Tram, the Regional railway, the Athens International Airport (relocation of the previous one). As opposed to the Thessaloniki case all were materialised, primarily because of the urgency created by the upcoming of Olympic Games and the contractual interdependencies (e.g. between the ring road and the airport). "This materialization was over and above existing planning (in the sense of the master plan of the city). Special laws, such as Law 2730/1999 "Planning, Integrated Development and Materialisation of the Olympic Works and other provisions", were passed in order to accelerate and legitimize pre-decided projects which did not exist in the master plan of the city" (Skayannis, 2013).

Despite these advancements, part of this construction planning, in fact those not foreseen or necessary for the Olympics, was left for later stages (e.g. the extension of the ring road, the connection of the area of the old airport with the new one, the connection of the Athens - Corinth motorway with the north- south motorway, the metro extensions, the decisions on the area of the previous airport), and later on suffered delays.

Besides the Olympics urgency, "this top-down and bottom-up by-passing and overlooking of pre-existing planning legislation was left to survive due to the fact that construction had been one of the major locomotives of the Greek economy, able to speed up or slow down the pace of the economy

(Skayannis, 1990). This was coupled by a planning governance that on the one hand would collect the opinions of formal stakeholders but on the other would disregard the opinions of ordinary citizens and their organizations, in essence a political choice of non-participatory planning of any sort that obviously faced the problem of applicability''.

Yet, while special attention was paid to the aforementioned infrastructure projects (with all the pitfalls and drawbacks), the major challenge in Athens became the deterioration of the conditions of the Centre of the city due to an explosive mix of impoverishment due to the crisis, to influx of excessive illegal immigration, and to the perpetuating and unsolved problems. "

According to Economou, Skayannis, Deffner, et al (2012), the problems of the centre of Athens have their origin in the early '90s or earlier (e.g. lack of comprehensive city planning, high-density building, green space deficit, old building stock, low quality of public spaces, lack of the necessary urban infrastructure, urban sprawl and suburbanisation). Other problems are more recent (e.g. increasing criminality, drug trade and prostitution, illicit trade, closed shops, abandoned buildings, increase in the number of homeless on the streets and impoverishment of a significant number of the population). The latter have been caused either by heavy migrant inflows in the city of Athens or/and by the effects of the current financial crisis on urban population. The immigrants' problem has developed to a major concern, as has got out of proportion by all standards. This influx is a combination of two factors, namely the economic and political migration reasons and the fact that due to European legislation, immigrants are not allowed to be transferred to other European countries and are stuck in Greece. Low, unpaid and mostly black labour deprive the state from potential resources and result into low social welfare possibilities and danger for public health conditions. These problems pose manifold risks, primarily to public health and safety but also to entrepreneurship and property and to the quality of life as well.

As a consequence, over the last years, the inner city of Athens (the historic and commercial centre) has been changing in a rapid and hostile way, suffering from an increasing decline. Rising crime and lawlessness have reached "crisis proportions" in downtown areas, while the concentration of legal and illegal immigrants in some neighbourhoods has led to concern about the creation of ghettos in the heart of the city. At the same time, the economic crisis has led hundreds of stores to close down, to the increase of unemployment, and to the breakdown of social services and the degradation of the quality-of-life standards in many traditional middle-class districts (Economou, Skayannis, Deffner, et al, 2012), as well as allegedly to serious land speculation activity in view of a possible future gentrification process. This situation has triggered the activation of groups of the extreme right, something which has increased the fragility of the social tissue.

Given the above, there is a question whether the problems of the city –in crisis- would be reasonable to be faced with tools from the sphere of physical planning, especially of the urban design scale, or from those of socio-economic development planning.

However, in parallel to this plan, various agencies (Ministry, etc. with the tolerance of the Athens Municipality) were elaborating a major intervention to the city that was very vaguely foreseen in the 1985 master plan, namely the pedestrianisation of the major road axis (Panepistimiou, ave) in the very centre.

The various proposals (a total of more than seven sets of proposals) (cf Skayannis, 2013), diverse in nature and orientation, do not necessarily abide with existing planning, but do respond to different efficacy degrees to the urgent need to face the situation of the dilapidation of the Centre. The plans can be divided into two major groups: those that have architectural – design approach and those that have

a more development socio-economic orientation, being spatially aware (some are purely socio-economic and not directly referring to spatial matters). Yet it seems that planning so far was not able to face the problems in the context of such complexity and a new planning tool, SOAP, was devised that combined the spatial with the socioeconomic aspects. The plan, focussing on the city centre of Athens, was elaborated by our University of Thessaly team and makes a conscious effort not to violate the pre-existing planning at the metropolitan master plan level (at the time the on-going regulatory plan) but to make proposals in the context of this planning (being spatial but not intervening with the physical form and restructuring of the centre). In this sense, this planning tool and the plan that came out was aspiring to bring closer planning to the real world. But in order for this to happen, the plan has to materialize.

The materialisation of the SOAP plan requires resources and the incorporation of its provisions into the plans of the different ministries, while a co-ordination can be with one of the ministries (YPEKA) with a major contribution and involvement of the MA. This is a problem in the Greek legal and administrative system, and obviously endangers any plan of this nature to happen. At the same time, though, dealing the very centre of the city brings forward the need for a metropolitan municipal structure having the appropriate competences (and capacities) to deal with complex problems that directly or indirectly concern the whole of the metropolitan area.

## Discussion - Conclusion

A very interesting issue is the real practice of planning, i.e. the attempts and the reality of implemented planning as opposed to the result of it.

There are two parallel universes: the universe of master-regulatory planning which is conceived and is partly implemented if at all, and the universe of the construction world which is planned and partly implemented.

In both cases we have the coordinates of conceived space (Lefevbre, 1991/1974)[6] which is however not the same. In this sense we have two conflicting versions of conceived space for the same physical space, and two versions of the perceived materialised space which however does not conform to any of the two. The perceived space is a mixture of an ill implemented version of both not actually expressing any of the two. Yet it creates a lived space for the users with its own denotations and connotations.

The winner, yet in a pyrrhic victory, is infrastructure construction. This is possible to happen for a series of reasons: interests behind it are very strong, it comes to satisfy need of the wider population (e.g. modern transport), politicians use it because of its very direct visible and tangible results and nature in order to appeal to an equally wider electorate (electioneering purposes). In this way it is a win-win short term situation for the direct stakeholders involved. In the long run (besides all of us being dead – re: Keynes) a layer situation is formed which becomes a given in the city. This kind of development in a manner of distorted planning is to a certain extent organic, as players have exercised a role to produce an emergent environment that might not be completely non- planned but yet it is partially planned or plans are distorted by multiple interventions.

Firstly, in this whole set-up, institutions are at the same time present and absent, put differently, they face the real world being heavily undermined.

[6] According to Lefebvre (1991), urban environment is constructed by three major factors, conceived, perceived and lived space, (in spatial terms: spatial practice, representations of space, representational spaces) (p.40).

In the case of statutory planning (master plans, regulatory plans, etc.) plans are undermined from inside. This is because they are unrealistic and with inadequate comprehension of reality. They are frequently caught into traps of windmills in the heads of planners (or policy makers) e.g. Thessaloniki being the capital of the Balkans, or of what is feasible and what is not. Frequently this is caused by a partial understanding of reality as plans are made by architects i.e. the socio-economic background of the plan is not enough or is not solid or is not taken fully into consideration because simply sometimes is not pleasant enough or does not fit with the preconceptions or ideological fixes of the planners - designers (or politicians). In this sense planning is made in the spheres of phantasy crystallised in phantasmagorical blueprints but having lost touch with reality.

In this situation, institutions are the ones that due to internal inefficacy are undermining themselves. So the product of the process of planning (the pan) is not standing properly on its feet. The plan then comes to the real world to be implemented. But the plan is weak because it is not realistic.

The second - antagonistic- constituent of planning is infrastructure planning (leaving aside the purely technical part). Locational decisions are here very important as well as the necessity of projects (in the sense of social opportunity costs- i.e. versus other projects of a different nature possibly more required by society, such as the case of the undersea tunnel). But even if these conceptual dimensions were left aside, institutions that plan infrastructure projects (even if ministries or similarly relevant authorities are considered) research in Greece has shown that they lack certain qualities: appraisal of projects is often problematic. The metro of Thessaloniki is a very good example as well as the possible problems from the undersea tunnel. Though I would by no means argue for the case of the iron triangle (time-budget-specifications fix) in the construction of large (if not mega) infrastructure projects, a considerable level of appraisal should secure the fortunate/ successful delivery of the project (of course in contextual terms, and taking into account what really would make it successful, i.e. the fulfilment – or a considerable effort to - of the four sustainability dimensions).

Part of the problem of the clash between plans and the real world is that plans are not discussed with the people they concern. Though in theory they have gone through the scrutiny of public consultation, this is organised and done in a way that the real recipients are unable to express radical (or even incremental) objections not even are they in the position to make proposals. Though before the conclusion of drafts various agents are advised or consulted these are by and large those of the official state, so they are in a sense part of the planning side. And if in planning this is the case (in part and to an extent also responsible for illusionary and partial interpretations of reality in an effort to combine opposing interests), the case is even more valid in the case of infrastructure planning especially as far as the social environmental impacts are assessed i.e. as far as the various sustainability challenges (all four) are tackled.

But the problem is not only that each particular constituent of spatial structuration at the level of spatial representation (conception) is coming into the picture with its particular problems. The problem is exacerbated because of the fact that the two sets of plans are not necessarily compatible (to say the least). Regulatory planning and master planning does not necessarily abide by what is planned by the other side (infrastructure planning and construction).

In this sense, planning as a form of conception and major component of conceived space is starting with a twofold deficiency. Institutions are not really performing in a way to guarantee an implementation of the plans that would be unproblematic. So implementation starts with problems.

That is, the institutional side, before even starting to implement a plan, i.e. to face the real world, has an intrinsic problem. It's like starting a war with defective weapons.

In the sphere of implementation, there are several deficient forcers that counteract the plans (besides the state itself with its bureaucracy and bad organisation). These come from two major sets of actors: a) civil society i.e. the various organised civilian interests and also individual opponents; basically his means for the case of Greek local organisations of inhabitants, professional groups, political organisations, etc.; b) organised economic interests major stakeholders with economic power who for 'some' reason did not intervene in the first place to influence the plans or were not successful in doing so. This frequently takes the form of court cases whereby the judicial power opposes the legislative and executive power of the state itself, thus bringing into the surface another dimension of insufficient preparation [this is not to oppose the distinction between the three powers as organisational base of the state securing the freedoms and counterbalancing contradicting societal forces].

And if this twofold problem is faced, then the even more real world is to be confronted; the world of real problems, barriers, be it technical or related to human resources, or other factors.

But there is something even more important when it comes to implementing regulatory plans: this is time.

Slow-moving procedures (due to a variety of reasons related to administration practices and culture, to other cultural dimensions, and to organisational capacity) often make (whatever) plans redundant. The reasons are a) objective reality: changes in modes of production and regulation, technical advancements, external forces, changes in the economic situation, etc.; b) subjective: this is when the attitudes of people are against 'the plan' (or the processes of planning), i.e. the changing values, expectations, assumptions, understanding of space, finally the changed (over time and because of time) lived space that produces different expectations for the future lived space. This counteracts the process of space production via interventions to the process of planning implementation whether planning regulations or infrastructure construction delivery.

In contrast to this, the new fast track regulations for investments, as a counter economic crisis measure (Law 3894/2010) and the practice of concession agreements for big projects also come often in contradiction to pre-existing planning. This is because the need for investments brings the state (from the side of planning authorities) to a weak situation *vis a vis* a prospective investor. As a result, existing planning regulations are relaxed, by utilising legal bypasses and special legislation.

In the cases analysed above, the perennial Greek planning weakness became evident, i.e. the controversial co-existence of physical planning and design with economic-social planning Community Support Framework style. Planning, being not cohesive and having embedded institutional pitfalls, has been proven to be inadequate to face the rapidly accumulating problems. A deeper understanding of this development calls for a complex answer to the problems, a kind of multi-tasking exercise, an integrative plan which would be strong enough to set the rules even for the City Master Plans. However, for this to happen the institutional environment has to be changed; to become effective it has to become simpler, more comprehensive and above all realistic and more communicative.

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# SPATIAL PLANNING INSTITUTIONS IN URBAN FLOOD MANAGEMENT IN KAMPALA AND KIGALI AND THEIR IMPLICATIONS FOR INTEGRATED SPATIAL MODELLING

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ABSTRACT. *Recent research has looked at questions of flood management in Kampala, Uganda in the context of climate change by combining an urban development model and a dynamic flood model. This work is now being extended to include Kigali, Rwanda. Both Kampala and Kigali face enormous and complex developmental problems: relatively weak economic performance; the urbanization of poverty; relatively poor infrastructure (roads, public transport, water, sanitation, health, education, etc.); complex environmental management issues including regular flash flooding; etc.. Both Kampala and Kigali have recently prepared new urban plans that are now being implemented. The paper examines three main issues: what policy instruments for urban growth management and flood management are in place in the two cities; to what extent do their governance environments allow these instruments to be effectively applied; how such differences could or should influence the design and performance of integrated urban flood modelling approaches. Our analyses from Kampala suggest that ineffective of urban planning and management procedures are a significant factor in increasing storm water run-off rates and discharge as well as in increasing the level of exposure of communities to flooding due to the occupation of flood prone areas. In Kigali, where urban planning and enforcement has recently become stronger, integrated models may still provide useful insights into potential problems through ex-ante evaluation of the impact of urban development projects.*

## 1. Introduction

Recent research has looked at questions of flood management in Kampala, Uganda in the context of climate change by combining an urban development model and a dynamic flood model. The Integrated Flood Management Project Kampala (IFMK) was undertaken by a consortium led by ITC in the city of Kampala (Sliuzas, Flacke, & Jetten, 2013). In this project, a series of land cover modelling exercises based on spatial logistic regression methods (Fura, 2013) and cellular automata (Pérez-Molina et al., 2015a) were completed for the Upper Lubigi sub catchment and for the Kampala metropolitan area (Abebe, 2013). The openLISEM model (De Roo et al., 1996) was calibrated for Upper Lubigi by prof. dr. Victor Jetten (see an analysis of this model in Habonimana, 2014); Mhonda (2013) used this model to assess the impact of non-conventional interventions, such as rainwater harvesting, infiltration trenches, and retention ponds on storm-water discharge and flooding. The land cover scenarios developed in Fura (2013) and Pérez-Molina et al. (2015a) were later used to simulate the consequences on flood impacts of urban development (Sliuzas, Flacke, & Jetten, 2013; Sliuzas, Lwasa, et al., 2013), in combination with other measures (such as improvement of the drainage system). The openLISEM flood model of Upper Lubigi provided the capacity for flood simulation.

While results from the Kampala experience were directly applicable to urban management in this city, they also provided an appropriate platform to formulate more general research questions. Particularly, to what extent can land use planning reduce the impact of flood hazard in urban contexts? The experience of Kampala provided important insights on infrastructure investment as a tool to reduce flood hazard; but since enforcement of land use controls is deficient, broadening the scope of analysis to the city of Kigali –were regulation is more stringently applied– is expected to generate a wealth of

knowledge, especially when comparing both cases and by setting them within the more general context of Sub-Saharan African cities.

**2. Opportunities to advance knowledge through comparative case studies**

The cities of Kampala and Kigali, and the countries of Uganda and Rwanda, present striking similarities. As discussed by Goodfellow (2013), Ugandan and Rwandese national economies are largely agricultural-based but have been reporting very high economic growth rates over recent years (Annual change in GDP for 2008-2013: Rwanda 8.4% p.a. and Uganda 5.74% p.a. (APP, 2014)) poverty levels are similar (according to UNDP in 2010-2011 both have around 71% population suffering multi-dimensional poverty), both have a low Human Development Index (HDI 2013 for Uganda is 0.484 and that of Rwanda is slightly higher at 0.506) (http://hdr.undp.org/en/data) and political regimes have a shared background.

The cities themselves also present similarities. The have similar overall population levels (estimated for 2015 at 1.9 million residents in Kampala and 1.3 million in Kigali). Physically, they are located in a hilly terrain with wetlands occupying the low elevation areas (Kampala appears to have preserved the natural vegetation of these areas better, although encroachment into the inundated area by industry and housing is larger, with Kigali having occupied them with agricultural fields and some industries and housing). Both cities are also growing at a yearly rate of 4% (est. for 2010-2015), although when land patterns are analysed, the level of dispersion in urban development is much larger for Kampala than for Kigali (Fig. 1).

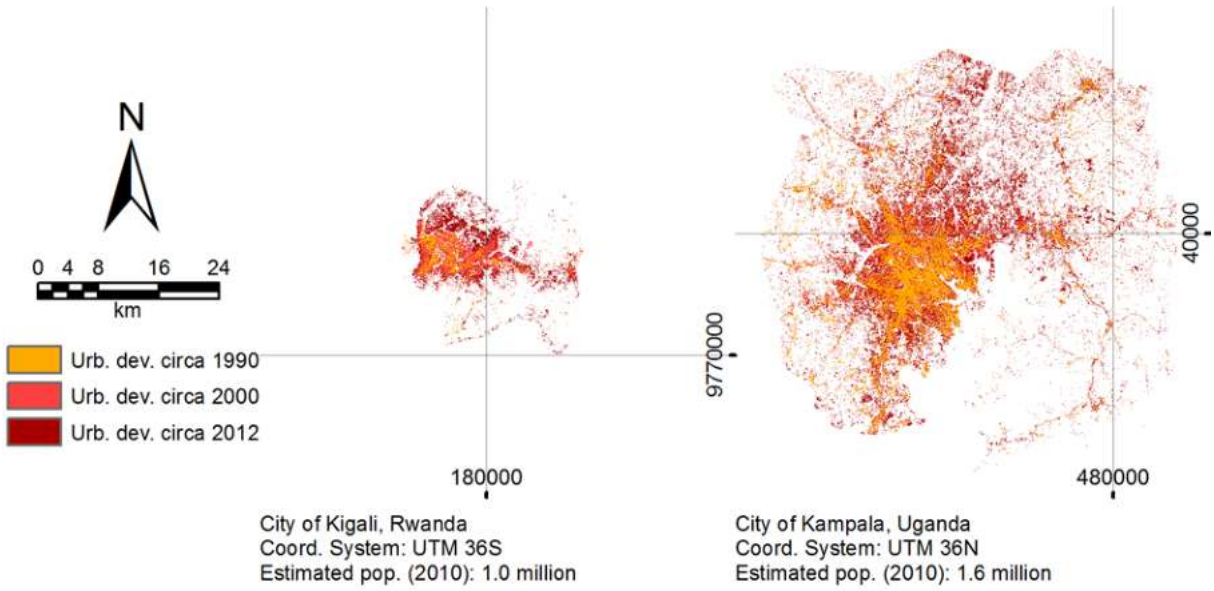


Figure 1. Urban development trends for Kigali and Kampala

Further, the challenges faced by both cities are also comparable. Both cities show important limitations in infrastructure provision (roads and public transportation, water and sanitation, and notably drainage systems). However, they do diverge in one fundamental way: the willingness of enforcing land use controls, which Goodfellow (2013) ascribes to "fundamentally different political bargaining environments". Whereas in Kigali, the central government's commitment to implementation of land use plans created a "virtuous cycle" encouraging both local authorities to enforce plans and urban dwellers to comply with them, Kampala presented the opposite situation: both elite *and* popular groups could effectively sidestep decisions by the City Council by appealing to

higher levels of government (in turn, de-incentivizing local authorities' will to enforce urban regulations). Moreover, in Kampala many large landowners such as religious groups and the Buganda King who owns much of Kampala's wetlands, allow leasehold access to their lands for group members or citizens, and development of such lands are often poorly regulated by government officers (Muinde, 2013).

A comparison of these two very similar cases, with such a contrast in urban management practices, offers an interesting opportunity to assess the differences introduced by land use planning.

*2.1 Land use planning instruments*

Both Kampala and Kigali have recently prepared new urban plans that are now being implemented. The Kampala Physical Development Plan (KPDP) was approved by the City Council in April 2013[1]; the Kigali Master Plan (KMP) was finalized in 2013, based on the conceptual plan existing since 2007[2].

When comparing both documents, one can conclude that both plans have a strong focus on physical development and in particular land use (zoning) and regional transportation. Transportation, further, also adopts the same technological solution – bus rapid transit, complemented by regional road systems and at least mentioning non-motorized modes. But there is a difference in the level of detail of the land use provisions in each plan.

- The KPDP generates a conceptual proposal, including identifying new satellite towns to be reinforced as well as suitability analysis for urban development. Some sketches of possible future (re)development options are provided for some localities such as the city centre, but mostly it is a conceptual plan.
- The KMP goes into greater detail, to the point of identifying and proposing conforming, conditional, and non-conforming land uses (e.g. in the Natural Environmental Management Strategies section). More detailed district level development plans are also used to guide development application and approval processes.

This difference is also apparent in the conceptualization of flooding within the plans. Thus, in Kampala, flooding is addressed in the section corresponding to infrastructure, assuming the solution of drainage systems. Indeed, coordination between urban development and drainage systems is proposed, emphasizing detailed design of drainage systems and adequate funding to accommodate future growth (the IFMK fits perfectly within this scheme by developing one such urban development/drainage capacity analysis for the most critical area, the Upper Lubigi basin corresponding to the Kawempe division, which is expected to have significant development due to its suitability for urban land uses), with detailed land use planning having the role of preventing further encroachment of urban land uses on flood prone areas, a role which until now has been largely unsuccessful.

In contrast, the KMP deals with flooding in the Natural Environmental Management Strategies section (of the city level master plan report). The relationship between flooding and urban development is posed in terms of protecting the natural value of wetlands –which might seem contradictory, since many of the wetland areas are not occupied by natural vegetation, unlike Kampala, although urban encroachment into them is also much more limited than in Kampala. Specific goals of the plan include zero loss of existing wetlands (to urban development) and riparian buffer zones from wetland fringes and from drainage (20 to 50 m); the elements suggested in the proposed storm water system (in the infrastructure section) are vegetated and bioretention swales, bioretention basins and constructed

[1] http://www.observer.ug/component/content/article?id=32676:-kampala-is-making-headway
[2] http://www.kcps.gov.rw/index.php?id=21

wetlands; these have the goal of re-using storm water for beautification and non-potable water source, rather than merely channelization of storm water. (The KMP does consider the 2008 Storm Water Master Plan to be in line with its own vision.) Recently Kigali City has relocated several industrial and housing areas out of wetlands and commenced an ecological restoration project in two large wetlands. Further displacements from wetlands are also envisaged.

*2.1 Enforcement of land use controls in Kigali, Rwanda*

Figure 2 illustrates a case of large scale relocation of an informal settlement originally located in a wetland; the area was transformed into roads and green space. According to Republic of Rwanda, Ministry of Natural Resources (2013), residents of the centrally located Ubumwe slum –a densely populated area with "dilapidated and unhygienic" buildings– were moved to Batsinda, a fringe area at about 5 km distance from Ubumwe. This space is to be partly re-developed for commercial land use but, since part of it is in close proximity to the wetland, a grass buffer will be maintained in its north-east part.

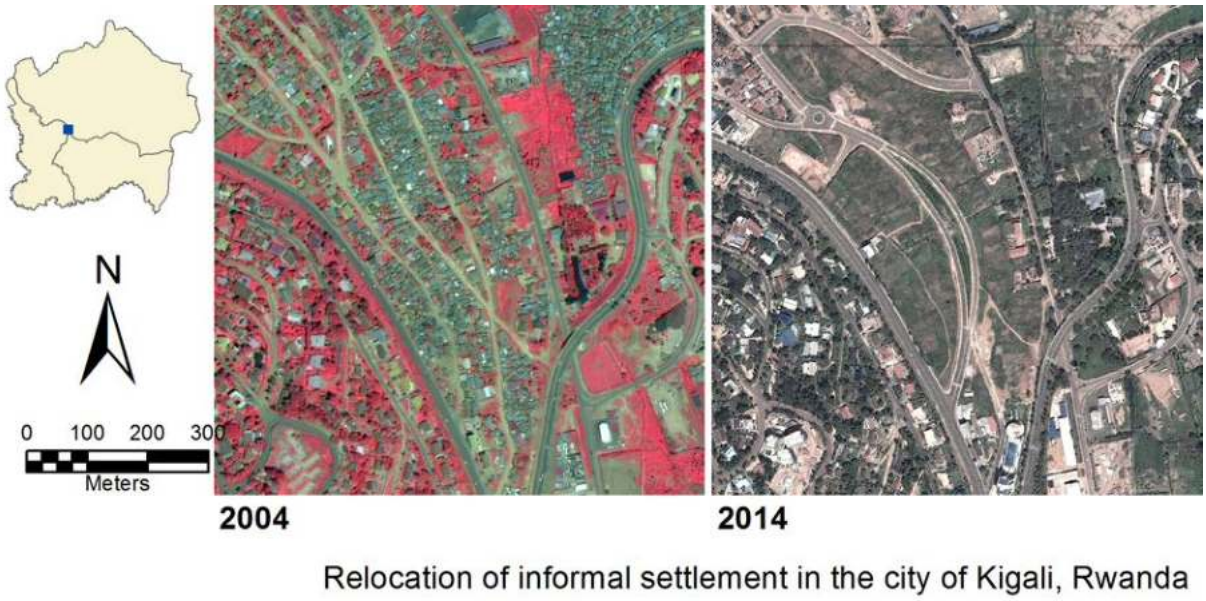


Figure 2. Example of enforcement of land use controls via displacement in a wetland area of Kigali

*2.2 Infrastructure drainage system investment in Kampala, Uganda*

The landscape of Kampala consists of 8 main catchment areas, each draining into a broad and very gently sloping wetland area; some wetlands drain directly into Lake Victoria while others channel water into neighbouring local government areas and eventually into rivers and lakes. Kampala itself does not contain any rivers as such, though each wetland does include both natural and artificial channels .

Kampala's drainage system is, however, poorly developed and managed. There are 8 primary drainage channels, two of which have been recently upgraded according to the 2002 Drainage Master Plan (KDMP): the Nakivubo channel that drains much of the city centre area feeds into Lake Victoria and the Lubigi channel that drains much of the north western parts of Kampala and feeds into Lake Mayanja Kato to the west. To date the upgrading of the Lubigi channel has been limited to its upper reaches only. Upgrading was undertaken through a combination of channel widening and lining and the installation of high capacity culverts at bottlenecks such as under roads. Recent flood events show that such improvements may not always be sufficient. In 2014 a new project to update the 2002

KDMP was started but this too was focussed on the primary drainage systems, albeit with more attention for Sustainable Drainage System (SuDS) options than was apparent in the KDMP. Secondary drains do exist but are of variable quality and durability; some are constructed with lined channels but many are in a more natural state and poorly maintained. Tertiary drains, where they exist are frequently community-made and poorly maintained.

Drainage systems form part of any city's basic infrastructure, however, there are many ways in which they can be designed and managed. In Kampala's case, given the relatively weak technical, financial and human capacity of the city administration, it is especially important to consider the implementability and sustainability of all planning and engineering options. One of the major proposals of the IFMK project is to adopt a SuDS principles in drainage design, especially in case of new developments and the foreseen growth of Greater Kampala's population to as much as 8-10 million by 2040. A SuDS approach can utilize the natural capacities of the landscape to manage surface water runoff to reduce peak discharges and, in so doing, reduce the investments required for traditional drainage systems. The approach can also be combined with community based management practices for solid waste management, protection of natural wetlands etc.. Their ultimate success will also require improved regulation and control of urban development activities. Improved understanding to the combined effects of such measures can be assessed through modelling activities that can provide insights into the relative merits of different mixtures of measures and behaviours. The construction of the Northern Bypass alongside the Lubigi Channel for example has significantly reduced traffic load in the city centre but aggravated pluvial flooding in some areas and necessitated the forced displacement of multiple households. Such effects can be foreseen through ex-ante model based analyses that may lead to modified designs and decision making, or at the very least more timely displacement in view of the changed flood risks in certain locations.

Figure 3. Improvement of primary drainage channel in Bwaise, Upper Lubigi, Kampala 2013 (photo taken from Habonimana, 2014)

**3. Modelling framework and application**

The approach applied during the IFMK is of widespread use in the field, especially in recent years, when computational power has increased: it consists of a land use/land cover component and a flood component. In essence, land cover patterns are researched (and generally base line conditions are used to simulate future land cover conditions). The output of this analysis is then used as input to a rainfall-runoff model, which in turn can be used to simulate the flow of runoff over the landscape –and detect any flooding, should it occur.

From a scale perspective, the final objective is to analyse a key catchment within the city. The strategy is to develop an analysis pilot case study, ideally in a critically important area (i.e. an area undergoing rapid change that increases flood risk in it). This pilot can later be replicated by local authorities in other catchments; it serves to develop specific modelling products, pertinent for the context being explored, while generating knowledge that informs higher level theoretical models of urban and environmental dynamics.

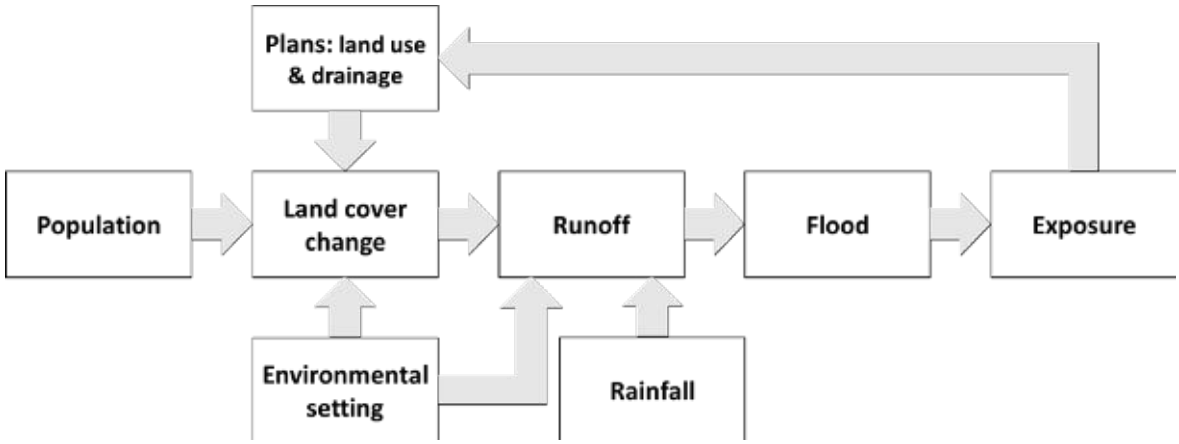

Figure 4. Conceptual framework

Land use/land cover simulation for Kigali and Kampala has included two approaches: spatial logistic regression (SLR) and cellular automata (CA). SLR, in turn, has been performed at city-wide scale and also for the specific catchment being analysed. Smaller scale studies of specific functional aspects (e.g. runoff generation) or of design have also been used to complement the overall narrative. Flood modelling has been performed using the openLISEM flood model, a rainfall-runoff-flood model appropriate for mid-scale analysis. openLISEM has the advantage of receiving as inputs land cover and rainfall data, as well as an infiltration map, and producing a diversity of spatially explicit flood measures.

## 4. Discussion on modelling for policy and findings

*4.1 Land use dynamics modelling*

Sliuzas et al. (2013a) synthesized integrated results of the IFMK project: spatially explicit scenarios of land cover change, projecting land cover conditions to 2020 (assuming trend and high population growth), were used as inputs into the flood model of the Upper Lubigi catchment in Kampala, Uganda. Twelve scenarios were simulated: a baseline scenario with unimproved drainage and baseline year (2010) land cover; a set of scenarios with improved primary drain and clean secondary drains; a set of scenarios in which the secondary channels were grassed waterways (increasing infiltration); a "Zone" scenario considering the removal of built up flooded in the baseline conditions (replaced with grass), and a scenario were 15 thousand house owners increased grassed area in their plots. Output results included flood depth maps, total flooded area, discharge and flood volume, as well as quantification of the number of structures flooded in each scenario.

Future land cover scenarios used in Sliuzas et al. (2013) were developed using the SLR results of Fura (2013). This analysis was carried out on 10m square cells; the predicted land cover category was built up (designated as 1 or 0). Identified drivers of land cover (built up) included: proportion of

surrounding built up, distance to CBD, minor roads, industrial sites, and to major roads (positively correlated with probability of being built up) and slope, distance to market centres, streams and proportion of undeveloped land surrounding the cell (negatively correlated). The predicted probabilities were used as a suitability score to spatially allocate future urban development.

SLR predictions, however, have two problems: firstly, they tend to over-cluster the predicted landscape pattern; this is shown in figure 5, where most cells correspond to the 40 to 60% built-up category. Secondly, it is difficult to use them to generate land patterns deviating from the trend conditions (e.g., for Kampala, it would be difficult to model the effect of stronger land use plan implementation, since enforcement has been historically weak). Therefore, in a second stage, a simple CA model was developed (Pérez-Molina et al., 2015a). This model was based on defining a simple suitability measure, including percentage of built up in neighbouring cells, wetlands, non-vegetation percentage, and distance to CBD. It is a simplified version of the SLR; factors were chosen and weighed in such a way as to replicate trend conditions (with the advantage that any new suitability index, based on the researchers interest, could be defined and used to simulate alternative land patterns).

Unlike the SLR of Fura (2013), the CA model used a 20m-side cell as the basic geographic unit. Each cell (automaton) was characterized by the percentages of built up, vegetation, on-road bare soil, off-road bare soil, tarmac, and water within it. Also associated to each cell was a potential condition, such that built up and on-road bare soil both increased (randomly but with the overall basin conforming to a statistical distribution consistent with historic urban development) and other categories declined. The model selects the most suitable cells and, to simulate future landscape, assigns to these the potential (future) urban condition. Further, this potential condition can be modified to reflect policy constraints (e.g., no land cover change was defined for institutional land uses such as the Makerere University campus).

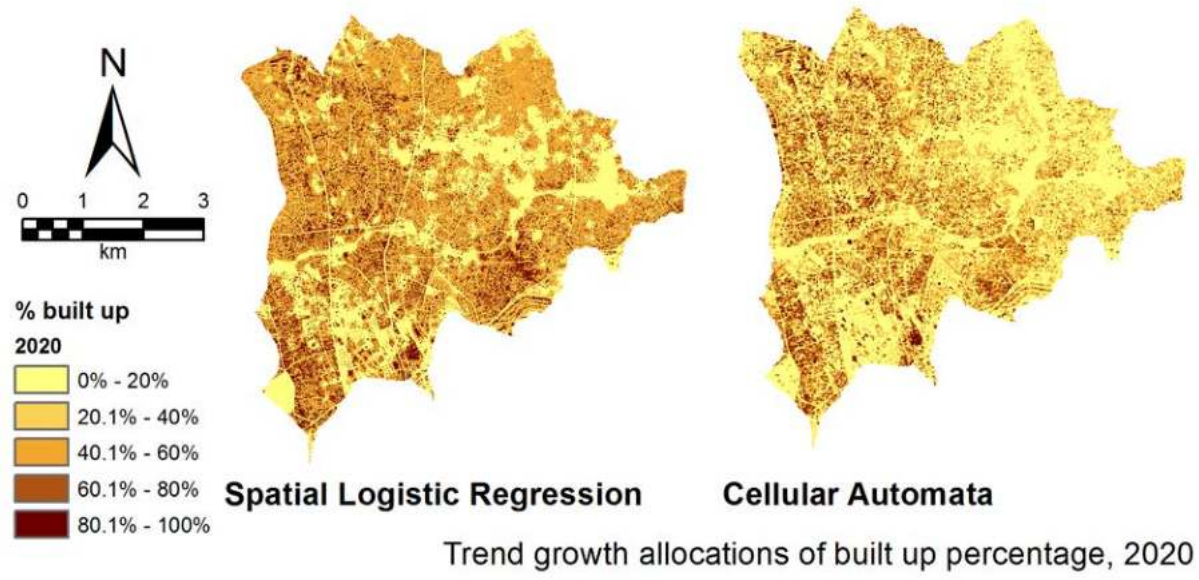


Figure 5. Comparison of simulated scenarios of urban development for Upper Lubigi, Kampala

For Kigali, Nduwayezu (2015) recently completed a SLR modelling exercise using Landsat (mid-resolution) satellite imagery to derive land cover, describe land pattern changes, and identify determinants. As in the work of Fura (2013) and of Abebe (2013) for Kampala, the neighbourhood

factor –percentage of built up surrounding the cell– was identified as the main determinant of land cover change. Nduwayezu (2015) simulated trend conditions and found troubling potential problems, such as possible deforestation and occupation of wetlands in the western part of Kigali.

All of these models have formalized built up land cover as a single category, which is treated as the sole dependent variable; even the CA model implicitly does this, since the percentage of on-road bare soil is determined by the increase in built up land cover and other categories (vegetation, off-road bare soil) decrease proportionally to their base line values. For future extensions, two key modifications are being analysed:

- The disaggregation of built up into a set of land use/land cover categories (specifically, formal high density built up, formal low density built up, industrial, and informal). It is expected that urban growth simulations will be both easier and richer, in the sense of providing more information, than a single entity; further, policy simulation would also be eased, given that many policy targets vary per building typology. However, this decision also means better land use/land cover data models must be generated in data sparse environments.
- An exploration of the relationship between non-built up land cover categories and their dynamics. A recent analysis (Pérez-Molina et al., 2015b) detected that only a few land use scenarios differing in the distribution of built up land cover caused differences in flood impacts. However, if the proportion of off-road bare soil and vegetation were modified, hydrological impacts do substantially change; in particular they are much smaller for larger vegetation percentages. This finding suggests that it may be critical to better understand how vegetation changes within the urban landscape and how such changes affect the processes of water retention, infiltration and runoff; additionally, sustainable urban drainage systems and other forms of local infiltration could be re-assessed, in light of this result, as possible policy measures to reduce flood impacts.

*4.2 Flood modelling*

openLISEM (documented in the webpage http://blogs.itc.nl/lisem/) is an event-based rainfall-runoff-erosion-flood model. It transforms total rainfall falling over a catchment into runoff by subtracting various fractions, depending on landscape characteristics and conforming to several physical processes: soil hydrological characteristics and initial humidity result in an estimate of the infiltration fraction; a vegetation land cover map triggers interception, as does a housing (built up) land cover map; roads and housing introduce total or partial imperviousness of the soil (no infiltration). Once runoff has been determined for an initial time step, rainfall will vary for the second timestep according to a hyetograph and overland flow will be accumulated towards the channel system, from which the landscape may eventually be inundated.

openLISEM, and the PC Raster platform on which it was built, have been used to explore how different elements can be incorporated into the drainage system (or upstream) to reduce runoff, and what general impact they cause on hydrological outcomes.

Habonimana (2014) explored the impact of the spatio-temporal variation of rainfall on flood estimates for Upper Lubigi, Kampala. Both Kigali and Kampala are data sparse environments (to the point that, for Kampala, a rain gauge was installed in order to generate basic data for the IFMK project), with the consequence that simulations are generally performed with point rainfall data assumed as valid for the entire catchment (see Sliuzas et al., 2013). However, Habonimana's (2014) results suggest that spatial variations of intensity may indeed impact hydrological outcomes in unforeseeable ways (some areas over predicting and others under predicting, relative to a constant intensity); at the very least, more attention should be paid to this issue and perhaps uncertainty should be addressed by simulating various rainfall events.

Mhonda (2013) tested three strategies to promote local infiltration (rooftop rainwater harvesting, infiltration trenches, and retention ponds); he found rainwater harvesting to have, by itself, negligible effects. But the combination of all measures was argued to be the best option in reducing runoff, with peak discharge at the outlet being up to 25% less than peak discharge without any measure.

These case studies show the versatility of openLISEM in incorporating pertinent policy measures, in line with alternative approaches to drainage systems (such as sustainable urban drainage systems) that prioritize local infiltration of runoff. The calibrated openLISEM models for Kampala, Uganda (specifically for the Upper Lubigi basin) assumed certain simplified land cover conditions. For example, all built up units were of the same type (although, as can be seen, barrels for water harvesting for some of these could be simulated) and vegetation is also assumed constant. Would variations to these aggregate categories be useful or are they necessary? This question is particularly important for the vegetation fraction, currently also being treated as constant in the land use dynamics models.

*4.3 Findings on the case studies*

In both cities, the development and use of such models, and the capacity to use them in local decision making across various spatial and temporal scales can contribute to a strengthening of the evidence base of planning and management decisions.

Our analyses from Kampala suggest that ineffective urban planning and management procedures are a significant factor in increasing storm water run-off rates and discharge, and perhaps more importantly in increasing the level of exposure of communities to flooding due to the occupation of flood prone areas. A pre-requisite for the enforcement of wetland protection and a development moratorium in flood prone areas is information on their location and extent. Such analyses are, however, not just technical exercises. Implicit in such a spatial definition of flood proneness is a political discussion of acceptable risk, as the flood extent varies according to the return period of the rainfall (i.e. a 1:100 year event will generate a larger flood extent that a 1:10 year event). Moreover, if flood zones are to be created and enforced these should also consider the effects of future developments within the catchment and perhaps also the effects of climate change.

In Kigali, where urban planning and enforcement has recently become stronger, integrated models may still provide useful insights into potential problems through ex-ante evaluation of the impact of urban development projects. The examination of longer term scenarios related to climate change could also be beneficial, though as in Kampala, they are likely to be less critical in the short term.

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# FAILURE TO IMPLEMENT THE INSTITUTIONAL TOOL OF REGENERATION. THE CASE OF VOLOS.

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## ABSTRACT

*In Greece, there are numerous legislative instruments which, despite being significant spatial planning tools, are not practically used at all. Regarding urban planning, the most important and already implemented law is the law 2508/1997 ‹‹Sustainable Residential Development in Urban and Country Settlements and Other Provisions››. Several provisions of this law address major urban planning, socio-economic and environmental problems of the country's cities and smaller settlements. A typical example of this is the regeneration tool, aimed primarily at improving the residents' living conditions and built environment, protecting and showcasing the area's cultural, historical, morphological and aesthetic features. This paper examines whether this tool has been implemented in the case of a medium-sized Greek city, Volos. The analysis showed that since 1997, when the law was adopted, and up until today, no region has been declared a regeneration area. So, this paper also examines the reasons why a useful tool with so many urban planning and developmental benefits was never used. Is it due to the stiffness of the state apparatus, the lack of interest on behalf of the competent authorities or the inadequacy of available resources? Therefore, the main question that arises in this case-study is why are point interventions being recorded since they are not part of a broader and integrated project.*

## 1. Introduction

The term 'urban regeneration' has acquired quite a few meanings both over the years and, to a certain extent, over different countries. According to a general descriptive definition, regenerations are urban planning interventions in parts of the existing urban fabric which include, though not entirely consumed by, their physical (re)structuring. In this context, the specific objectives, thematic range and emphases on regeneration are determined by the urban planning problems (if any) and some general parameters, such as the cities' changing roles or socio-economic data (Oikonomou, 2004).

Defining the term's notion and content is particularly significant, because urban regeneration is very often confused with urban renaissance. The first case concerns interventions in the morphological characteristics of the residential area (mainly in the public, but also in the private sector), while the second one relates to interventions in its structural characteristics. So, even though, for instance, regenerations may lead to an overall improvement of the city's image, urban renaissance aims at changing the city itself, that is to say, not only its morphological or even economic, social and cultural characteristics. Urban renaissance is a wider process that contains urban regenerations, without which it would prove quite difficult to bear fruits. The interventions made in the existing urban area, which focus on physical planning, are obviously not the only components of the urban renaissance spectrum. They practically have a central role in it as they are essentially connected to some of its principal

determinants (Oikonomou, 2004). There is, consequently, a two-way and clearly hierarchical relation between the two. What is more, it should be mentioned that urban renaissance, as a predominantly development process, requires the existence of a coherent framework and a combination of several sectoral policies.

**2. Urban regeneration in the Greek reality**

The basic element identified within the Greek reality, both in theory and in practice, is that the boundaries between urban regeneration and urban renaissance are not very distinct especially in institutional texts where the term of urban renaissance is never used in contrast to that of urban regeneration. The tool of urban regenerations which is established by the provisions of the law 2508/1997 (Article 8) is a classic example of this. Now, while the areas in question should be referred to as urban renaissance areas – based on their characteristics as well as their objectives – the institutional framework refers to them as urban regeneration areas (this specific tool will be extensively discussed later on). This is why there is still a growing confusion regarding the terminology used.

Even if we accept this institutional term on condition, the problem remains, as it has been informally established that any kind of urban intervention, whatever the intensity, is characterized as urban regeneration. As a consequence, the term is used today to describe fragmented or point interventions that have absolutely nothing to do with the philosophy and definitions derived from the institutional text, thus reflecting the lack of cohesion and planning in design (Vlachvei, 2012). Various problems arise, in this way, such as difficulty in implementing the urban planning policy and in evaluating the results of the underlying projects and the predominance of fragmented interventions over integrated planning.

**3. Institutional tool characteristics of the regeneration of law 2508/1997**

By law 2508/1997 ‹‹Sustainable Residential Development in Urban and Country Settlements and Other Provisions›› (GG 124 A'/13.6.1997), except for any other strategic type tools such as Development Plans, Open City Spatial and Residential Plans and Master Plans, the first institutional tool for problem or developing areas which are within the city plan – either by instalments or in entire urban units – has been introduced. (Chapter B' in articles 8-17). The law's objective lies in the environmental and urban planning recuperation of the city area as opposed to previous residential policies confined only to urban extension. (law 2508/1997)

Regenerations based on institutional provisions have yet to be realized, while even the ones whose designing had begun (Old City of Irakleio, N. Liosia, Zygos area – municipality of Filippon Kavalas) were never completed, due to the lack of issuing regulatory acts as provided by law. (Scientific Committee Report, 2006)

According to law 2508/97 regeneration is defined as: "…the set of guidelines, measures, interventions and procedures of an urban, social, economic, residential and specific architectural nature, which result from a relevant study and aim mainly towards improving the citizens' living conditions and built environment, protecting and showcasing the area's cultural, historical, morphological and aesthetic features". Regeneration areas are defined as:"…those areas of approved city plans or demarcated settlements where problems of degradation or deterioration of the residential environment are noted. These problems cannot be confronted only through the usual urban planning procedures of town plan revision and building terms and restrictions. A regeneration area may include one or more urban units or parts of urban units." "In order for an area to be classified as a regeneration area, there should be at least some of the problem categories below: High building densities or great lack of communal spaces

and spaces for recreational facilities. Conflicts on land uses or needs of radically restructuring land uses, depending on the area's potential and prospects. Lack of protection and promotion of the area's historical, archaeological and cultural features and activities. Increasing aesthetic degradation and generally that of the area's built environment quality and natural assets. Pressing housing stock problems."

The regeneration process consists of three stages: the preliminary proposal which includes the preliminary proposal and the financial information, the programme where the timetable, guidelines, measures and any processes needed for the project's completion including its budget are systematized and the regeneration design which includes the urban study and other relevant specific studies.

The Ministry is responsible for the approval of the regenerations which have to be part of an overall design while having emerged from the area's certified DP, OCSRP, MP guidelines. Furthermore, in case of any public interest reasons not having been considered during the designing phase, their approval is rendered impossible. (Scientific Committee Report, 2006)

Regeneration is perceived as a business plan, part of the current DP/ OCSRP /MP programming according to which the regeneration area is determined. The preliminary proposal constitutes the planning document that sets the goals, guidelines and implementation measures and the regeneration design is essentially the business plan. (Arvanitaki, 2005). Respectively, the regeneration study comprises the physical planning of a project within a given space, as reflected upon the planning and the business level.

Competent regeneration bodies, according to the law, are par excellence public institutions and namely the public administration at a NUTS 2 or even a LAU 1 level. Respectively, the responsibility for opening a procedure lies with the private sector either at ministry level or at the level of local authorities.

Regeneration is a fairly new term in Greece in contrast to the aforementioned foreign bibliography, though it shares common features with the term of urban regeneration due to its developmental character, which is based on the institutional framework (law 2508/97).

**4. Reasons for not implementing the institutional tool and its necessity**

Several critical points of the law 2508/97 on regenerations are expressed below:

- Legislative complexity as to the procedures to be followed.
- Stiffness as to the competent bodies. Public-private partnership is not given the opportunity to grow.
- The public sector, which has a major reserve problem especially during the current Greek economic crisis, is the only funding source.
- There is no legal differentiation as regards to the process of regeneration depending on its intensity degree (mild or highly invasive form of regeneration), and what is more, there is no regeneration possibility for the white land area included in the institutional framework. (Arvanitaki, 2005)
- Failure to inform the public so that they can participate in the process of regeneration in order to avoid negative reactions and for the project to be embraced by the local community. (Tsoukala, 2005)
- Lack of institutional measures about building renovations and reconstructions within the regeneration areas, in case the owners are indifferent to their restoration. (Tsoukala, 2005)

These problems were recorded in examples of cities where regeneration studies based on the law were approved but never actually completed (the example of Palaio Irakleio).
Undeniably, there is a need for a more flexible legislation on the regeneration issue, among others, which would offer the possibility for a public-private partnership, not only to avoid conflicts of interest, but also to seek funding, as the public sector does not possess the required capital especially during the economic crisis. Simultaneously, the participation and involvement of the local residents is an integral part of the project's success because quality urban planning for the society's benefit is a top priority. The stiffness of the institutional frameworks in the Greek reality complicates, of course, the projects' completion, while, at the same time, the DPs, ΣΧΟΟΑΠ, or MPs are revised after a quite long period of time and their updating according to economic, social and urban planning needs is seriously delayed.
In order for the property ownership to be defined, the Land Register completion is a necessary condition for exploiting the existing economic incentives offered by the law and for achieving efficient planning.

Nevertheless, the fragmentation which characterizes today's "regenerations" (better: point interventions) has eliminated the area's coherence and consistency both in physical planning and in the realization of its vision and design. This will result in urban planning as well as environmental benefits and will contribute to the area's economic growth through attracting suitable investments.

## 5. Case – Study of Volos

In the previous section of this publication, reference was made to the institution of regeneration and to what is happening in the Greek reality. In particular, emphasis is placed on the institutional tool of regenerations and on the fact that it remains inactive since the year the law was established, even though it could have made a major contribution to the way Greek cities are structured. Apart from the theoretical approach to the matter, exploring the tool's implementation is equally essential so that its practical importance can be understood as well. For this reason, a medium – sized city, Volos, is selected, where point interventions and the absence of integrated planning predominate, just as it happens in the rest of the country.

### 5.1 Analysis of the city

Volos is situated at the central part of the country at a close distance from both the metropolitan regions of Athens and Thessaloniki. It is the sixth biggest Greek city with a population of 141.675 citizens and a size of 385.614 sq km. The area specialises in the tertiary sector, while the primary and secondary sectors follow at lower rates.The Municipality, according to the Kallikratis criteria, includes 9 urban planning units quite different from each other as regards to their population, economic, social and urban planning features. As to the municipal units relating to the present proposal, it should be noted that there are many land uses, with residency, trade and recreation among them. The building densities within these uses are high, which is based on the absence of communal spaces, mainly green spaces and city squares, within the urban fabric. Moreover, the interventions made within the urban space are point interventions without resulting from an integrated plan with questionable results. It is estimated that the determination of an area as a regeneration one would effectively address its various urban planning and economic problems.

A broad band that includes a section of the Palaion area (Municipality of Volos) and a section of the Municipality of Nea Ionia is defined as the regeneration area. This band constitutes an integrated section that covers some of the considerably large area of the two Municipalities (chart 1).

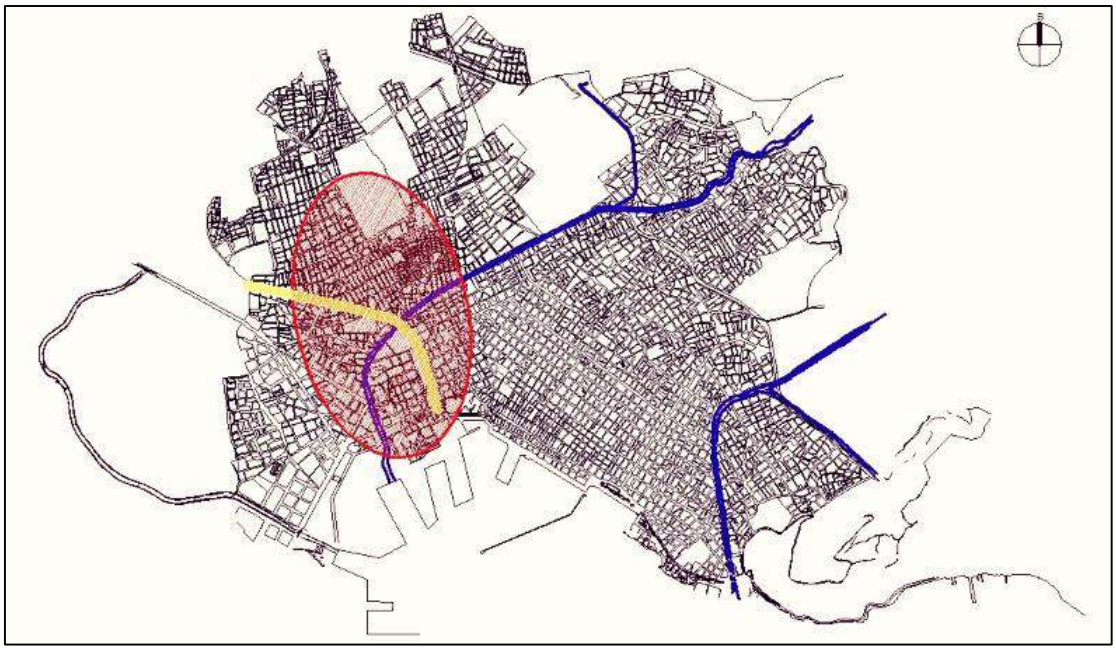

Chart 1. Regeneration area

This band's specific characteristics are those that make up the necessary and sufficient condition for this part of the city to be characterised as a regeneration area in accordance with the Greek institutional framework. The elements considered in order to explore whether the area meets the requirements and can therefore be characterised as a regeneration area are the following: urban planning – environmental, socioeconomic and cultural.

In more detail, as regards to its urban planning features, the main land uses that are being recorded within that band are those of residency, trade and recreation. In the absence of arrangements envisaged by the urban planning, it is quite reasonable for conflicts regarding land uses to arise. These are mostly between residency and recreation, as already observed in the Palaion area. The conflicts within the band section of the Municipality of N. Ionia are significantly fewer and spatially identified, even though the determination of measures/arrangements for their immediate restoration is necessary. In addition, another basic element of the area that contributes to the degradation of the urban environment are the high building densities. The absence of communal spaces reflected on the low sqm/resident rates (common feature of Greek cities), in combination not only with the absence of networking, but also with the bad quality, render interventions of an integrated nature absolutely necessary.

The analysis revealed two main facts regarding the proposed area's socioeconomic features: first, that the majority of citizens comes from lower and middle classes and second, that social discrimination phenomena against the area's different minorities (immigrants, Roma etc.) are often recorded. Moreover, due to the economic crisis the country is facing, there are numerous stores that are no longer in business, which has multiple effects on the local economy (e.g. unemployment, reduction of land values, etc.). As a result, features of a shrunken city can already be detected in the area.

The cultural features are equally important since the area as a whole has a unique historical nature which is strongly reflected upon the urban landscape. The archaeological sites, monuments and mainly the housing stock are typical of this. While, however, the existing cultural and housing stock is especially rich, it remains unreliable and in bad condition.

It can easily be deduced, now, that the proposed area has common features even though it is formed by sections of different urban planning units. Further differentiations, though not really significant, can be detected as well. There are, of course, some features, which may contribute to a better relationship between the two sections in the future through implementing an integrated urban planning project, although today these same features accentuate their differences. The first one is the railway premises (chart 1) which while connects the city of Volos to the district's headquarters, does not serve the connection between different parts within the city. On the contrary, it presents a further barrier that interrupts the spatial continuity. The second feature is the river Krafsidonas which up until today has yet to be exploited, leading to the environment's aesthetic degradation.

It is established, therefore, that the proposed band meets all five of the criteria – problem categories of the law 2508/97, in order for the area to be classified as a regeneration area. The Municipality of Volos is appointed the body responsible for the area's regeneration, so the benefits resulting from this process can be fully exploited by it and especially at an economic level, without the existence of lost profit.

### 5.2 The purpose of this proposal

The purpose of this proposal is twofold. On the one hand, the very useful institutional tool that has remained inactive up until today has to be implemented, and on the other hand, it has to become the stimulus for comprehending the importance of a complete and clearly stated urban planning policy. In other words, urban planning should not be identified with point interventions, as it usually happens today in the country. The need for a comprehensive approach to problems and the link between urban planning and development design should be understood. Particularly in a country like Greece, where problems besetting the city centres are not only of an urban planning but especially of a socio-economic nature, their holistic treatment is necessary. This indicates that the means and tools to be used are going to have both an urban planning and a development dimension since, by their own nature, society, economy and urban planning are inextricably linked.

The proposals discussed in this article are limited to guidelines and do not specialise in particular arrangements – measures. This is because regeneration areas are determined, according to the law, by the Development Plans (DP) which are of a strategic and not of a regulatory nature. Detailed arrangements will, therefore, have to be provided for by other types of planning such as urban planning studies and implementation acts.

More precisely, the proposed guidelines address the following axes:

A) Increase in the percentage of communal spaces per citizen and creation of networks such as green spaces, foot and cycle paths.

Finding available space for the creation of communal spaces in the case of Greek cities is undeniably a cumbersome and time-consuming process mainly because of the dominance of fragmentation of private property (Getimis, 2000) and smaller property. Furthermore, unregulated building projects that resulted in reshaping the peri-urban space illegally and in advance and where the subsequent urban development plan of '87 was based, are the urban planning policy's status quo. This causes a plethora of problems within the urban space among which is the difficulty in locating communal spaces. Nevertheless, both the national legislation and the European programmes, in which the country participates, allow the possibility of locating spaces suitable for this specific purpose. Using tools such as reimbursement, the preferential right and the building rate transfer, the national urban planning legislation and the exploitation of European programmes of type Jessica ensure the regeneration body that there are the resources necessary for the projects to be completed. They also provide the landowners with the incentives so that they can participate in it. What is more, the exploitation of

unstructured spaces and empty shells is the alternative to ensuring the existence of the communal spaces required for the regeneration area. Finally, the public – private partnership should be a top priority. Both sides can benefit from this partnership. For the public body, the benefits are directly related to the location of the required land and to the maintenance of any communal spaces that will arise. For the private sector, the benefits are related to investment incentives that will be provided within the band.

B) Addressing the nuisances occurred by different land uses.

Within the study area, no land use conflicts serious enough to require modification of the designated uses by the Development Plan are detected. However, individual nuisances between recreational spaces and residences cannot be overlooked. To address this problem, it is proposed by way of illustration, to reduce the authorised noise levels and to impose stricter fines in case they are exceeded.

C) Protection and promotion of the historical and cultural features.

The area in discussion, as mentioned above, possesses a rich historical and cultural stock which is, unfortunately, neither protected nor exploited. Thus, its negative impact is the degradation of the historical monuments and archaeological sites themselves and, by extension, the loss of the area's historical identity and the creation of lost profit instead of it being exploited (e.g. used as a resource for tourism). In order to address these issues, the creation of a network of archaeological sites and historical monuments is suggested. At the same time, an indicative way to protect and promote them is to provide the urban equipment and specific lighting needed for them to be accessible to the public for longer periods of time.

D) Upgrade in the quality of the structured and physical environment.

The communal spaces, the foot and cycle paths as well as the paths connecting archaeological sites will contribute significantly to the reformation of the urban environment. Additionally, emphasis is placed on providing the right incentives, such as funding or municipal tax reduction in case of building renovations that will contribute to great improvement of the housing stock.

Simultaneously, using the existing infrastructures, the promotion of the railway station and establishments, the exploitation of the river as an important resource of the area and their smooth integration into the urban fabric, will remove the barriers that previously existed. After having achieved these objectives, further benefits are expected at an urban planning and economic level. The urban planning and environmental benefits are obvious. The economic ones, though, arise indirectly from increasing land values, attracting capital and granting aid to local small and medium-sized businesses about which further incentives are proposed.

E) Providing urban planning – economic incentives

The regeneration tool of the law 2508/97, as stated in the previous section, has a strong development dimension, which cannot be disregarded in this proposal. So, then, besides public – private partnership and benefits to the local economy, which were analysed earlier, it is appropriate for urban planning and economic incentives to be provided as well within this band. Some instances of these incentives are funding new businesses, tax reduction for small and medium – sized businesses and favourable building conditions.

It is estimated that the above mentioned guidelines will effectively contribute to the improvement both of the morphological and structural features of the area in the short and in the long term. That being

said, they will enhance the quality of the urban environment and at the same time create prospects for the local economy to recover and for the social cohesion to be strengthened.

## 6. Conclusions

Having understood the need to connect spatial and development planning, the use of multidimensional tools is absolutely necessary. The forefront of the law 2508/1997 lies in incorporating the development dimension into urban planning. Since it includes tools that are capable of yielding substantial effects at numerous levels, it thereby highlights the socio – economic terminations of urban planning. However, several provisions of the law, including those on regeneration, have not yet been implemented in Greece. On the contrary, the ‹‹regenerations›› take place only at a point intervention level. The reasons why such a practical tool is not in use are many, varying from bureaucracy (e.g. delays in completing and approving projects) and lack of available resources to stiffness of the country's intricate legislative system. The main issue that arises, though, is the absence of a clear and integrated policy and the existence of multiple legal instruments, which are sometimes confusing, since they operate in opposition to each other. It is, then, particularly important to lay some foundations so as to perceive that urban planning has to have a strong development dimension and not be restricted to planned and point interventions

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# TRACK 11

# Planning across Borders: Transnational, International and Intergovernmental Planning and Spatial Management

## Track description

Co-chairs: **Stefanie Dühr**, **Wil Zonneveld**

Spatial planning initiatives for functional regions that stretch across political and administrative boundaries are often challenged by the 'boundedness' of how spatial planning is conceived and organised. The political, administrative, cultural or ethnical territoriality is a real challenge for trans-boundary planning in a world of multi-scale organizations and large-scale spatial development issues. In this track, we invite papers discussing theories and practices of trans-boundary planning in relation to the agreement on agendas for cooperation, the organisation of trans-boundary spatial planning processes, and questions over their democratic accountability. Questions which we would like to discuss in this track include the following: How can territorial governance and shared responsibility be organised for planning of flows crossing political borders? How do ideas and discourses spread through collaborative planning processes, and do they influence planning approaches in the involved regions? What is the role of planning cultures in collaborative planning processes across political borders? How can the complexity of spatial planning issues combined with the complexity of intergovernmental planning across borders be managed? What skills and qualities are needed for planners to deal with these tasks?

# THE IMPACT OF EUROPEAN TERRITORIAL COOPERATION AND TRANS-EUROPEAN TRANSPORT NETWORK POLICIES ON CROSS-BORDER TRANSPORT

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Keywords: Coordination of EU-policy sectors, Trans-European Transport Networks, European Territorial Cooperation

*Although ambitious goals have been formulated and efforts have been made to contribute to a good inner European transport system, the effects of the borders are still observable: bottlenecks and inefficient cross-linked transport at borders are the hard facts within large parts of the EU. Cross-border transport is supported by two major EU policy sectors: Cohesion Policy and Transport Policy. Both programmes have been running in parallel, often without interlinkages. In the new funding period there are attempts to link these two EU policy fields in a better way and to avoid duplications (European Parliament and Council of the European Union 2013c). This is a challenging aim because the two policy fields have always had contradicting interests (Robert et al. 2001).*

*Within this paper the contents and aims of EU policies are analysed by means of a document analysis as conducted in policy analyses (Jann and Wegrich 2003). Policies that address cross-border transport within the frame of the Trans-European Transport Networks (TEN-T) or European Territorial Cooperation (ETC) of the last (2007-2013) and current funding period (2014-2020) are taken into account with the purpose of analysing their aims and coordination. On that basis, the contribution of the ETC-policy to the establishment of the European transport network is evaluated. The paper concludes with recommendations on how the European cross-border transport can be improved by a further alignment of the two policy fields.*

## 1. Introduction

EU policies show a high variety in terms of execution measures, evolution and spatial relevance. Intervention measures can be legal regulations and treaties, softer development guidelines, as well as financial incentives. The Trans-European Transport Networks are an example of guidelines and show a long-time perspective. EU policies have different spatial demarcations and impacts. The Cohesion Policy demarcates broader areas eligible for funding. The Transport Policy is focused on the improvement of certain infrastructures and has a direct spatial relevance with a linear or punctual concentration in the case of the TEN-T (Robert et al. 2001).
The establishment of a common European transport system is partly funded by the European Transport Policy (currently the Connecting Europe Facility), but also supported by other funds like the Structural Funds and the Cohesion Fund as well as the European Investment Fund, the European Investment Bank and the Horizon 2020 Programme (former Research Framework Programme) (Robert et al. 2001). This raises the question if the investment in Europe's transport infrastructure is conducted systematically and expedient or if no coordination exists.

In the following, challenges and potentials that occurred in the coordination of Cohesion and Transport Policy are presented first. Then the results of a document analysis on TEN-T policies and European Territorial Cooperation and their aims concerning cross-border transport are illustrated. In the conclusion, the contribution of the European Territorial Cooperation to the completion of the European transport network is evaluated and recommendations for the further support of cross-border transport through the additional alignment of the two EU policies are given.

## 2. Challenges and potentials of coordinating EU policy sectors and their related funding programmes in European cross-border transport

The Directorate Generals (DGs) of the different EU policy fields at the European Commission are responsible for the coordination of the European policies. These policies should be coherent and follow the defined aims and priorities of its president (Robert et al. 2001). Challenges and potentials of a coordination of cohesion policy and transport policy are discussed in the following based on a literature review.

### *2.1 Cohesion Policy*

The EU and the Member States have a shared competence on Cohesion Policy (Mairate and Hall 2001). With the accession of more and more countries to the EU, the disparities between the Member States have been growing. In the Treaty of Rome a balanced development for the European territory has been anchored as a goal. Moreover less favoured regions are to be supported (Dunford et al. 2001). After the introduction of the European Single Market the competitiveness between the European regions has grown. Globalisation contributed additionally to an increased competition. The Cohesion Policy shall foster a balanced sustainable development of the EU territory and therefore has a spatial dimension (Peters 2003). The European Regional Development Fund (ERDF), introduced in 1975, was then the most important fund to support this aim (Dunford et al. 2001).
Cohesion Policy is a territorial and not a sectoral policy. Its aim is to support the development of the EU territory. In this context Cohesion Policy has several connections with other EU policy fields like environment and transport. It tries to make use of synergy effects by supporting the sectoral policies with its funds. However, this ambition has not always proven to be successful. In the past the programme was criticized as inflexible and highly bureaucratic. Furthermore, it was difficult to reach consensus for common aims among the different DGs of the European Commission and among the different administrative levels involved. Additionally, the contribution to its own aim of territorial balancing was questioned when donating its funds to the sectoral policies without taking into account less favoured regions (Robert et al. 2001).
This shows that the aims of the Cohesion Policy have not been easy to reach: The idea of a balanced development has been in conflict with the fostering European competitiveness. As the Cohesion Policy is a territorial policy, it influences the sectoral EU policies.

### *2.2 Transport Policy*

Although Transport Policy is a sectoral European policy and mainly focuses on the European transport development, it has a strong impact on the European territory. It is therefore tied to the European Cohesion Policy. The Cohesion Policy Funds ERDF and Cohesion Fund are spent to support both policies. They contribute so much to the Transport Policy that the policy is dependent on this financial support while following its own policy aims (Robert et al. 2001).
Transport is directly connected to the economy but also to the quality of life. Without a good access to transport infrastructure and services the economic production would be strongly hampered and the quality of life would be reduced. To provide a good transport system, a physical infrastructure and its operation, long-term investments have to be made, coordinated, planned and regulated. This was traditionally done by the national levels of the Member States without taking into account neighbouring countries. Therefore at the beginning of the European Union the infrastructures across national borders were in a poor state. To reach the aim of non-discrimination and competitiveness on a European scale, the establishment of a common European Transport Policy was decided by the EU Member States in 1957. Disadvantaged regions should be supported in their transport development to contribute to the minimization of disparities within the EU. However, the influence of the European

Transport Policy turned out to be very low in the beginning. The establishment of the Internal Market was a new impetus to the common Transport Policy. In 1992 an integrated European transport system became an item of the political agenda together with the aim of European social and economic Cohesion. In political practice, however, it was criticized that European Cohesion was not treated as a main focus and goal of European Transport Policy: It was taken into account rather marginally and not often implemented into practice (McGowan 2001).
To calculate the impact of the Transport Policy to European Cohesion is hard. The contribution of the Trans-European Network investments to European Cohesion is measured by the change in accessibility. This evaluation method, however, shows several shortcomings: Although the accessibility might have grown in urban agglomerations, the effect is much lower for rural regions far away from the network. Furthermore, a region covered by a TEN-T does not necessarily benefit from being close to the network if it does not have an access point. Having no access point can mean being less attractive (Economic and Social Committee of the European Communities 1995; McGowan 2001).
The historical development of European Transport Policy shows that there have been several attempts to coordinate Transport Policy and Cohesion Policy. However, it has proved to be a challenge in practice.

*2.3 Coordination of the two policy fields*

In scientific literature the existence of different, contradicting development aims at EU level is criticized: These might lead to conflicts in the implementation of policies. An example of the discrepancy of EU aims is the funding of Trans-European Network priority projects on the one hand and the aims of Cohesion Policy on the other hand. The funding of priority projects focuses on the most important transport links in the EU core and invests in their further upgrading. Cohesion Policy, on the contrary, wants to reach a balanced European development and supports disadvantaged regions outside the EU core (Peters 2003). It is proposed to minimize the strong concentration effects of the TEN-T by supporting several smaller transport projects (Robert et al. 2001) and to establish a broad spatial investment strategy for the TEN-T. The latter especially focuses on the connection to secondary networks and making use of all benefits (European Commission 1996).
There are further points of criticism: If EU funds were spent on cross-border transport sections they often supported already well developed border regions and not geographically disadvantaged regions lagging behind (Assembly of European Regions 1995; Robert et al. 2001). Therefore it is proposed to develop secondary networks that ensure the access of all European citizens to the transport network. Investments in these areas should be prioritized to secure their realization. Although the TEN-T guidelines aimed to establish good connections between core and secondary transport networks, the funds did not focus on the implementation of this goal but on sectoral issues and the core network instead. The Cohesion Policy and its funds - in contrast - have a stronger integration focus and aim at supporting the secondary networks. Therefore it would be an opportunity to establish a better linkage between EU Transport Policy and spatial planning (Robert et al. 2001).
Most important in terms of legislation for the European Transport Development is the European Transport Policy. In the funding of infrastructure investments, however, also the Cohesion Policy with its Structural Funds is decisive together with EIB and EIF support. The different funds apply different territorial assignments. The Transport Policy supports the linear and nodal investment of transport axes and Cohesion Policy distributes its funds on NUTS level (Robert et al. 2001). This might lead to contradictions and complicate a policy coordination. At the same time this can be seen as a chance to coordinate the funds and contribute to a balanced spatial impact of transport investments.

Consequently, the two policy fields European Cohesion Policy and European Transport Policy are strongly interrelated. However, they do not exclusively follow the same aims and often contradict each

other. As both are very important for the territorial and economic development of the EU, the policies should be coordinated to contribute to a sustainable European development.

## 3. Aims of EU policies on cross-border transport between 2007 - 2013 and 2014 - 2020

In this chapter EU policy documents that address cross-border transport within the frame of the Trans-European Transport Network (TEN-T) or European Territorial Cooperation (ETC) within the current and last funding period are analysed with the purpose of comparing the development of their aims and of detecting possible cross-references.

### *3.1 Funding period 2007-2013*

In the funding period 2007-2013 the **ETC Policy** regards a good transport infrastructure to be of high importance for European Cohesion as it is said to contribute to a higher attractiveness of the European regions and to economic growth. As the support of the Cohesion Policy is dedicated to cross-border and transnational regions, cross-border TEN-T projects should be supported. Reasons for a support of cross-border transport projects are diverse. First, it is considered to support the integration of the domestic markets of the Member States and the European identity. Second, Cohesion Policy is needed to manage the cooperation to achieve a solution to a common challenge because cross-border transport projects concern several Member States. Therefore an integrated approach is needed. Third, a good cross-border infrastructure is seen as prerequisite for cross-border cooperation and is expected to develop an added value for cooperations. In the transnational cooperation the zoning of the cooperation areas has been amended. It is to take into account functional spaces within the EU based on commonalities like the crossing of a common area by a transport corridor. This shall enable the transnational space to react jointly on possible challenges and opportunities. Commonly conducted transport projects in the transnational cooperation are expected to contribute to the cross-linkage of European regions. Especially highlighted is the establishment of European transport corridors. ETC projects should be used to support TEN-T projects and transport connections of strategic importance under the premise that they contribute to economic growth and competitiveness (Council of the European Union 2006)
The ERDF shall support ETC projects that lead to a higher accessibility. This can be reached by establishing links to the TEN-T and improved transport services. Transnational projects can also support TEN-T cross-border sections and secondary networks. With these projects the sustainable development of the EU territory shall be guaranteed (European Parliament and Council of the European Union 2006).

The **European TEN-T Policy** between 2007 and 2013 also accredits a high importance to cross-border transport. Cross-border projects are considered to be less profitable and cost-effective but of high European added value. Therefore they should be financially supported. Border regions often contained bottlenecks because the national systems still had a nationally centred view in 2001. Cross-border infrastructure planning and a common approach for the concept, financing and evaluation was missing (European Commission 2001).
The ‘White Paper on European Transport Policy for 2010’ focuses on some more technical problems of cross-border infrastructures like operating problems. Transport infrastructures that link the EU to its accession countries are of highest priority and should get the highest financial support (European Commission 2001).
The TEN-T guidelines from 2004 contain many references to cross-border sections and ascribe them also a high importance. The aim followed by the TEN-T guidelines is the completion of the Single Market, especially in the light of the European enlargement in 2004. The Member States are called to define important border crossings in their countries. One of the priorities of the TEN-T is

the completion of the TEN-T by establishing missing links and removing bottlenecks especially in the cross-border sections of the most important routes (European Parliament and Council of the European Union 2004).
Furthermore, the policy documents contain several measures to facilitate the implementation process of cross-border transport projects. First, they should benefit from a speeded-up strategic environmental impact assessment procedure. Second, European Coordinators shall simplify and coordinate the infrastructure implementation. The defined TEN-T priority projects shall contribute to the implementation of the main transport corridors and concentrate their support on border crossings (European Parliament and Council of the European Union 2004).
Concerning cross-border transport not many changes were introduced to the amended TEN-T guidelines from 2010. It was still considered as an important priority. One novelty was the idea to employ the European Coordinators also in whole transport corridors (European Parliament and Council of the European Union 2010a).
Also the aim to enlarge European competitiveness is a reason for the support of the TEN-T and cross-border transport projects. Because of missing connections between some Member States, not all countries are said to be able to benefit from the internal market. This is expected to be negative for economic growth. Therefore especially cross-border linkages need to be improved. This is also a reason why the EU dedicates a higher funding rate to cross-border sections (European Parliament and Council of the European Union 2007).
The TEN-T policy concentrates its scarce funds on priority areas that ensure a European added value. Border-section projects should be given special attention and support. Especially, joint projects by several Member States shall be funded that aim to complete cross-border sections. To ensure the implementation of a cross-border project, the involved Member States should sign a declaration on the completion of the missing link (European Parliament and Council of the European Union 2007). The amended rules on Community Aid for the TEN-T from 2010 contain fewer references to cross-border transport. Still the cross-border projects are eligible for funding and shall receive more funds when being part of a priority project defined in 1996. These projects shall contribute to the completion of the internal market in the EU-27. To be eligible for funding, cross-border projects should contain a schedule of implementation for its sub-projects (European Parliament and Council of the European Union 2010b).

Both funding programmes related to the two policy fields attribute a high priority to cross-border projects. The TEN-T documents show a stronger technical focus and a higher grade of detail than the Cohesion Policy documents and define the funding prerequisites for cross-border transport projects more clearly. A direct reference to the TEN-T also exists in the ETC documents. Even the ERDF can support parts of TEN-T projects and is not solely dedicated to the establishment of secondary networks. This illustrates an overlap of both policy fields. Inverse, there is no funding of the ETC transport projects by the TEN-T fund. The funds of the TEN-T policy, however, are strongly enriched by the ERDF[1].
Comparing the general aims connected with the support of European cross-border transport (Table 1), both, the policy documents related to Cohesion Policy and Transport Policy, show references to the economic development as an increased competitiveness of the EU, a contribution to the completion of the Single European Market and an improvement of the accessibility and interconnectedness of the European Member States and regions. The Cohesion Policy, however, also refers to rather soft factors like the contribution to the European identity by improving European mobility as well as to the European sustainable development of its territory. The comparison shows that the general aims connected with the support of cross-border transport do not contradict each other on the level of EU policy formulation. After the implementation of these

[1] In eligible countries the Cohesion Fund also plays a major role in addition to the ERDF.

policies in the respective corridor- and cooperation area-programmes, however, differences in the interpretation may occur.

Table 1. Comparison of aims of the support of cross-border transport (2007-2013)

| **ETC Policy (Cohesion)** | **TEN-T Policy (Transport)** |
|---|---|
| Increased attractiveness of the regions | Competitiveness |
| Economic growth | |
| Completion of the Single Market | Completion of the Single Market |
| Cohesion by accessibility and interconnectedness | Completion of the TEN-T |
| European identity | - |
| Territorial sustainable development | - |

The TEN-T-policy focuses on the implementation of the TEN-T axes and priority projects, defined in 1996. ETC support can be dedicated to TEN-T axes as well. At the same time cross-border projects in secondary networks can be funded if they have a European added value. Transnational cooperation focuses on the development of transport corridors. Cross-border cooperation usually supports smaller (sub-) projects in border regions.

*3.2 Funding period 2014-2020*

The policy documents for the new funding period changed especially in their organisation. This is connected with the introduction of the Europe 2020 Strategy that strongly concentrates on certain goals to be reached until 2020. Therefore it defines a stronger focus on certain priority sectors on which all EU policies should be aligned to achieve better results. Additionally, it contains a stronger evaluation component. Output indicators are defined to monitor the results of the financed actions as a measure for a better implementation (European Commission 2014a). This thematic concentration is strongly mirrored in the ETC- and TEN-T policy documents.

The **ETC policy documents** intend to reach a concentration on certain priority areas. This shall lead to more perceivable results. The ETC programmes on cross-border and transnational cooperation can choose freely out of 11 priorities but they can only choose 4 at the most. At least 80% of the funding has to be concentrated on these four.[2] The removal of bottlenecks and sustainable transport in key transport infrastructures is one of the ETC aims that can be chosen (European Parliament and Council of the European Union 2013c; European Parliament and Council of the European Union 2013a). The amount of support of cross-border transport through the ETC depends on the decision of the Member States and cooperation areas. However, in general it is still possible to spend money on the improvement of cross-border transport.

[2] Under the ‚Investment for growth and jobs'-goal of European Cohesion Policy, the ERDF should be spent mainly on 4 priorities. Here, support in cross-border transport infrastructure is less important (European Parliament and Council of the European Union 2013b, art.4).

Another novelty of the new funding period is the introduction of output indicators in the ETC policy documents: the number of constructed or upgraded infrastructure kilometres is to be calculated (European Parliament and Council of the European Union 2013a).
A further innovation to ensure the maturity and implementation of projects is the definition of ex-ante conditionalities. These need to be fulfilled by projects in order to be funded. In the case of transport projects the Member States need to develop a comprehensive plan on transport investments beforehand. This plan needs to contain plans at all administrative levels and take into account all transport modes. It needs to be in line with the respective environmental assessment provisions and should aim at fostering the Member State's infrastructure development and at improving the access to the comprehensive and core TEN-T network. The plan needs to contribute to the establishment of the Single European Transport Area and detail the planned investments in the TEN-T network, secondary networks and other projects. The envisaged projects should be mature and viable (European Parliament and Council of the European Union 2013c).
The ETC programmes should contribute to the achievement of the Europe 2020 Strategy goals and Cohesion. As before, the existing cross-border infrastructure should be described to determine missing links (European Parliament and Council of the European Union 2013a; European Parliament and Council of the European Union 2013c) and contribute to a "sustainable cross-border mobility" (European Parliament and Council of the European Union 2013a, preamble 17).
Beyond all the novelties, the ERDF provisions emphasize the fund's still remaining basic goal to contribute to a balanced territorial development of the EU by supporting territorially disadvantaged regions (European Parliament and Council of the European Union 2013b; European Parliament and Council of the European Union 2013a).
The tasks for ETC projects differ: The ERDF should especially contribute to the development of secondary and tertiary networks and their linkage to the core network (European Parliament and Council of the European Union 2013a). At the same time it is communicated that the Cohesion and Transport policy should be coordinated to ensure the joint implementation of the most important transport projects of European added value, i.e. the TEN-T priority projects. Furthermore, ETC projects should take on the task to facilitate a common and coherent planning and development process of transport infrastructure for a broader border region or a transnational region (European Parliament and Council of the European Union 2013c). Transport projects which are based on a high demand and contain cross-border sections should be supported preferentially. Missing connections and bottlenecks between Member States and regions shall be detected and improved (European Parliament and Council of the European Union 2013c).
One important demarcation of the aims of ERDF-funded ETC projects is the focus on the territorial support of the European regions (European Parliament and Council of the European Union 2013c).
The ETC policy documents contain more references to the TEN-T policies and funds than before. First, the Common Provisions cross-reference to the Connecting Europe Facility (CEF), which is the new financing instrument of the Transport Policy. The ESIF regulations should be coordinated with the CEF regulations to enlarge the European added value of transport projects. The aim of this coordination is a joint contribution of the funds to the establishment of the European transport network, i.e. a linkage of secondary or tertiary networks to the core network and to ensure the accessibility on all levels. Second, it is stated that the ERDF should respect the TEN-T guidelines. Therefore transnational ETC transport projects should be aligned to existing plans of the respective Core Network Corridors. The same is true for ETC support in macro-regional transport projects (European Parliament and Council of the European Union 2013c).

Compared to the last funding period, the ETC policy documents show some new elements. First, the policy documents contain calls for policy coordination with the TEN-T policies. This is a novelty because it concerns policy documents and not only the coordination of its funds as before. Second, the ETC documents contain strong references to the establishment of the TEN-T: The

network shall be supported. Third, the ETC documents contain more concrete descriptions on the possible design of transport projects. Fourth, output indicators have been defined to measure the impact of transport projects.
The policy documents contain some contradictions. The ERDF is supposed to contribute to a balanced development and support the accessibility of all regions and therefore aims at linking tertiary and secondary networks to the core network of the TEN-T. In the coordination with the CEF and TEN-T policy, however, the ERDF should be focused on the most important infrastructure routes. This implies a clear prioritisation of core areas which contradicts the balanced development of the EU.

**The TEN-T policy** documents also refer to the Europe 2020 Strategy. The strategy's aims are to be supported by the Connecting Europe Facility. The TEN-T are still supposed to support transport across national borders and therewith contribute to Cohesion (European Parliament and Council of the European Union 2013e).
The TEN-T guidelines from 2013 introduce a new two-layer structure: a Core Network and a Comprehensive Network. The Core Network should focus on projects with a high European added value that concentrate on cross-border sections, bottlenecks and missing links. These projects should contribute to the reduction of $CO_2$ emissions. The Core Network consists of connected nodes and contains the most important cross-border nodes - also at the EU's external borders[3]. Therefore cross-border connections are of high importance for the Core Network. Also the Comprehensive Network prioritizes the connection of transport axes through the removal of bottlenecks especially in border sections (European Parliament and Council of the European Union 2013d). Despite the division in these two layers, both contain border crossings that shall be supported.
The European Transport Corridors, being part of the Core Network, shall foster the implementation of the core. They should put an emphasis on transport interconnections across borders by eliminating bottlenecks and establishing missing-links. This shall contribute to a higher efficiency and sustainability as well as to European Cohesion by fostering territorial cooperation (European Parliament and Council of the European Union 2013d). This is especially important as most difficulties in the implementation of transport projects have been experienced in cross-border transport sections (European Commission 2014b). European Corridor Coordinators have been appointed to support the corridor development. They shall especially search for funding opportunities for cross-border transport projects and support their implementation within the corridor. Working groups can be set up for each transport corridor and facilitate the implementation of cross-border projects (European Parliament and Council of the European Union 2013d).
'Cross-border sections', in the understanding of the TEN-T, contain the space between the closest urban nodes at two sides of a border. All cross-border sections are said to be of common European interest because a good transport connection secures the continuity of European transport routes. Although these projects might have lower direct economic effects for the individual Member States, they need to be prioritized because of their European added value (European Parliament and Council of the European Union 2013d).
The TEN-T policy documents of 2014-2020 encourage the use of other funding programmes like the ERDF. The coordination of funds is said to contribute to the achievement of common goals like the implementation of cross-border projects (European Parliament and Council of the European Union 2013d; European Parliament and Council of the European Union 2013e; European Commission 2014b). Transport projects in cross-border sections get a higher financial assistance than other projects. Even road infrastructure can be funded in cross-border sections. 80% of the

[3] The TEN-T guidelines from 2013 define the cross-border nodes to the external borders in Annex II 3.

funds, available from CEF and Cohesion Fund,[4] are dedicated to the removal of bottlenecks, rail interoperability, establishment of missing-links and support cross-border connections (European Parliament and Council of the European Union 2013e).
Also the CEF defines output indicators to measure the outcome of cross-border transport projects: The number of improved cross-border sections and bottlenecks as well as the amount of kilometres of improved infrastructure need to be calculated (European Parliament and Council of the European Union 2013e).

In the current funding period the TEN-T policies introduced some new elements like the dual layer structure of the TEN-T and the definition of European Core Network Corridors. As in the ETC policies, reference to the Europe 2020 Strategy is made and output indicators have been defined. Furthermore, it is recommended to coordinate the TEN-T funds with other EU funds that support the European transport development as the Cohesion Fund and ERDF. Also reference is made to territorial cooperation and cohesion that shall be fostered by the support of TEN-T border sections. Cross-border transport sections are of a high priority in the TEN-T. This is true for the Comprehensive and Core Network as well as for the Core Corridors. Therefore cross-border projects get a higher financial support compared to other transport projects. They are generally considered to have a European added value.

Both the ETC and TEN-T policy documents for the funding period 2014-2020 still ascribe a high priority to the development of cross-border transport. However, the restriction of choice in the ETC – the Member States and cooperation areas must choose four out of 11 priorities - might lead to a loss of importance of transport topics in the operational programmes. As far as cross-border transport is concerned, the documents of both policy areas mutually refer to each other - especially in the case of funds. Additionally, it is recommended to coordinate the different policies to jointly reach common aims and contribute to the Europe 2020 Strategy.

Both policy fields define several reasons to support cross-border transport and some are very similar (Table 2). Others contradict each other. The Europe 2020 Strategy can be seen as a catalyst that leads to the convergence of aims and the establishment of a common focus. Both policy fields acknowledge for instance the importance of the reduction of $CO_2$ emissions.
Further reasons for the support of cross-border projects are a sustainable and efficient transport development and European Cohesion. Both policy fields contain references to the further completion of a continuous European transport network.
The ETC policy concentrates its funds mainly on the comprehensive network. The TEN-T policy fosters both layers. The European Territorial Cooperation additionally supports the establishment of secondary and tertiary networks and their linkage to the TEN-T.
The aim of an equal access throughout the EU is connected with the aim to contribute to a balanced development of the EU territory that is taken up by the ETC policy documents again. The TEN-T policy rather pursues the contradicting goal: It wants to concentrate scarce funds on key infrastructures.
Both policy fields see the need to cooperate in the field of cross-border transport: Aims, orientation of funding and common projects should be coordinated to achieve common goals and prevent contradictions.
Special tasks of ETC projects can be the support of cross-border transport projects to improve and establish a common planning process on cross-border infrastructures and services. Also the TEN-T policies consider improved territorial cooperation to be important for the development of cross-border transport.

[4] The Cohesion Fund is solely dedicated to the Core Network (European Commission 2014b, 8)

Compared to the former funding period more aims and reasons for the funding of cross-border transport projects have been defined and the policies interrelated in a stronger way. Still some contradicting aims exist.

Table 2. Comparison of aims of the support of cross-border transport (2014-2020)

| **ETC Policy (Cohesion)** | **TEN-T Policy (Transport)** |
|---|---|
| Europe 2020 Strategy | Europe 2020 Strategy |
| Reduction of $CO_2$ emissions | Reduction of $CO_2$ emissions |
| Sustainable transport | Sustainable and efficient transport |
| European Cohesion | European Cohesion |
| Single European Transport Area | Continuity of European transport axes |
| Support of comprehensive network (mainly) | Support of both layers |
| Access to the Comprehensive and Core Network, Balanced development | - |
| Better Coordination with CEF and TEN-T | Coordination of the transport funds |
| Common, coherent planning across borders | Territorial cooperation |

## 4. Conclusions: Contribution of European Territorial Cooperation to the Completion of the European Transport Network and Recommendations for a further Improvement of Cross-border Transport

The European Territorial Cooperation (ETC) can support projects in the transport sector and already did so in the past. Also the new policy guidelines offer the possibility to do so in the cross-border and transnational cooperation. Besides the Cohesion Fund, the ERDF has been and will be an important financial contribution to the scarce funds of the TEN-T policy.

The ETC and the ERDF shall contribute to the balanced development of the EU territory and especially support disadvantaged border regions as well as foster the Cohesion in larger cooperation areas. Therefore in the cross-border cooperation secondary and tertiary transport networks should be funded. These shall generate the activation of positive effects of the existence of the TEN-T core corridors by linking border regions to them and by improving their accessibility. Transnational cooperation projects with a broader spatial scope might support the core transport corridors by linking the main transport routes with the regions they cross and foster the linkage to secondary networks. In the future an important task of ETC projects might be the establishment of transnational spatial planning strategies based on the transport development and effects of the core network corridors.

Therefore the ETC can promote the establishment of the European Transport Network by focusing on the lower scales. However, it should be taken into account that the TEN-T policy concentrates solely on cross-border transport links that connect the major transport routes. ETC projects, though, rather focus on transport networks on a lower scale or on the connection to the main corridors. An expansion of the ETC funds to major transport axes of the TEN-T should not be pursued because this would contradict its basic aims. Instead both policy fields and support mechanisms should join forces to support links between the two transport network levels. The economic added value of the European

transport corridors and main routes should be made use of. The corridors should not solely cross regions and connect main hubs but also connect all parts of the EU territory.
A better alignment of the development of cross-border transport could be reached by involving the Core Corridor Managers of the European Core Network Corridors. These managers should be informed about ETC projects conducted in the sphere of their corridor and then coordinate the aims of the projects and their linkage to the Core Network. Furthermore, the managers themselves could contact the ETC authorities of the respective regions and inform them about possible projects that could contribute to the linkage of the Core Network to secondary networks.

Based on the conducted document analysis it can be stated that the reference between the EU documents on cross-border transport in Cohesion Policy and Transport Policy has been strengthened. The importance of cross-border transport in both policy fields has remained stable and the coordination between the policy fields has been improved in the EU documents. Several references have been made in the current regulations to coordinate the aims and to support cross-border projects and the overall transport development of the EU. The Europe 2020 strategy has contributed as a catalyst because all EU policies of the current funding period have been oriented to the achievement of the strategy's goals. This is evaluated to be a positive development. However, it needs to be seen how these demands for coordination in the EU policy documents have been implemented by the Member States and which impacts can be reached in practice.

A further analysis of the adopted Operational Programmes in European Territorial Cooperation needs to be done to see how often the transport priority has been adopted by the cooperation areas. This decides about the possible amount of projects funded between 2014 and 2020 and about the ETC's contribution to the completion of the European Transport Network. Here it would also be interesting to see which tasks are connected to the transport objective and how this objective relates to the Trans-European Networks. Additionally, it needs to be investigated how the TEN-T projects refer to ETC projects that are conducted in their proximity. Based on the results of such an analysis the impact of the EU policies - calling for a coordination of policy areas - can finally be evaluated.

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# The Integration Development and Territorial Cohesion of Neighboring Cities :the Case Study of Jiuquan-Jiayuguan in China

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*Abstract: City integration derived from the regional integration, urban agglomeration, has become a new regional phenomenon in China.This phenomenon has attracted wide attention. The paper examines the case of city integrate development between Jiuquan –Jiayuguan neighboring cities based on two spatial scales. Firstly,at the neighboring cities level,the paper studies the influence extent of facilities, complementarity extent of industries development and efficiency extent of institution system construction.secondly,at city linkages level, The authors study Changs in Intercity transport links and Changs in Intercity residents' daily behavior.Next,the paper analyzes the problems of city integration development and its influencing factors.On the basis of the above discussions, the paper believe that Jiu-Jia should build high-efficient cooperation mechanism, "complementary development"of land use function, "convenient" Intercity travel supply and jointly build complementary industry types and these four aspects help better promote the healthy development of the city integration in Jiu-Jia.*

## 1.Introduction

Since the 1980s, with the continual development of global economy and internet progress, either regional economic integration or urban agglomeration has replaced single city, became main spatial regional unit for global competition and cooperation of countries and region, accelerated economic globalization and regional economic integration, increasingly become the most important character for current development of global economy. Regional economy integration is characterized as city agglomerations, city belt, as well as regional cooperation between cities, all of which regard the large city, and super city as center, and also behaved as trend conversion and expansion from urban space to regional space. City integration is developed from the huge context of economic globalization and regional economy integration, especially, as advanced products of development of industrialization, urbanization, and all the more so, it is making an "concordance" focusing on the common benefits between neighboring cities(Qunhua Zeng, etc,2013). The two central city areas of Jiu-Jia have a distance of 18 kilometers,both had long historical origin since ancient era. Jiayuguan is a new modernization city developing with the Jiuquan Iron and Steel Group in first five-year national key construction project, and was approved by the state council as municipality of province instead one part of Jiuquan. Both Jiuquan and Jiayuguan are transportation gateways, as known as a strategic town

in Hexi, a key in border. The two cities are linked with geography, joined by mountains and rivers, connected with human relation, and equipped with mutual basis of city integration. This paper aims to dig and trim the influences of City integration to these two cities, summarizes experience from them, and eventually provides beneficial references to city integration in the Jiu-Jia and other areas.

## 2 .City Integration Research Overview

### 2.1 Feature analysis

City integration contains two or more than two cities which have adjacent or closer built-up areas geographically, similar natural environmental conditions and social cultural background, developed rapid transportation network and communication network in a certain historical and realistic conditions. The cities, which have complementarity on the function and close connection on the industrial structure, become an urban aggregation with polycentricspatial structure and mutually independent in administration(Guodong Zhang,2008). The practice of the city integration across the different regions has been varied. For instance, Tai-Yu city integration proposed “Ten integrations”, Chang-Zhu-Tan integration proposed “Five integrations”, Xi-Xian New Direct proposed “Eight integrations” etc., all have their own characteristics.

Table 1. The Main Practice in Different City Integration Objects

| City Integration objects | Start Year | Composition city | Main approach |
|---|---|---|---|
| Chang-Zhu-Tan | 1982 | Changsha, Xiangtan, Zhuzhou | Transportation with ring、Electricity with net、Financial city、Information share、Environmental co-governance |
| Tai-Yu | 2001 | Taiyuan,Yuci | Planning jointly consider 、 institutional isomorphism、market with the body、industrial with the chain、Common prosperity of science and technology 、 Transportation with ring 、 Facilities with layout 、 Information share 、 Environmental co-governance |
| Xi-Xian | 2002 | Xian、Xianyang | Planning jointly consider、Transportation with ring、Information share、Market with the body、Industry synchronization、Common prosperity of science and technology 、 Travel with line 、 Environmental co-governance |
| Guang-Fo | 2002 | Guangzhou、foshan | Construction of Guangzhou and Foshan cities cooperation framework agreement 、 urban planning、Transportation Infrastructure、Industry Collaboration、environmental protection the four special docking Agreement |

**2.2 Driving mechanism**

As a special form of regional economic development stage, city integration has different generation mechanism in the areas with different developing levels, thus producing different development patterns.In this paper, a few city-integration cities in china are taken as objects, which have different generation mechanism in the areas with different developing levels, to analyze the difference on driving mechanisms under the different economic developing levels.

Table 2. The Main Driving Mechanism in Different City Integration Objects

| City Integration Objects | Driving Mechanism |
|---|---|
| Shen-Fu | Increasingly closer economic and social space links, Aspects of government and inter-city cooperative enterprise governance methods.. |
| He-Huai | Economies of scale and competition effects, diversion effect, the welfare effect |
| Guang-Fo | The driving force of government and impetus of market mechanism |
| Tai-Yu | Economic strength is the real foundation of the city integration; the industrial structure is the basis for the city integration; development and competition is the source of the city integration |

## 2.3 The Relationship Between City Integration and Regional Integration

City integration and regional integration are not equal entirely, the key to discriminate is that whether the involved areas belongs to the same region. When the involved area of city integration is same with the regional integration's, city integration and regional integration can be equal. When the involved area of city integration is less than or is assigned to the involved area of regional integration, city integration is a crucial stage in the process of regional integration, city integration area is equivalent to a "growth pole" in the involved area of regional integration. The development and construction of "growth pole" contributes to regional development and promotes the construction of regional integration with clear priorities and gradual process.

## 3. Development Review of Jiu-Jia City Integration

City integration is a development particular form among regional cities and its essence is a process of close cooperation between the regional cities. City integration experiences city integration consensus, co-construction between cities, city integration alliance, city merge each other, city integration realization from the initial phases to the mature phase of development. So far,The development of city integration is at the stage of co-construction. Co-construction is the elementary stage of city integration, and the guidance of co-construction also has a critical impact on health

promotion of city integration.

### 3.1 City Integration Consensus

Jiu-Jia cities have enormous potentiality in economic cooperation and strong complementarity in cooperative development. Jiayuguan has an enormous steel smelting strength and a higher urbanization rate , while Jiuquan possesses rich mineral resources, complete industrial categories and prosperous service industry. Numbers of the consumption in Jiuquan need to drive by Jiayuguan, and that Jiuquan need Jiayuguan to provide consumer sentiment . The population of permanent residents in city in Jiuquan is 245,000, and rural population is 245,000. Jiayuguan, with 219,900 city permanent population and 15,600 rural population, provides large developing space to peasants' urbanization in Jiuquan. A sentence has been circulated in Jiu-Jia is that seeing the city in Jiayuguan, shopping in Jiuquan, buying a house in Jiayuguan, working in Jiuquan. Jiu-Jia connect closely in the region, landscape and the culture. With the rapid development of economy and the speeding up of urbanization, the Geopolitical contact between Jiu-Jia cities have been more closer, and city integration development has been an irresistible trend.

### 3.2 Co-construction between Jiu-Jia cities

Through the current situation of urban land in 2000, 2004, 2006 and 2009, it can be seen that Jiu-Jia city integration had been in gestation period and had relatively slow development before 2009. After 2009, the development strategy of Jiu-Jia regional integration was proposed by the Gansu province, and a series of development policies were introduced to accelerate the development of Jiu-Jia regional integration. The trend of spatial extension approaching to each other in Jiu-Jia began to accelerate. Industry park in the West of Jiuquan started a large scale construction from 2009 and Jiu-Jia cities expressway was opened to traffic in 2012. Mingzhu Park and Taolai River Park in Taolai River New District completed first and then residential communities, administrative office, schools and other communal facilities followed up.

## 4 .The effectiveness analysis of Jiu-Jia city integrate

Urban space development effectiveness study allows us to go from the bottom-up perspective seriously examine the problems and the reasons of the urban development process, in turn, to better guide our planning. In this part, the author will use a combination of qualitative and quantitative manner, starting from different periods of development of the Jiu-Jia city integration to analyze the actual effectiveness, the concrete can be from the city integration development's influence on the whole Jiu-Jia area (the neighboring cities level) and the influence on the inter-city link (city linkages level) to analysis the two scale.

## 4.1 The Neighboring Cities Level

### 4.1.1 Changs in the Industry System of the Neighboring Cities

Currently Jiuquan takes new energy equipment manufacturing, agricultural processing, chemical industry, commercial logistics industry as the mainstay industries. The gross output value of the four mainstay industries in 2009 were 69.4%, 5.8%, 2.5% and 16.1%.While Jiayuguan's steel industry appears to be the dominant industry with the steel industry accounting for more than 90% of overall industrial output value. The city industrial integrate development between Jiuquan and Jiayuguan is then based on industry structure differences, differences in the proportion of light industry and heavy industry and the industrial categories differences.The industry system development in Jiu-Jia is mainly based on the traditional manufacturing upgrades and fostering strategic emerging industries, thus promoting the coordinating development of three major industries and enhancing regional industrial competitiveness.

The specific development strategy of the city industrial integration in Jiu–Jia is mainly focus on building clustered industrial parks including Jiuquan western industrial park, Jiuquan southern industrial park, Jiayuguan eastern industrial park, Jiayuguan northern industrial park and Jiuquan steel group. Through analyzing the area of site's space changes of 7 categories of industries of the year of 2000,2004,2009,2012 and 2014(Figure 1), this paper finds that each industrial park gradually forms its backbone industry over time. Jiayuguan northern industrial park forms metallurgy and new materials and building materials as the leading 2 types. The land size of metallurgy and new materials increases from 83ha in 2004 to 592.4ha in 2014 that reflecting a rather fast pace. In Jiuquan western industrial park, the agricultural products processing industry and the chemical industry based on biopharmaceuticals become its two leading industries. Wind and solar power generation equipment manufacturing have grown rapidly in Jiuquan western industrial park, which also become the emerging industries of Jiu –Jia in about 2012. Commerce and Trade Service Industry lay in the industrial parks in Jiuquan western industrial park and Jiayuguan northern industrial park. Jiayuguan eastern industrial park started later than others, which leading industry is metallurgy fine and new materials.The leading industry of northern part of Jiayuguan is new materials and building materials .T he leading industry of western part of Jiuquan is the equipment manufacturing and new energy. The leading industry of southern part of Jiuquan is agriculture and sideline products processing and chemical industry. In a word, these three main industrial parks have their characteristic industry. From the view of the whole region of Jiu-Jia, there is a long way to go.The industrial types of these three main industrial parks are similar. So there is a keen competition among the three industrial parks. Jiugang group, as the upstream firm, does not have enough drive effect to the stainless steel, alloy materials, R&D, circular economy, producer service industry of the three industrial parks. This is a long way to go for the complementary of industry in Jiu-Jia.

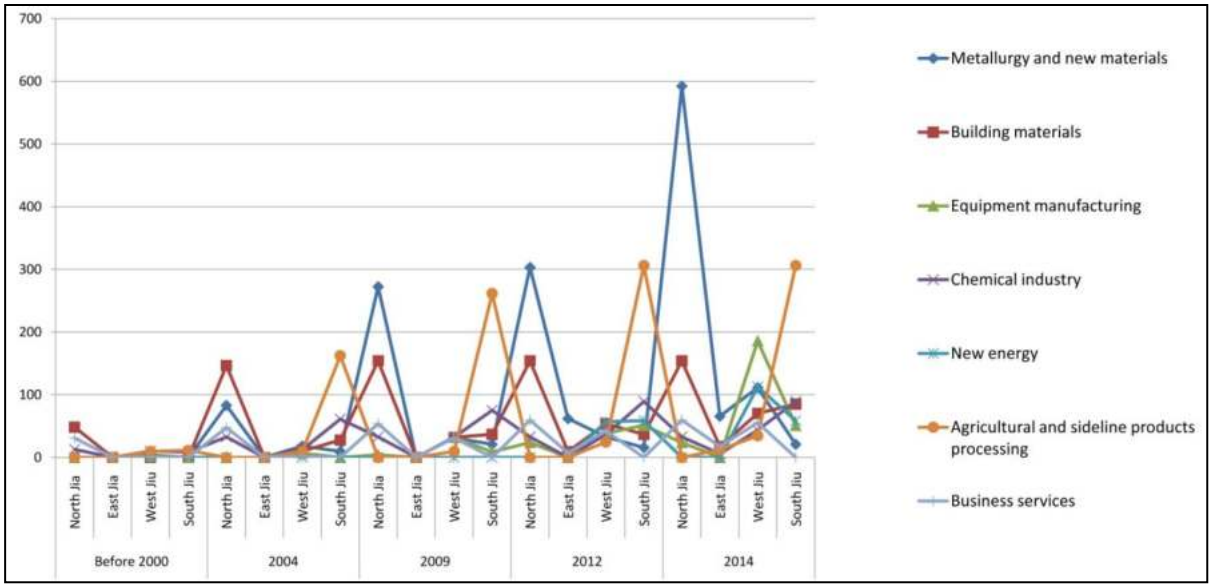


Figure 1. Industry Development Status of Each Industrial Park

### 4.1.2 Changs in the urban space of the Neighboring Cities

Urban form is one of the external manifestation of association degree of the city elements, and a different urban form can have different effects on the regional urban transport links, organizational structure, land layout and so on. From the point view of the boundary of urban built-up area, Jiayuguan and Jiuquan are all single central cities before the year of 2009, and then ,Jiayuguan urban area gradually evolved into more structured form of group layout form, while built-up area of Jiuquan city is showing a form which is similar to "7".

By comparing the status of urban land use of the central city of jiujia among the year 2004, 2006 and 2009(Figure 2-5), we can see that Jiayuguan and Jiuquan developed maily to the south before 2009. After 2009, the two cities accelerated the face-to-face development， and Jiayuguan developed mainly to the east, while Jiuquan to the west. with the continuous development of urban space between the two cities, the spatial distance between the two cities is shrinking continually. Currently, the shortest linear distance of the construction land edge of the two cities is less than 10 kilometers, and the shortest distance between the two cities reduces at the speed of 1-2 km per year, then the two cities will naturally blend in the next 5 to 10 years. Hence, the overall urban form will change greatly.

Through land-use structure changes of the two cities in recent years, there exists differentiation which is mainly manifested in the aspects as the followings: the increasing proportion of Jiayuguan road traffic, public service facilities and municipal infrastructure and decreasing trend of the industrial warehouse proportion; On the contrary, in Jiuquan, industrial warehouse proportion increased rapidly,which shows that Jiayuguan is already transforming from late industrialization to service industry,while Jiuquan is experiencing a period of fast development of industrialization.

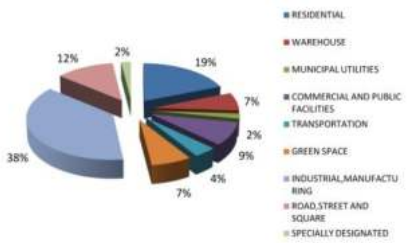


Figure 2. Jiayuguan land use structure in 2007

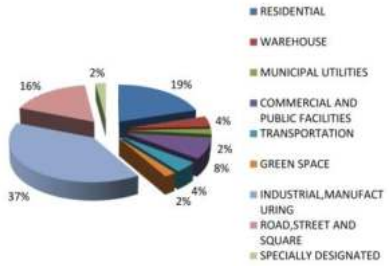


Figure 3. Jiayuguan land use structure in 2011

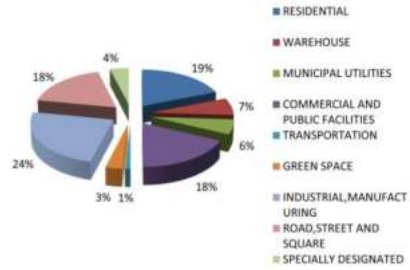


Figure 4. Jiuquan land use structure in 2004

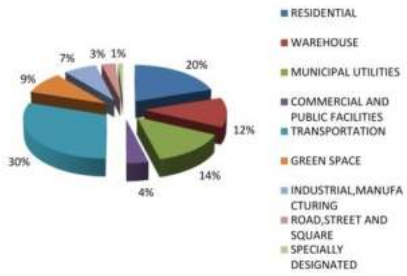


Figure 5. Jiuquan land use structure in 2011

## 4.2 The city linkages level

### 4.2.1 Changs in Intercity transport links

On contact channel construction, 2000 years ago,in addition to the rail way,G312 Jiu-Jia section is the only contact channel between two cities; In 2006, the second contact channels Qing Jia highway officially opened to traffic,Jiu-jia fast track was opend in 2012 with a line design speed of 80km/h and two-way eight-lane. The line is open free to the public, has become the the most convenient way between the two cities . In 2014 years,Jia yuguan Mingzhu Road and west industrial park Guangda road of jiuquan communicated with each other, the third contact channel was built so far. 2005 years ago, public transport links between the two cities is only interoperability Shuttle every 30 minutes. In 2005, the two cities intercity bus line started operations.The bus company of Each city provided half vehicles, Initially,Jiuquan and Jiayuguan only have 11 and 9 little buses,2009 onwards,the two citis gradually replaced them to the large.To 2014,there are 18 large vehicles in Jiuquan and 15 in Jiayuguan.2005-2014 years,Jiayuguan issued annual passenger volume increased to 1.5 million from less than 300,000 and jiuquan from less than 400,000 to 1.9 million.The constantly opening up of the contract channel and continuously improvement of the ability to inter-city bus service reduce the contact barriers between the two cities ,promoted the further development of the City integration.

### 4.2.2 Changs in Intercity residents' daily behavior

In order to know the effect of city integtation promoting to residents' daily behavior, this study adopted the method of questionnaire and interview carried on the thorough research to the residents in two citis. In addition to the research of the current situation of the people daily inter-city behavior, also please residents recalled their daily behavior of inter-city memories for nearly a decade and complete the questionnaire, to gain a certain amount of historical data to reveal people daily behavior changes at a period of time. Research site selection to cover the major area of the two cities, two cities each randomly distributed 150 questionnaires , of which 134 valid questionnaires recovered Jiayuguan, Jiuquan 137.

(1) Changes in Travel frequency and travel time

Through the questionnaire analysis showed that more than 35 percent of residents in the two cities daily more frequent travel between the two cities, the main frequency to 1-3 times a month(Figure 6), more frequent contacts between the two places in the crowd, about 18% who before 2005 started travel between the two cities, but by 2010 this figure is small change, about 68% of people suddenly start more frequently from 2010 to the other cities(Figure 7).

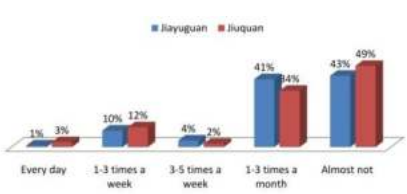


Figure 6. the frequency of Daily to Other City

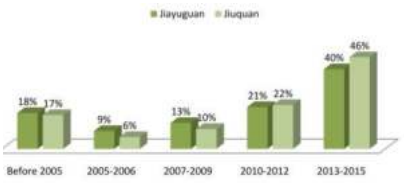


Figure 7. Time to Other City

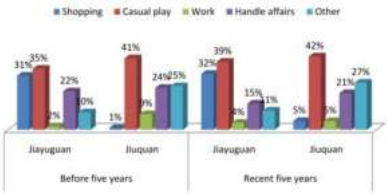


Figure 8. Purpose To Other City

（2）Changes in the purposes of traveling and travel destination

In the past five years, Jiayuguan residents traveled to Jiuquan mainly for recreation and shopping purposes. Before 2010, Jiayuguan residents traveled to Jiuquan for the same purposes yet in a slightly lower ratio. The destinations of their traveling were concentrated to Gulou Business District. Fukang Shopping Center and Jiuquan Municipal Square had attracted more and more Jiayuguan residents to areas surrounding Jiuquan People's Administration, which caused the changes in their choice of destinations. Major part of Jiayuguan residents who travel to Jiuquan for work reasons traveled to Jiuquan City to do business, yet in the past five years more people went to the Industrial Zone in Jiuquan's western suburbs.

In the past ten years, Jiuquan residents traveled to Jiayuguan also mainly for mainly for recreation and shopping purposes. However, before 2010 only a few Jiuquan residents traveled to Jiayuguan for recreational reasons, and travel destinations were concentrated to Guancheng Scenic Area and several large parks(Figure 8). In the last couple of years by the newly openned Taolaihe park attracted more Jiuquan

residents. When it comes to Jiuquan residents who travel to Jiayuguan for work reasons, more people worked at Jiayuguan, Jiuquan Iron & Steel Group before 2010, while in the recent five years, with Jiuquan's local employment pressure been eased thanks to the newly built Industrial Zone in Jiuquan's western suburbs, less Jiuquan residents came to work in Jiayuguan.

（3）Changes in people's way to travel

Before 2010, up to 70% of the citizens from both cities chose to travel to each other's city using intercity public transportation, and only about 18% chose to travel with private cars. In the recent 5 years residents from the two cities who drive private cars to each other's city doubled, while the number of people who used intercity public transportation dropped to around 54%. Not so many people chose to travel with electric vehicles or other transportation methods.

## 5 .Reflections on the Jiu-Jia city Integration Development

### 5.1 A high-efficient cooperation mechanism led by local governments can guarantee a smooth process of city integration development

In light of Gansu Province's regional development goals of "Cities in the center of Gansu (Lanzhou, Baiyin) should lead common development for surrounding cities in Gansu's both wings; All cities should develop as groups according to overall planning", Jiuquan and Jiayuguan are important cities in Gansu's western wing. In the year of 2010, the Gansu People's Government drew up the Jiu-Jia Regional Economic Integration Development Plan, aiming to guide the embodiment integration development of the two cities under an overall plan. Yet until now, the intergration development has stayed on an initial stage. Both Local enterprises and the public have strong demand for an intergration development. Local enterprises wish, with the help of an intergration development of Jiu-Jia, to have the free flow of production factors promoted, the combined effect enhanced and the upstream and downstream industry chain extented. While the public wish to see imcrease in employment opportunities employment and improvement in their quality of life. Higher level governments have not been very active during the process of intergration development, which has been relatively slow on the whole and have encountered many problems. Under the process of intergration development, Jiayuguan seems to be more active while Jiuquan seems to hang back. The frequent vicious competition between operating companies for intercity public transportation has seriously affected residents from the two cities to travel freely. The serious of problems root in the lack of an efficient cooperation mechanism led by both governments. Without sufficient information exchanges and collaboration, intergration development has not been organized disorderly like a heap of loose sand. Local goverments should after balancing the views of all interested parties take initiative to establish a high-efficient cooperation mechanism and draw up an overall intergration development strategy.

In this respect, the cooperation mechanism of Yangtze River Delta Urban Economic Coordination Conference can be a good reference(Xiaolong Luo, Jianfa Shen, 2007). The Economic Coordination Conference holds mayoral meeting and working meeting every two years, at which academic elites and members of higher level governments are invited. Topics at these meetings includes discussion around

strategic objectives, interactive policy and ideas for development, as well as a variety of other topics. In addition, under the coordination mechanism between major cities, special leading groups for integration develoment work, leading groups should also be set up, in order to build a multi-level platform for negotiation, communication, inforrmation exchanges and cooperation, thus to jointly promote the sound and rapid development of both cities.

## 5.2 "Complementary development"of land using can be a channel enhancing friendship in daily intercity contacts

The American Geographer Ullman in the mid-1950s proposed that complementarity is an important condition for the occurrence of spatial interaction, i.e. if the material provided by a region meets the need of another, there is a basis of spatial interaction. The greater the complementarity, the larger is the amount of mutual interaction between these two places. After analysis on Jiuquan and Jiayuguan residents' daily interaction, we have found out that the main reason for Jiayuguan residents go to Jiuquan is shopping, while the main reason for Jiuquan residents to go to Jiayuguan is recreation and sight-seeing. In order to find the the main driving forces that triggers these interaction, we have done a related analysis between the land-using of business, leisure & entertainment, sports centers and exhibition in different periods, and the residents daily travels under the corresponding period (Table 3).Analysis showed that complementary land-using under the integration development can play an important roll in guiding the daily interaction of residents. The beautiful environment of Jiayuguan and the concentrated and bustling shopping centers in Jiuquan can form a kind of complementary land using, which stimulate the frequent daily exchanges between the residents of both cities. On the other hand, the frequent daily interactions between the residents of both cities in turn accelerated the integration development.

Table 3. The Relationship Between the Behavior and Urban Development

| **Year** | **Building of Large- and Medium-sized Retail Business** | | **Land used for Large- and Medium-sized Leisure & Entertainment Projects, Sports Center and Exhibition** | | **Changes in interactions** | |
|---|---|---|---|---|---|---|
| **Before year 2005** | Jiayugu an | Jiuquan | Jiayuguan | Jiuquan | Jiayuguan to Jiuquan | Jiuquan to Jiayuguan |
| | Dispers ed along Xinhua Road | Concentrated around Gulou area | 3parks，<br>1 big theatre,<br>2 stadi，<br>1museums，<br>1 public square | 3 parks，<br>1museum | Not many people,<br>For shopping purposes maily ，<br>Concentrated to areas near Gulou business center | Not many people, for sight-seeing purposes maily<br>Concentrated to large parks |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Around year 2009** | +1 shopping center | + 3 shopping centers | + 1 park | + 1 public square, 1 museum | Number of people grow slowly, for shopping purposes maily , Concentrated to areas near Gulou business center while more people visit the newly built Leisure & Entertainment Projects and Sports Center | Number of people grow slowly, for sight-seeing purposes maily Concentrated to large parks |
| **Around year 2012** | Not much changed | Not much changed | + 1 park | Not much changed | Number of people grow fast, for shopping purposes maily , Concentrated to areas near Gulou business center while more people visit the newly built Leisure & Entertainment Projects and Sports Center | Number of people grow fast, For sight-seeing purposes maily Concentrated to large parks. Many visit the two newly built parks. |
| **Around year 2014** | Not much changed | Not much changed | + 1 park, + 1 large-scale amusement park | + 1 museum | Number of people grow rapidly, for shopping purposes maily , Concentrated to areas near Gulou business center while more people visit the newly built Leisure & Entertainment Projects and Sports Center | Number of people grow rapidly, Concentrated to the 3 recent newly built parks. |

## 5.3 Convenient transportation as a solid foundation for city integration development

Spatial Interaction is a precondition for integration development while the flows of people and things are its basic manifestations. Convenient transportation is an important means to accelerate flows of key factors between regions, and a solid foundation for integration development. If two cities are built into a

half-to-one hour living circle, where residents can have a daily life and commute like in one city(Yingkui Zhao, Jianjun Zhang,ect, 2010). Highway system connecting Suzhou District in Jiuquan and Jiayuguan has grown from one road to the current three roads. Residents from both cities are given special free access to the Jiuquan- Jiayuguan Highway Channel. The construction of the Jiuquan- Jiayuguan Highway Channel has fastend interaction between city residents, promoted cultural integration between the two cities, and at the same time led the developmet of the whole Integration Development area as wll as the internal development of each city seperately. Public transportation between the two cities can provide convenience in travel for the residents and reduce their difficulty in finding a car. Thus it plays a vital role in promoting integration development. Coordination system should be build for public transportation operation between the two cities to guarantee an efficient and convenient intercity travel. On the basis of accelerating highway channel construction between the two cities, intercity public transportation should be given high priority in the city integration development process.

### 5.4 To jointly build complementary industry types is the key in complementary development

To jointly build demonstration areas, high-level model areas, management innovation zones and area of most dynamic growth can lead and coordinate the development of the whole region. Industry is an important pillar of regional development, jointly built industry types must not only drive their own development, but also to the greatest degree of optimize the industrial chain in the entire intercity region, thus the former vicious competition between similar industries can be transformed into complementary collaboration so as to enhance the overall competitiveness of the whole integration development area. The new region of Jiuquan-Jiayuguan is a united constructed zone, which includes two major industrial parks: the Industrial Park in Eastern Jiayugaun, and the Industrial Park in Western Suburbs of Jiuquan. The latter has two characteristics of industrial types: new energy equipment manufacturing and automobile sales, and business services, especially sales of regional agricultural products. These two major industrial types not only lead the growth of the Industrial Park in Western Suburbs of Jiuquan itself, but also play an important complementary role in optimizing the industry structure of the whole Jiu-Jia integration development area. The Industrial Park in Eastern Jiayuguan is still in an initial stage of large-scale construction. Judging from the current enterprises its main features are metallurgy and new materials, which is similar to Jiayuguan, Jiuquan Iron & Steel Group and the Industrial Park in Western Suburbs of Jiuquan. With the opportunity of Jiu-Jia integration development, The Industrial Park in Eastern Jiayuguan should be coordinated into having complementary industrial types from the other industrial parks thus optimize the industrial chain in the whole region.

## 6 .Conclusion

City integration as a new phenomenon of regional development, which plays a vital role in driving the overall development of the region and promoting the new urbanization. On the basis of the development of the domestic city integration reviewed research,taking jiuquan-jiayuguan development as an example,at the eighboring cities level,from the whole industrial system variation, urban space

development variation and at the urban linkages level,from the Intercity transport links variation、Intercity residents' daily behavior variation，the authors analysis development effectiveness of city integration from these two different spatial scales . Ultimately the paper believe that Jiu-Jia should build high-efficient cooperation mechanism, "complementary development"of land use function, "convenient" Intercity travel supply and jointly build complementary industry types and these four aspects help better promote the healthy development of the city integration in Jiu-Jia.

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**TRACK 11: Planning across Borders: Transnational, International and Intergovernmental Planning and Spatial Management.**
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# Building a cross-border spatial planning strategy between four countries: a wishful thinking?

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Abstract:

*Since 2010 and the launch of the METROBORDER project, funded by ESPON, Luxembourg and the neighbouring regions in Belgium, France and German pursue the objective of creating a cross-border polycentric metropolitan region. This strategy should bring more coherence and cohesion within this region which is strongly functionally integrated, due to the very high number of cross-border commuters but which is still poorly institutionally integrated. We have been involved in the building of the economic part of this strategy as moderators and scientific advisors. As such, we were able to identify obstacles to cross-border cooperation. The objective of this presentation is to depict the gap between the initials ambitions and the strategy issued with the required critical distance. We propose to describe and analyse the policy content of this strategic territorial vision but, most of all, the difficulties faced by the policymakers in its elaboration. These problems are due mainly to institutional mismatches, diverging policy priorities and differences in planning cultures. We will also highlight the importance of trust between individuals, which remains understudied in the field of cross-border spatial planning but which is, according to our experience, a crucial parameter. In this difficult context, the consensus that has been reached by all the stakeholders is the "smallest common denominator", that is to say the less constraining. Of course, such a posture is far from being enough to tend to a more coherent and integrated cross-border area.*

# Building a cross-border spatial planning strategy between four countries: a wishful thinking?

## 1) Introduction

Europe, with its numerous internal borders, appears as a very fragmented space. The challenge linked to the European project of a multicultural supra-state space of freedom, security and justice is to remove the barriers to exchanges (Balibar, 2005). One of the issues of the European Regional Policy is to strengthen the integration between the border regions in order to better (re)shape ties between the populations. In the 2007-2013 program of the Regional Policy, the EU has set in a more precise way the strategic orientations for the use of the structural funds, especially concerning territorial cooperation. The ambition is to promote a more even, harmonious and sustainable development of the European space and to contribute to a better cohesion between its territories regarding its economic, social, cultural and environmental dimensions. Through the structural funds, the objective is to finance the networking of regional actors as well as the concrete actions in favour of a more territorially integrated development. In this context, numerous regional stakeholders have taken the initiative to structure and organize spatial development within their cross-border spaces, by elaborating a territorial strategy in a collective manner.

The idea of this article is to question the ability of these initiatives of cross-border strategic spatial planning to contribute to better integrate the territories, answering to the different dimensions of the cross-border integration process, as defined in the academic field of border studies. Indeed, this concept appears as a complex and multidimensional one, but in the European planning discourse, theoretical references are lacking to describe it properly and in a comprehensive form. This hinders the production of cross-border spatial strategies which can efficiently articulate border territories and create synergies between them.

The first part of this paper will consist in formulating a conceptual framework aiming at cross-fertilizing the academic works from the border studies with the discourses and policy concepts coming from the more applied field of spatial planning. The goal is to build a suitable tool-grid to analyse how cross-border spatial planning strategies serve the different dimensions of the concept of integration. Such an approach should allow to question the non-scientifically demonstrated postulate of the EU according to which more integration leads to more cohesion. In a second step, this conceptual framework will be applied to the case-study of the Greater Region where a cross-border spatial planning strategy is being elaborated. In this space of cooperation, which includes one State and parts of three other ones, most of the very numerous flows which cross the borders are oriented towards Luxembourg. At last, the third part will highlight the most important limits and obstacles which hamper the success of this strategy.

## 2) A conceptual framework derived from the articulation between the fields of border studies and strategic spatial planning

If the literature on comparative spatial planning territories (Knieling & Othengrafen, 2009; Newman & Thornley, 1996) has flourished during the last decades, as well as works on the emergence of a European spatial planning policy and discourse (Dühr *et al.*, 2010 ; Faludi, 2010), cross-border spatial planning has still been little studied. The notion of cross-border spatial planning refers to the search for a collective cross-border decision making (Herzog, 2000), which goes through a process of reinforcement of the institutions for pursuing beneficial outcomes for all the involved parts (Peña, 2007). Its primary purpose is to make the spatial planning objectives of all the border regions converge. From a conceptual point of view, the aim of cross-border strategic spatial planning is to develop a common project with a variety of actors on both sides of the border in order to discuss a joint development strategy (Durand, 2014: 117). Most of the time, the approach consists, for the spatial planners, in producing strategic documents which are not constraining, which are limited to a high degree of generalization, and which have very small effects on cross-border

integration. For Bufon (2011), "*regional cross-border policies thus remain mostly administrative and bureaucratic in character, addressing real life and real needs of the borderland population only to a small extent*". In a way, cross-border spatial planning is restricted to the definition of vague and simple orientations, which have no legal impacts on practices. Indeed, spatial planning priorities and strategies are still defined at the national or regional scale and embedded within these territorial logics.

The EU doesn't address directly the issue of cross-border spatial planning, but it has defined a spatial planning vision for the whole European area through diverse documents (ESDP, 1999; Green Paper on territorial cohesion, 2008; Territorial Agenda 2020, 2011). It has introduced a European dimension in spatial planning, by influencing territorial policies through the elaboration of guiding principles and concepts (polycentrism, territorial cohesion…) (Dühr et al., 2010, Jean & Baudelle, 2010). In order to implement this conception, the EU has established a regional policy which aims, first, at reducing the inequalities between the different European regions –the convergence policy- and which mobilizes an important part of the available structural funds (Objective 1).The EU also promotes the intensification of cross-border interactions, with the help of specific financial tools (INTERREG programs) and legal ones (Objective 3). Concerning the cross-border context, the intention of the EU Policy is to better interconnect the territories beyond the administrative borders which underline the ruptures between states and generate obstacles with regards to flows of people, goods and capital. The EU policy in favour of cross-border integration appears to be deeply impregnated by this cross-border flows approach. However, even if a lot of works have studied the notion of cross-border integration, including studies funded by the EU (Study Programme on European Spatial Planning 1998-2000, Metroborder 2009-2011), the understanding of this process remains tricky. This is why we propose, in the next step, to examine in depth the concept of cross-border integration before seeing how its different dimensions can be transferred in a planning approach. In a second step, we will see how a cross-border territorial strategy can potentially contribute to serve the dimensions of cross-border integration.

### 2.1 The different meanings of the concept of cross-border integration

In the scientific literature, the study of cross-border integration is often limited to economic interactions between border territories (Anderson & Wever, 2003). Other works have tried to see if the existing interactions between two border regions lead to a greater convergence of the development trajectories (in social, economic and urbanistic terms), and therefore to a diminution of their structural differentials (De Boe et al., 1999). The results show that when cross-border interactions are very asymmetrical, they can tend to increase the territorial disparities instead of reducing them. This observation seems to contradict the hypothesis that more cross-border interactions always lead to more convergence (Topaloglou *et al.*, 2005; Decoville *et al.*, 2013). The concept of integration can therefore not be summarized to a process which would have a single causal effect. Indeed, the cross-border integration process between border regions results from symmetries and similarities as well as from asymmetries and differentials (Durand, 2015). Consequently, in order to overcome the misunderstandings linked to the equivocal meanings of this concept, it has been deconstructed and reveal four different dimensions:

First, the **functional dimension** of integration relates to the interactions on both sides of a border for motives such as work, shopping, leisure or services. They are the results of everyone's actions. The functional dimension of integration can be compared to *the flow approach*, as defined by Van Houtum (2000). The quality of the inter-linkage between two border territories by the network of public transport contributes also to improve the functional dimension of integration.

The **institutional dimension** of integration is linked to the organizational side of cross-border cooperation and to the networking of actors in order to generate, to support or to regulate the functional dimension of cross-border integration. This governance can be either very formalized or more informal from an institutional point of view.

The **structural dimension** of cross-border integration refers to the characteristics of a geographic cross-border space (in terms of urban development, economic activities, social patterns) and to the differences and differentials on both sides of the border. A structural integration process relates to a diminution of these differences and differentials. Most of the times, socioeconomic indicators are used to express the structural integration process.

The **ideational dimension** of integration gathers a variety of distinct subjective elements linked to individual and collective representations, such as the sharing of common social and politic references and symbols, or the feeling of identification to a common cross-border living area (Donnan & Wilson, 2001). Indeed, individuals can cross the border to benefit from opportunities without sharing this feeling of belonging to an integrated space, or without developing cultural affinities.

The concept of cross-border integration appears therefore to be polysemous. The different meanings of the concept of integration show how difficult it is to foster a comprehensive cross-border integration process. Nevertheless, a cross-border spatial planning strategy can contribute, due to its trans-sectorial approach, to support the integration process by opening the debate on the most important directions which should be pursued at the cross-border scale, by institutional actors, civil society, or the business representatives.

### 2.2 How can a cross-border spatial planning strategy contribute to the different dimensions of cross-border integration?

As previously mentioned, there is no real cross-border spatial planning policy, since there is no real legal framework for it, nor common financial means that are provided at the cross-border scale. Cross-border contexts are characterized by a juxtaposition of different territorial systems with their own functioning, that is to say with their own regulation systems, tools and methods to plan urban development that are inspired by different planning cultures. As a consequence, cross-border spatial planning consists in a cooperation between actors located on each side of a border, without a clear and recognized hierarchy between them (De Vries, 2008). In addition, concrete actions remain very limited since there is no legal instruments, at the cross-border scale, which can directly impact on land use policy, and since financial means remain very restricted. Most often, cross-border initiatives are confined to sectorial approaches, put in place to regulate certain issues, such as mobility questions. It should be added that different factors influence cross-border spatial planning, such as the size of the area of cooperation, the need for cooperation, the structure of the cross-border cooperation, language barriers or cultural differences (Knippschild, 2011). For these reasons, it requires a strong coordination between the different administrative and governmental stakeholders from the different countries (Peña, 2007). Furthermore, the conceptualisation of a relevant cross-border spatial planning policy appears impossible without considering the societal issue, with its different planning cultures and priorities (Jacobs, 2014). However, a cross-border spatial planning strategy can potentially offer relevant tools to foster the process of cross-border integration. Indeed, numerous policy concepts or actions associated with the EU spatial planning policy contain references, more or less explicit, to the different dimensions previously described.

Concerning the structural dimension of integration, its translation into the European spatial planning objectives can be associated to the concept of convergence, that is to say to the reduction of the gap of development on both side of a border. From a strategic point of view, the idea is to include elements from the European territorial cohesion policy to tend towards a more homogenous development on both side of a border. This is reflected on the one hand by a convergence of the socioeconomic characteristics (reduction of the differences) and, on the other hand, by a convergence of the policies, the strategies (in terms of economic, social, educational and spatial priorities), and the legal and tax settings.

The functional dimension of integration is more clearly addressed by the planning policies, especially by the concrete inter-linkage of border territories, which is promoted in order to increase cross-border flows. At the

European level, the transport infrastructures policy is the most important tool (Trans-European Transport Network), even if the competence remains a state sovereignty.

In terms of institutional integration, the setting up of a cross-border spatial planning policy requires the implementation and the structuring of a dedicated cross-border governance between the stakeholders. In order to organize the exchanges and the debate in a constructive way, and to allow the decision-making process to take place, a multi-level governance is usually put in place, which gathers all the institutional actors which have the required legal competence to realize concrete actions and to elaborate projects. In this sense, cross-border spatial planning strategies contribute to structure the institutional integration process.

The ideational dimension of cross-border integration refers to issues relating to the perceived and lived space. A cross-border spatial planning strategy can contribute to build a common identity by creating favourable conditions for an appropriation of space by individuals. In more concrete terms, this can be fostered by taking into account the wishes of the population, or by involving it in the elaboration of the strategic documents. It can also be promoted by implementing diverse initiatives which allow to strengthen social and cultural ties between the populations (organization of events, festivals, meetings). Territorial marketing actions also contribute to improve the image of a cross-border space.

The different elements described above do not constitute a "best practice" guide, but just an attempt to conceive a new conceptual framework, built from the cross-fertilization of the works previously done in the fields of border studies and strategic spatial planning. It is with the help of this conceptual grid that we will analyse the way a cross-border spatial planning strategy has been put in place in the Greater Region.

## 3) The territorial development scheme of the Greater Region

In this part, the territorial development scheme of the Greater Region, which is still under construction, is going to be analysed with the previously described theoretical framework. Its impact on the different dimensions of cross-border integration will be underlined. But before entering the topic, it is necessary to present the context of the Greater Region as well as the approach that has been followed by the institutional actors.

### 3.1. Elements of context

The Greater Region is a 65 400 km² cross-border cooperation space which gathers more than 11 million of inhabitants. Its juridical setting, as well as its names and territorial boundaries have evolved since the first initiatives of cooperation, at the beginning of the sixties. Today, this vast cross-border space contains a sovereign State (Luxembourg), the Walloon region of Belgium, the French Lorraine region, and two German *Länder*: Saarland and Rhineland-Palatinate. Most of the challenges are concentrated around the borders of Luxembourg (see Figure 1). Indeed, concerning the functional dynamics, most of the cross-border flows are directed towards the Grand-Duchy. With more than 160 000 cross-border workers (STATEC, 2014), which represent 44% of the total employment in Luxembourg, the borders of this country are among the most permeable to cross-border work flows in Europe. Structural differences, in terms of employment opportunities, wages and working conditions explain this attractiveness of Luxembourg with regards to the surrounding areas. These flows strongly impact on spatial development within the cross-border functional region, especially concerning housing development (Sohn et al., 2014). There is another active cross-border space of cooperation around the capital city of Saarland, Saarbrücken, and the northern part of the French department of Moselle: the Eurodistrict Saarmoselle. Cross-border flows are lower there (approximately 20 000) and mostly directed to Germany. The Greater Region appears to be a very large space of cooperation in comparison to the border regions which are concretely impacted by the cross-border dynamics. Taking into account these particular settings, and the administrative complexity of the entire region, the Greater Region

institution has set itself the objective of fostering the complementarities between the territories which compose it, by establishing a common territorial strategy.

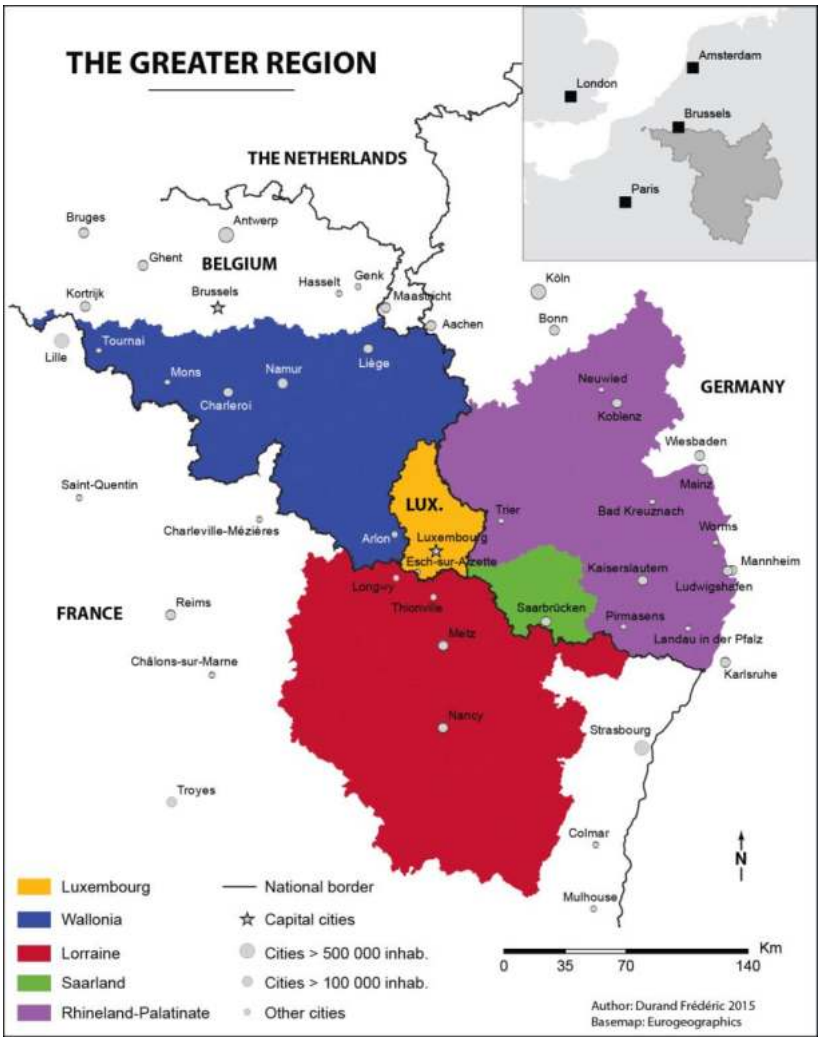



Figure 1. Location map of the Greater Region

### 3.2. The approach of the territorial development scheme of the Greater Region

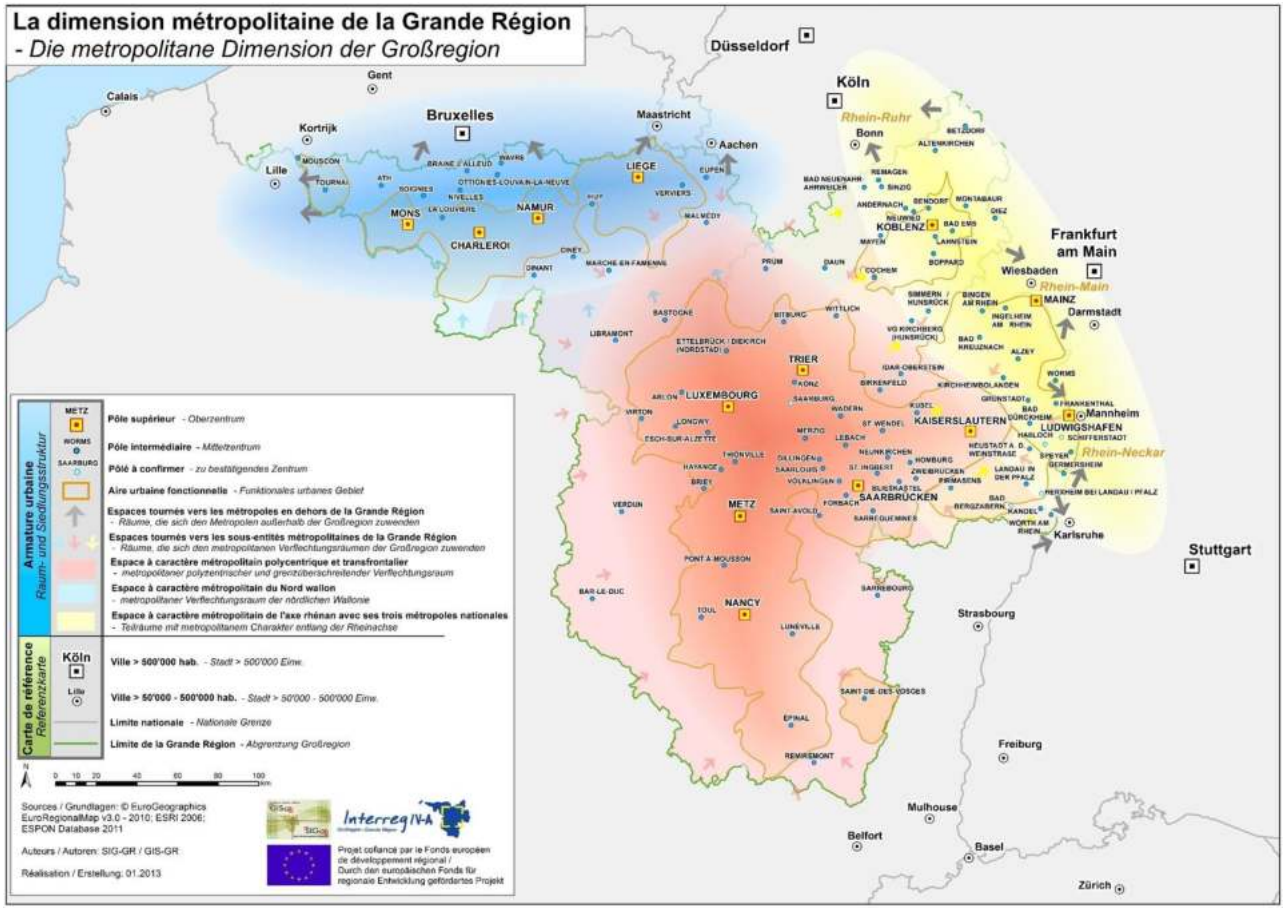
The links which bring together the different territories within the Greater Region have encouraged the authorities to initiate a strategic reflection, called the "territorial development scheme of the Greater Region", which aims at fostering the development of a cross-border metropolitan polycentric region. The observation which underpins this strategy stands on the results of the study realized in the frame of the ESPON program called METROBORDER (2010), which shown that the Greater Region, characterized by a network of small-and medium sized cities, doesn't possess the critical mass to position itself on the European scene. The cross-border polycentric metropolitan region strategy suggests a better inter-linkage of the different urban centres, in order to provide a larger offer of metropolitan functions. Through a better integration of the different urban centres, the objectives are also to generate scale economies and to share certain public facilities. The cross-border strategy might tend to constitute a socio-spatial process, driven by the public sector, through which a vision, actions and means to shape and organize spatial development of the cross-border area are developed. However, it remains limited by the fact that it is not constraining and has not the requested means to achieve its objectives.

The elaboration of this strategy has been given to the Committee for the coordination of territorial development (CCTD), a working group which gathers different representatives of the institutional partners of the Greater Region for the issues related to spatial planning. The elaboration of this strategy is a multiple steps process: First, the Executives of the Greater Region have defined the guidelines of the strategy. In the second step, which is still under process, the CCTD coordinates and leads the development of the preliminary works done in the frame of the strategy building. At last, the different parts of the strategy will be validated by the Summit of the Executives, which is the supreme authority of the decision-making process in the Greater Region.

This approach has led to the production of different documents which treat different themes. The first document, produced in 2012, deals with the metropolitan dimension of the Greater Region and consists in an overview of the urban structure of the Greater Region. It has been followed by a second one which defines the existing transport networks, and identifies, on the basis of a common agreement, the future networks which should be given priorities on the policy agendas. The third one focuses on the economic side of the spatial planning strategy, and aims at providing the representatives of the Greater Region with the required statistical and qualitative information to identify the economic domains which should be prioritized and supported by the policy-makers. Two other documents should be produced soon, on the touristic valorisation of the Greater Region and on its demographic challenges.

### 3.3. The contribution of the territorial development scheme of the Greater Region to the different dimensions of cross-border integration

The document which focuses on the metropolitan dimension has allowed to define the levels of centrality of the most important cities within the Greater Region, as well as their functional profiles. Three different metropolitan spaces have been identified which possess their own logics (Figure 2). The first so called "cross-border polycentric functional space with a metropolitan dimension" is located in the central part of the Greater Region and includes the functional space around Luxembourg, Metz, Nancy, Saarbrücken, Sarreguemines, Trier and Kaiserslautern. The second one is located along the Rhine axis and incorporates three different German metropolitan regions: Rhine-Ruhr, Rhine-Main and Rhine-Neckar. The last one is located on the northern part of the Walloon region, and is composed of cities which are under the gravity of Brussels, as well as cross-border metropolitan areas such as Lille-Kortrijk-Tournai or Aachen-Liège-Maastricht. This first document doesn't provide concrete solutions to increase the cross-border integration process, but it highlights the potential importance of a better articulation and of more complementarities within these three different spaces. It also gives precisions concerning the cross-border territorial strategy which should be envisaged within the Greater Region. Indeed, since spatial planning is carried out under the responsibility of each territory the actions should be defined and realized in accordance with the competences and tools which already exist in each territory.




Sources: CCTD 2012 (*Schéma de développement territorial de la Grande Région – volet 1 : la dimension métropolitaine de la Grande Région*)

Figure 2. The three metropolitan spaces of the Greater Region

The document which refers to the priority transport networks highlights the challenge of cross-border mobility in a context which is characterized by a growing number of cross-border workers and, more generally speaking, by an increase of flows. The first priority concerns the development of road transport infrastructures as well as the railway network (improvement of the motorway network, construction of high-speed railway line, implementation of the Eurocap-Rail project, which aims at better linking the three different European capitals of Brussels, Luxembourg and Strasbourg). The second priority targets a rise in the offer of public transport lines and an improvement of passenger's services (single information platform, pricing strategy). In this context, institutional stakeholders have already conducted bilateral initiatives, such as the "Scheme for cross-border mobility" between France and Luxembourg (another one is scheduled between Belgium and Luxembourg). Concerning the delicate issue of airports, no strategic discussion have taken place so far, due to the importance of the competition between the different territories. Waterway transport has not been considered as a priority.

The document which focuses on the issue of a spatial strategic reflection on the promotion of economic development has underlined the strong heterogeneity of the Greater Region as well as the divergences concerning the economic priorities identified in the different territories. The strong specialization of Luxembourg in the financial sector pushes the policymakers to search for a diversification of its economy, by fostering other kinds of high added value sectors, such as research, highly specialized services, IT. Saarland, which is facing a serious problem of population shrinking, tries to foster its attractiveness in order to offset its loss of qualified working force to maintain its industrial sector, mostly dealing with automotive industry and machine-tool production. Rhineland-Palatinate has also a strong specialization, in the sector of

the chemical industry and in the machine-tool production. Most of the economic actors in Rhineland-Palatinate are not really turned toward the "heart" of the Greater Region (except for the city of Trier). The economic activity of the Walloon region is also not really deeply tied to the Greater Regional context, excepted for its most eastern part, which is sparsely populated. For these reasons, Rhineland-Palatinate and the Walloon region do not seem to consider the Greater Region as the most relevant territorial scale to elaborate an economic development scheme. At the opposite, the Lorraine Region, which is encountering difficulties since the closing of numerous steel industries in its northern part, largely considers the importance of Luxembourg in its strategic reflections. Around 80 000 workers cross the French-Luxembourgish border every day to work in the Grand-Duchy. Of course, this also doesn't go without creating problems, including a feeling of strong dependency towards Luxembourg. These differences between the territories which compose the Greater Region have made it very difficult to pinpoint clear priorities at the cross-border scale. Nevertheless, two domains have been identified: the development of new materials and the silver economy (the economy linked to ageing).

➔ How do these different reflections serve the four dimensions of cross-border integration?

It seems that, generally speaking, the scheme for the territorial development of the Greater Region consists more in a modest attempt to answer to the growing importance of cross-border interactions, than to a proactive approach aiming at reinforcing the cross-border integration of the different territories. Indeed, the structural dimension of integration is not considered in the targeted objectives, that is to say that the reduction of the inequalities of development is not mentioned. At the opposite, and concerning the functional dimension of integration, the agreements and consensus are much easier to find. The need for a better fluidity of people and goods is clearly recognized by all the stakeholders. This consensus also goes beyond the mere spatial planning policy, since initiatives have been taken to improve the access to the cross-border labour market, to allow the recognition of foreign diplomas, and so on.

The scheme for the territorial development of the Greater Region doesn't address directly the issue of the institutional integration, but suggests changes to improve the cross-border governance. Indeed, a strong original impediment remains: how to define a relevant inter-territorial political coordination in a context characterized by a strong institutional imbalance between the nature of the territories (State, *Länder* and Regions), by a splitting of the decision centres, and diverging priorities? So far, no concrete decision has been taken, but the Walloon presidency intends to deepen the reflection on this specific issue and to rationalize the governance to improve its functioning. At last, the ideational dimension of integration has not been addressed in the frame of the strategy so far.

To understand the lack of more concrete results concerning some of the dimensions of cross-border integration, it is necessary to shed light on the different obstacles that the stakeholders have to face before adopting concrete resolutions.

## 4) A cross-border strategy constrained by numerous obstacles

The cross-border strategy conceived by the institutional actors aims first at fostering the economic development and at reinforcing the metropolitan potential of the Greater Region. However, this strategy is confronted to numerous difficulties which restrain its capacity to make the cross-border area more coherent. Three types of obstacles can be identified: the technical obstacles, the political obstacles, and the relational obstacles.

### 4.1. The technical obstacles

These obstacles are linked to institutional mismatches, differences in planning cultures and tools, and legal problems. These obstacles are usually the one which are the most often cited by actors in the field of cross-border cooperation. Indeed, they constitute huge hindrances to the concrete implementation of a strategy. In the case of the Greater Region, the situation with respect to this type of problems is very complex due to the number of countries which are concerned. Institutional structures and state organizations (centralism vs federalism) vary on each side of the borders. The institutional levels have not the same competences, and are not systematically represented in the cross-border governance (Nelles & Durand, 2014), even if they would theoretically be needed. This doesn't help to serve the dialogue between actors and to reach a consensus. Luxembourg, of course, has the full competencies of a sovereign country. The *Länder* in Germany benefit a strong autonomy, as well as the Walloon region. The Lorraine region reflects a more centralized structure of the French territorial organization. Indeed, the central State authority is involved in the cross-border governance through the "Prefecture" of Lorraine. These institutional mismatches impact the efficiency of the cross-border governance.

Beyond these institutional mismatches, planning cultures largely diverge between the different territories of the Greater Region. A distinction can be done between the *regional economic planning approach*, which dominates in Lorraine and in Luxembourg, the *land use management approach*, in the Walloon region, and the *comprehensive integrated approach* in the German *Länder* (Newman & Thornley, 1996). The confrontation between these different planning conceptions doesn't constitute, at first sight, a strong impediment to cooperation, since the setting up of a cross-border territorial strategy constitutes a flexible and non-constraining process. Nevertheless, the conceptual tools that are used are not always understood in the same manner, as "polycentrism", "centrality" and "metropolitan". This impacts on the mutual understanding of the strategies that are followed by the neighbours. Moreover, the priorities that are targeted by the different representatives of the planning authorities diverge. Whereas the promotion of economic development is prioritized by the French and the Belgium actors, the issue of mobility seems to monopolize the attention of the Luxembourgish stakeholders. Our analyses did not allow us to see if the German actors were really following a *comprehensive integrated approach*, in line with the description given by Newman and Thornley.

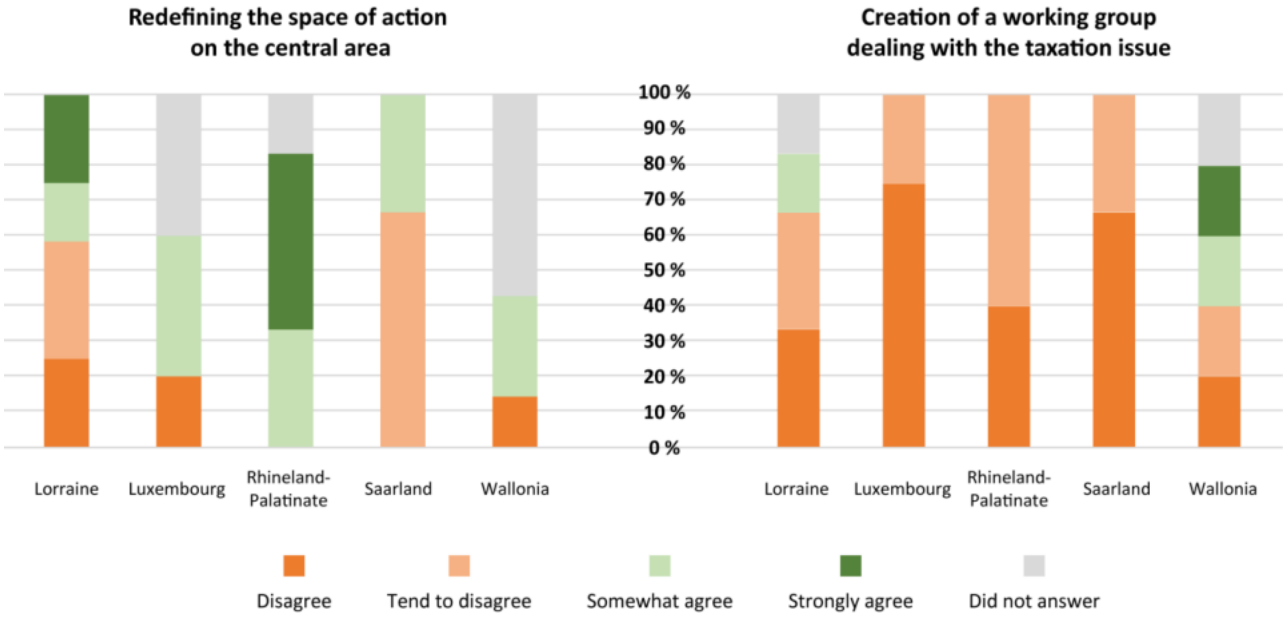
In addition to these obstacles, the inequalities in terms of economic development and tax regimes between the different territorial members of the Greater Region make the situation even more complex. The tendencies concerning the evolution of the average wages, the variation of the total tax rates on business, the total labour cost and the unemployment rates show that the inequalities, which are very high, will probably not decrease in the coming years. These disparities tend to generate, for some territorial actors, a feeling of dependency on the "wealthy Luxembourg" which provides work opportunities. When the qualified work force from France, Germany, and Belgium crosses the border every day to work in Luxembourg, it is sometimes seen as being at the expense of the capacity of these territories to rebound and to develop their economies. These feelings lead to defensive postures that are not in favour of a more peaceful and fruitful dialogue.

### 4.2. The political obstacles

The development of a cross-border strategic reflection raises political problems linked to the representativeness of the stakeholders that are involved. For instance, the local actors are not members of the decision-making process within the Greater Region, even if they are strongly impacted by the border effects and by the challenges of cross-border integration. On the contrary, state actors still dominate the cross-border governance sphere and largely influence the outputs of the debates (De Vries, 2008; Dörry & Decoville, 2013; Durand & Lamour, 2014). The case of the Greater Region is no exception to this rule, and the content of the exchanges expresses the differences concerning each national strategy. The cross-border cooperation is thus, in a way, the place where national strategies are confronted, where everyone supports his position. State actors import in the debate their "institutional culture", and defend most of all the interests of their institutions.

Beyond the confrontation of the different national priorities, the stakeholders have also diverging opinions concerning the desired future of the cross-border space. During the realization of the preliminary study related to the economic part of the strategy, a workshop took place, which highlighted these contrasting positions. Two issues discussed on that occasion show divisions between territories (Figure 3).

Figure 3. Stakeholders positions (according to their territorial belonging) concerning cross-border related questions




Sources: Data from the workshop conducted in the frame of the study on the development of the economic component of the Territorial Development Scheme of the Greater Region (2014)

Concerning the first question, which suggested a redefinition of the space of action on a restricted area centred on the space where most of the interactions take place, strong differences appeared between the positions defended by the different actors. The stakeholders from Lorraine and the Saarland are not in favour of such a redefinition, and they suggest to stick to the boundaries of the Greater Region as a whole, whereas the other actors were more favourable to the suggestion. The lack of consensus on such a crucial issue makes it impossible to converge towards a more efficient implementation, in concrete actions, of the general orientations of the strategy.

Concerning the thematic of tax regimes, which generates important disparities between the attractiveness of the different territories on some specific types of activities, goods and services, a quite unexpected consensus appeared. All the stakeholders agreed to answer that this topic should not be addressed by a dedicated working group. Such a rejection clearly shows that beyond the appearing desire of more cross-border cooperation, competition and national interests remain stronger. Tax regimes is a very sensitive and strategic tool, and sharing information related to these strategies is not conceivable. This taboo is nevertheless a real political obstacle, which restrains discussions within the cross-border governance.

Furthermore, there are other division lines between the actors on the issue of cross-border governance. Should the local actors be more involved? Should an integrated team, dedicated to cross-border issues and funded by the different territorial members be created? The answers to these questions are far from converging, and these oppositions constitute serious impediments to the success of the cross-border territorial strategy.

### 4.3. The relational obstacles

At last, another type of obstacles should be considered, which lies in the formal or informal relations which tie individuals and that can be called "relational obstacles". These obstacles should be differentiated from the political obstacles because they are not linked to differences in terms of ideologies or policy priorities, but because they depend on the quality of the human relations between members of the cross-border governance. This type of obstacle is rarely studied *per se*, and it is very complex to obtain reliable information on such a sensitive issue. Cross-border cooperation has a lot to do with the image that it should reflect from the policymakers, and for this reason the communication on cross-border governance is usually quite controlled. However, a good understanding of the functioning of a policy network, through the perceptions that each stakeholder has from the other members of the decision-making process is a necessity in order to better grasp the limitations or successes of the different initiatives. Indeed, cross-border governance is most of all a space of dialogue and exchange between individuals who do not have the same social capital, the same legitimacy, or the same leadership. In order to understand the power relations which structure the decision-making system, 41 experts belonging to 34 different organizations have been interviewed in a dedicated research project[1] (Dörry & Decoville, 2013). These experts were selected for their involvement in the cross-border governance related to the issue of public transportation. In a first step, we have asked the actors to relate their subjective feeling concerning the importance of the other actors in the decision-making process. By summing the scores obtained by all the individuals who belonged to the same organisations, we could provide an estimation[2] of the perceived importance of the different institutions, considering that the social capital of people "*aggregates into the social capital of organisations"* (Burt, 1992: 9). This "perceived" importance is not the same as the "institutional" one, which is given by the official legal competences. Table 1 presents the five organisations considered as being the most important.

Table 1. Main organizations perceived as important within the cross-border governance network on the public transportation issue

| Organisations | Perceived importance in the decision-making process |
|---|---|
| Ministry of Sustainable Development (Luxembourg) | 55 |
| Lorraine Region (France) | 38 |
| National Transport Agency (Luxembourg) | 20 |
| Ministry of Economy, Transport, Agriculture and Wine (Rhineland-Palatinate) | 17 |
| Ministry of Environment, Energy and Transport (Saarland) | 17 |

The first finding is that two institutions appear as being much more important than all the other ones in the subjective representations of the interviewed people, even if the Greater Region includes four countries and five regions which should have, theoretically speaking, similar weights in the decision-making process. These two institutions are the Ministry of Sustainable Development and Infrastructure of Luxembourg (MDDI) and the Lorraine Region. The MDDI is both an initiator of projects and a key decision-maker. The Lorraine Region has been given the competences of managing railways transportation in 2002. The three following institutions are the National Transport Agency (Luxembourg), the Ministry of Economy, Transport, Agriculture and Wine (Rhineland-Palatinate) and the Ministry of Environment, Energy and Transport (Saarland). No Belgian stakeholder appears in the top most important ones. These differences in the level of perceived importance in the decision-making process appears to be more due to the level of involvement of the individuals who represent an institution than to the legal and official competences of the

[1] Metronet Project, funded by the National Fund of research, Luxembourg.
[2] The score corresponds to the number of times one or more actor(s) belonging to a single institution has (have) been mentioned as "important in the decision-making process".

latters. It should be noticed that most of the time, the actors who participate in the cross-border governance have this task in addition to other attributions that they have to fulfil for the institutions they belong to. In the hierarchy of their tasks, the cross-border files are seldom the first priorities.

In the frame of these interviews, the experts have been asked to express their perception concerning the involvement, the leadership and the trust capital of the other actors involved. For that, the interviewees were asked to give a value ranging from 1 (weak) to 3 (strong). The figures presented in table 2 correspond to the average values obtained by each individual, according to the perceptions the others had from him. Of course, the results were anonymized, and they translate subjective representations of the situation, and not absolute ones. Table 2 shows the five most important actors of the previously mentioned institutions.

Table 2. Perceptions of the involvement, the trust capita and the leadership qualities of a few important stakeholders in the cross-border governance

| | **Involvement** | **Trust** | **Leadership** | **Type of actor** |
|---|---|---|---|---|
| Actor 1 | 3,0 | 2,9 | 2,9 | driver of the CB cooperation |
| Actor 2 | 2,7 | 2,5 | 2,1 | driver of the CB cooperation |
| Actor 3 | 1,9 | 1,7 | 2,4 | hindrance to CB cooperation |
| Actor 4 | 3,0 | 2,7 | 2,5 | driver of the CB cooperation |
| Actor 5 | 1,5 | 2,5 | 2,0 | not involved |

The actors obtained scores which greatly vary from one to another concerning their capital of confidence (trust), their quality of leader or their level of involvement. Table 2 just gives a short overview of the different profiles that can be identified. The stakeholders who obtained good values in the three above mentioned fields can be view as drivers of the cross-border cooperation. They are involved, they are recognized, and they can stimulate the debate. On the contrary, some actors can be characterized as constituting a hindrance to the cooperation. Indeed, they are important in the decision-making process, but they do not inspire "trust" to the other members. The reasons of this lack of trust can vary. Either they are seen as actors who are not really in favour of strengthening the cross-border cooperation, or they are seen as lacking the required diplomatic skills. At last, a third type of actors can be distinguished, the ones who are considered as being not engaged and committed in the cross-border issues.

This very brief summary of the survey has no ambition to present the results more in details, but to remind that the elaboration of a cross-border strategy is not only impeded by the well-known obstacles of the institutional mismatches or diverging policy priorities. It is also, sometimes, limited by the bad quality of the inter-individual relationships. Cross-border governance is not a compulsory demarche, it relies on the desire and the willingness of some actors to create, strengthen or maintain ties with the neighbours. It consists in a fragile network mostly driven by policymakers and civil servants who show very different levels of involvement. It is not easy to evaluate the impact of these relational obstacles in comparison to the technical or the political obstacles, but one thing is sure: technical problems can be solved, whereas it is much more complicated to recreate trust when it is not existing anymore.

## Conclusion

At its actual stage of development, the scheme for a territorial development of the Greater Region appears to be seriously hampered by the extreme complexity of the geographical configuration, with distinct territorial identities, but also by technical (multiplicity of actors, institutional mismatches, variety of competencies), political (divergence of priorities) and relational (lack of trust, of legitimacy) obstacles. It should be reminded that this strategy is still an ongoing process, and that no definitive conclusion can be given. However, it seems that it cannot serve the ambitions of promoting a more comprehensive cross-border

cooperation, in the different dimensions of the meaning. This strategy can be qualified as the one of the "smallest common denominator", even if it would be unfair and false to say that cross-border cooperation in the Greater Region has led to no result. In the field of cross-border public transportation, for instance, numerous cross-border lines and services were created to accompany the economic dimension of cross-border integration. Facilitating the workers flows is necessary for Luxembourg, which needs work force for its economy, but also for the border regions, which are facing high unemployment rates and which see the proximity of Luxembourg as an opportunity to develop their residential economy, based on the incomes of the cross-border workers. Allowing a better fluidity of these flows constitutes a win-win challenge. But the other dimensions of cross-border integration are very poorly addressed so far. The complexity of the context is often evoked, but when we try to look beyond the scene of the cross-border governance, by looking at the individuals who drive it, and not at the institutions which are represented, it appears that solving the technical problems is not a purely technical issue, but more a question of willingness. Studying the importance of these notions of trust, leadership and commitment is crucial to better understand the "disillusions" often associated with cross-border governance (Knippschild, 2011), and to be more nuanced with respect to the EU paradigm, according to which more interactions should lead to more integration.

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# RE-THINKING LOCAL GOVERNANCE IN POST-COMMUNIST COUNTRIES: THE CONCEPT OF URBAN TASK FORCES AND ITS APPLICATION IN THE STATUS PROJECT

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*While there is a vast literature on the specific problems of small and middle-sized towns in Europe, the effect of planning issues on development opportunities in post-communist countries in these towns has been less documented. In this case, the centralist approach and focus on obsolete normative planning often determines a weak capacity of local authorities and lack of stakeholder involvement in strategic planning processes.*

*The STATUS project (Strategic Territorial Agendas for "Small and Middle-Sized Towns" Urban Systems) in South-East Europe can be regarded as an attempt to stimulate a paradigm shift in local governance and integrated development in lower tier cities from several post-communist countries. The aim of the project was to design strategic territorial agendas (flexible urban programming tools transposing the results of local workshops into a coherent strategic planning document) for ten partners, based on a participative planning methodology. Through the STATUS project the concept of territorial cohesion was put into practice, making it easier to grasp by decision makers at different levels and defining a governance framework that facilitates a more effective and efficient use of EU structural funds.*

*This paper overviews the Strategic Territorial Agendas realized in six partner cities located in post-communist countries, with a special focus on the future implementation of these agendas by the Urban Task Forces (UTF). Crystallized during the STATUS project, the latter comprise the most relevant local stakeholders interested in local development. Benefiting, in some cases, from cooperation platforms known as Urban Centers, the UTF can be regarded as an alternative governance framework for ensuring the integration and correlation of sectorial projects at local or metropolitan level.*

**Keywords**: Participative Planning, Small and Middle-Sized Towns, Stakeholder involvement

## 1. Introduction

The paper is based on the authors' experience in the design and content management of the project STATUS (Strategic Territorial Agendas for "Small and Middle-Sized Towns" Urban Systems), initiative financed by the European Commission under the programme SEE 2007-2013 (South East Europe, assignment running from January 2013 to December 2014). The SEE programme was an instrument that, in the framework of the Regional Policy's Territorial Cooperation Objective of EC, aimed to improve integration and competitiveness in an area (namely Balkans and Adriatic Sea Basin) by presenting, from a geopolitical viewpoint, multiple and articulated identities and sensitive urban questions. STATUS tackled the problem of incoherent urban and regional development in South Eastern European countries by jointly developing an approach that can assist cities in designing integrated and sustainable urban agendas and place based strategies by practice of participatory planning tools (Elisei, 2014a).

Out of the ten territorial partners in the project (Figure 1), six are located in post-communist countries: Montenegro (Herceg Novi), Romania (Alba Iulia, Baia Mare, Satu Mare), Republic of Moldova (Bălţi),

Republic of Serbia (Temerin).The aim of this paper is to analyze how the work accomplished in project STATUS has managed to propose an alternative, integrated and participatory planning model in countries where planning systems are often regarded as obsolete and strongly focused on normative and regulatory aspects.

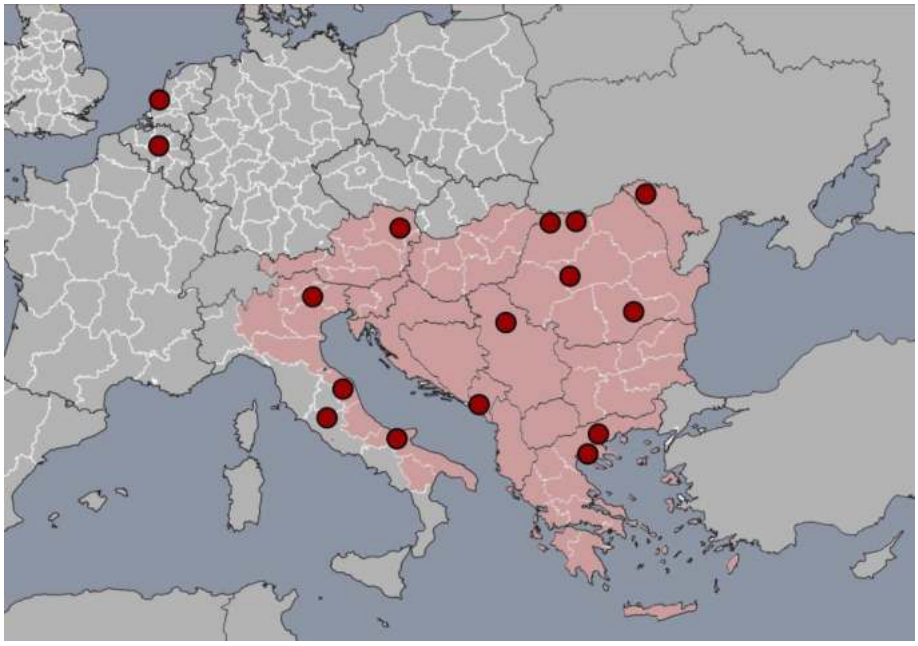

Figure 1. The STATUS project partnership (authors' contribution)

## 2. Background

Small and middle-sized towns comprise 72% of the European population (OIR, 2006), as 97.9 % of the European cities have a population of under 100,000 inhabitants (Elisei, 2014b). Consequently, there is a need to shift focus in at EU level from High Density Urban Clusters (HDUC) to smaller urban settlements, as a matter not only of policy relevance, but also of spatial justice (Servillo et al, 2014).

Overshadowed by larger urban agglomerations, small towns need to find local solutions to capitalize their endogenous potential, often by strengthening their social and cultural networks (OIR, 2006).However, problems with strategic planning culture are evident in partners in post socialist countries, which often fall short in ensuring coherent long-term development and even access to EU funds.

Strategic planning should be centred on the elaboration of a mutually beneficial dialectic between top-down structural developments and bottom-up local uniqueness (Albrechts, 2004). In the first ten post-revolution years, planning practices in post-socialist countries showed a growing interest, especially from capital cities, in going strategic (Tsenkova, 2005). From the Baltics to the Balkans, cities have gone through a process of strategy development with a varied degree of success (Buckley and Tsenkova, 2001; Maier, 2000; Nedovic-Budic, 2001). This first generation of strategic plans usually have been an "import" of models and methodologies from western planning cultures, but again the ownership of these instruments has been limited to elites and not fully participated by an enlarged arena of urban actors. To generate planning results through participative approaches is still something to achieve, as we still deal and strive with political and technocratic legacy generated in those years. During socialism, strategic

planning was done in the upper echelons of political power, but planners were still called upon to determine how the goals handed down by the bureaucracy will be incorporated in urban space (Stanilov, 2007). Pre-1989 normative plans and procedures, in the post-communist planning environment, were considered to be no more effective and efficient as they represented the legacy of a system shaped according to some principles inspired by the ideology of that time:fast industrialisation, egalitarian development, containment of the built-up areas and collective housing in high density residential areas (Elisei and Pascariu, 2012).

There is a tendency in strategic planning to ensure the design of strategies which allow both the participation of various stakeholders and multi-source funding (Ciaffi, 2005). In this context, new governance allows for a successful integration of horizontal and vertical initiatives and actors, thus including citizens, enterprises, different municipality departments and other public institutions by realizing shared projects (Weeber et al, 2011). While the cooperation between groups to achieve a common goal is referred to as governance, in the case of the EU, where the actors involved can be located at different levels of government, the term multi-level governance is used (Grisel & van de Wart, 2011).

Multi-level governance indicates cooperation among the various players in a vertical order, involving national, regional and local players in the design and implementation of EU policies. But it has its horizontal dimension as well, in compliance with the EU principles of subsidiarity and partnership. The provisions for setting up partnerships at local/regional level and the need for involving relevant stakeholders into planning, programming and implementation of interventions, had already been part of the Structural Funds regulations since 1988. The aim of good governance hasn't changed since then: it requires commitment, involvement and engagement at the various levels of governance. Consequently, the problem of multilevel governance mostly concerns the ways of coordinating activity between and across levels of government, while also taking into account subsidiarity, a key organizing principle of the EU system (Grisel & van de Wart, 2011).It is recommended that bottom-up and top-down processes be integrated within multi-level governance models, as the former refers to an extensive degree of motivation while the latter guarantees resources and specialized means (Ciaffi, 2005).

Tasan-Kok & Vranken (2011) single out spatial policy instruments that are designed to facilitate integrated action from a spatially, administratively and sectorial point of view in a multi-dimensional setting by taking into consideration environmental, social, cultural and organisational aspects. The local actions plans, defined as such instruments, must be developed at local level within a framework established at a higher level of public governance hierarchy. The main aim of this kind of instruments is to avoid fragmented interventions and replace them with strategic interventions which seek integrated actions with a multi-dimensional, multi-actor and multi-scalar setting for achieving better results (Tasan-Kok & Vranken, 2011).

The advantages of participatory instruments are mainfold: they focus on goals by creating a framework for structuring diffuse discussion, they are democratic as they ensure the equal participation of all members in the group and are efficient as workshops can bring quick outcomes and answers. In participatory planning approaches, it is crucial to involve target groups into the early stages of the project, as community engagement in the beginning can determine the effectiveness of strategy development and implementation in later stages (Demeter, 2012).

The STATUS project, shortly described below, has placed a great focus on these kinds of participatory instruments, knowing that widening stakeholder involvement and building social networks contribute to the institutional capital (Healey, 1998), with the Urban Task Forces considered to be partnership structures where stakeholders share planning and decision-making responsibilities, strongly resembling

planning committees (Arnstein, 1969) or URBACT Local Support Groups. The introduction of the participatory approach has been a great challenge especially in post-communist countries, where the heritage determined weak local governance systems (Elisei, 2014b).

## 3. STATUS project: Objectives and Methodology

The STATUS project's overall objective was to assist city authorities of the SEE countries in developing Strategic Territorial/Urban Agendas (ST/UA), depending on the scale of the partners' institutional territorial management, as a tool for sustainable and integrated development, and in implementing Urban Centers (UC). Finally, generated practices and emerging city networks have been archived and promoted through the SEE Web Platform (SEE-WP – www.seecityplatform.net).

STATUS project's main challenge was defining locally rooted urban projects, based on a strong involvement of local communities in the creation of Urban Task Forces, inspired by the URBACT Local Support Group model. The project served as a platform to observe urban community action in South-East Europe states, many of them post-socialist and still operating through centralistic top down decision making, through the interaction with new governance contexts, where strategic territorial and urban decisions are being shared (Elisei, 2014a).

STATUS is structured in three main phases (Figure 2):
1. Analysis
2. Urban programming
3. Creation of urban centers

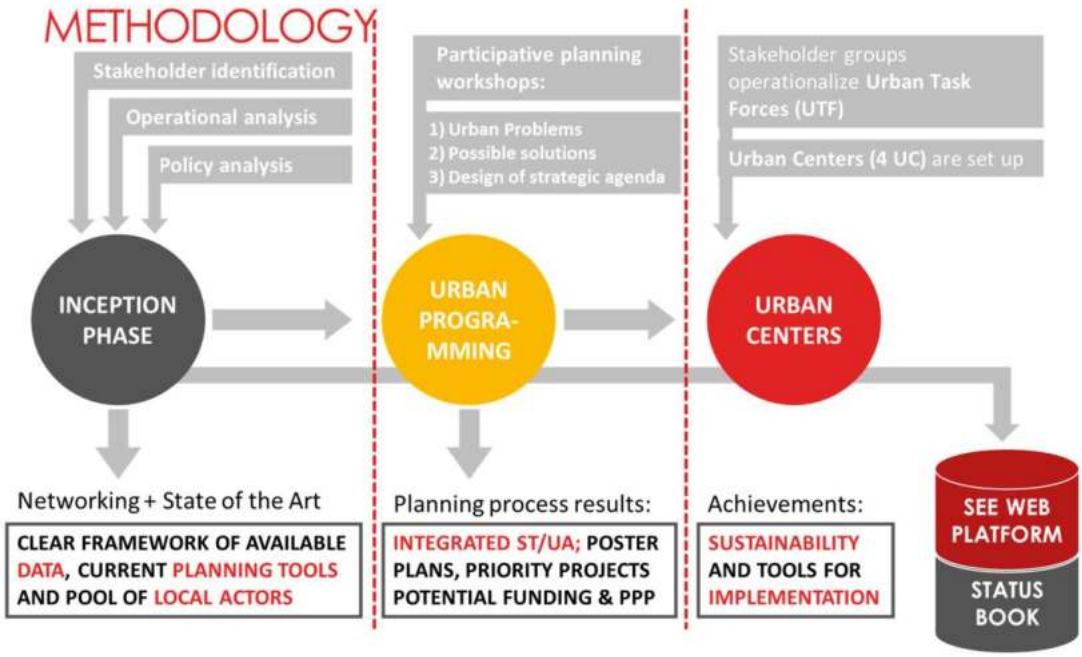


Figure 2. STATUS Project Methodology (authors' contribution)

The first phase has been designed proposing a set of activities that permit planners to assess the current planning "state of art" in the partner territories, from stakeholder analysis to operational analysis and the assessment of each partner's planning framework.

The second phase was based on the realization, in each partner city, of three workshops involving stakeholders and citizens and focusing on (1) problem identification in a set of planning domains, (2) identification of solutions through the creation of local working groups helped by international experts in town and regional planning and (3) design of the final strategic planning document and graphical representation (poster plan). STATUS aimed at finding the right solution to operationalize the concept of integrated territorial approach, thus the result was named a Strategic Integrated Urban/Territorial Agenda and not a plan, a flexible urban programming tool transposing the results of the local workshops into a coherent strategic planning document which contains the vision, mission, action plan and monitoring. Moreover, the Agendas were designed to be also a tool for future partnership and negotiation with the national and EU levels, containing a portfolio of the flagship projects for each city together with the potential funding sources and local, regional and national opportunities for partnership.

The last phase, which will be further detailed in this article, related to the consolidation of an Urban Task Force (UTF) from the stakeholders involved in the three urban programming workshop, with the opportunity to finance the realization of urban Centers as physical places to be run by the UTFs (Figure 3).

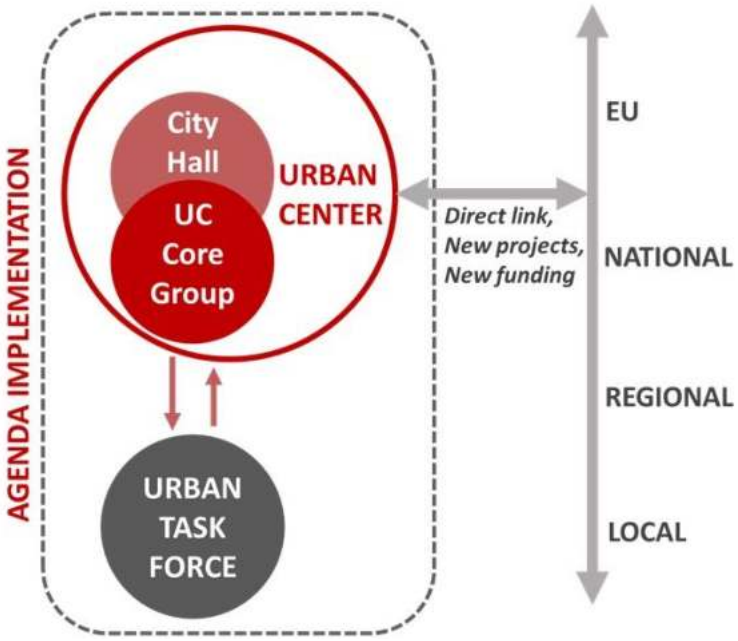


Figure 3. The relation between Urban Task Forces and Urban Centers

Urban centers are places generated by the experience of participation initiated through the STATUS methodology. In these places the continuous urban dialogue that will monitor the agenda results in the incoming years will be generated, but, very important,they will represent the engine of future development initiatives in involved partners' areas.

Synthetically we can describe the role of an Urban Center as (Ginocchini, 2014):
• A *Megaphone*, explaining the city's evolution and promoting its projects and programmes
• An *Antenna*, collecting the ideas received from civil society;
• An *Arena*, a platform for publicly discussing urban projects, with the possibility to thus influence public policy

In the following section, an analysis of Strategic Agenda provisions and Urban Task Forces in the six territorial partners located in post-communist countries will be realized, with the progress regarding the implementation of urban Centers also being taken into account.

## 4. UTFs – a local governance framework for implementing Strategic Agendas

This section is based on contributions from the territorial partners regarding their process of designing the Strategic Agendas and consolidating their Urban Task Force during the STATUS project.

In the city of ***Bălți*** (Republic of Moldova), the Strategic Urban Agenda has had a great focus on the re-vitalization of the city's central area, with the five priority projects related to public space interventions and the provision of different services to the population. The Urban Task Force will function on the basis of a *Regulation on the functioning of the Urban Task Force* and a *Parnership Agreement*, being directly supported by the administration of the City Hall of Bălţi municipality. The interesting part about the Urban Task Force in this case is its division into three working groups of *Expert Teams*: (1) economic field group, (2) socio-cultural field and (3) public space field. An Urban Center was also created, as a division within the Local Public Administration managed by the team involved in the implementation of the STATUS project. While created for the specific focus of providing a platform for the implementation of the Strategic Urban Agenda, the Urban Center has become a talking point and is currently promoted as a tool for urban planning and development at the „Upper-Prut" Euro-region level. The sustainability of activities will be ensured by the additional role of the Urban Development Center to constantly search for opportunities and new sources of funding to implement new projects designed together with the Urban Task Force

In the case of ***Herceg Novi*** (Montenegro), the Strategic Urban Agenda was focused on developing tourism and infrastructure, with the target being to establish the city as a well-established, all year-round touristic destination. The Urban Task Force that emerged throughout the participatory workshops gathered great array of stakeholders: representatives of the public sector, NGOs, planning and engineering experts, professional association representatives, as well as representatives from institutions at national level. This has been an important step forward, if we take into account the fact that, at the beginning of the project, local public authorities had identified weak local public participation as one of the priority problems in the area.

Based on the paradigm of integrated sustainable development, the Strategic Urban Agenda in the city of ***Alba Iulia*** (Romania) contained projects from all development axes for the 2014-2030 period. The Urban Task Force gathered not only representatives of the local public authority (the city manager, municipal chief architect and directors of the departments of urban planning, environment, mobility and finance), but also other qualified stakeholders from both private sector and civil society: business, academics, NGOs, cultural institutions etc. As a result, more than 30 people are expected to continue to contribute in the implementation of the priority projects proposed by the new Strategic Urban Agenda. While Alba Iulia has not developed an Urban Center within the STATUS project, guidelines for its future development have already been drafted, with special attention being given to the management team of the urban center which would be needed to ensure its financial and functional feasibility.

***Baia Mare*** (Romania) was the only territorial partner in the STATUS project that had its Strategic Agenda designed at metropolitan level. The priority projects selected with the aid of local stakeholders focused mostly on economic development through the creation of a wood-industry cluster related to future industrial parks, as well as on infrastructure development – road network, water and sewage and waste management. Consequently, the Metropolitan Task Force (MTF) formed within the STATUS

project was conceived as an executive entity responsible for preparing and monitoring the implementation of the Strategic Territorial Agenda. Its creation was based on a partnership agreement which was signed between the Metropolitan Area Association, local public authorities at county and local level, professional associations and private companies providing utilities or public transport services. The Metropolitan Center, as the physical space where the Metropolitan Task Force will function, has been established in the premises of the Baia Mare Metropolitan Area Association's headquarters as a „factory of ideas". The Center's scope is to promote of the efforts undertaken by the Baia Mare Metropolitan Area Association and MTF, while also being the place to collect feedback upon the initiated project proposals. The Metropolitan Center is to ensure its resilience through various means, from constituting the reference point for local knowledge incubator, creative think-tank for wider metropolitan opportunities and facilitating schemes, territorial planning center bridging the private sector and community engagement, as well as a "polis theatre" in accommodating harmonised needs within the metropolitan area, in its capacity of implementing the BMMA Strategic Agenda.

In ***Satu Mare*** (Romania), the Strategic Urban Agenda included projects related to diverse domains such as accessibility, environment, energy efficiency, tourism development, social and economic development or public administration. The Urban Task Force consisted of a number of stakeholders and City Hall experts who had already been involved in the participatory process of designing the Strategic Agenda. In Satu Mare, the envisaged role for the UTF is that of a consultative body whose main role will be to monitor the implementation of the strategy. The UTF members are set to assume different tasks according to their individual domain of expertise, with the overall structure being flexible enough to allow, if necessary, the creation of thematic or project-based workgroups.

The strategic priorities for the Municipality of ***Temerin*** (Republic of Serbia) included brownfield redevelopment, tourism and recreational development in areas with historical heritage and eco-farming. The Urban Task Force has included a wide range of experts: a University professor in regional studies, a traffic engineer, an urban planner, an architect, a civil engineer, a regional development specialist, a business cluster manager, an industrial designer, an economist and a lawyer, who have all been involved in the elaboration of the Strategic Urban Agenda. The UTF is shaped as a non-formal association with the primary mission of working on the ideas, methods and tools of proposed in the Strategy.

The Urban Task Forces of the post-socialist countries in STATUS are as diverse as the subjects tackled in their Agendas, but nevertheless there is a core common understanding of their overall role and importance in ensuring the sustainability of the initiative started by the project.

For the partners analysed in this article, which have understood that their participatory processes are very much at the beginning of the roadmap towards true, active and lasting community co-creation of planning instruments, it was important to focus also on *form*: clear provisions on future activities of the UTF and UC, on frequency of meetings and organizational framework, in order to keep the momentum going.

However, in the case of all partners, the aim of creating the Urban Task Forces has been to ensure lasting effects of the actions employed during the project, through a negotiated, better informed and long-term involved local dialogue. Further than that, it was each of the six cities' prior experience and focus of the agenda which made the difference between structure, composition and future activities of the UTFs.

## 5. Conclusions

The STATUS Project represented a test bed for participatory and integrated area-based strategies for urban areas, focusing cohesion policy resources on performance-yielding interventions, collaboration,

capacity building and fund integration. During its two-year implementation period, it managed to prove an important point – that, given the opportunity of experience exchange between international experts, cities of the more advanced parts of Europe in terms of participatory planning and cities of the ex-EasternBloc, the latter can create and implement the tools necessary to transition from traditional planning to an integrated territorial approach, and truly capitalise on the potential of public participation. It proved that small and middle-sized cities from Romania, Moldavia, Montenegro and Serbia can move away from deterministic and rule-driven planning and invest themselves into adopting, through co-ownership and a collaborative process, a flexible strategy to reach their goals.

Yet the STATUS project has been a guided process, and its main challenge still lies ahead. The future of the Strategic Agendas and set-up local processes lies with both the administrations and the stakeholders which have been involved in STATUS: the Urban Task Forces will need to self-organize and take ownership of the flagship projects designed in the Agendas, while the local administrations will need to ensure a steady investment into the management of the project portfolio and its implementation, making the most out of the European, national and local funding opportunities.

In this sense, the EU Member State cities (Baia Mare, Satu Mare, Alba Iulia, all in Romania) have an advantage: the Partnership Agreements signed for the 2014-2020 Multiannual Financial Framework provide very important funding opportunities for the flagship projects of the Agendas, as well as a framework for the use of two new, innovative tools for integrated development: Integrated Territorial Investments (ITI) and Community-Led Local Development (CLLD).

Last but not least, continuing the legacy of STATUS is not just about implementing the co-designed projects of the Agendas, but also keeping new ideas and projects coming, as the needs of the city and its inhabitants change. Perhaps the most important lesson which the partners have learned in STATUS is that the traditional planning instruments and top-down attitude are obsolete tools for fostering coherent urban development, and that the latter can be achieved only by sharing power and adopting more flexible, inclusive and integrated tools. The catalysts for these changes should be the Urban Centers, as participation outlets where the future development of the cities can be monitored, intervened upon should the conditions and opportunities change and further shaped through the generation of new ideas and new projects.

The Strategic Agendas and participatory processes out of which the Urban Task Forces and Urban Centers crystallized responded very well to these challenges so far, and as they are highly replicable instruments, they could be successfully promoted and developed in other post-communist countries and cities that also lack other operational planning instruments.

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# TWENTY-FIVE YEARS OF EU DEBATE ON TERRITORIAL POLICY: TIME TO GO BEYOND INTERGOVERNMENTAL RHETORIC!

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***Abstract***

*Twenty-five years have elapsed since the first ministerial meeting on European territorial policy held in Nantes in 1989. It is worth taking stock of progress achieved by policy makers since this landmark event. Arguably, mixed results have been achieved, in terms of both content and process. The practical implications of the recognition of territorial cohesion as a formal EU policy objective have not yet been fully clarified.*

*Participants in the process raised various key policy issues, several of which remain to be clarified. Three of them will be commented upon in this paper:*

- *EU cohesion policy remit: should this policy be mainly dedicated to a mere communicating vessels game between better- and less well-off regions (question "how much EU funding in which regions?"), or on the contrary, should it also encompass a content-related and territorial dimension (question "ESIF[1] to do what and where?"); put otherwise, what are the implications for the EU territorial policy and should reference policy maps be elaborated to illustrate geographically differentiated policy options?*
- *Interdependence between various areas of the EU and the subsequent need for transboundary[2] territorial integration; to what extent have the successive INTERREG territorial cooperation initiatives actually contributed to a genuine territorial integration process?*
- *Governance / decision-making process in the area of EU territorial cohesion: should the "Community method" apply to decisions to be made in connection with EU territorial development? How should the subsidiarity principle be applied, with what specific practical implications?*

## 1. Introduction

A quarter of a century ago, on 24 November 1989, the first informal meeting of ministers responsible for spatial planning in the European Community[3] took place in Nantes. It had been convened and was chaired by Jacques Chérèque, French Minister Delegate for spatial planning, who had also invited his friend Jacques Delors, the then President of the European Commission (Faludi & Waterhout, 2002, pp.

[1] ESIF = "European Structural and Investment Funds"

[2] As recommended by Dühr, S., Colomb, C. and Nadin, V. (2010), the word "transboundary" is used generically in this paper to refer to various types of territorial cooperation, generally labelled "cross-border" and "transnational" in the INTERREG territorial cooperation supported by the EU.

[3] At the time, the "European Union" was still an unknown concept

34-35). This event, which went relatively unnoticed at the time, triggered a long-lasting policy process, which led to the publication of the European Spatial Development Perspective (ESDP) and the two successive versions of the EU Territorial Agenda ("TA 2007" and "TA 2020").

This process has already been extensively commented upon in various publications. Providing a detailed description of it in this short paper would be pointless. Suffice it to recall some key-milestones. In 1991, it was decided in The Hague to set up the "Committee on Spatial Development (CSD)", which brought together the ministerial departments responsible for spatial planning in the member states and the European Commission. In 1993, a large majority of Ministers participating in the Liège informal Council supported the elaboration of a "European Spatial Development Perspective (ESDP)". The first official draft of the ESDP was adopted in Noordwijk in 1997 and the ESDP itself in Postdam in 1999. In parallel, a new strand was introduced in 1996 in the INTERREG II Community Initiative "to foster transnational cooperation initiated by Member States and other authorities with responsibilities for spatial planning within a framework of common territorial development priorities" (EC, 1996, p. 23). This transnational cooperation strand has been maintained until now in all the generations of INTERREG (or "European territorial cooperation") programmes. In 2000, the CSD (which was informal in nature, albeit hosted by the European Commission), was replaced by the formal "SUD (Spatial and Urban Development) sub-committee" of the Management Committee of the Structural Funds, later renamed "Territorial Cohesion and Urban matters (TCUM) committee". On 3 June 2002, the European Commission approved the ESPON 2006 CIP[4]. In May 2007, the Territorial Agenda of the European Union (TAEU) was agreed in Leipzig at the Informal Ministerial Meeting on Urban Development and Territorial Cohesion. The same year, an Action Programme was approved in Ponta Delgada (Azores, Portugal) and the "Network of Territorial Cohesion Contact Points (NTCCP)" was created to provide technical support for the implementation of the Territorial Agenda. On 1st December 2009, the Lisbon Treaty entered into force, which means that "territorial cohesion" was henceforth explicitly recognised as a key policy-objective of the EU. In May 2011, the revised Territorial Agenda, "TA 2020" was agreed at the Informal Meeting of Ministers responsible for Spatial Planning and Territorial Development in Gödöllő (Hungary).

Various key policy issues were raised during this twenty-five year process. Three of them will be commented upon in this paper:

- the EU cohesion policy remit: should this policy be essentially limited to a mere communicating vessels game between better- and less well-off regions (question "how much EU funding in which regions?"), or on the contrary, should it also encompass a content-related and spatial dimension (question "ESIF[5] / structural funds to do what and where?");
- the interdependence between various areas of the EU and the subsequent need for territorial integration;
- the governance / decision-making process in the area of EU territorial cohesion.

Other very important policy issues would also be worth addressing below, in particular the need for policy integration between various sector policies with a territorial dimension (environment, transport/mobility, energy, etc.) However, this need is not typical of EU policy, since cross-sector integration is also a difficult issue in the domestic context. Recent years have witnessed growing

[4] CIP stands for "Community Initiative Programme". Initially, "ESPON" stood for "European Spatial Planning Observation Network". More recently, the ESPON 2013 programme has been renamed "European observation network on territorial development and cohesion" while keeping the "ESPON" acronym unchanged.

[5] ESIF : recently introduced acronym, standing for "European Structural and Investment Funds". These currently include the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund (CF), the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime & Fisheries Fund (EMFF).

interest for urban development among stakeholders involved in EU regional policy programmes, as exemplified by the considerable success of the Reference Framework for European Sustainable Cities, the URBAN Community Initiatives, the URBACT programmes and other ERDF-funded operations dedicated to urban development. These issues are also outside the scope of this paper.

Thus, let us concentrate on the three key-issues referred to above, including the related policy responses which may be envisaged.

## 2. The EU cohesion policy remit: communicating vessels game or territorial strategy?

The first and second multiannual financial frameworks of the European Community, the so-called "Delors Package I" (1988-1992) and "Delors Package II" (1993-1999) were characterised by a dramatic increase of the budgetary means (or "structural funds") allocated to the regional policy. This was a major policy shift: the relative share of the Common Agricultural Policy in the EC budget, initially overwhelming, was projected to decline in future. Considerable amounts of ERDF monies, match-funded by national contributions, were allocated to various regions facing specific difficulties, in particular Objective 1 areas "whose development was lagging behind". Beneficiaries were not supposed to do whatever they liked with the subsidies. On the contrary, strict compliance with eligibility rules was required, but this had more to do with administrative and procedural aspects (e.g. the so-called "audit trail") than content-related issues. All the operations were supposed to contribute to the achievement of some key policy objectives, but these were defined in relatively broad terms. More recently, the Lisbon strategy, followed by the Europe 2020 strategy[6], put forward a series of policy objectives, for example in terms of education level, investment in R&D, job creation, energy and resource efficiency, etc. Despite this relatively more focused policy approach, a wide room for manoeuvre was still left, in principle, to programme managing authorities and project applicants to define their own specific objectives and work plan.

Paradoxically, this room for manoeuvre was not really exploited. For example, the reference objectives set out in the development strategies of most ERDF-funded operational programmes were strikingly similar. This stems from the fact that a set of key policy objectives was already included in the reference EU regulations[7]. Especially in the 2000-2006 and 2007-2013 programming periods, these objectives were rather accurately defined, and reproduced, often literally, in the various operational programmes. Even the reference performance indicators were often identical, which facilitated the aggregation at the EU level of outputs and results delivered by the various programmes. This standardisation process gave rise to criticisms among regional policy experts, epitomised by the celebrated Barca report and its plea for a "place-based approach" (Barca, 2009).

To deal with the EU regional policy, the relevant formation of the Council of Ministers was that responsible for "general affairs", attended by ministers responsible for economy and/or regional policy when cohesion policy issues were on the agenda. Among these ministers, a minority were also responsible for spatial planning. This was for example the case in France and Portugal, but more the exception than the rule. One of the reasons why ministers responsible for planning set about holding regular informal meetings from the nineteen-nineties onward was the sense of frustration they could legitimately feel when considering, on the one hand, the considerable size of EU budgetary means and their allocation discussed by their colleagues responsible for regional policy, and on the other hand the virtual impossibility to allocate these means to operations contributing to the achievement of specific objectives set out in territorial planning strategies. Most, if not all, of the ERDF-funded operational

[6] during the 2000-2006 and 2007-2013 programming periods respectively.

[7] See for example the regulations applying to the 2007-2013 programming period (European Parliament and Council of the European Union, 2006a and 2006b).

programmes and single programming documents did not include any map to provide a geographically differentiated picture of policy priorities.

This frustration of ministers (and their respective departments) responsible for planning was probably the main reason for initiating the ESDP / Territorial Agenda process. To some extent, the same comment applies to the "territorial cohesion" paradigm, whose rationale, however, seems more complex. At least two distinct, and even divergent, policy approaches to territorial cohesion can arguably be identified: the first tends to equate territorial cohesion to a range of positive discrimination steps in favour of different categories of penalised areas (peripheral, less accessible, mountainous, sparsely populated, prone to natural disasters, etc.); the opposite approach places the emphasis on the need for integrated territorial planning strategies and the integration of EU policies (Doucet, 2006). The first approach is of course favoured by various regional lobbies, and the second one by the world of spatial planning (ministerial departments, regional planning administrations, research centres addressing territorial development issues, including the ESPON network, etc.)

This ambiguity about the very content of the territorial cohesion paradigm has led to a paradox: whereas it has been formally recognised as a fundamental policy goal in the Lisbon Treaty, territorial cohesion remains some sort of UFO, as nobody has ever been able to provide an authoritative definition of it, not even the European Commission in its dedicated Green Paper (EC, 2008). Moreover, no reference EU policy map has ever been proposed, let alone approved, to illustrate what the achievement of the territorial cohesion ideal should entail in practical terms. However, some tentative contributions, e.g. the scenarios of the ESPON 2006 project 3.2 (Transnational project group of ESPON Project 3.2, 2007), the VASAB Long-Term Perspective[8] for the Territorial Development of the Baltic Sea Region (VASAB CSD, 2010), and the Territorial Vision ("TeVi 2050") of the ESPON 2013 project ET 2050 (Transnational project group of ESPON Project 2013/1/19, 2014), represent significant steps in the right direction.

The ESPON projects 3.2 and ET 2050 proved to be very stimulating exercises and produced considerable food for thought. However, it seems difficult to use the scenarios and the proposed Territorial Vision as formal policy tools. Even though quite many policy makers were consulted for the elaboration of these documents, the process was clearly informal in nature, and more a knowledge-based than a formal policy-driven exercise.

By contrast, the process initiated in the early nineteen nineties, which led to the adoption of the VASAB LTP in October 2009 (the so-called "Vilnius Declaration", VASAB CSD, 2010, pp. 49-53) represents a remarkable achievement. The authorities involved managed to reach a formal agreement concerning the implementation of a joint spatial strategy focusing on issues of transboundary relevance[9]. This seems to be an unprecedented achievement. True, similar strategies were also produced at an earlier stage, and not only in the Baltic region[10], but the degree of involvement of the national and regional authorities concerned, and of formalisation of their cooperation, was considerably lower.

Drawing on the VASAB experience, "EU strategies" have recently been elaborated by the European Commission, at the request of the European Council, to address various challenges and opportunities in the Baltic, Danube and Adriatic-Ionian macroregions: EUSBSR (EC, 2009 & 2012), EUSDR (EC, 2010) and EUSAIR (EC, 2014c) respectively. At the time of writing, one more such EU strategy is about to be published by the EC: the EU Strategy for the Alpine Region (EUSALP).

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[8] Henceforth referred to as "VASAB LTP".

[9] i.e. issues which, by their very nature, cannot be properly tackled without transboundary cooperation, e.g. water pollution in an international river basin, missing links of a transport network in border areas, etc.

[10] See for example the Atlantic Spatial Development Perspective (CPMR, 2005) or the North West Europe Spatial Vision (NWMA Spatial Vision Group, 2000).

The content of these strategies, and more specifically their contribution to territorial integration, will be addressed in Section 3 below. For what concerns the territorial dimension of the EU cohesion policy however, it cannot be denied that their elaboration represent a significant step forward. Should such strategies be elaborated and implemented over the entire EU territory, a major breakthrough would be accomplished, especially if maps are also produced, on the model of the VASAB LTP, to clarify geographically differentiated policy priorities. The communicating vessels game between better- and less well-off regions, which has mainly characterised the cohesion policy so far (question "how much EU funding in which regions?"), would be supplemented (and of course not replaced) by a more strategic territorial approach (concentrating on the question: "ESIF[11] to do what and where?").

The current state of things, however, raises a real issue: would it be acceptable that significant parts of the EU territory are not covered by a strategy similar to the first four EU strategies mentioned above? Especially in Western Europe, the elaboration of such a strategy does not seem to be on the agenda for the time being. Perpetuating this asymmetric situation is not appropriate in the long run.

The time seems ripe for the European Council to request the Commission to go a step further. This would consist in elaborating similar strategies for other macroregions in such a way that the entire EU territory is covered. In an ideal world, a synthesis of all these territorial strategies should also be produced and approved by the European Council. The resulting document would provide, for the first time in the history of the EU regional policy, a consistent and geographically differentiated picture of policy objectives in the area of territorial cohesion[12]. A long-awaited but never attained objective since the initiation of the ESDP process in the nineteen nineties. This process could be preceded by the publication of a White Paper on EU territorial cohesion, a document which the European Parliament and the Committee of the Regions urged the Commission to produce (Böhme, K., Doucet, Ph., Komornicki, T., Zaucha, J., Świątek, D., 2011, p.23). At a meeting of ministers responsible for EU cohesion policy held in Potznań in November 2011, the Polish Presidency of the EU recommended this publication, but to no avail (Polish Ministry of Regional Development, 2011, p.3).

## 3. The need for territorial integration

For lack of clear reference definition, it remains difficult to know what "territorial cohesion" actually means. Things are different for what concerns "territorial integration", a notion which could arguably be regarded, by the way, as a component among others of the elusive territorial cohesion concept.

This notion was already referred to decades ago, after World War II, possibly even earlier on. At the time, "territorial integration" as well as "regional integration", its quasi-synonym, were essentially regarded as a process geared towards the integration of economies. Its starting point was often the establishment of a free-trade area, and it could potentially lead to the full unification of economic, monetary, taxation and social policies, as typically experienced in modern nation-states. It could also be argued that the EU integration process initiated in the nineteen fifties by the European Coal and Steel Community (ECSC) is destined to reach a similar outcome (Marchal, 1965, p. 33. Doucet, 2013, p.28.)

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[11] ESIF = "European Structural and Investment Funds"

[12] The same document could also take on board various objectives of the EU integrated maritime policy. This question, however, is rather complex and intricate, and it seems difficult to address it properly in this short paper. Suffice it to indicate that Directive 2014/89/EU, recently approved, establishes an EU "framework for maritime spatial planning aimed at promoting the sustainable growth of maritime economies, the sustainable development of marine areas and the sustainable use of marine resources" (Art. 1.1). This entails the integration of economic, social and environmental aspects of various policies and the elaboration of "maritime spatial plans". One may wonder why a similar process would not be justified in the area of "land spatial planning"…

In more recent times, the phrase "territorial integration" has reappeared, especially in the framework of the INTERREG territorial cooperation supported by the EU Cohesion policy, but with a slightly different interpretation. The following definition[13] was proposed in a report published in 2011 by the Polish Presidency of the EU: "the process of reshaping functional areas to make them evolve into a consistent geographical entity; this entails overcoming the various negative effects stemming from the presence of one or more administrative borders, which hamper harmonious territorial development." (Böhme & al., 2011, p.29) This process may take place, for example, in a metropolitan area. In that case, the aim will be to overcome the fragmentation resulting from the competition between the various municipalities through promoting positive-sum games and a synergetic approach geared towards the implementation of a joint territorial strategy. Similarly, and more importantly for this paper, territorial integration may also take place in cross-border or macroregional areas[14]. In principle, it should even be regarded as a strategic objective, an arguably even the most strategic one, of the EU INTERREG cross-border and transnational cooperation programmes.

The reality is different. Despite some stimulating breakthroughs, the realisation of genuine territorial integration has for long been more the exception than the rule in the INTERREG operations. However, there seems to be growing (albeit still limited) interest about this topic, especially in the framework of the preparation of the new 2014-2020 programming period of the ESIF. To ascertain this, let us examine the achievements of the successive generations of INTERREG programmes.

### 3.1. INTERREG I and INTERREG II: the first experiments

During the 1989-1993 programming period of the EU structural funds, the first INTERREG "Community Initiative" was "designed to help border areas to prepare for a frontier-free Europe" (CEC, 1993, p.27). This means that cooperation, albeit encouraged, was not even a prerequisite for various operations to be recognised as eligible for ERDF funding. For example, various single-country operations were supported in Greece, France, Denmark and Germany[15].

Although genuine cooperation was strongly encouraged in the framework of INTERREG II (i.e. during the 1994-1999 period), projects taking place on one side only of the national border remained commonplace, especially at the EU external borders[16]. The INTERREG II ex-post evaluation team acknowledged that projects often contributed to reduce or eliminate the isolation of diverse border regions, but this observation also referred to the better connection of various remote regions to more

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[13] Surprisingly, this definition appears to be the first ever published after more than two decades of INTERREG cooperation. While making several references to the notion of territorial integration (for example in the definition of "territorial cooperation"), the CEMAT spatial development glossary (CEMAT, 2007), does not define it. "Territorial integration" must not be mistaken for "integrated territorial development", whose (very ambitious) aim is to bring together and harmonise various sector policies of territorial relevance (transport, environment, regional development, etc.) with a view to defining and applying an integrated cross-sector strategy.

[14] Examples include the joint management of water resources and the green infrastructure in a transnational river basin, the integration of a transport network through the completion of cross-border missing links, the establishment of networks of SME and research centres in a macroregion, the integration of the labour market at the transboundary scale, etc.

[15] In general, the ERDF funding allocated to these INTERREG projects was modest (ECU 7m. in Bornholm, Denmark; 5m. in Baden-Württemberg, Germany; 6m. in Rhône-Alpes and 10m. in Franche-Comté, France). Yet some sizeably larger amounts were granted in Germany (ECU 37m., Bavaria) and especially in Greece (ECU 340m. for the construction of the Egnatia highway linking up the Ionian Sea to the Turkish border)

[16] Among the programmes dedicated to operations at the EU external borders, Programme No 28, "Greece / External borders" was the best endowed: no less than €540m. eligible expenditure (including €344m. ERDF funding) was entirely incurred on the Greek territory.

central ones of the same national territory. "One-side projects" took even place at the internal borders. This was particularly the case at the Spanish-Portuguese border. Measure 3.1 ("Accessibility") of the INTERREG IIA ES-PT Programme[17] supported 106 projects, whose total eligible cost amounted to €266.7m. According to the ex-post evaluation report, "Cross-border co-operation was non-existing in this measure. All projects in this measure are genuine one-side projects and the main reason for lacking cross-border partnership was, according to both Spanish and Portuguese parties, that there was no need for cross-border co-operation since the projects were simply implemented on one side." (LRDP Ltd & al., 2003, Annex 1.F, p.107) The same report also pointed to significant progress made towards greater integration / coordination of the management of various INTERREG II programmes, including the establishment of joint programme secretariats. However, a really integrated cross-border programme management took place in only about one-third of the programmes, almost entirely those on internal borders with low isolation and a long-standing tradition in cooperation (LRDP Ltd & al., 2003, p.13).

In 1996, the European Commission published the "INTERREG II C Guidelines" (EC, 1996). This was rightly regarded as a major step forwards in the ESDP process[18]. According to the Guidelines, INTERREG II C programmes were meant to foster, among other policy aims, "transnational cooperation initiated by Member States and other authorities with responsibilities for spatial planning within a framework of common territorial development policies adopted for continuous geographical entities covering areas in more than one Member State", and "to improve the impact of Community policies on spatial development." (EC, 1996, Art.5) Much could have been hoped for from such an innovative approach, including in terms of territorial integration (even though this notion was not explicitly referred to in the Guidelines). According to the ex-post evaluation report, the final outcome was below expectations: "Although a number of projects with strategic character were produced (the spatial visions, projects on transnational corridors, transnational flood protection initiatives etc.), bottom-up projects were in overwhelming majority. They were frequently carried out by partnerships composed of local or sub-regional authorities and related to the management of common issues of local character rather than to the tackling of real transnational issues. A reason for this imbalance in project generation was the rather modest involvement of the national and regional spatial planning authorities in the elaboration and implementation of projects." (LRDP & al., 2003, p. 21.)

### 3.2. INTERREG III: territorial cooperation comes of age

Taking stock of the first two generations of INTERREG programmes, the INTERREG III Guidelines (EC, 2004[19]) set the course for the 2000-2006 period. Paraphrasing the conclusions of the INTERREG II ex-post evaluation report, the Guidelines depicted as follows the state of play in the area of territorial cooperation: "The kind of strong cooperation that takes place, for example, in 'Euroregions' is still the exception rather than the rule. Whereas a great deal of development activity has taken place in border areas and those areas have certainly benefited from that activity, it has generally been much more difficult to establish genuine cross-border activity jointly. In some cases, this has led to perverse effects such as parallel projects on each side of the border. In any case, it has prevented border areas and Member States from reaping the full benefits of cooperation." (EC, 2004, §5)

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[17] INTERREG IIA ES-PT was the best endowed of all the INTERREG II programmes, with a total budget amounting to €776m., out of which €569m. ERDF funding.

[18] At the time, the ESDP (European Commission, 1999) had not yet been approved, but a series of other reference documents were already available, including the "Europe 2000" and "Europe 2000+" communications published by the European Commission and the "Leipzig Principles" (approved in September 1994), elaborated in the framework of informal meetings of EU ministers responsible for spatial planning.

[19] This version includes the original of the INTERREG III Guidelines, initially published in 2000.

In response, the objectives of the INTERREG III initiative were defined more accurately in the guidelines published by the European Commission. Strand A cross-border cooperation was intended to "promote integrated regional development between neighbouring border regions, including external borders (neighbourhood programmes) and certain maritime borders" and "to develop cross-border economic and social centres through joint strategies for sustainable territorial development." (EC, 2004, §6 and §9). As to the transnational cooperation of Strand B, it was meant "to contribute to harmonious territorial integration across the Community" and "to promote a higher degree of territorial integration across large groupings of European regions, with a view to achieving sustainable, harmonious and balanced development in the Community and better territorial integration with candidate and other neighbouring countries' (EC, 2004, §6 and §12). Territorial integration was thus repeatedly referred to.

To what extent was this message taken on board in INTERREG III programmes and projects? According to the INTERREG III ex-post evaluation report, mixed results were obtained in this respect. Some projects of Strands A and B did contribute to territorial integration, but the cross-border or transnational relevance of the other operations remained a critical issue. Many of these, including various investment projects and others generating "soft cooperation outcomes" contributed at best to addressing issues faced on either side of the border. In other instances, especially in programmes covering the external and new internal borders[20], so called "one-sided projects" were still common place.[21]

In the same report, the following guiding principles were put forward to improve the elaboration of future INTERREG programmes:

- "Programme strategies need to address and effectively tackle issues of real cross-border or transnational relevance.
- This requires an analysis of cross-border and transnational areas taking into account the level of integration achieved and identifying how integration can be further enhanced.
- Programming partnerships should be required to select only a few strategic issues which demonstrate a clear potential for furthering an integration of the cross-border and transnational cooperation areas." (Panteia and Partners, 2010, p. 21.)

The 2007-2013 period of the EU structural funds was well under way when the INTERREG III ex-post evaluation report was published. Therefore these guiding principles were essentially relevant for the preparation of the current 2014-2020 programming period.

### 3.3. INTERREG IV : no explicit reference to territorial integration

During the 2007-2013 programming period of the EU structural funds, "European Territorial Cooperation" (better known as INTERREG IV[22]) was formally recognised as the third objective of the cohesion policy. Article 3 (c) of General Regulation 1083/2006 provided that the European territorial cooperation objective should be aimed "at strengthening cross-border cooperation through joint local and regional initiatives, strengthening transnational cooperation by means of actions conducive to

[20] In May 2004, ten new member states joined the European Union. This means that several national borders, initially "external", became internal borders of the EU during the 2000-2006 programming period.

[21] Further detail about the contribution of INTERREG III programmes and operations to territorial integration can be found in the INTERREG III ex-post evaluation report (Panteia and Partners, 2010). See for example section "IV. Conclusions on the overall impact of INTERREG III", pp. 16-17 of the report.

[22] In principle, the formal recognition of "European Territorial Cooperation (ETC)" as one of the formal policy objectives of the EU cohesion policy, has led to a change in terminology, "ETC" taking over from "INTERREG". In practice however, "INTERREG" remains widely used by participants in ETC programmes and operations. Therefore "INTERREG IV" and "INTERREG V" are respectively understood in this article as the equivalents of "ETC 2007-2013" and "ETC 2014-2020".

integrated territorial development linked to the Community priorities, and strengthening interregional cooperation and exchange of experience at the appropriate territorial level." (European Parliament and Council of the EU, 2006b, Art. 3 – 2 [c]). This regulation includes no explicit reference to territorial integration, which cannot be reasonably regarded as a necessary component of "joint local and regional initiatives" ("joint initiatives" may result in very soft exchanges of experience on issues of local interest) or "integrated territorial development" (which could refer to an integration between sector policies).

The same comment applies to ERDF Regulation 1080/2006. However, reference is made, especially in the presentation of strand A (cross-border cooperation), to some notions akin to territorial integration, e.g. "cross-border trade", "cross-border water, waste and energy systems and facilities", "integration of cross-border labour markets". Nevertheless, many other activities of a more general nature are also included in the list of eligible operations: encouraging entrepreneurship, supporting links between urban and rural areas, improved access to transport, information and communication networks and services, etc. (European Parliament and Council of the EU, 2006a, Art. 6 [1]). As far as strand B (transnational cooperation) is concerned, four broad priority areas have been defined: innovation, environment, accessibility, and sustainable urban development. In each of them, a wide array of activities is eligible for ERDF funding. Since these activities are not intrinsically conducive to territorial integration, an additional condition must be fulfilled for projects to be eligible: those dealing with innovation are required to "make a direct contribution to the balanced economic development of transnational areas", those addressing environmental or accessibility-related issues must carry out "activities with a clear transnational dimension", and those involved in sustainable urban development must have "a clear transnational impact" (European Parliament and Council of the EU, 2006a, Art. 6 [2]). At first sight, this additional condition may appear rather demanding, but a careful reading of Article 6 [2] of the regulation, including the various examples of eligible operations provided, clearly suggests that a project contribution to territorial integration is not regarded in practice as an eligibility criterion.

This is implicitly confirmed in the section of the regulation dedicated to the selection of cross-border and transnational cooperation projects: "Operations (...) shall include beneficiaries from at least two countries, of which at least one shall be a Member State, which shall cooperate in at least two of the following ways for each operation: joint development, joint implementation, joint staffing and joint financing. The selected operations fulfilling the abovementioned conditions may be implemented in a single country provided that they have been presented by entities belonging to at least two countries." (European Parliament and Council of the EU, 2006a, Art. 19 [1]).

Paradoxically, the so-called "mainstreaming" of INTERREG (i.e. its inclusion as "European territorial cooperation" in the EU regulations relating to regional policy) has been accompanied by the disappearance of any explicit reference to territorial integration in the EU regulatory framework of the 2007-2013 programming period. This does not necessarily mean that no practical progress towards territorial integration was made during this period. However, such progress was not a formal requirement. Despite this, it may have taken place, but this remains to be examined in the framework of the ex-post evaluation of INTERREG IV, still in its inception phase at the time of writing.

Moreover, it should be borne in mind that various important territorial cooperation activities took place outside the INTERREG framework and gathered pace during the 2007-2013 programming period. This important breakthrough is addressed below in a dedicated section.

### 3.4. INTERREG V: better prospects for territorial integration?

The ESIF-funded operational programmes of the current 2007-2013 programming period were approved at a rather late stage. It is therefore premature to analyse the characteristics of operations

supported in this framework. Nevertheless, an analysis of the reference regulations recently adopted for this period provides some useful insights.

First, an integrated approach is explicitly encouraged in many sections of the regulations. New notions have been introduced such as "community-led local development" and "Integrated Territorial Investments (ITI)". The emphasis is however placed on policy (rather than territorial) integration, and even more on the coordination of financial means provided by various sources of funding[23].

Second, little reference is made to territorial integration. The "Common Strategic Framework (CSF)" (Annex 1 to Regulation 1303/2013) includes one single reference to it, under heading 4.9 relating to "Instrument for Pre-accession Assistance, European Neighbourhood Instrument and European Development Fund" (European Parliament and Council of the EU, 2013a.). Territorial integration is not mentioned at all in ERDF regulation 1301/2013 (European Parliament and Council of the EU, 2013b), but this may appear quite normal since a distinct regulation specifically concentrates on ETC, namely Regulation 1299/2013 (European Parliament and Council of the EU, 2013c). Explicit reference is made in this regulation to the issue of territorial integration, but rather incidentally (in Article 2 [2] concerning transnational cooperation) for a document entirely dedicated to the "ETC goal". All the same, the reintroduction[24] of such an explicit reference is good news.

Third, more importantly and beyond these considerations about terminology, the overall content proposed in Regulation 1299/2013 for operations of the ETC goal represents a real progress. There remains a certain lack of focus, but a series of interesting "investment priorities", conducive to territorial integration, are put forward, for example "supporting labour mobility by integrating cross-border labour markets, including cross-border mobility" or "developing and coordinating macro-regional and sea-basin strategies" (Ibid. Article 7, "Investment Priorities"). The reference to these strategies in particular is not fortuitous. Indeed, this makes possible the establishment of a critical link between ESIF-funded INTERREG cooperation and the elaboration of strategies recently catalysed by the European Commission.

Furthermore, Common Provisions Regulation 1303/2013 provides that "the Partnership Agreement[25] shall also indicate (…) the main priority areas for cooperation under the ESI Funds, taking account, where appropriate, of macro- regional strategies and sea basin strategies."(European Parliament and Council of the EU, 2013a, Article 15, 2 [a] ii).[26]

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[23] This is particularly clear in Article 36 of Common Provisions Regulation 1303/2013, which reads: "Where an urban development strategy or other territorial strategy, or a territorial pact referred to in Article 12(1) of the ESF Regulation, requires an integrated approach involving investments from the ESF, ERDF or Cohesion Fund under more than one priority axis of one or more operational programmes, actions may be carried out as an integrated territorial investment (an 'ITI')." (European Parliament and Council of the EU, 2013a.)

[24] As a reminder, explicit reference was made to "territorial integration" in the INTERREG III Guidelines, but no longer in the regulations of the 2007-2013 programming period. Noteworthy is also the fact that this reference applied exclusively to strand B "transnational cooperation", whereas the vaguer and softer notion of "integrated territorial development" has always been used, surprisingly enough, to present the main objectives of strand A "cross-border cooperation" since the programming period 2000-2006.

[25] The "Partnership Agreement" is the reference document prepared by each member state and approved by the European Commission to provide guidance on the use of EU structural funding during the 2014-2020 programming period.

[26] Further detail about these strategies has been provided in chapter 7 ("Cooperation activities") of the CSF referred to above (Ibid.). In item 7.1.4, it is notably stated that "Member States shall seek to ensure that where macro-regional and sea basin strategies have been put in place, the ESI Funds support their implementation". According to item 7.2.2, "Member States and regions shall, in the areas concerned, seek to draw on cross-border and transnational cooperation to:

These provisions of the regulatory framework applying to the 2014-2020 programming period clearly represent a significant breakthrough and improve the outlook for genuine territorial integration in the coming years, the critical issue examined here.

It must be stressed, however, that the field of cooperation in the framework of macro-regional strategies is sizeably wider than regional policy-related activities supported by the ESIF. Any confusion therefore needs to be avoided between the INTERREG VB ADRION, Baltic Sea Region and Danube Programmes and the EUSAIR, EUSBSR and EUDSR macro-regional strategies, even though ESIF subsidies of the programmes may of course provide a very significant financial contribution to the strategies.

In principle, this should considerably improve the prospects for further and deeper European territorial integration in the coming years. There is a momentum to seize. Nevertheless, there remains significant room for progress to raise awareness in the coming years about the need for territorial integration. This notion is barely touched upon in the three operational programmes concerned, and no specific indicator[27] has been designed to measure progress made in this field (INTERREG VB Adriatic-Ionian transnational partnership and European Commission, 2014; INTERREG VB Baltic Sea transnational partnership and European Commission, 2014; INTERREG VB Danube transnational partnership and European Commission, 2014).

Last but not least, territorial integration should also be regarded as a key-objective of the cross-border cooperation of INTERREG strand A programmes. The focus recently placed on macro-regional strategies must not hide the fact that territorial integration has already taken place, in some case for many years, in the framework of cross-border cooperation. Especially in areas where standing conferences such as "Euregios" were set up, in some cases long ago, a genuine territorial integration process may have taken place. It is not possible to dwell on this in this short paper, but it seems clear that any future in-depth study on territorial integration in the EU should take this other type of cooperation fully on board.

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(a) ensure that areas that share major geographical features (islands, lakes, rivers, sea basins or mountain ranges) support the joint management and promotion of their natural resources;
(b) exploit the economies of scale that can be achieved, in particular with regard to investment related to the shared use of common public services;
(c) promote coherent planning and development of cross-border network infrastructure, in particular missing cross-border links, and environmentally friendly and interoperable transport modes in larger geographical areas;
(d) achieve critical mass, particularly in the field of research and innovation and ICT, education and in relation to measures improving the competitiveness of SMEs;
(e) strengthen cross-border labour market services to foster the mobility of workers across borders;
(f) improve cross-border governance."

According to Item 7.3.3., "Member States shall promote, where appropriate, the use of ESI Funds in the context of macro-regional strategies, for the creation of European transport corridors, including supporting modernisation of customs, the prevention, preparedness and response to natural disasters, water management at river basin level, green infrastructure, integrated maritime cooperation across borders and sectors, R&I and ICT networks and management of shared marine resources in the sea basin and protection of marine biodiversity." (Ibid.)

[27] Other indicators have been designed to monitor, for example, the "cooperation intensity" in the Danube area, but this does not provide any relevant indication of progress made towards deeper territorial integration.

## 4. The governance / decision-making process in the area of EU territorial cohesion

In section 2 above, a case has been made for the elaboration of a consistent EU territorial cohesion strategy providing a geographically differentiated picture of policy objectives. Obviously, such an undertaking should prove very challenging, both technically and politically. Whereas the ESPON projects 3.2 and ET 2050 have provided a Europe-wide picture with no formal validation by policy-makers (even if some of these were consulted on an informal basis), the reverse took place in the case of the VASAB Long-Term Perspective: the document was formally approved as a guiding reference by an intergovernmental forum of ministers responsible for spatial planning and development, but its geographic scope is limited to a component of the EU territory, namely the Baltic Sea Region (VASAB CSD, 2010, pp. 49-53.)

To take up the challenge, it seems clear that the issue of EU territorial governance needs to be revisited. Little progress has been made on this in recent time. To some extent, the adoption of macro-regional strategies represents a step forward in this respect, but it is not the European Commission's intention to generalise the elaboration of such strategies to the entire EU territory[28].

However, the Greek and Italian Presidencies[29] managed to reach a consensus in informal ministerial meetings on the necessity to secure a more structured and systematic political debate in the Council about EU economic, social and territorial cohesion. It was proposed that this debate be held in regular dedicated sessions of the General Affairs Council. This represents a move in the right direction, to avoid leaving these important issues in the hands of ministers responsible for Finance or European Affairs. Nevertheless, these sessions are not likely to be attended by ministers responsible for territorial development, at least in the short run, but instead by their colleagues responsible for regional policy.

Since the adoption of the revised Territorial Agenda of the EU (TAEU or "TA 2020" / Informal Ministerial Meeting of Ministers responsible for Spatial Planning and Territorial Development, 2011), little has been made to promote its application. Sizeably more attention has been paid to urban development than territorial cohesion. This may seem paradoxical: after all, the involvement of the EU in urban affairs is not quite in line with the subsidiarity principle, but we may assume that the EU is always "competent" to provide subsidies…

Yet in 2011, shortly after the adoption of TA 2020, the Polish Presidency came up with an interesting proposal, namely the elaboration of a White Paper on Territorial Cohesion. According to the Presidency, "several countries welcomed the proposal (…) regarding this as an important step forward in translating the Territorial Agenda into practice and following the Green Paper adopted in 2008. However, it was also suggested that this may lead to rigidity and that an informal Working Paper would suffice." (Polish Ministry of Regional Development, 2011, p.35, §17). The proposal was thus not implemented.

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[28] "New initiatives should only be launched if there are particular needs for improved and high-level cooperation. These should be of strategic importance for the macro-regions and translated into a limited number of well-defined objectives with an appropriate set of indicators to measure progress. Common challenges (such as environmental deterioration, climate change adaption, impact of natural and man-made disasters, connectivity gaps, striking income disparities) and/or opportunities (such as openings for research networks, expanded markets, modernising administrations) should be evident, as well as agreed geographical identity. It is therefore an approach only to be used in particular circumstances where involvement of the EU is appropriate, and existing EU horizontal policies reinforced." (EC European Commission, 2013, p. 10.)

[29] Respectively during the first and the second semesters of 2014. Cf. Informal Meeting of Ministers responsible for Cohesion Policy, 2014 and Italian Presidency of the Council of the European Union, 2014.

This is a telling sign of a lack of political will. For the time being, neither a majority of planning departments represented in the NTCCP nor the European Commission seem ready to draw the logical consequences of the recognition of territorial cohesion as a fundamental EU policy goal. Among these consequences, the first is that formal meetings of the Council should be held regularly to take stock of progress made in the area of EU territorial development. This could entail a formal approval of TA 2020 or any other reference document as official EU territorial cohesion strategy. In principle, such a decision may be made by the Council acting by a qualified majority, in accordance with the ordinary legislative procedure[30]. Alternatively, owing to the multi-sectoral nature of territorial cohesion, a process similar to that applying to the EU Maritime Policy could be initiated, the first milestone of which would be the adoption of a framework directive in the same vein as the approach adopted in Directive 2014/89/EU on "Maritime Spatial Planning". (European Parliament and Council of the EU, 2014.) In both cases, the so-called "Community method" would apply: decision made through qualified majority voting, on a proposal from the European Commission (the so-called "right of initiative"). To date, the high Commission officials of DG Regio have carefully avoided initiating such a procedure, but it cannot be ruled out that one day they follow the way paved by their colleagues of DG Mare. There does not seem to be any legal obstacle on the road, but the lack of political remains the main stumbling block.

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[30] In the Maastricht Treaty (Article 130D), such a decision had to be made by the "Council acting unanimously". Since the adoption of the Nice Treaty, this is no longer the case: according to Article 161 of the Treaty establishing the European Community (nowadays Article 177 of the Treaty on the Functioning of the EU), the Council shall act in accordance with the ordinary legislative procedure (i.e. by a qualified majority on a proposal from the Commission).

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**The State of Planning and Planning Education in Europe 2015**
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**Key words:** Status of planning in Europe, Planning education, European urban policy

**Abstract**
Since planning has become an academic discipline, debates on the role of planning in the post-industrial society and on the right approach to educate and train planners for this society seem to never end. The community of planners across Europe argues constantly that planning (be it urban and regional or spatial or environmental) is always in a crisis and does not receive the required political support from European, national, regional or local governments. The extent to which planning does address social disparities and can contribute to territorial cohesion is a much-discussed theme among planners. There are continuous debates about the right approach to planning education, between architecture, urbanism or geography and planning as an independent discipline. Finally there are ongoing controversies about the role of the European Commission in intervening into local or national urban policies.

Addressing these debates, the paper presents the outcome of a survey among planners and practitioners on the occasion of the publication of the 200th issue of the Swiss planning journal: **disp: The Planning Review.** Randomly selected renowned academic planners and practitioners from 18 countries in Europe have been asked to respond to six questions concerning the state-of-the-art of planning and planning education in 2015. The responses were in English, French, German and Italian the four languages of the only multi-lingual planning journal in Europe. A synthesis of the 34 responses to our questions is given in this paper.

**Introduction and Background**

More than a decade ago *disP – The Planning Review* asked planners in Switzerland, Germany, Austria and Canada to reflect on the future of a discipline that seems to be continuously under challenge (disp 148 in 2002: *Zukunft der Raumplanung*). The response was cautiously positive, though planners noticed the widening gap between ambitions and reality, with contradictions between the rationales of planning and the rationales of democracy and participation rising on the horizon. Twelve years later, times have changed and the concerns have certainly changed. Political developments, such as the global financial crisis, the crisis of economic development in Mediterranean countries, the diminishing appeal of the European project, and trends toward re-nationalism across Europe have changed the priorities of the political agenda. Planning, though an important field to maintain liveability in cities and regions, it seems is not (anymore?) a priority, despite the efforts of the European Commission to launch a European Urban Agenda. Social, economic and territorial disparities are growing at all levels of planning and decision-making. The concern for the environment is losing appeal and is often expressed just to sell new technologies. Land consumption is still moving towards building suburban housing and new infrastructures, and the evolving e-shopping culture is causing excessive logistics all around cities and regions. At the same time, many architects and urbanists are raising their voices and dreaming of building resilient, green, healthy, intelligent, digital, smart, compact or even wise cities. But are they all aware of the reality of city building in times of neo-liberal market led economies? Do they really reflect on the economic and political dimensions of urban development, and do they care about the concerns of citizens? What is the state of the art of planning in Europe in 2015? What is the state of planning education? Addressing these debates, the paper presents the outcome of a survey among planners and practitioners on the occasion of the publication of the 200th issue of the Swiss planning journal: **disp: The Planning Review.**

We had asked a total of 50 randomly selected planners in 18 European countries – Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland and the United Kingdom – to send us their personal impressions about the state of the art of planning and about planning education. We are well aware that some European countries are not represented in this survey. The selection was neither systematic nor balanced. Not everyone approached found the time to

respond However, we added Turkey to Europe to resonate the strong contributions of the planning community in this country to European research. The participants come from varied institutional backgrounds and include academic planners as well as practitioners. When selecting planners we did not aim to be representative nor did we seek balance between theory and practice. We acknowledge that we received more academic responses than responses from planning practice. Our interest was to receive personal responses from individual planners, who we considered to be representative voices of their country. We did not wish to receive politically correct country reports..

Thirty-four respondents found the time to reflect on our six questions:

*1. What is the present state of planning, whether urban and regional or spatial and environmental, in politics and in the society of your country?*

*2. What themes dominate the discourse about planning in your country? Do the national media, e.g. newspapers and television, report on these planning challenges?*

*3. Is the gap between theory and practice in planning growing in your country? What role does English planning literature play in this discourse?*

*4. To what extent do planners in your country address growing social, economic and spatial disparities? Do they believe that spatial planning could contribute to reducing such disparities?*

*5. Are planning students adequately prepared to pro-actively address future challenges in planning in your country? Should planning education return to schools of architecture or perhaps be offered in geography schools?*

*6. Would you like to see urban and regional planning and spatial planning being regulated top-down by the European Union? Should the European Union formulate a joint European Urban Policy?*

The responses to our questions were given in English, French, German and Italian to reflect the four languages of the only multi-lingual planning journal in Europe. Though the respondents were encouraged to respond in one of disP's four languages (German, French, English and Italian) in order to support the multi- lingual mission of disP: The Planning Review, most responses are in English. This perfectly reflects how much English, as the lingua franca, already dominates the academic European planning community.

The outcome of our initiative is an impressive journey across Europe. A synthesis of the 34 responses to our questions is presented in this paper. We are well aware that the records of this journey are not representative, neither for Europe as a whole nor for any individual country. Summing up the individual responses provides food for thought for a timely discussion on the current state of spatial planning and planning education in Europe. Thereby we first state, why we asked this particular question, before we present our brief analysis of the responses from all over Europe.

1. ***What is the present state of planning, whether urban and regional or spatial and environmental, in politics and in the society of your country?***

*At the turn of the century, the ESDP (European Spatial Development Perspective) thrilled academic planners across Europe because governments – and even planners – seem to have gradually lost interest in spatial planning, especially at the regional level. Is this observation correct, and does it differ from country to country? How is planning viewed in 2015? Do neo-liberal policies dominate urban and regional development in Europe? Do citizens appreciate the role of planners, or do they complain about public regulation and intervention, about large infrastructure projects and a lack of democracy? Do investors argue about overregulation and planners complain about in- sufficient interest in planning matters? Is spatial planning, both urban and regional, finally appreciated for its efforts after so many decades, or still seen as a public sector instrument to control private investment?*

The answers show a bleak picture of the state of planning. Planning in Europe in 2015 seems to be in a state of re-orientation. The majority of respondents complain about the critical state of spatial planning in their countries. More than half of the respondents explicitly expressed the view that spatial planning has a low political profile in their respective countries. Respondents from northern European countries, in turn, seem to be more content with their established planning tradition, which is strongly focused on the community level.

Changing political priorities, modifications in the regulatory system, or organizational changes are seen as the main reasons for the gradual decline of the status of planning in Europe. The responses from Italy, Spain, Portugal and Greece refer to the effects of the global financial crisis of the year 2008. They observe that the crisis has favoured deregulation policies in order to promote market-led economic development. Planning regulations are seen as the cause of time-consuming and cost-intensive urban and regional development processes. Most respondents report that the negative implications of this re-scaling of planning for cities and people are seldom assessed systematically. Though policy documents in most European countries show well-worded support for sustainable and resilient urban and regional development, planning as a national government responsibility and the use of space as a regulated public task seems to have further lost importance in society and day-to-day politics. Only in Switzerland, where challenges of spatial development in cities and regions are widely discussed in the me- dia, does spatial planning seem to have a more positive image.

The predominant political focus on economic growth in a range of European countries has put spatial planning under pressure. Growth at any price – and if necessary, even on greenfields – seems to have priority in many places. As a rule, the financial interests of investors are placed well ahead of the efforts of planners to bring about a sustainable and resilient development of living spaces. In many countries in Europe policy-makers seem to be increasingly convinced that social, economic and ecological challenges can be better solved through sector politics and approaches rather than through overall sector coordination of spatially effective activities. Responses from the Netherlands and the United Kingdom, where planning has a long tradition, state that deregulation in the realm of spatial planning, which is linked to the recent political re-orientation, has to be seen as a dramatic step backwards. Moreover, respondents from Poland, the Czech Republic, Romania and Hungary report that spatial planning is still suffering under the negative connotation of decades of socialist planning economy, 25 years after the political transition. Nonetheless, in post-socialist countries, spatial planning is expected to pave the way for receiving EU subsidies and to orchestrate the spatial

prerequisites for economic growth and public infrastructure development to prepare the ground for private investors.

One issue reported by many respondents is alarming. It is the observation that in most EU countries, in contrast to *urban* planning, the traditional importance of *regional and national* spatial planning is declining. Cabinet shake-ups in Germany and the Netherlands, for example, recently demonstrated the low political interest in spatial planning at the national level of planning and decision-making. Also on the regional level, spatial planning seems to have lost its former significance.

In contrast, many respondents, particularly from Switzerland, Poland, Turkey, Denmark and Germany, assert that in addition to urban planning and the design of the immediate living environment, which is still widely accepted, planning in wider functional city regions has become a new arena of integrated spatial planning. This shows that despite the weakness of a probably methodologically outdated traditional physical regional planning, strategic inter- communal development in functional city regions is seen as an important field of public policy. Their inflexible administrative borders are often replaced by soft functional borders allowing for better management of regional spatial and economic development. Some respondents expressed an additional challenge: the difficulty in implementing large-scale infrastructural projects in city regions when faced with opposition from civil society, such as airport extensions, railway stations like Stuttgart 21 or inner city investment projects. Whether the opposition to such projects reflects a lack of public involvement in planning processes or perhaps democratic deficits, or not-in-my-backyard attitudes, remains open.

All in all, despite all the concerns expressed about the decreasing importance of planning, many respondents still believe in the positive role of planning in local development and hope that planning can positively address socio-economic and environ- mental challenges. However, it has become 'common sense' that planning processes will be more political and less and less technocratic. This in turn will require more strategic thinking and management and much mediation competence to moderate between the interests of political and economic stakeholders and the requirements and expectations of the people.

***2. What themes dominate the discourse about planning in your country? Does the national media, e.g. newspapers and television, report on these planning challenges?***

*The discourse on planning in the European Union is expected to differ from country to country. Our assumption is that it depends largely on the economic conditions of the country, its mainstream national policies, and on the amount of attention planning receives in regional and national media. The availability of jobs, land for development, accessibility by public and private transport, resource conservation, the integration of migrants, the provision of affordable housing in inner cities are all concerns that planners have to address these days. The respective discourse in a particular country reflects the concerns and values of its citizens and their satisfaction with the political system, as well as the impact of influential books on the zeitgeist. However, is the media concerned with or interested in spatial planning? Does the media offer an opportunity to inform people about emerging planning issues or launch debates about the impact that planning has on our living space? Is spatial planning largely ignored by the media except in cases in controversies over of high profile infrastructure projects?*

Planning faces a broad spectrum of challenges and this is similarly true for the many fields of action. Challenges mentioned by the respondents include:

- Implementing large, environmentally-compromising and cost-intensive infrastructure and investment projects
- Managing sustainable development
- Protecting nature and scenic landscapes
- Containing urban sprawl in city regions
- Responding to the erosion of public services, mainly in rural regions
- Addressing social disparities that result from market-led economic policies
- Coping with the implications of growing planning deregulation
- Handling planning failures
- Dealing with gentrification processes in inner cities Providing affordable housing
- Dealing with democratic deficits caused by insufficient citizen participation and insufficient invitations from government
- Reversing declining building cultures
- Providing good design of public spaces
- Anticipating the spatial implications of new smart technologies

In their answers, most respondents confirmed that spatial planning does not play a significant role in the public media of their countries. As a rule, spatial planning seems not to be a concern of radio and television channels or regional newspapers except in a few media, both print and radio, that only target a small group of informed listeners or readers. Most popular media report on planning themes only when it is about particularly controversial local planning projects, complaining about planning failures or related corruption cases. Switzerland seems to be an exception. There, after two decades of absence, spatial planning recently returned to the media when it covered a series of direct democracy votes on several spatial planning initiatives and the revision of the spatial planning law. In Switzerland, recent disasters caused by natural hazards raised people's concerns for the need for building-bans in high-risk zones through spatial planning regulation – an observation that was also reported in Italy.

***3. Is the gap between theory and practice in planning growing in your country? What role does English planning literature play in this discourse?***

*In the international community of planners, there are growing concerns about a widening gap between theory and practice, as there are fewer and fewer bridges between academia and professional prac- tice. In this context, language also plays a key role. While the quest for more participation in planning requires the use of the local language to communicate with citizens, English has become the language of the international scientific community. It would be worthwhile to explore how this gap could be narrowed again. Another observation should be mentioned: depending on regional traditions, planning theory has quite different roles in planning cultures across Europe.*

All over Europe, a growing gulf between theory and practice is being reported, between planning practitioners and planning academics and researchers respectively. The answers suggest that in at least some European countries two processes apparently play a role. One explanation given is that practitioners are less and less involved in teaching at planning schools, thus the exchange between educational institutions and professional practice is dwindling. In the last two decades, the practice of

bringing in professionals to teach at universities has declined enormously. Practitioners are not appointed as planning chairs or have no interest in entering the world of theory-dominated academia. Accreditation and internal university evaluation processes seem to add further to the theory or practice controversy in spatial planning. However, there are exceptions to such observations: voices from countries such as Italy and Po- land, where architects still dominate the planning profession and many planners at universities are involved in planning practice as policy advisors and consultants, are less concerned about the drifting apart of theory and practice.

Some respondents have expressed the observation that theory and practice in planning education are drifting further and further apart as a con- sequence of the growing importance of publishing scientific articles in international, refereed journals, preferably in English, in order to secure appointments to academic positions. The necessity to publish in high-ranking specialized journals, which are mainly in English, while the political arenas communicate in a local language, and the necessity to participate in the international discourse, is distancing planning academics from the planning milieus of their own country. There are two views on this issue. One is to understand that planning processes in more and more complex political, social, economic and ecological environments requires further explorations into the theoretical dimensions of spatial planning. The other is that coping with local planning challenges, calls for more practical experience and managerial and communication competence.

The language barrier as regards the influence of predominantly English-language journals is frequently named as a problem. Planning practitioners among the respondents criticize the strong position of international academic journals and the limited relevance of these articles to planning practice in countries such as those in Eastern Europe, where the challenges are different to the experiences reported in journal articles, and where, moreover, English is not widely spoken in professional planning milieus. Only in countries with a high affinity for the English language, such as Sweden, Denmark or the Netherlands, are planning practitioners actively interested in the English discourse. In other countries, for ex- ample, Germany, France, Switzerland and Austria, a high resistance to drawing on English planning literature, especially by planning practitioners, is re- ported. While individual planners working in larger city administrations might be interested in selected English planning literature, practitioners in small cities and communities mostly have no interest in English planning literature. Or have no time or inclination to read such publications.

The growing pressure to publish in international journals in English was frequently criticized. This pressure deters researchers from publishing their research results quickly in their own national professional journals, which would make their research results accessible to planning practitioners. One more challenge in bridging theory and practice is the fact that in some countries, such as the Czech Republic or Slovakia, there is no scientific planning journal available in the national language, making the continuous exchange between theory and practice difficult, even in their own language. Overall, planning in Europe seems to be divided by this language issue. Around half of the respondents state that English language literature has no thematic relevance for the respective national planning practice. They assert that the international world of theoretical planning discourse is mostly irrelevant to the planning reality of their own countries.

***4. To what extent do planners in your country ad- dress growing social, economic and spatial disparities, and do they believe that spatial planning could contribute to reducing such disparities?***

*Numerous research projects have documented empirical evidence of social, economic and spatial disparities. Concern is being expressed in many talks and reports all over Europe. Based on this empirical evidence, more planners are postulating in- creased political action to reduce such disparities in cities and regions, as well as between countries of the European Union, e.g. through transport planning or labour policies. The European Union is spending 25 per cent of its expenses to reduce disparities. Germany, after reunification in 1990, is shifting considerable public money from West to East Germany. Southern Italy has benefitted from more than fifty years of financial support from the North to the South, though disparities have not narrowed. The cohesion policy of the European Union includes contributing to the reduction of spatial disparities, but will such policies actually be able to narrow the growing gaps between countries and regions and within cities? Do different planning cultures across Europe see quite different solutions to such concerns?*

The majority of the answers report that planners are confronted with increasing social, economic and spatial disparities in their planning work on a daily basis. However, not all are convinced that spatial planning can actually contribute to eliminating these disparities, and about half of the respondents believe that the goal to eliminate disparities should not even have priority in planning practice. Actually, in many European countries growth policies, at (nearly) any price, prevail over the elimination of social, economic and spatial disparities, although the general political rhetoric claims on all levels and in many words that this is not true. This position is especially noticeable in post-socialist countries, where the political powers are convinced that the key to eliminating regional disparities lies exclusively in making economic growth possible.
Nevertheless, numerous respondents are still convinced that social disparities can be better eliminated or reduced at the local level than through regional or national spatial planning. This is in line with the responses to the first question above stating that, in contrast to well-established urban planning, regional and national spatial planning is becoming weaker and weaker in Europe. The unanimous trust in local planning is reflected by the answers pointing to the special importance of planning for improving the quality of life at the local or even the neighbourhood level.

However, the impression remains that planners tend to overestimate the influence of their discipline on social and economic development. The recent economic crisis in Europe has clearly shown that economic and social development in a market- driven society, where planning has a low profile, can neither be promoted nor controlled by the comparatively very weak instruments of spatial planning.

***5. Are planning students adequately prepared to pro-actively address future challenges in planning in your country? Should planning education return to schools of architecture or perhaps be offered in geography schools?***

*For half a century, 'appropriate' planning education has been a controversial issue in Europe. Though the planning community agrees that the challenges of urban and regional development require special competence and skills, acquired in a special trans-disciplinary education, the discourse is also influenced by regional traditions, institutional conditions and personal biographies. Each participating discipline is said to have its shortcomings, such as design competence, action orientation, economic shortfalls or methodological or communication deficits. Planning has become a field of action that requires quite different skills and training, such as dealing with the public, being part of a team and solving new kinds of problems, all of which also depend on local, regional and national strategies and traditions. Educational systems and perspectives vary from country to country,*

*as well as professional organisations. AESOP is a bridge-builder in this context, through exchange and communication to understand other national traditions. The Bologna agreement increases mobility and encourages more mutual learning, but it cannot create a common curriculum, as some people had hoped. Moreover, e-learning proposals are knocking on the door. Once introduced by influential planning schools, they will have a considerable effect on planning education in Europe. However, do we know what the expectations for future planning education are?*

Europe has quite diverse planning cultures and different regional traditions when it comes to educating planners. In fact, the very definition of planning still differs across Europe, and the required skills and capabilities necessary in planning differ from level to level, hence from local to regional and to national levels of planning and decision-making. The countries in southern Europe, e.g. Spain, Italy and Portugal, and to a certain extent Germany too, have a long and distinct tradition of training planners as part of an architectural education. In these countries, there is an unbroken dominance of architects in planning practice. Hence the education of planners is very much quality controlled by institutions representing professional architects in the country. In contrast, for example in the United Kingdom, France, Belgium, Luxembourg and the Netherlands, planning education is offered with a strong emphasis on social sciences and geography.

Completely independent from traditional orientation, all respondents agree that a geography-based planning education that provides skills in analyzing and explaining spatial conditions and development does not sufficiently emphasize teaching action-oriented, strategic and creative competences and skills. This certainly explains why many respondents still see schools of architecture as the preferred and best possible location for a planning education. In contrast, respondents in planning schools that are independent from traditional disciplines, emphasize the advantages of this concept. They believe that only this comprehensive combined undergraduate and graduate education prepares planners sufficiently for future challenges in spatial and urban development. Respondents overwhelmingly agree on the importance of studios and workshops in real world planning problems in planning curricula. Almost every fourth respondent pointed to real estate development as a new challenge and as a new subject embedded in planning education. This certainly reflects the diminishing importance of public sector investments in urban development. The last two decades have seen a complete professionalization of the real estate sector and the increasing awareness that real estate professionals are strong players in urban development processes.

The future of planning education in Europe seems to remain a controversial arena. Rooted in national traditions and controlled by national institutions, there does not seem to be much willingness to agree on a best approach to planning education. Only one respondent could imagine that a few universities in a particular country could offer comprehensive planning education at bachelor's and master's degree levels, while other universities would provide, as in the past, combination models for the education of spatial planners in architectural schools.

***6. Would you like to see urban and regional planning and spatial planning being regulated top-down by the European Union? Should the European Union formulate a joint European Urban Policy?***

*The European Commission, represented by DG Regio, convinced that the future of Europe is based on the future of cities in Europe, is increasing its efforts to promote a European urban policy. Cities in*

*Europe, and their regional, national and European lobby institutions, who are expecting financial contributions from the EU for their urban policies, do not openly reject such policies – though they are concerned that guidance of EU regulation from above will intervene in their freedom to build and follow their own development paths. Do they fear that a Europe-wide policy will not respect their specific cultural conditions? Are they afraid that they will have to change their own local priorities and adopt European policy guidelines? Are they comfortable with the administrative requirements they will have to follow? Will it be easier for larger cities and city regions than for small and medium-sized towns to meet the requirements? Are cities in the South, for financial or other reasons, more willing to accept the guidance from Brussels than cities in Germany, France or the Nordic countries?*

All respondents vehemently rejected a top-down regulation of spatial development by the European Union. The majority of answers were sceptical about the increasing regulation and homogenization of spatial planning and urban development in their countries through politics and strategies of the European Commission. However, some respondents from France, Spain, Portugal, Italy and post-communist countries of Eastern Europe definitely see some sense in European policies. They seem to accept EU top-down policies even when assessments show that the positive effects of a EU urban policy remain unclear. EU urban policies, in turn, are mainly rejected to a large extent with reference to the diversity of local city cultures in Europe. Some respondents, however, would like to see and accept more EU influence on insufficient urban policies of national governments. They even pointed to the danger that politicians in national and local governments in Europe are tempted to make superficial adjustments to local and regional conditions when applying for financial funds from the European Commission. Generally, European regional policy is viewed as a spatial strategy with strong social and cultural dimensions. That is why opinions were expressed relating to the fact that European regional policy should have a stronger impact on sector politics, e.g. economics, energy, transport, and competition.

The great importance of mutual learning through European projects and cross-border co- operation was emphasized in many answers. Many respondents stressed the importance of a cross- fertilizing exchange of experiences in the complex multi-level system of planning and decision-making in Europe. They would also accept some European guidelines on social and sustainable urban development.

**Conclusion**

The Europe-wide exploration has given a broad spectrum of answers to our questions. They give a good overview of challenges and problems planners are facing in their countries. And they show some of the concerns they have when doing their work in universities or planning practice. The answers tell much about the present mood of planners towards their discipline. They reflect the enormous path dependency of planning in the different countries of Europe. Planning in the North differs from planning in the South or in the East of Europe. Planning at the local level is fully accepted all over Europe, even though the public sector is loosing gradually its former dominance over urban development, while sharing the power with private investors and developers. Traditional regional (spatial) planning, in turn seems to losing out. The field has no more political support it has no strategic alliances, nor influential supporting lobby groups, apart from environmentalists and water authorities. Why?

The respondents could not elaborate on the reasons for this decline, and it is unclear whether it is just a temporary phenomenon, or the expression of a time, where most public infrastructure has been built and neo-liberal policies dominate the society and political milieus. Maybe regional planners themselves have contributed, too, to this decline having gradually lost contacts to people and investors, when writing their planning poetry loaded documents. Though there is some hope. Focussing on the future of polycentric city regions, regional spatial planning may soon experience a renaissance. In these city regions, where most households live, and most jobs are offered, the responsible political leaders will soon realize that development can only be guided by strategic spatial planning dealing with all the emerging challenges and with the conflicts between people, stakeholders and nature. Such strategic planning would have to be totally different from the traditional land-use-focussed regional planning of the past. it has to be strategic, both visionary and rooted into the city region's territorial potential. It has to be communicative and carried out in close co-operation with all the stakeholders in the city region. Planning for and in such city regions requires a broad range of planners, with quite different competences. Some have to be general and visionary, others have to be specialists in one of the many areas, where action has to be taken, whether in planning for mobility, social inclusion, creative industries or energy conservation, or in urban design and conservation or in other fields, where specialist planning competence is required. In such regions conflicts have to be moderated. Particularly there city region development aims and compromises have to be continuously communicated to policy makers, citizens, investors and media.

This makes clear that planning schools have to prepare for a diversity of challenges in their professional field. They have to build bridges from theory to practice, and from practice to theory. They have to bring practice back to universities to enrich education and research. In the recent past, many disciplines have explored the spatial turn in their research. Their competence is needed as well to raise the knowledge of city building, to create liveable and affordable spaces for cosmopolitan citizens in city regions., and to sustain an endangered environment.

# CROSS-BORDER COOPERATION AND THE SPACE GOVERNANCE RESCALING OF BORDER PROVINCIAL CAPITAL CITIES IN CHINA

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***Abstract***

*Border provincial capital cities have achieved more attention from superior governments in the background of Cross-Border Cooperation (CBC), and have been given more national functions of political, financial, trading and cultural exchanging functions. All CBC functions are determined and carried out by all levels of government based on different targets, and reshape these cities' space governance scale by multi-objective and multi-level governments' coordination and cooperation. This paper suggests that there should be multi-level analytical framework for border provincial capital cities developing especially in China, for the reason of the top-down politic and administrative system. First of all, it reviews CBC policies and spatial effect at 3 levels of government (central, provincial and city government) on Nanning (provincial capital city of Guangxi Zhuang Autonomous Region). Secondly, it analyses the characteristics of spatial plan and development, taking Wuxiang New District (WND) as an example, and argues that the spatial development policies of WND was guiding by central and provincial governments which even partly dominated its spatial structure. At last, it holds that local cooperating space emergence is under the control of central government, and local cooperating innovation in policy and space (including provincial and city levels) is the fundamental reason of local space diversification. The space governance of provincial capital cities is an indication of top-down guidance and bottom-up innovation, carried out by central, provincial and city government coordination.*

## 1. Introduction

Cross-Border Cooperation (CBC) is a type of regional governance based on different targets of various participants and shows diverse features because of differences in political, economic and social conditions between subnational districts adjacent to national border (Scott, 1999； Blatter, 2004). In East and Southeast Asia, economic development is a primary objective of CBC, trying to integrate and optimize resources allocation to form a "growth triangle" and improve condition of regional and national economic development (Perkmann, 2007). There are two cooperative modes (Sum, 2002): "the globalization embedding" and "the politics of open regionalism". CBC between China and adjacent countries adopts a more loose approaches (on political and social aspects), and takes "non-institutional cooperation model (Zhu, 2012)" even in economic cooperating process. It is still in the preliminary stage of regional economic integration (Lan, 2006). Therefore, case study is the only way to understand the CBC policies and its influence on the border region.

From late 1980's, with continuous improvement of political relations between China and neighbouring countries, central government carried out Border Opening (BO) policy to promote economic development and social stability of border regions, taking foreign trade and border cities as objects. Since 2000, this policy gradually shows conversion to comprehensive cooperating policy (including political, financial, transportation, legal aspects) and takes border provinces as spatial subjects (Li & Lu, 2014). Therefore, capital cities of border provinces have acquired more CBC functions from central and provincial governments. Space layout of these CBC functions from higher authorities is not determined by city governments, but a result of coordination among all levels. From the perspective of policy implementation, CBC has promoted economic and social development in border provinces and cities (Li, 2005, Brzica, 2008, Hu, 2011), but the impact on space of provincial capital cities remains ambiguity. Nanning, capital city of Guangxi Zhuang

Autonomous Region border with Vietnam, southwest in China, has expanded rapidly both in economy and space under the effect of CBC. Its economic factors, urban space functions and images are showing more characteristics of internationalization. However, these features are not only the appearance of "glocalization" but also CBC regionalization and internationalization (Li & Lu, 2012). In general, evolution of space structure is driven by conflict and coordination among "city government, enterprises and citizen (Zhang, 2001; Shi, 2004)", and city government is the most crucial subject. But in the context of CBC, central and provincial governments play a more important role in Nanning's space evolution. Taking Nanning and Wuxiang New District (WND) as example, which is a developing hotspot in southeast Nanning city, and focusing on CBC policies evolution and their spatial effect from 3 levels of central, provincial and city government, this paper reviews Nanning and WND spatial plan and development, and tries to explicate the mechanism of space evolution influenced by governments at all levels in CBC process.

## 2. CBC Policies at 3 Levels and Spatial Effect in Nanning

City government is undoubtedly a significant subject of local space policy making, but the exclusive perspective from city level neglects the spatial effect of central and provincial policies. Because of the differences of power and obligations, policies proposed by governments at all levels have different spatial effects (Zheng, 2009). In China, city's policies are constrained by higher-level governments. Especially in CBC, all crucial policies (such as tax incentives) are still strictly controlled by central government, and these policies largely determine the content and intensity of cross-border flowing factors and affect spatial formation and evolution of provincial capital cities. Meanwhile, higher-level governments also reserve power of control and coordination in China's urban and rural plan approval system, (some cities' master plan needs to be submitted and approved by provincial government or the State Council). In that sense, it provides a legal basis of central and provincial government's direct intervention in cities' spatial development and plan. In addition, with challenges of globalization, decentralization makes it possible to local space policy innovation from city government.

### *2.1 Central Government Cooperating Policies and Spatial Effect*

After the reform and opening up in 1979, "taking economic development as central task" has been national value guidance. Nanning, as the provincial capital city of Guangxi, should be the core of provincial economic development, but undertakes national military deployment and transportation functions because of military conflict between China and Vietnam. In this period, military preparations had been as dominant goal of Nanning development, and large enterprises or high-rise building constructions are banned. In 1980, instructions from Guangxi provincial government suggest that "In the future, universities, scientific research institutions and new large factories are not to be located in Nanning city as far as possible, and new industrial zones are not established except existing ones." Until 1991, China-Vietnam relations were normalized, and then in 1992, Nanning was approved as a coastal open city, and corresponding beneficial policies was provided. Normalization of China-Vietnam relations not only provides the political foundation for taking Guangxi and Nanning as subjective space of CBC, but also accelerates the growth of economy and space of Nanning (Figure 1). Beginning from 1991, formal dialogue between China and Association of Southeast Asian Nations (ASEAN) was started. In 2002, *FRAMEWORK AGREEMENT ON COMPREHENSIVE ECONOMIC CO-OPERATION BETWEEN THE PEOPLE'S REPUBLIC OF CHINA AND THE ASSOCIATION OF SOUTH EAST ASIAN NATIONS* was signed, and decided to establish China-ASEAN Free Trade Area (FTA) within 10 years. This is a landmark of formal establishment of supranational coordination mechanism. From 2005 to 2009, *AGREEMENT ON TRADE IN GOODS*, *AGREEMENT ON TRADE IN SERVICES*, and *AGREEMENT ON INVESTMENT* had been signed, and *AGREEMENT ON DISPUTE SETTLEMENT MECHANISM* was signed in 2011. A series of agreements provide institutional foundation for cooperation among countries.

Although Nanning is not bordered with other countries, city development is affected by border effect. From the view of economy and space developing history, it can be divided into three stages (Figure 2). Stage 1, fluctuation between China and Vietnam, marked by normalization between two countries in 1991. Economic growth had been slow and volatile, and GDP growth rate was even lower than national and provincial average as capital city of province, down to only 0.2% growth in 1984, and built-up area had been growing 3.8km$^2$ per year. Stage 2, implementation of BO policy from 1992 to 2000, marked by China-ASEAN FTA was proposed in 2000. Nanning economy is in the stage of recovering, whose GDP growth rate surged sharply to the peak in 1993 (23.5%) and dropped gradually below the average of nation and province in 2000. At the same time, built-up area had expanded rapidly at the pace of 5km$^2$ per year. Nanning High-tech Industrial Development Zone and Nanning Economic and Technological Development Zone were set up, and education, research and residence land synchronous expanded. Stage 3, implementation of CBC policy from 2001, marked by Nanning was determined as permanent site of CHINA-ASEAN Exposition (CAEXPO). The speed of economic growth gradually rises and is higher than China and Guangxi average, and Nanning has been the largest economy of Guangxi from 2002. Built-up area grows 11km$^2$ per year.

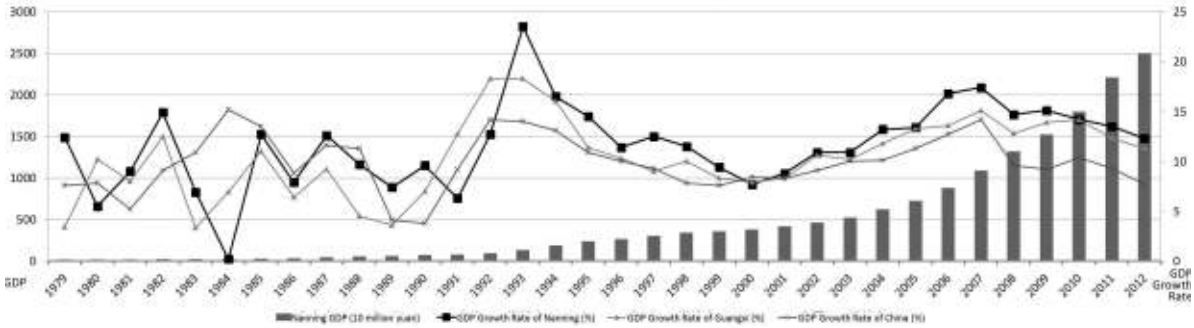


Figure 1. 1979-2011 GDP and GDP Growth Rate of Nanning, Guangxi and China
Data Source: Statistical Yearbook of Nanning, Guangxi and China

Different from border cities adjacent to other countries, provincial capital cities' CBC is not for a single country but a range of countries as capital cities of economic, political and cultural centre of border provinces in China, such as Harbin (Heilongjiang province in northeast) for Northeast Asian, Urumqi (Xinjiang Uygur Autonomous Region in northwest) for West Asian, and Nanning for ASEAN. Nanning has been endowed the platform of China-ASEAN cooperation, and this is also supported by national and regional development policy carried out by central government. These regional development policies, promulgated by central government, advance city function positioning. Nanning was positioned as "the bases of logistics, business, trade and manufacture, and the centre of information exchange (i.e. 3 bases and 1 centre)" of China-ASEAN cooperation – in *Guangxi Beibu Gulf Economic Zone Development Plan (2008)*. Also in "*Pearl River and West River Economic Zone Development Plan (2014)"* proposed to support relevant industries development —"taking advantage of central role in pilot border-financial reform zone, and giving support to foreign financial institutions for opening new branches, international or regional management headquarters, business operation headquarters, backup service centres and training bases". On the other hand, Bonded Logistics Park, political agencies and other cooperation projects etc. (e.g. China-ASEAN Business District, China-ASEAN Science and Technology Park of Modern Agriculture Cooperation) are directly set up in Nanning in national documents. Considering CBC opportunity, the State Council approved to adjust administrative districts (i.e. incorporation Yongning into Nanning) in 2004, and resulted in built-up area sharp expansion in 2005. In general, changes in central government policy – from military conflict to border opening and cross-border cooperation –significantly impact city economy and space of Nanning, especially in CBC period. Meanwhile, central government policy is a fundamental condition for CBC at local level.

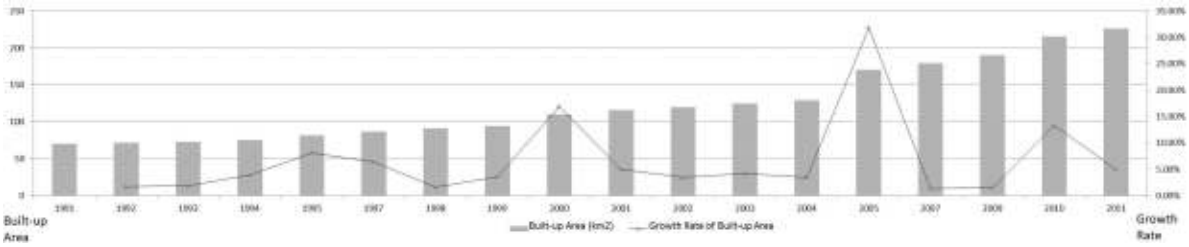


Figure 2. 1991-2011 Built-up Area and Growth rate of Nanning

Data Source: Statistical Yearbook of Nanning, Guangxi and China

*2.2 Provincial Government Cooperating Policies and Spatial Effect*

Because of the sensitiveness of coordination and decentralization in CBC, border provincial government takes more significantly role in coordination and participation which is not merely market-oriented in other cities with the Reform and Opening-up Policy. Decentralization from central government empowers province limited autonomy in CBC and provides some incentive mechanism which formed "multi-level branched institutional arrangements (Su, 2010)". But border provinces mainly concentrate in "lower politics (Wang, 2012)" such as economy and trade, environmental protection, cultural exchanges and other fields. Taking education as an example, the number of international students from ASEAN reached 7400 in Guangxi and 5000 studying in ASEAN countries from Guangxi (data source: Li, 2013). This makes Guangxi as the most important province of exchange students between China and ASEAN.

Under institutional incentives in finance, tax revenue and promotion of local officials (Zhang & Li, 2012), based on implements of central CBC policies, provincial government creatively formulates local CBC policies and tries to stay in CBC pivotal position between countries. In 2007, "China - Indonesia Economic and Trade Cooperation Zone" was established, which is the first state-level economic and trade cooperation zone in Indonesia. This is also the first national foreign trade and economic cooperation park undertaken by Guangxi, and *Guangxi Nongken Refco Group Ltd*, which is a state-owned enterprises located in Guangxi, was selected as the developer. In addition, "China - Malaysia Qinzhou Industrial Park" was founded in 2011, located in south of Guangxi, which is the third cooperation park between China and foreign central governments. With the approval as core space of CBC between China and ASEAN from central government, provincial government has been trying to expand its influence in ASEAN countries (such as "Guangxi Commodities Expo", held annually in ASEAN countries by Guangxi provincial government). Meanwhile, national CBC organizations are set up in Nanning by provincial government, e.g. China - ASEAN Institute, China – ASEAN Culture Research Association, Guangxi China – ASEAN Culture Promotion Association. It is clear that provincial government plays a role of initiator and promoter in a sense (Su, 2010).

As the capital of Guangxi, Nanning is the economic, political and cultural centre of province. And for that, Nanning has been further empowered from provincial government for promoting CBC effect. In "*the National 12th Five-Year Plan (2011)*", it proposed to turning Guangxi into "a highland of China – ASEAN cooperation". Later in 2012, "*Several Suggestions on Accelerating Highland Strategy Implementation of Nanning Inland-Opening Economy of Guangxi*" was published by provincial government, and 24 administration authority, including investment finance and taxation, land management, license and qualification management, price management etc., was empowered to city government to promote Nanning's economy. The decentralization increases autonomy of Nanning city spatial development.

*2.3 City Government Cooperating Policies and Spatial Effect*

City government is truly not a sovereign actor, so its supranational power comes from higher-level government authorization and permission. At present, cities have been one of subjects of regional

and national competition with market-oriented reformation in China. Connection between provincial capital cities of border provinces and neighboured foreign cities and regions has been strengthening by CBC, and city government has strong motivation to participate in CBC in decentralizing context of authority-responsibility adjustment. After Nanning was positioned as "3 bases and 1 centre" by central government, Nanning city government proposed "regional modern logistics base, advanced manufacturing industry base, characteristic agricultural industry base and international centres transportation, information exchange and finance (i.e. 3 bases and 3 centres)". It can be seen that Nanning city government tries to innovate and undertake more important economic functions in CBC countries, based on implementation of national policies.

However, with economy diversity in CBC regions and different central and local policies, border provincial capital cities' internationalization shows both globalization and CBC-regionalization characteristics. From the view of foreign trade and foreign investment development, Nanning shows CBC-regionalization characteristics – ASEAN countries are the most important partners of foreign trading and investment abroad. At the same time, because of insufficiency of economic growth supporting for Nanning from CBC countries, city government actively participates in globalization. For that, globalization characteristics are also shown in foreign trade and foreign investment aspects, especially in foreign direct investment (FDI) – the most important source of Nanning's FDI is from Hong Kong and US. In addition to economic cooperation, local policies are published to strengthen social interaction with ASEAN countries. In 2011, "*Scholarship Management of ASEAN Foreign Students*" was published to encourage and reward foreign students from ASEAN sister-cities in Nanning. In recent years, city governors and industry professionals have been organized to Singapore for learning and training, and Singapore has been an important window for Nanning learning from abroad.

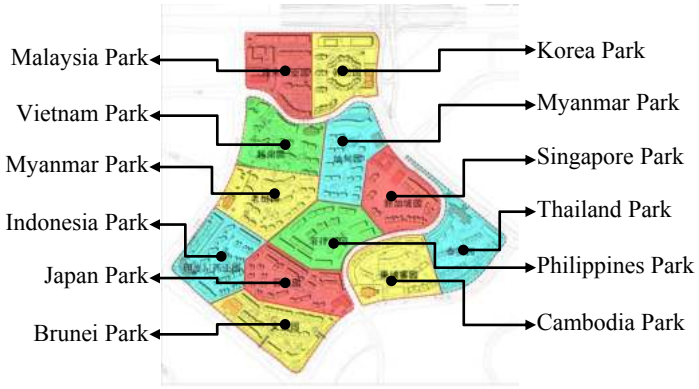


Figure 3. Zoning of China – ASEAN Business District

Source: Development Control Plan for China – ASEAN International Business District

The international behaviour innovation of city government can be carried out only in independent and autonomous space. As the direct subject of city government's public policy, city space is designed and reshaped with some international characteristics of spatial form of CBC countries for city marketing. Because of aspiration of integration into China – ASEAN cooperation, Nanning tries to maintain its status with Southeast Asian's architectural features called "tendency of splendid Southeast Asian (Yuan & Feng, 2010)". For example, in China – ASEAN Business District, it shows collage by buildings of ASEAN countries (Figure 3). In addition, not only central government's CBC projects are located in Nanning (e.g. Modern Agricultural Science and Technology Park), but also local CBC projects are blooming. It can be seen that urban space named by "China – ASEAN" or "ASEAN" increases, such as *China – ASEAN Cultural Products (Publications) Logistics Park*, *China – ASEAN Youth Training Base* and *China – ASEAN Headquarter Base*. Some of these CBC districts involve government, enterprises and non-governmental organizations of CBC countries, but most of all are local projects developed by local government and enterprises.

Although the lower-political projects are still at local level, they are useful supplements to CBC between countries because of the controllability of political and economic risk, and could be approved by central government in some scenarios. Such as "China South City" in Nanning, annually holds *China – ASEAN Expo of Light Industrial Products* from 2009, and approved by China prime minister as "*China – ASEAN Commodity Exchanging Centre (CACEC)* as trading platform and the logistics base" in 2011. After that, CACEC was founded as the first trading and logistics project with national governments of all levels and enterprises, which provided rent free for five years to distinctive products exhibition and trade from ASEAN countries. By now, all local leading policies made by Nanning government, including "*the 12th Five-Year Plan*", "*Master Plan of Nanning City (2011)*" and "*Land use Master Plan of Nanning*" etc., have consider CBC with ASEAN as one of the most important factors about city development, and are eventually implemented with characteristic space.

## 3. Spatial Plan and Development – Wuxiang New District (WND)

WND locates in southeast of Nanning central urban area (Figure 4). From China – ASEAN Expo has been held annually in 2004, "Regional-International City" has been proposed as main goal of city development, and administrative districts adjustment was carried out for spatial expansion and optimization. After that, master plan was started and WND was emphasized as focal point of spatial growth. In 2006, "Concept Master Plan of Wuxiang New District" was published as guideline of spatial development by Nanning city government. The following in the passage is about the spatial plan and development of WND.

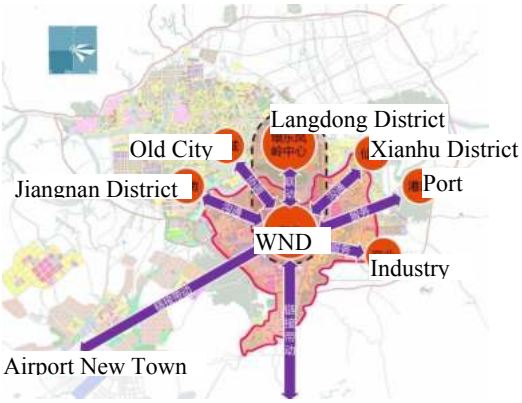


Figure 4. WND location in Nanning central urban area

Source: Concept Master Plan for Nanning WND

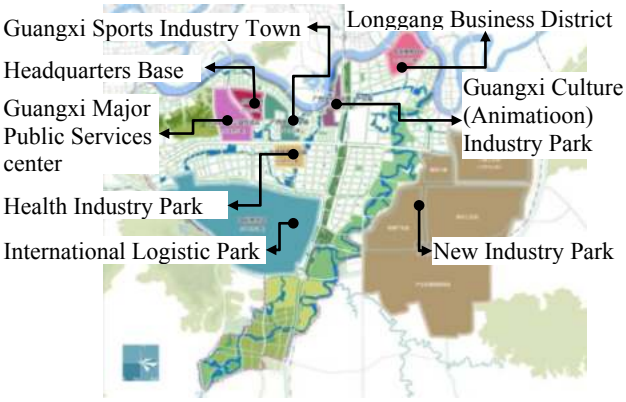


Figure 5. 8 Plates of WND

### *3.1 Spatial Plan and Development of WND*

With the main goal of "Regional-International City", CBC effects on WND economy and space have been highlighted at the very beginning of plan. It holds that CBC projects – cooperation between Beibu Gulf urban agglomeration (including Nanning, Beihai, Fangchenggang and Qinzhou 4 cities) and ASEAN countries, CAFTA and Great Mekong Sub-region Cooperation (GMSC) – will significantly impact economy, technology and culture of Nanning. Therefore, "modern city of influencing ASEAN" is emphasized in development goals, and WNC's functions are defined as "the logistics, trade, manufacturing base and information centre of CAFTA, and new headquarters base of Pan Beibu Gulf (PBG) Economic Zone". Besides, national cross-regional cooperative policies, such as "Go West Strategy" and "the Pan Pearl River Delta Regional Cooperation", and provincial preferential policies are considered. And functions are determined as not only a southwest access to the sea and trading and logistics centre at national level, but also an administrative centre at provincial level. Multi-scale policies and flowing factors have got local government's attention.

In consideration of the multi-scale preferential policies and flowing economic factors, 8 functional plates are emphasized in master plan (Figure 5). These plates not only carry provincial administrative, commercial and public service functions, but also reflect the goal and requirement of CBC participation. For example, provincial sports functions are located in the plate of *Guangxi Sports Industry City*, including *Guangxi Sports Centre*, *Guangxi Sports Education Base* and *Guangxi Olympic Training Base*, and CBC project of *China – ASEAN Sports Communication and Cooperation Experimental Area* are integrated in the same area. It is same in *Guangxi Culture (Animation) Industry City*, *China – ASEAN Cultural Industry Talent Base*, *China – ASEAN Digital Publishing Base* and *China – ASEAN Cultural Products Logistics Park* are integrated into other local cultural and residential functional space. It is clear that provincial government has been actively involved in WND plan and tries to enhance mutual connection with CBC countries.

The plan of International Logistics Park (Nanning China-ASEAN International Logistics Base) started from "Logistics Industry Adjusting and Revitalization Plan" published by central government – Nanning was defined as one of the 21 national logistics node city in 2009. At the same time, "Nanning Bonded Logistics Centre (NBLC)" was checked and started operating in 2010. As a "dry port", it enjoys export tax rebate, import bonded and free transfer policy. In Feb. 2010, Nanning was identified as "the National Demonstration City of Modern Logistics Industry". Under the support of a series of top-down preferential policies, "*Nanning China-ASEAN International Logistics Base Regulatory Plan*" was approved by city government, and positioned as "the comprehensive bonded zone and international modern logistics park for serving CAFTA and southwest China, and the new district including modern logistics, trade, advanced manufacturing industry and residential functions".

As can be seen, the plan of WND is not just an area of city spatial expansion as a result of population growth and only depended on city government, but a target area under the guidance of multi-level policies made by governments at all levels. In WND, NBLC could only be approved by central government, and provincial administrative and public service functional space needs provincial government's permission. The most important functional space of CBC is a result of coordination between governments at different levels and an innovation of local government based on its own overall targets.

*3.2 Development of WND under CBC*

Unlike other districts, led by city government, provincial government has participated in WND plan and development at the very beginning. In 2006, provincial government of Guangxi proposed that Nanning should focus on the goal of regional-international city and prioritize the development of WND. With provincial government support, "Decision on Accelerating Development of WND" was carried out by city government in 2007, which provided a series of preferential policies. In 2013, the administrative level of WND had been promoted by provincial government to accelerate development.

WND built-up area had expanded 3-4km$^2$ annually until 2013, and had been an important area of Nanning city spatial growth – accounting for 25% of total amount. By now, land of public administrative and service facilities accounted for 32.13% of WND's total, just less than residential land 34.24% (including housing development and resettlement of farmers). It is obvious that the spatial expansion mechanism of driving by public facilities. In master plan, WND is defined as the centre of information and headquarter for CBC countries, but spatial agglomeration of regional headquarters has not appeared in WND – business facilities land (including business services, commercial and financial land) accounted for only 8.7% of total. It has demonstrated the features of public-dominated cooperation. Although regional headquarters have not agglomerate in WND, but CBC effect on Nanning has been recognized by market – some enterprises have set up regional logistics centre in Nanning. And some enterprises have transferred customs clearance business from Guangdong to Nanning since operation of NBLC, showing the "arbitrage economies (Altvater, 1998)" features in border areas. At the same time, WND also attracted national large

projects and enterprises such as Yurun Global Procurement Centre of Agricultural and Sideline Products and Beibu Gulf Paper Trading Market, and large manufacturing enterprises such as Good Fortune Heavy Industry CO.,LTD (GFHI) and SANY Group.

Generally speaking, spatial plan and development is driven by all-level policies and market behaviours under the background of CBC. Central government promulgates macro policy of CBC and gives WND possibility of participating in CBC, and directly approves and sets up "Bonded Logistics Centre". So, the central government is the basic impetus of local spatial expansion. No doubt, provincial administrative and public service functions influence capital city's space, and provincial government has powerful influence on site selection of significant CBC projects. Nanning city government proposes master plan and developing goal based on preferential policies of higher levels, and limited cooperating space and activities are innovated to strengthen local cross-border linkages.

## 4. Rescaling Mechanism of Space Governance

Unlike other regional developing and coordinating policies, CBC refers to political, cultural and social cooperation which is strictly controlled by central government. Therefore, the decentralization of diplomatic power to local government is minimal, and city spatial development is firstly influenced by macro policies and must be subordinated to national interest – a frontline of defending and attacking or a gateway and channel of communication between two countries. The former excludes economic, social and cultural space agglomeration in city, and results in smaller spatial scales and slower spatial expansion; the latter brings about preferential policies and CBC projects at different administrative levels, and results in rapid spatial expansion.

Border provincial government has been one of crucial participant of CBC between China and other countries. It organizes and implements national CBC projects, and coordinates cross-border flowing factors among cities in province, and innovates local CBC policies cautiously, e.g. integrates local exposition into CBC Expo, and founds relevant CBC research academies. In china, provincial government could be seen as an ally of central government in the process of CBC (Su, 2012). In general, provincial rarely involves in city spatial plan and development directly. But as political centre of province, capital city's space governance will inevitably be affected by higher-level government activities. In addition, provincial government is a more significant partner than city in CBC process, and some important projects still need its approval and coordination.

The city government is given limited power in CBC, so its main role is to implement the policies and projects of higher-level government. But, participation in CBC is conducive to attracting factors agglomeration and enhancing the level of city economic development. For that, city government can only reshape the image of city by limited authorization, such as naming specific area and introducing distinctive buildings of CBC countries, in order to attract more CBC functions and economic factors. In this process, city government has also innovated cooperating modes in economic, social and cultural aspects to improve city's status. Implementation of higher-level policies provides new impetus for city. As the direct manager of city space, city government integrates multi-level policies and projects into its own developing goal, and specific spatial pattern has ultimately formed.

## 5. Conclusions

For a city, all-level policies impact the evolution of city space to a certain extent, but border province is the most direct region which "territorial logics conflicting with functional logics (Blatter, 2004; Popescu, 2008)" and more sensitive to higher-level policies. Under the background of CBC dominated by central government, provincial capital cities' economy and space is expected to expand, and innovation in local policy and space will be possible to promote to national level if it is approved by central government. Therefore, local government is possible to be the leader and innovator of CBC between countries based on its own interests and judgments. In general, all-level

CBC policies impact space of provincial capital city. The fundamental driving force of city spatial growth comes from implementation of central CBC policies and relevant space supply. With provincial supporting policies, local space is integrated in macro CBC policies by local government's innovation in policies and space. The multi-level CBC policies complicated the content and intensity of flowing factors in provincial capital cities, and rescaled spatial governance. Multi-level space governance of provincial capital cities should be paid more attention for understanding mechanism of spatial evolution.

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# PLANNING WITHOUT BORDERS: IMPLEMENTATION OF MARITIME SPATIAL PLANNING DIRECTIVE (2014/89/EU) IN THE ADRIATIC IONIAN REGION

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Abstract
Over the last decade, in response to the increasing demand for maritime spaces a
2012), a growing attention has been paid to Maritime Spatial Planning, identifi
promoting a rational allocation of maritime uses and for balancing the demand for
maritime activities with the need to preserve the integrity marine ecosystems (Ehl
tough spatial planning is not a formal EU competence, the European legislator has
develop a common approach to maritime spatial management across all Member States
COM(2008)791 final). In particular, with the entering in force of the new Directiv
be ratified within 2016, all Member States will have to identify competent author
boundary maritime spatial management plans within 2021.

The development of trans-boundary MSP and its integration with existing planning s
of specific challenges, mainly in terms of cooperation efforts, which are required
adaptive planning schemes in marine spaces (Ehler & Douvere, 2009). The first or
boundary cooperation. The adoption of an ecosystem-based approach to MSP (Dir. 200
necessity to stimulate neighbouring countries to embed their marine spatial plan
context that takes into account ecosystem issues beyond their national boundaries
the same time, the cross-border nature of maritime affairs requires a strong
barriers imposed by administrative borders and international framework agreements
also be fostered among subjects with authoritative power on maritime spaces a
planning authorities, in order to promote a multi-scalar approach to MSP and to ov
national and sub-national scale. A second, important, organizational challenge co
coordination: it is indeed necessary to promote the cooperation among public bod
the sectoral development of those maritime activities, whose management has to be
MSP umbrella. Finally, MSP should be based on a continuous process of institutio
based on mixing expert, scientific and sectoral knowledge and ultimately aimed a
planning process.

The guiding question to be answered in this work concerns the role that planners s
On the one hand, it is argued that spatial planners could guide this coordinat
organization of collaborative and adaptive MSP, also contributing to foster the in
existing land planning systems (Smith & Maes, 2011). On the other hand, it is
will have to significantly update their professional skills and competences to p
challenges posed by trans-boundary MSP issues.

As an example, the case of the ADRIPLAN Project (ADRIPLAN.eu) will be presen
supported by the DG Mare - is setting the first example of maritime spatial pla
Ionian Macroregion, involving 6 countries in the basin (Italy, Slovenia, Croat
Greece). It will test a transboundary MSP example for the AIR and for two focus
realistic scenario at 2020 and proceeding with the definition of an actions por
programs 2014-2020, local land and coastal planning, regulative and legal system
planning test for AIR will terminate by July 2015.

## 1. Introduction: towards a common maritime spatial management in the EU

Coastal and marine ecosystems have been subjected to increasing anthropogenic p
fifty years (UNEP MEA 2005). The demand for maritime and coastal spaces for diff
one for natural resources are indeed constantly and rapidly increasing (UNESCO 20

2009). On the one hand, this is leading to an overexploitation of marine and coas
loss of biodiversity in marine and coastal systems and to the consequent decr
ecosystems to produce ecosystem services (see Worm et al. 2006). On the other han
have emerged with respect to the use of marine and coastal spaces. As a consequenc
develop a comprehensive framework capable of promoting the definition of common ma

The need to define policies and tools for the integrated management and planning
areas has acquired an increasing relevance in the European context. The EU l
foundations for the development of an Integrated Maritime Policy (IMP, launched t

Blue Paper), which in general terms aims at conciliating economic developm
have been established by the Blue Growth Strategy (2012/494/EU) – with marine a
requirements, as defined by the Marine Strategy Framework Directive (Dir. 2008/
identified Maritime Spatial Planning (MSP) as a proper tool to be used for the rat
uses. According to the new Directive on MSP (2014/89/EU), all Member States wi
Directive within 2016, to identify competent authorities for MSP and to dev
management plans within 2021.

A functional coexistence of human activities in the marine space and the reduc
marine and coastal environment are some of the main goals of the European polic
Directive 89/2014 identifies MSP, using an approach ecosystem-based (EBA), as t
achieve these goals. Eheler and Douvere (2007) defined Maritime Spatial Planning
analyzing and allocating the spatial and temporal distribution of human activities
achieve ecological, economic and social objectives that have been specified throu
order to be effective, the process must have some key characteristics. It has to
both across sectors and governments, adaptive, thus capable of learning from exp
oriented, and ecosystem-based. The application of an ecosystem-based approach ai
collective pressure of all the human activities is kept within levels compatibl
current ecosystem services and that the capacity of marine ecosystems to respond t
is not compromised. As a matter of fact EBA is defined a process that recognizes t
the ecosystem as a whole and humans as part of the ecosystem and of its dynamics.
of ocean space are thus closely interrelated and need to be considered as a w
ecosystem-based approach are to: (i) balance the increasing number, diversity
activities with the sea s ability to provide services; (ii) incorporate appropria
and cultural perspectives; (iii) support management that is coordinated at the sc
political jurisdictions (Foley et al. 2010).

## 2. Implementing Maritime Spatial Planning: new challenges to be faced

A first important element to be considered when approaching MSP is that it is a
researchers, planners and practitioners. Despite a number of approaches to in
developed, a common methodological framework has not yet been established. Further
have been implementation, so that there is a substantial lack of transferable bes
the development of the different phases which composed the adaptive MSP planni
consideration concerns the difficulty of applying a common framework to a process
place-based, i.e. grounded on the specificity of local economic and ecological dyn

In this framework, a major challenge is represented by the development and imp
within a context the maritime one where borders are often uncertain and fleeti
to the one used in land-based planning. A substantial lack of well defined mar
boundaries is often accompanied by disagreements among involved authorities and st
to the boundaries established. The adoption of transboundary planning in a maritim
at least four significant challenges:

1) Integrating MSP in existing (land-based) planning schemes

The inclusion of maritime spaces within existing planning systems constitutes a fu
at the governance and at the implementation level. It deals not only with the app
MSP, but also with the adoption of a new perspective in approaching both to ma
planning. The integration of MSP in the existing, land-based, planning schemes r
trans-boundary cooperation effort: planning schemes and planning management syste

country to country. Not only competent authorities for planning operate at diffe
management of maritime activities is highly fragmented (within and among cou
competences fields, spatial jurisdiction and regulatory frameworks. Planners shou
the relevant bottleneck related to governance and management fragmentation, and
definition of planning measures  the definition of spatially e sectorally integra

2) Defining shared management and planning boundaries

Notably, the need to adopt a new, sea-oriented, perspective does not only emerge f
specific normative provisions (i.e. to the elaboration of MSP plans within 2021),
necessity to solve both user-user and environment-user conflicts. This need h
local/regional scale, and has been raised by stakeholders involved in the use/ma
coastal spaces. The necessity to define, at different scales  planning and mana
shared by different authorities and involved stakeholders is crucial in order
politically accepted plan.

3) Define boundaries capable of embracing ecosystems

The previously described ecosystem-based approach to maritime spatial planning
planning measures that consider the specificity of local ecosystems and environ
pursue this objective, a significant effort is needed to overcome the definition o
considering political issues related to competence areas (e.g. national boundari
traditional approach to boundary definition should necessarily be based on trans-b

4) Knowledge sharing

Finally, the definition of integrated MSP strategies and actions should be based o
information and, in more general terms, on a mix of expert, scientific, operat
Acquiring data and information from different sources (including relevant sta
overcoming of science-policy barriers and the fostering of cross-border cooperat
acquisition and management.

## 3. A new role for planners

The challenges described in the previous part require a revision of the role that
complex process of decision-making posed by MSP. As a matter of fact, an effective
and coastal areas involves not only technical capabilities of problem solving, bu
building among sectors and economic actors, capacity building between communiti
policy-makers, and sharing of knowledge and technical data as recommended in the E
Policy (IMP). MSP requires a substantial new role of planner as coordinator of
disciplinar competences. In certain sense planner as to anticipate the extensio
maritime spaces, finding proper connection between land&sea starting with existist
The adoption of a  new perspective  requires an update in the planning competence
plans will have to encompass social, cultural, economic and environmental issue
include in the planning team planners with heterogeneous knowledge and expertise.

## 4. Lesson learned from the EU experiences

Following the increasing importance attributed to ICM and MSP and within the no
has led to the elaboration of the Directive on MSP, a number of planning exercis
been developed at different scales. Within the EU, the most relevant examples
financed by the European Commision – are the following (see EC  Maritime Affairs

1. BaltSeaPlan – Baltic Sea Region Programme project "Introducing Maritime Spatial
   Baltic Sea" (2009-2012): aiming at identifying MSP strategies for the Baltic
   eight focus areas, the project was strongly focused on cross-border cooperati
   coming from Germany, Poland, Denmark, Sweden, Estonia, Lithuania and Latvia c
   Vision for the Baltic Sea, based on the motto  Think Baltic, act regionally .
   identifies pan-baltic objectives and strategies, while establishing the princ
   according to which spatial challenges have to be dealt with at the lowest mos
   level.

2. Plan Bothnia[ii] – Preparatory Action on Maritime Spatial Planning in the Baltic Sea (2010–2012): transboundary pilot project developed in the Bothnian Sea. The Pilot Plan, jo Sweden and Finland and coordinated by HELCOM, aims at providing a long-term s area analysed, also considering possible developments in the land-sea interfa integration of maritime spatial plans in the existing national planning frame established cover ecosystem integrity; protected areas; maritime traffic; ren regional development.
3. MASPNOSE[iii] – Preparatory Action on Maritime Spatial Planning in the North Sea starting from the identification of specific priority uses and strategic sect the project developed an international fishery plan for the Dogger Bank in th an exploration of the potential for collaboration on the Thornton Bank in the North Sea.
4. TPEA[iv] – Transboundary Planning in the European Atlantic (2012–2014): the proj the DG Mare, the project involves partners from Ireland, Portugal, Spain and focused at developing a transboundary planning proposal for two focus areas, region (within the waters of Northern Ireland and the Republic of Ireland) ar Atlantic (within the waters of Spain and Portugal situated around Guadiana).

Such planning exercises have been developed not only to solve effective confl actual allocation of maritime uses, but also to define possible methodological and used in the definition of integrated and ecosystem-based maritime spatial plans. A planning exercises and studies, the following elements have a crucial role:

- Definition of a common vision for maritime areas of strategic importance at
- Enhancement of cross-border cooperation to support EU cohesion and integrate
- Acquisition of data and information related to local ecosystem dynamics, a economic and political characteristics of the uses analysed;
- Identification of relevant stakeholders to be involved in the definition of Establishing of a dialogue among the stakeholders involved in the use an maritime spaces;
  Increase of the coordination among policy makers and coordinators.

The most recent planning experimentation developed in this context is constitu project, financed by the DG MARE, which is finalized to propose and recommend a pl Adriatic-Ionian Region (AIR) (Fig. 1).

Figure 1. Adriatic Ionian Region (IUAV, 2014)

## 5. Implementing MSP in the Adriatic-Ionian Region: the ADRIPLAN Project

Concerning the AIR, MSP is an important part of EUSAIR (EU Strategy for the A Region), defined as an integrated framework to address common issues of EU Membe Countries located in the Adriatic–Ionian Macro-region. ADRIPLAN (which stands f maritime spatial PLANning) is a 18-months project started in December 2013, a experimentation led in the Mediterranean Basin. It aims at defining a commonly ag border MSP in the Adriatic-Ionian Macro-region, with a particular focus on two a Adriatic and the Southern-Adriatic/Northern-Ionian.

The project, coordinated by CNR-ISMAR, is developed by a transnational partn technical partners (mainly Universities and Research Institutes) which are respo project activities under the steering, the supervision and the support of 9 in regional authorities) and of an external Advisory Board. Through the direct involv and the inclusion of relevant stakeholders in different phases of the planning pro identify key issues to be faced, (ii) define strategic objectives to be set for th and cross-border planning options both in the macro-area and in the two focus are the elaboration strategic recommendations for the development of maritime spatial define a planning proposal for the allocation of uses in focus areas characterized and by high pressures of the identified uses on ecosystems and environmental ADRIPLAN also aims at constructing a solid knowledge base to be used within th available for the elaboration of future plans.

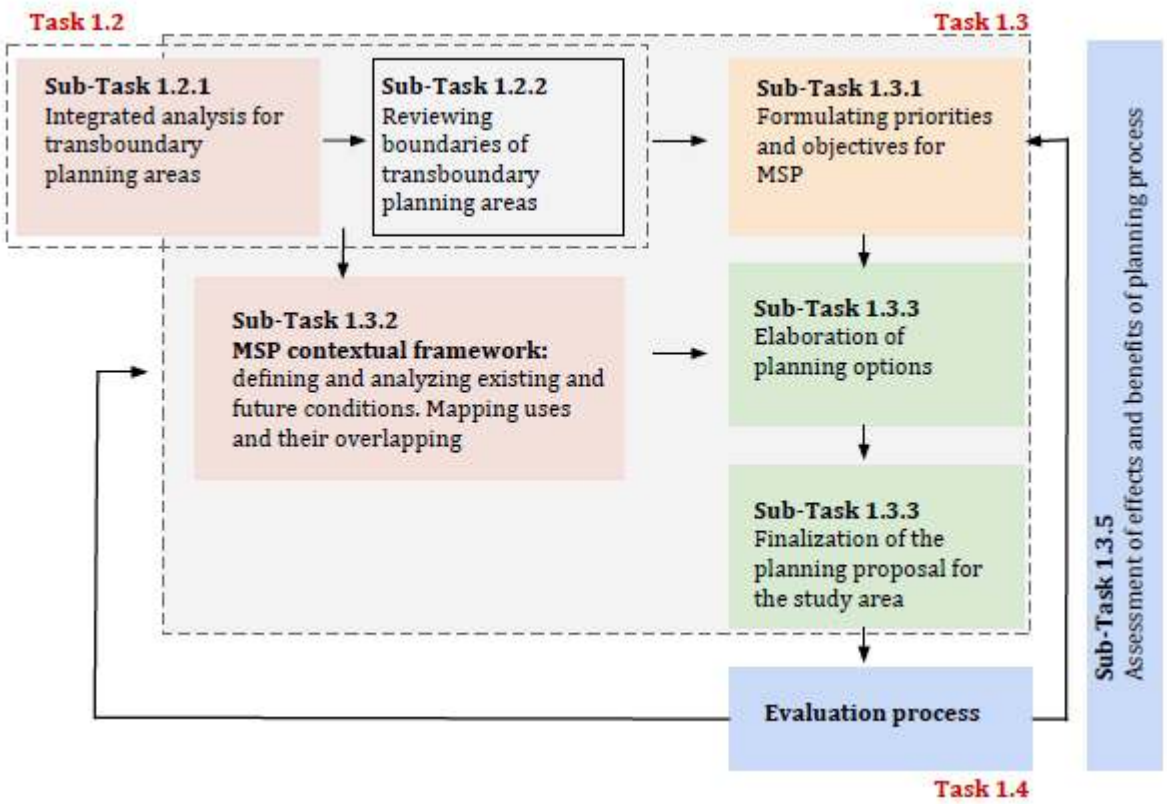


Figure 2. ADRIPLAN Methodology (IUAV, 2015)

Accordingly with the EU Directive on MSP (2014/89/EU), the literature availab
experiences conduced both at European and extra-European level, ADRIPLAN metho
following an Ecosystem-Based Approach. The project methodology is constructed to d
future oriented and integrate plan of the Adriatic-Ionian area and is articulated
First of all, an analysis of the transboundary planning area is structured to col
area s existing conditions, dynamics and current pressures on the environment. Aim

identify human activities present in the project area;
identify the existence of vulnerable ecosystems;
identify the socio-economic issues connected to sea-based activities;
identify planning and governance structures in the different project coun
scales;
identify limitations on current and potential uses;

Secondly, considering that the project aims at developing proposal and recommenda
on the Adriatic-Ionian Macroregion, but also on two Focus Areas (1. Northern
Adriatic-North Ionian), a review of boundaries of transboundary planning areas is
with EBA, the definition of boundaries have to be made considering the different
including: (i) environmental pressures and needs; (ii) intensity and multiplicity
involved in the process; (iv) policy priorities and cross-border issues (v) co
different scales.
Following these two preliminary activities, the formulation of priorities and br
Macro-region and for the two Focus Areas, is established in order to guide the sub
considers the strategic goals and objectives promoted at the International and
transnational, national and local stakeholders issues and needs.

In parallel with this activity, the definition and analysis of existing and futur
uses and uses-environment conflicts, compatibilities opportunities and potential s

activity is performed using different tools, data elaboration methodologies and u
data and information collected in the previous phases. Moreover, the analysis of
conditions, made taking into consideration the defined priorities and objectives,
planning issues, options and measures as indicated in the process of planning elab
In order to acquire all the necessary information, data and suggestions to perform
an EBA, specific activities of stakeholders involvement must be planned and condu
stakeholders acting at different scales and level is essential to support the pla
needs, conflicts, priorities and dynamics.
Finally, an activity of monitoring and evaluation of the different phases perfor
results achieved is established in order to make the whole process as adaptive as

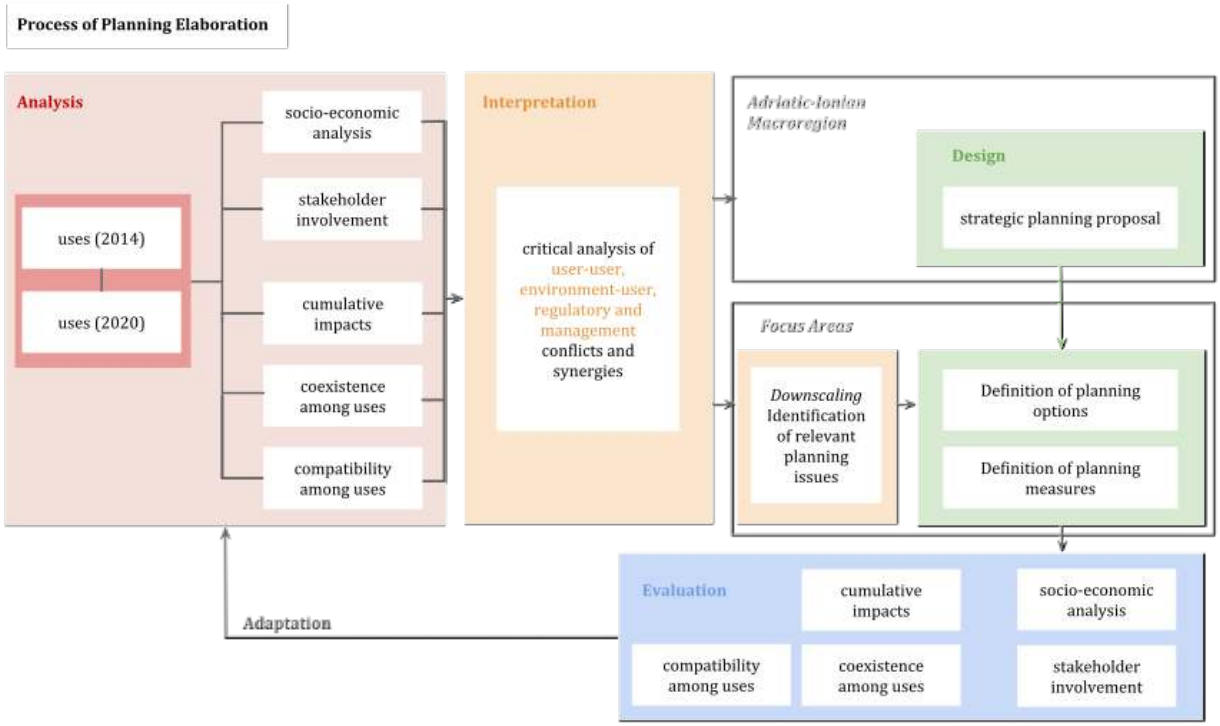


Figure 3. The process of Planning Elaboration (IUAV, 2015)

For what concerns more specifically the process of planning elaboration, in ADRIE
cyclical and adaptive (Fig.3), based on the steps established by the methodologic
Fig. 2.
In the first phase, current and future uses are analysed, considering interact
environmental components. Future uses are part of an explorative scenario (a
interactions of expected projects and already planned initiatives in the region.
future uses is aimed at identifying user-user and environment-user conflicts ar
respectively minimized or fostered by properly designed planning actions, but a
planning issues (including management and regulatory issues influencing planning
priorities by stakeholders involved in the process.
In the second phase, all the information acquired are interpreted, also in light
relevant stakeholders, including institutional actors operating at the national a
face the complexity deriving from the intensity of uses in the area, this critica
starting from the analyses of pivotal uses. These can be defined as pivot of
starting points upon which the planning proposal should be developed, always
objective of achieving an allocation of uses capable of minimizing existing and
uses and between maritime uses and the marine environment in a tranboundary pers
uses are not more important than the others, but are the ones with the higher capa
and of allowing for the emergence of existing and potential conflicts that need to
integrated and interdisciplinary approach. This phase will result in some comment

conflicts/synergies, to be potentially addressed by a strategic plan, as well as potentially addressed by specific planning measures. These will provide the bas planning actions, as defined in the following step.
Thirdly, two kinds of planning proposal are elaborated: a strategic, large-scale Ionian macro-region and some operative planning measures ( pilot actions ) for t strategic plan will represent a technical and political statement of policy from area of interest and competences. It will consist in a cartographic part and in a former will identify: (i) boundaries for potential management and regulation in management zones; (iii) Potential development areas for pivotal uses; (iv) Protect non-suitable areas for the development of specific uses, in relation to the environmental components and/or to the coexistence of non compatible uses, etc.). (i) at drafting indications/suggestions for regulating specific uses/maritime acti management schemes; and (ii) at providing indications to support trans-boundary co specific themes. The pilot measures will be developed at the focus-area level, a specific challenges emerged always assuming a multi-scalar and- where applica perspective. Planning measures will consist in a zoning proposal and in a descript the indication provided by UNESCO-IOC (2012), the zoning proposal will consist designing zones based on the underlying topography, oceanography and distribution 2) designing a set of indications to define permits, licenses and use rules withi will be set accordingly three elements: a) the environmental components units at b) the vertical zoning where it is necessary to provide different rules of use w case also on the seafloor; c) the temporal zoning to define a timeframe (both periods) to set boundaries, permits and regulations, where needed.
Finally, guidelines for the evaluation of planning measures will be provided, potential redefinition of proposed actions.
To sum up, Maritime Spatial Plan will include a vision, policies, objectives and relevant both at AIR level and at the focus area level to guide decision make undertake activities or development. Taking into consideration the minimum re Directive (EC, 2014), the planning documents will consist on the minimum of:

- strategic spatial visions for the areas;
- targets for key activities and interests, considering maritime activities a
- guidance for statutory planning activities;
- proposed local and transboundary spatial strategies;
- locational possibilities and zoning proposals;
- good practice / user recommendations.

Where possible, more detailed proposals for areas requiring special attention will

## 6. Conclusions

For too long coasts and maritime space have been seen as sectoral environment mainstream policy regarding land and environmental planning framework. With the approach supported MSP, maritime space will receive the same attentions in terms of land and territorial space. In this sense the expansion of planning processes t connection between land&sea systems with a particular attention to coastal areas t border between the territorial and maritime space. Surely after the approval of EC new perspective in terms of professional skills and competence, is coming for Europ

[i] see http://www.baltseaplan.eu/
[ii] see http://planbothnia.org/.
[iii] see https://www.wageningenur.nl/en/show/Maspnose-Maritime-spatial-planning-in-the
[iv] see http://www.tpeamaritime.eu/wp/

[v] see http://data.adriplan.eu/.

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# Research on Means and Spatial Features of Collaborative Development of Cities in Yangtze River Delta at the Urbanization Ratio over 50%

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**Abstract:**

Studies show that, after the urbanization ratio in the Yangtze River Delta exceeded 50% in 2000, the urban construction space in the region continues to expand rapidly, which has brought about such problems as land use and environment constraining the urbanization process. To address the many problems seen in the urbanization process, and stand together against the competition from other city clusters in the world, the Yangtze River Delta has been enhancing the efforts in collaborative development after its urbanization ratio exceeded 50%. To maintain the environmental survival bottom-line and obtain the benefits of joint efforts against the external competition, though it has been lacking in the cultural environment of collaboration and in the strong institutional support, the Yangtze River Delta, since Year 2000, has made considerable practice in the collaborations of environment harnessing, building of infrastructures, land use and development, and knowledge innovation in the region. Studies show that, after the urbanization ratio exceeded 50% in the Yangtze River Delta, the collaborative development among cities, in terms of geographic territory, has been shifting from the collaborative development in the multiple points to that in the belt of neighboring regions and in the network structure with layers. At the same time, it is also developing from the collaborative development of physical space to that of virtual space.

Keywords: Yangtze River Delta, city, urbanization ratio of 50%, Cooperative Development; spatial features

## 1. Introduction（research background）

According to the 1978-2012 statistics of urbanization ratio of permanent population in Shanghai Municipality, Zhejiang Province and Jiangsu Province (Table 1), the urbanization ratio in the Yangtze River Delta in 2000 stood at 49.6% and exceeded 50% in the following year. In 2000-2010, the urbanization ratio of permanent population in the region rising rapidly by 1.6 percentage points annually. Even after it exceeded 50%, it still rose by nearly 1 percentage point after 2010 (see Table 1). The 2012 data show that, the territory in the Yangtze River Delta (1 municipality and 2 provinces) accounted for 2.19% of the total in China, its population took 11.65% (157.77 million) of the total in China and its GDP accounted for 20.96% (RMB 10.8904

trillion)of that in the whole country[1]. The rapid urbanization has triggered the booming economy in the region. At the same time, it has also aroused many problems in the structure of economy and capacity, immigration of population, and harnessing of environmental pollution, which seriously impact on the quality of urbanization in the region. The urbanization ratio in the Yangtze River Delta exceeded 50% in Year 2000 when China entered WTO and the Chinese people began their full awareness of taking joint efforts to address the globalization competition and getting into collaborative development among different regions.

Table 1 Table of Urbanization Ratio of Permanent Population in the 2 Provinces and 1 Municipality in Yangtze River Delta in 1978-2012

Population in 10,000

| | **Shanghai** | **Zhejiang Province** | **Jiangsu Province** | **Yangtze River Delta (2 provinces and 1 municipality)** | | |
|---|---|---|---|---|---|---|
| | **Urban population** | **Urban population** | **Urban population** | **Total population** | **Urban population** | **Urbanization ratio (%)** |
| 1990 | 868.73 | 1516.57 | 1458.94 | 12338.90 | 3844.24 | 31.16 |
| 1995 | 1262.13 | - | 1929.09 | 12869.02 | - | - |
| 2000 | 1478.00 | 2235.66 | 3040.81 | 13615.75 | 6754.47 | 49.61 |
| 2005 | 1684.00 | 2742.00 | 3832.06 | 14469.40 | 8258.06 | 57.07 |
| 2010 | 2056.00 | 3354.06 | 4767.63 | 15618.51 | 10177.69 | 65.16 |
| 2011 | 2096.30 | 3403.00 | 4889.36 | 15709.26 | 10388.66 | 66.13 |
| 2012 | 2126. | 3461.00 | 4990.00 | 15777.41 | 10577.00 | 67.04 |
| 2013 | 2164.000 0 | 3519.00 | 5090.01 | 15852.64 | 10773.01 | 67.96 |

Source: 2011-2014 Zhejiang Statistical Yearbook, Jiangsu Statistical Yearbook and Shanghai Statistical Yearbook, as well as 2006 China Public Health Statistical Yearbook.

## 2. Scope and methods of the study

Studies of regional collaboration in the Yangtze River Delta have the following focuses: the studies focusing on regional economic integration (e.g., Li Jian, Ning Yuemin and Shi Song, 2006; Han Jia, 2008); studies cored on integration of city clusters (e.g. Wang Guixin, 2005; Yu Hongsheng, 2010); studies centered on empirical city relational degree (e.g., Tang Zilai, 2010; Wang De, 2003); and studies pillared on spatial changes (e.g., Chen Jianjun, 2007; Zhao Miaoxi, 2011). These studies emphasize on analysis of industries, economy, population, space and development of city clusters. Nevertheless, the analysis is rarely combined with the problems and needs of urbanization process. At the same time, because local administrations in China lack the cultural atmosphere and institutional guarantee of collaboration, the integration is really a very difficult target for regional development. And the collaborative development is the ideal choice of making joint efforts to address the negative external factors in the condition of existing policies. The study, at first, states that it is necessary to engage in collaborative development among cities so as to address the problems brought by the rapid urbanization after the urbanization ratio exceeds 50% in the Yangtze River Delta. Then it adopts the method of comprehensive analysis to analyze the process of collaborative development among cities after the 50% urbanization ratio before reaching the needs and means of collaborative development

[1] Source: 2011-2014 Zhejiang Statistical Yearbook, Jiangsu Statistical Yearbook and Shanghai Statistical Yearbook, as well as 2006 China Public Health Statistical Yearbook.

among cities after the 50% urbanization ratio in the Yangtze River Delta. In the end, it uses both the case analysis and GIS analysis to analyze the spatial characteristics of collaborative development among cities in the region after the 50% urbanization ratio.

For the sake of convenience, the thesis mainly studies the statistics of administrative zones and the overall analysis of the Yangtze River Delta is mainly made in the scope of 2 provinces and 1 municipality, namely, Zhejiang Province, Jiangsu Province, and Shanghai Municipality. And the data used in the study are mainly those ranging from 2000 till today.

## 3. Fundamental problems that need to be addressed in collaborative development among cities after the urbanization ratio exceeds 50%

Problems of land and environment are fundamental problems that need to be solved in the urbanization process because land is the carrier of urbanization and environment constitutes the bottom-line guarantee of urbanization. In this section, we will focus on analyzing the problems of rapid land expansion and serious environmental pollution that need to be solved in the regional collaboration in Yangtze River Delta after its urbanization ratio exceeds 50%.

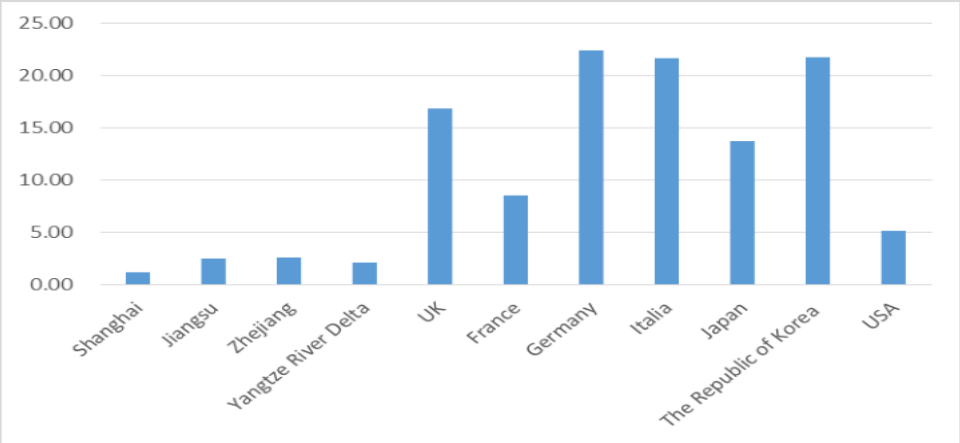
### 3.1 Problem of rapid expansion of urban construction land

Urban construction land in the Yangtze River Delta expands rapidly but inefficiently with limited quantity of new land for construction. (See Table 2) In 1980-2013, the built-up area in the Yangtze River Delta, which is the most important city cluster in East China, grew from 2,260km2 in 1980 to 2,896km2 in 2000, with average annual growth rate of 1.25%. However, after Year 2000, the built-up areas in the cities started to expand rapidly with the annual growth rate in 2000-2013 standing as high as 7.27%. Nevertheless, in the 13 years in the same period, the annual growth rate of urban population in the 2 provinces and 1 municipality in the Yangtze River Delta is only 3.66% (Table 2). It shows the rate of urban construction land expansion is far higher than that of population growth. Evidently, the growth pattern which is oriented towards land development instead of human needs is not sustainable. And the comparison of GDP per area of construction land in 2013 shows the GDP per area in the Yangtze River Delta is far less than that in the developed countries in the world, which demonstrates that urban construction land in the Yangtze River Delta is expanding in an inefficient way (see Graph 1).

Table 2 Urban population and urban built-up areas in the Yangtze River Delta

| Year | Total urban population | Annual growth rate of population | Urban built-up area | Annual growth rate of urban built-up area |
|---|---|---|---|---|
| 1980 | 1568.81 | - | 2260.00 | - |
| 2000 | 6754.47 | 7.57% | 2896.30 | 1.25% |
| 2013 | 10773.01 | 3.66% | 7208.00 | 7.27% |

Source: Statistical Yearbook



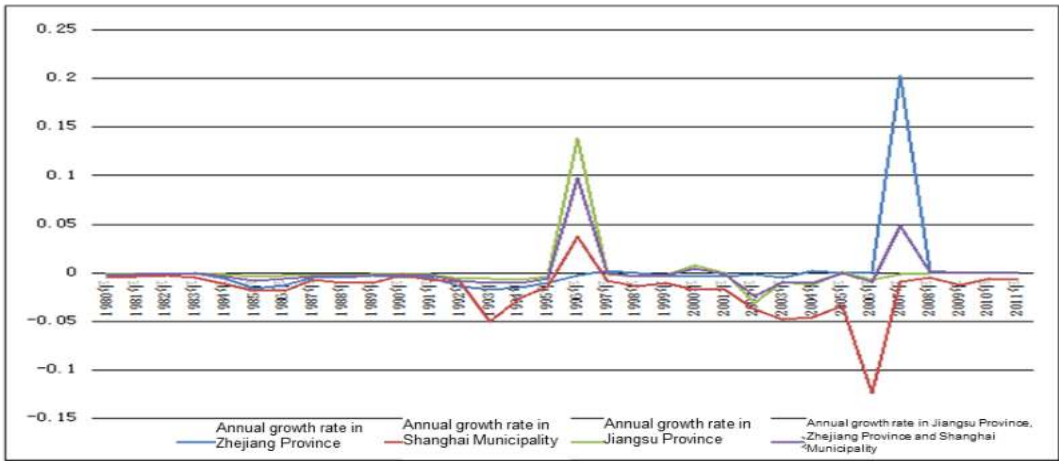

Graph 1 Comparison of GDP per area of construction land in 2013
Note: GDP per area of urban construction land = GDP aggregate/total quantity of urban construction land in the region with the unit at USD100 million per km2. Source: The overseas urban construction land area comes from http://www.demographia.com/calculation of urban areas in different countries; data of GDP of various countries come from WB database; and the data of China come from statistical yearbooks of different localities in China.

At the same time, the urban land expands extensively and rapidly occupies the farmland. According to the studies made by Chen Wen, et al (2007), after Year 2000, the urban construction land was expanded at considerable rate in both scale and speed in the central cities and secondary cities (see Table 3). However, the expansion degree in central cities was evidently lower than that in the secondary cities (county and county-level cities). And we can conclude that construction land expansion not only happened in central cities, but also moved from the central cities gradually to the secondary cities, thus bringing about the spread and expansion of hot points in land use. The spread built-up development environment in the high-density regions has caused problems of life quality and social risks in the region as a whole.

Table 3 Intensity and speed of urban construction land expansion in the Yangtze River Delta in 1980-2007

| | | 1980 1995 | 1995 2000 | 2000 2007 |
|---|---|---|---|---|
| Intensity of urban construction land expansion | Overall | 0.07 | 0.08 | 0.46 |
| | Central cities | 0.16 | 0.11 | 0.91 |
| | County(city) | 0.04 | 0.04 | 0.3 |
| Speed of urban construction land expansion | Overall | 3.20% | 5.80% | 15.85% |
| | Central cities | 2.90% | 3.50% | 11.54% |
| | County(city) | 3.60% | 6.70% | 16.80% |

Though the urban construction land expanded rapidly, the farmland area fell down year by year (Graph 2). In the 31 years in 1980-2011, the farmland area in the Yangtze River Delta fell down almost every year. In particular after Year 2000, the farmland reduction happened at a faster rate.

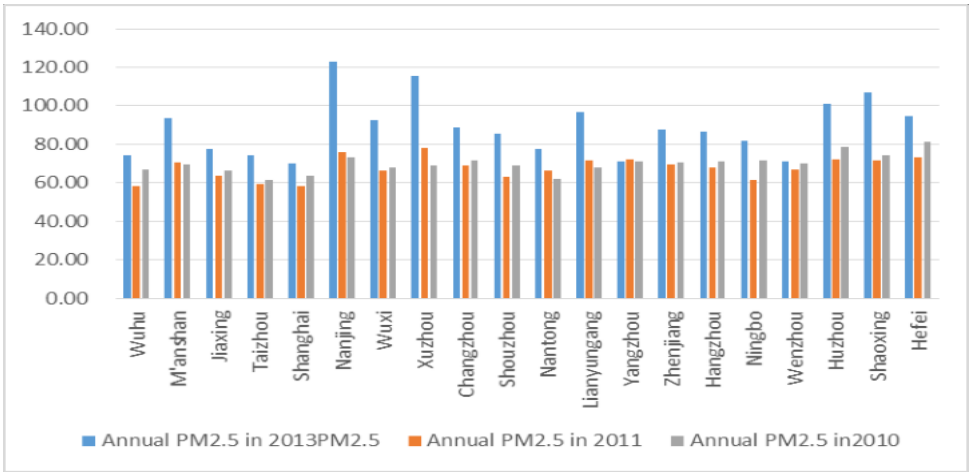



Graph 2 Annual growth rates of farmland area in the Yangtze River Delta in 1980-2011

### 3.2 Problem of regional environmental development

In terms of ecological environment, the environmental problems in the Yangtze River Delta featured by high-density development mainly include the atmospheric and water environmental pollution, as well as the 3 urban wastes (waste gas , waste water and industrial residue) and mammoth energy consumption.

First of all, air pollution in the Yangtze River Delta has been very serious and there is no sign of alleviation in the recent years. In 2010-2013, the annual PM2.5 index in the Yangtze River Delta had been rising considerably. In major regions in the Yangtze River Delta in 2013, the annual PM2.5 index was higher than 60 while that in Nanjing, Xuzhou and Shaoxing stood at above 100 respectively, showing the air pollution had been very serious (see Graph 3). According to the Air Quality Performance of 74 Chinese cities released by the Ministry of Environmental Protection for 2014, in the 25 cities at and above the prefecture level in the Yangtze River Delta, the average period of qualified air quality was only 254 days in that year and 2.9% of days in the year had air pollution rated as serious and above.




Graph 3 Annual PM2.5 index in major cities in the Yangtze River Delta in 2011-2013
Source: Database of China Intelligent Urbanization Co-creation Centre for High Density Region

Second, water pollution in the Yangtze River Delta is serious. The waterfall in the region is abundant because of the Yangtze River Delta. However, as the cities develop and the explosive growth of population, the water consumed for life and production has been rising sharply and producing pollution, thus posing great challenge against water environment and threatening, in an indirect way, the other systems in cities. In 2004, in the 21 monitored points in Taihu Lake, 19% had grade-IV water quality, 24% had grade-V water quality and 57% had bad-grade-V quality. In 2012, the sewage discharges in Shanghai, Jiangsu and Zhejiang reached 2.205 billion tons, 5.982 billion tons and 4.21 billion tons respectively. Besides, the pollution of water systems has led to a few ecological problems such the water eutrophy, sharp reduction in the aquatic species and land subsidence caused by the over-exploitation of underground water in the built-up areas. For instance, in Shanghai, the maximum land subsidence over the past 7 decades has reached 2,630 mm[4].

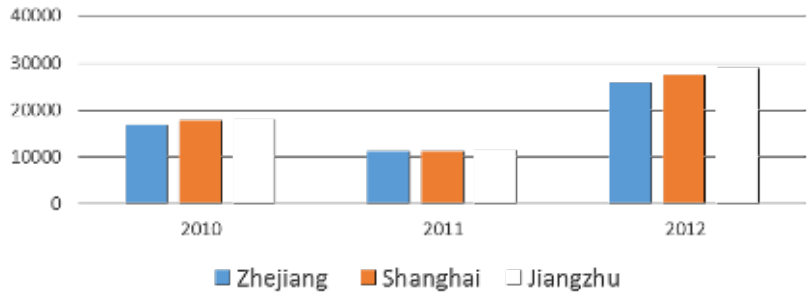
Third, the 3 urban wastes (waste gas , waste water and industrial residue) are discharged in large quantity in the Yangtze River Delta, which are difficult to be disposed of. In 2010-2012, the sewage discharge in the Yangtze River Delta reached 12.3966 billion tons and 1.696525 trillion tons of solid wastes were produced in the same period, bringing great pressure on the infrastructures in the Yangtze River Delta disposing of the 3 urban wastes (waste gas , waste water and industrial residue). Take Year 2011 as an example, the urban sewage treatment ratio in Shanghai was 84.42%, meaning 360.5367 million tons of sewage were not treated. The urban sewage treatment ratio in Jiangsu Province was 85.1%, representing that 319.389 million tons of sewage were not treated. And the urban sewage treatment ratio in Zhejiang Province was 89.92%, meaning 380.892 million tons of sewage were not treated.

Table 4 Discharge of 3 urban wastes (waste gas , waste water and industrial residue) in the Yangtze River Delta in 2010-2012

| Provinces | Year | Discharge of waste gas (in 100 million tons) | Discharge of waste water(in 100 million cubic meters) | Production of industrial solid waste (10,000 tons) |
|---|---|---|---|---|
| Zhejiang | 2010 | 42.2618 | 24435 | 4843 |
| | 2011 | 42.0417 | 24940 | 4529 |
| | 2012 | 42.0960 | 23967 | 4542 |
| Shanghai | 2010 | 24.82 | 12969 | 2448.36 |
| | 2011 | 19.86 | 13692 | 2442.2 |
| | 2012 | 22.05 | 13361 | 2198.81 |
| Jiangsu | 2010 | 55.55 | - | 9063.83 |
| | 2011 | 59.28 | - | 10475.5 |
| | 2012 | 59.82 | - | 10224.44 |

Fourth, high energy consumption in the Yangtze River Delta with low self-sufficiency rate Graph 4 . Graph 4 shows that total energy consumption in the Yangtze River Delta continued to grow and reached 408,009,030 tons of petroleum equivalents in 2012 alone, close to the total energy consumption of Japan in 2012 at 451,500,800 tons. However, the self-sufficiency rate of energies in Yangtze River Delta was relatively low. And the crude oil, coal, natural gas and other major energies consumed in the region were mainly purchased out of the region. Take the coal supply in 2009 as an example, all the crude coals in Shanghai were bought from outside Shanghai. And the self-sufficiency rate of crude coal in Jiangsu Province was only 11.2% while that in Zhejiang Province was 0.1%. The energy consumption per RMB 10,000 GDP in the

Yangtze River Delta had been decreasing year by year. However, in 2012, it still stood at about 0.54 tons of coal equivalent per RMB 10,000, which was higher than the 0.4 tons of coal equivalent per RMB 10,000.



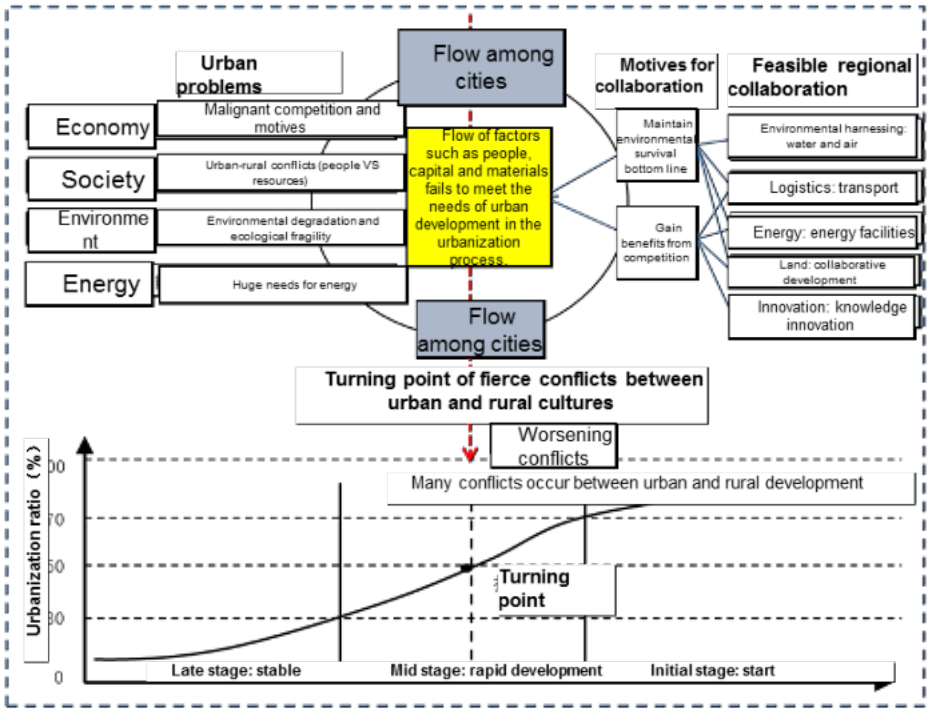

Graph 4 Total energy consumption (in 10,000 tons of coal equivalents) in 2010-2012

## 4. Needs and means of regional collaboration after 50% urbanization ratio in the Yangtze River Delta

### 4.1 Needs of collaboration

As mentioned above, when urbanization ratio exceeded 50% in Year 2000 in the Yangtze River Delta, we have seen the fierce conflict between the urban and rural civilizations. The region had entered the period of intensive conflicts of urbanization (e.g., Gao Peiyi, 1990; Bao Shusong, 2012). Within the region, it is necessary to address the series of problems accompanying the rapid urbanization. In terms of economy, we need to face the malignant competition caused by the assimilation of industrial structures, lack of economic development forces and other problems. In terms of society, we need to face the problems such as the social conflicts and competition for the public-service facilities and resources caused by the excessive cluster of urban and rural population. In terms of environment, we have to face the problems of worsening environment and overload of ecological capacity. In terms of energies, we have to face the problem of huge energy needs and consumption. And these problems are mainly caused by the fact that the allocation of human, capital and materials , the 3 urbanization cannot meet the needs of urbanization in the Yangtze River Delta. It is very difficult to solve the above-mentioned problem of urbanization factor flow within the single city administrative region. As a result, it is urgent for cities to join hands and solve the urbanization problems in the region (see Graph 5).

Since Year 2000, the collaborative development among cities in the Yangtze River Delta has had the following purposes: based on the stimulus for common public or market interest, engage in trans-reginal collaboration; keep optimizing the allotment of people, capital, land, environment and other resources in the urbanization in the region; keep solving problems of rapid urbanization; provide certain guarantee for the healthy urbanization; and work jointly to improve the holistic competitiveness in the region. The study believes that regional collaboration is the major means and inevitable process of regional integration.




Graph 5 Process analysis of cities needing collaborative development after the 50% urbanization ratio

## 4.2 Means of collaboration

Based on the above analysis, the reginal collaboration, after the urbanization ratio exceeds 50%, has the following major motives: to maintain the environmental survival bottom line and gain the common benefits of competition against competitors beyond the region. (See Graph 5), when the Yangtze River Delta now lacks in the cultural environment of collaboration and in the strong institutional support, the Yangtze River Delta has made collaboration practice in the following ways:

(1) Collaboration in regional environmental harnessing. It mainly refers to the collaborative harnessing of regional environment cored on water environment preservation and atmospheric harnessing. For instance, the environmental harnessing in the Taihu Lake waters involve the collaborative efforts of Suzhou, Wuxi, Yixing, Huzhou and Jiaxing.

(2) Collaboration in the building of regional infrastructures. It mainly refers to the development of inter-city transport (including transport hub) major municipal infrastructures and energy infrastructures in the region. For example, the Hangzhou Bay Bridge was built by Shanghai, Hangzhou and Ningbo. And the Inter-city Metro Line 11 was built by Shanghai and Kunshan of Suzhou.

(3) Collaboration in land development. It refers to the collaborative development of land in and close to cities, for instance, the collaborative development of Kunshan and Anting; the collaborative development of enclaves of cities, such as the collaborative development made by Zhangjiang Group in Pinghu City of Zhejiang Province; and the collaborative development made by cities along the Yangtze River and along the East China Sea.

(4) Collaboration in regional knowledge innovation. It mainly refers to the collaboration cored

on talent training, talent free flow and sharing of research results among the cities. For instance, Shanghai Tongji University has established research institutes in Jiaxing and Taicang to realize the collaboration among cities between the industries, colleges and research institutions.

## 5. Spatial Features of regional collaboration after 50% urbanization ratio in the Yangtze River Delta

### 5.1 Neighborhood nature of collaborative development space

In the beginning, the reginal collaboration in Yangtze River Delta was featured by the collaborative development of a few neighboring nodes in the region. Then the collaborative development gradually expanded to larger areas to form the block-shaped and belt-shaped regions of collaborative development.

In the 1990s, Jiangsu Province and Zhejiang Province adopted the development philosophy of collaborating with Shanghai , hoping to stimulate development of their regi with Shanghai. At that time, Jiaxing, Kunshan and Taicang in the adjacency to Shanghai had wonderful opportunities of development. However, they were limited to the point-to-point collaboration with Shanghai. After Year 2000, the cities began to recognize the concept of collaborative development. The regions close to Shanghai, to the Yangtze River and to the East China Sea went into the block-shaped, belt-shaped and piece-shaped collaborative development with the neighboring cities. Kunshang, which neighbors with Shanghai, is in collaborative development with Anting New Town in Shanghai. At the same time, it is connected to the inter-city railway of Shanghai, thus becoming an influential destination for Taiwan investors in China (see Graph 5). In the around-Taihu-Lake region, the neighboring Suzhou, Wuxi, Yixing, Huzhou and Jiaxing have re-positioned their urban functions because of their joint efforts to harness the aquatic environment in the Lake. Most of the regions around Taihu Lake are no longer pillared on manufacturing industry. Instead, they focus on leisure tour. After 1-decade development, the ecological environment in Taihu Lake has been evidently improved. And the around-Hangzhou-Bay city cluster, consisting of Hangzhou, Ningbo, Shaoxing, Jiaxing, Huzhou and Zhoushan, has formed the collaborative development layout in urban economic belt, ecological reserve, transport network and talent flow (see Graph 6).

Figure 6. Kunshan Jiangsu and Anting Shanghai collaborative planning

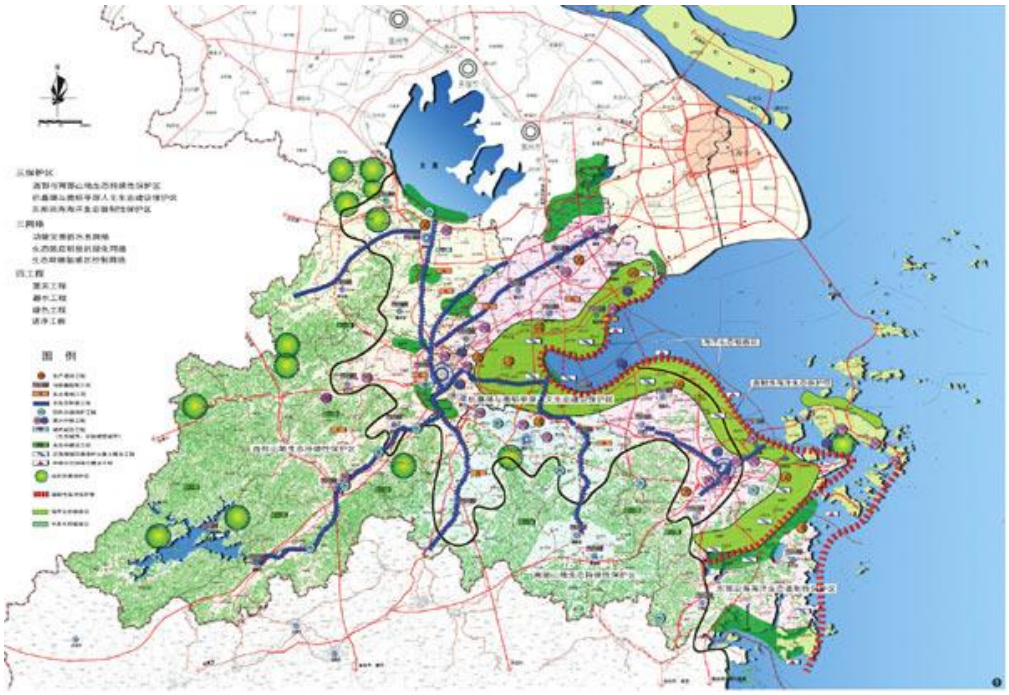


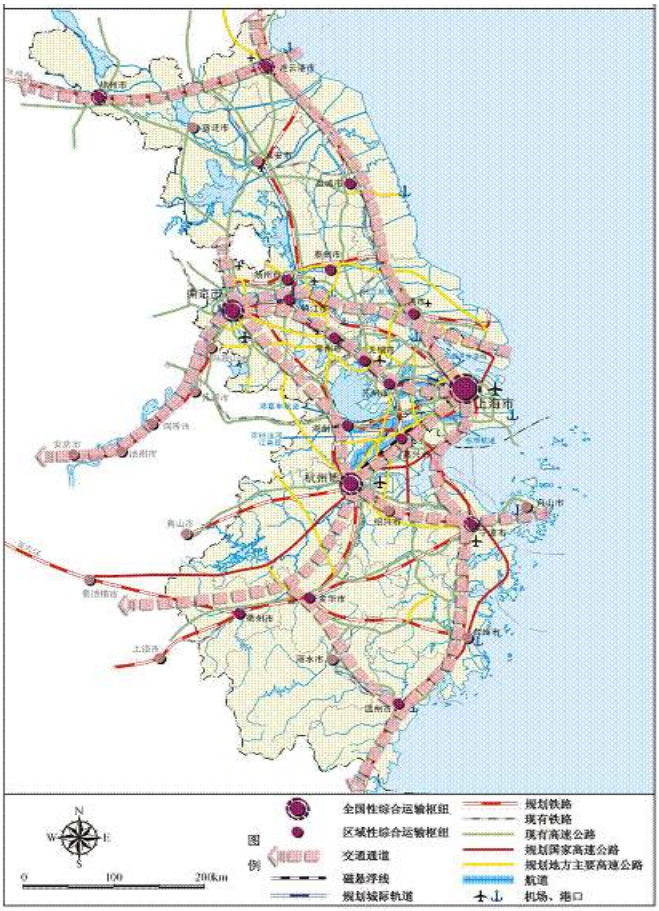
Fig. 7 Schematic diagram of the cooperative development of ecological protection in the Gulf of Hangzhou

## 5.2 Network feature of collaboration in regional infrastructures

Based on the collaborative development of neighboring regions, the enhanced building of network-shaped facilities has promoted flow and exchanges of people, materials, capital and information in the region. And the accelerated flow of these elements has triggered a few influences such as polarization and expansionary effects. The greater capacity in transport accessibility has extended the scope reached by urban functions, changed the original time-space concept and expanded the scope of collaboration scope among cities. At the same time, the inter-city high-speed railways have enlarged and highlighted the inherent competitive advantages and disadvantages of cities, sped up the formation of new urban networks, promoted the restructuring of regional spatial structures and enhanced the collaboration and collaboration among the cities in the Yangtze River Delta.

Judging from the layout of transport infrastructures in the Yangtze River Delta, the comprehensive transport & traffic system has been basically formed, presenting the urban development axis pillared on four major transport channels, namely, Shanghai-Nanjing, Shanghai-Hangzhou, Nanjing-Nantong and Hangzhou-Wenzhou, which are cored in Shanghai with port cities as the hub. In terms of the length of transport and traffic routes, we have seen rapid growth in various means of transport. In 2010, the total highway mileage, mileage of inland river waterways, operating railway mileage and highway mileage in the Yangtze River Delta stood at 272,458 km, 36,157 km, 4,118.2 km and 8,217 km respectively, accounting for 6.79%, 29.1%, 4.52% and 11.09% of the total in China respectively. Compared with fact that Yangtze River Delta territory accounts for only 1% of the total territory in China, the length of transport routes take a higher percentage in the country and the transport infrastructure network is taking shape in the Yangtze River Delta. In the future, the region will continue to improve development of its transport channels by completing the Shanghai-Nanjing and Shanghai-Hangzhou channels, the along-Yangtze River channel, coastal channel, Nanjing-Huzhou-Hangzhou channel and many other trunk channels within the region. At the same time, it will speed up the development of comprehensive hubs and enhance the network support capacity

for the regional collaborative development.



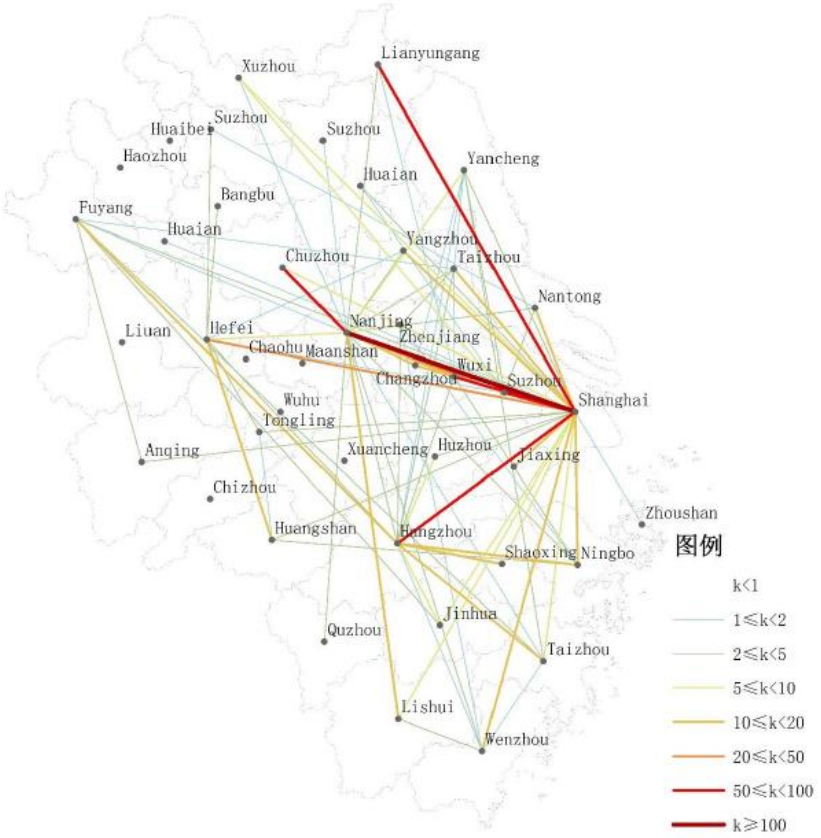

Graph 8 Map of planned transport channels in the Yangtze River Delta 2009-2020
Source: Regional Plan in the Yangtze River Delta 2009-2020

### 5.3 Network feature of collaboration in knowledge innovation

In 2013, the urbanization ratio of permanent population in the Yangtze River Delta reached 67.96%, meaning the region would enter the mature stage of urbanization. As a result, it is necessary to shift from the factor-driven development relying on the bonus of cheap land and labor force to the innovation-driven development. Alfred Marshall once pointed out, Knowledge is the most powerful production force, which ensures we can conqu and meet our own needs . The collaboration in knowledge innovation can promot high-quality talents, improve the research capacity and help shift the physical extension focusing on quantity to the connotation development focusing on quality in the urbanization process in the Yangtze River Delta.

By using the analytic method of GIS partnership and based on the data of 2000-2015 partnership patents (substitution parameter of innovation partnership) applied and publicized by WIPO in the PCT system, the author analyzes the collaboration in city knowledge innovation in the Yangtze River Delta. The studies show that, in the innovation partnership in 2000-2015 in the Yangtze River Delta, the major nodal cities, such as Shanghai, Nanjing, Hangzhou, Hefei, Taizhou, Fuyang, Taizhou, Ningbo and Yancheng, etc., have close and extensive innovation partnership with other cities. Of these cities, we see the highest intensity of innovation partnership between Shanghai and Nanjing, Hangzhou, Suzhou, Wuxi and Liangyun-gang and

between Nanjing and Chuzhou. In terms of space, the grid network has been formed that consists of the core + multiple nodes . Shanghai plays an evident role as th in the innovation in the Yangtze River Delta (Graph 9).




Graph 9 Spatial organizing features of innovation partnership in the Yangtze River Delta in 2000-2015

Prepared by LU Tianzan

## 6. Conclusion

To make joint efforts to address the many problems brought by urbanization and stand against the competition from the other city clusters in the world, the Yangtze River Delta has been enhancing its collaborative development after its urbanization ratio exceeded 50%. The collaboration among cities has shifted from the point-to-point collaboration among neighboring regions to diverse collaboration. Till today, we have seen such major collaborative development as in the environmental harnessing, building of infrastructures, land use and development and in knowledge innovations in the region. And the spatial features of collaboration are represented by the multiple points to that in the belt of neighboring regions and in the network structure with layers. At the same time, it is also developing from the collaborative development of physical space to that of virtual space. It is worth pointing out that, the topic of the study is relatively macro with each section having the potential to make further explorations and empirical studies. Besides, the integrity of collaboration and regional differentiation in the Yangtze River Delta are worth in-depth studies. The thesis only summarizes the needs, means and spatial features of regional collaboration in the Yangtze River Delta after the 50% urbanization ratio, thus providing certain reference for the people wishing to learn about the urbanization and regional collaboration in the Yangtze River Delta.

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# TRACK 12

# Responsibility for Social Cohesion in Housing, Cohousing and Neighbourhood Planning

## Track description

Co-chairs: **Nikos Karadimitriou**, **Roelof Verhage**

Favouring socially mixed neighbourhoods has been a cornerstone of cohesion policies for the last couple of decades. The assumption behind the promotion of the spatial mixing of social groups in a residential area is that it improves upward social mobility and favours social integration. Thus planning and housing policies promote a mix of uses, tenures and housing types for a variety of social strata in both new and established neighbourhoods.

Is the policy objective of socially mixed neighbourhoods worth pursuing further? What exactly are the links between spatial organisation and social cohesion? What evidence is there to show that we can improve social cohesion by altering the spatial organisation of a neighbourhood? Should policy put more emphasis on horizontal social policy measures instead?

If creating socially mixed neighbourhoods contributes to a more cohesive society, then a key challenge is to identify and reach an effective compromise between individual and group preferences, interests and resentments, keeping the public interest in mind. How housing policies contribute to the pursuit of this goal? What legitimacy do these policies have and what are the rights and responsibilities of different stakeholders involved in the making of socially cohesive residential spaces?

The track would welcome papers focusing on theoretical reflections and applied analysis of urban policies and projects dealing with the relation between spatial organisation, social mix, social cohesion and housing and planning policy.

# NEO-LIBERAL AFFORDABLE HOUSING POLICIES THROUGH PROJECTS OF HOUSING DEVELOPMENT ADMINISTRATION OF TURKEY

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**Abstract**

*After 1980, a notion of neoliberalism has also been appeared in Turkish urban planning laws and policies as the rest of the world. One of the major implementation of these policies was the establishment of Housing Development Administration of Turkey, hereafter HDA, in 1984. The administration has been shaped as providing social housing for low-income households in the first place. However, since 1984, while the main aim of the administration stays as same as the first day, its mission has been modified. The administration has started to generate luxury housing projects to transfer their profits to the social housing fund. The study aims to compare ongoing and completed* affordable and luxury housing projects according to their residences income payment methods/plans for buyers. Report analysis of the administration and *reviews become main sources for the study. According the literature review; one affordable and one luxury project is selected to compare. In the conclusion, report analysis, and website reviews and will convey the findings and discussion.*

**Keywords:** Affordable Housing, Urban Transformation, HDA

## 1. Neo-liberalism and its Impacts

After the Keynesian regime went into crisis in the early 1970s, the global economic system has neo-liberalized (Brenner & Theodore, 2002). As Forrest and Hirayama (2009, p. 998) state, neoliberalism is a political project involving reduced state intervention in economic and social affairs and the assertion of the superiority of market processes. Reduced state intervention and superiority of market processes are the key points of neoliberalism. This system predicts a new emphasis on markets, minimal states and individual choice in contemporary political-economic formations (Larner, 2009).
Neo-liberalism is a process which has led to drastic changes in the political, economic and social structures. These changes in community structures affect each other, and some contradictions might be seen in some cases. In the economic dimension, neoliberalism includes loosening of the various institutional constraints on behalf of markets, commodification, excessive exploitation of workers, etc. (Brenner & Theodore, 2002). On the other hand, the global economy has experienced to associate with the concept of globalization. The new organization of the global economy includes decentralization of the industry economy from developed countries to developing countries and expansion of finance and service sector on a global scale ( ktem, 2006). These changes in the economic structure also leave marks on cities. In the context of neo-liberalism and globalization, there is a shift from the nation-state formations to the global cities. A lot of cities have risen in every aspect worldwide, and cities have new roles as spheres of economic, political, and social areas in the neo-liberal world (Larner, 2009). After this point, urban space might be accepted as the most profitable investment tool and must be evaluated in the best way.

Neo-liberal urbanism adopts entrepreneurial urban governance, supports private sector participation in urban projects, and has self-regulating structure (Leitner, Peck & Sheppard; 2007). The most common neo-liberal urban interventions are to provide privileges to personal property and property rights and to realize urban reconstruction projects via loosely regulations (Waley, 2013). Neo-liberal urbanism undertakes the task of the division of property rights between public and private sector actors. Neo-liberalism has affected every perspective of urban planning as housing policies worldwide (Candan and Kolluoglu, 2008; Forrest and Hirayama, 2009). Neo-liberal housing policies have been implemented as various types around the world. For example, countries which have a wide range of public housing stock have begun to privatize their housing stocks. This process has been experienced in Turkey as a different way. Before moving on the neo-liberal housing subject, in the following part, neo-liberal policies and the structure of housing stock in Turkey will be summarized.

In 1950, 75% of the population in Turkey was living in rural areas (TUIK, 2015). Since 1950s, with the mechanization of agriculture and the Marshall Plan, a chaotic pattern of urban development has emerged based on uncontrolled immigration from underdeveloped countrysides to urban areas of Turkey (Lovering, 2011). While the Turkish cities were growing with illegal settlements in the 1960s and 1970s, the housing policies have not been influential to solve the chaotic urbanisation problems. In 1980, an important turning point was marked in the social history and neo-liberal globalizati Turkey as in the rest of the world (Din er, 2011).

The neo-liberal reconfiguration in Turkey is usually conceptualized in three different stages as 1980s, 1990s and after 2000 (Temizel, 2007). The first phase envisages an outward-oriented national economy and integration into the global capitalist economy ( oban, 2012). Several a granted by the Government in the 1980s. In the second stage, national and international investments were encouraged via legal and institutional arrangements. Privatization programs and the encouragement of investment laws in tourism can be given as examples on the issue.

The last period, after 2000, neo-liberalism has reached its highest level in Turkey. The new conservative-democratic government came to power after the economic crisis that occurred at the beginning of 2000s. The most important features of the period are; the rise of the construction industry, privatization of public institutions and services, foreign direct investments, poverty policies based on charity and so on ( avu o lu, 2014). Neo-liberal policies impose global scale competition upon countries. Accordingly, Turkey has chosen to compete in the construction industry via public and private sector cooperation. In the same time, the State has increased its power and dominance in the sector. Also, the private sector became capable of contributing the sector due to the States' policies. For this purpose, several areas like illegal settlements, ecologic and historic areas have been re-zoned for construction purposes. Prevailing urban practices of the last period support mega-projects and urban transformation projects especially in metropolitan cities. The Third Bosporus Bridge and the Third Airport projects are given as examples for mega-projects in Istanbul, which have undertaken a mission about attracting investment and capital to the mega city of Turkey. Mega housing projects can be evaluated in the same category. Construction companies of mega housing projects claim that they provide safe and privileged life to their inhabitants. Thus, a new consumer group has been arising with a great support of the finance sector in Turkey. Also, urban transformation projects have been accepted as one of the main implementation tools of the construction industry. Especially, the illegal squatter settlements have begun to be seen as potential areas to transform. The State puts the emphasis on disaster risk of those areas as a main reason for these projects and numerous urban transformation projects have been implementing one after another. Housing Development Administration has been the institutional tool of the Government in this process. After all, it can be said that a new housing sector has been appealing to upper income groups, and this has been creating conflicts with poor social housing policies of the State. This issue will be discussed also in the following sections.

## 2. Affordable Housing

The failure of accessing housing by low-income households is one of the most important problems in the worldwide. The main reason of this problem is the inability of the low-income households to afford housing market prices. Stone (2006) states that for some people, all housing is affordable, no matter how expensive it is; for others, no housing is affordable unless it is free. According to social governments, housing must be provided by states for those who in need. Harvey states that markets do not exist (in areas such as land, water, education, health care, social security, or environmental pollution) then they must be created, by state action if necessary (Harvey, 2005, p. 2). Accordingly, Affordable Housing can be defined as housing which supplies provided and balanced according to their incomes of low- and middle-class households (Sengupta, 2013). Bramley (2006) refers that even though affordability concept accepted easily, applying the concept to a real world due to possible changes in conditions of households in time. Furthermore, countries experienced this process in different times and ways. But there is a common approach to the affordability concept accepted by everyone. This approach is the ratio of housing costs to income.

Kutty (2005) states that affordability is usually measured by the ratio of housing costs to income. UN-Habitat (2012) clarifies this affordability parameter as the allocation of maximum 30% of household income. Paris (2007) states analogously that the main challenge of defining affordability is based on diversity of affordability parameters, and usually, ratios approaches are relationship between income and housing cost.

Affordable housing is the concept that has taken place in an international conventions text. The article 11/1 of the Covenant on Economic, Social and Cultural Rights states that as: *"The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions".*

The Committee on Economic, Social and Cultural Rights (CESCR) is the body of 18 independent experts that monitors implementations of the International Covenant on Economic, Social and Cultural Rights by its States parties. This Committee has been released General Comments about contract clauses. General Comment 4 explains what adequate housing is and its principles. Affordability is one of the principles of adequate housing. A lot of countries have been adopted the concept of Affordable Housing and made practices in this direction. Paris (2007) states that governments in many countries have explored ways of using statutory land-use planning systems to influence the provision of additional affordable housing, especially in localities with relatively high house prices and rental costs. Turkey also has some experiences in this regard.

### 2.1. Affordable Housing in Turkey

In metropolitan cities of Turkey, the main reason of deficiency of housing stock might be linked the rapid population change in these cities due to immigration from rural areas. For example, Istanbul s population increased from 1.17 million to 4.74 million between 1950 and 1980 (DIE, 2000). The percentage change between these years is more than 350%. In parallel with this population change, the quantity of housing was increased via illegal squatter settlements, especially between 1950s and 1980s (Karaman, 2012). These illegal squatter settlements have been seen as solutions to the housing problem in Turkey which are produced by occupants. Sprawling of the illegal squatter settlements, which are called gecekondu in Turkey, has been emerged due to lack of government policy o housing. Aru (1970) states that Turkey did not have any social housing policy from the founding of the Turkish Republic to 1960.

1960s are the breaking point for Turkey because a new constitution was ratified and five-year development plans were begun to prepare. The constitution and first plans aimed to provide social housing stock for the citizens. During this period, cooperative dwelling associations have been adopted as a method of the social housing. However, cooperative housing concept was usually embraced by middle- and upper-income groups up to 1980s (Tekeli, 2010). 1980s are considered as another breaking point because of the last and current constitution was ratified and neo-liberal government policies have begun to dominate the country as mentioned in the preceding sections of the article. Mass housing law also came into force in 1981, and these changes in Turkey required an institution to provide housing stocks. For that reason, mass housing stocks have been producing by one of the state organization that founded with the current constitution as the state-owned social housing supply agency, HDA.

## 3. Housing Development Administration of Turkey (HDA)

The 1982 Constitution stipulates mass housing as a social housing policy. After the constitution had come into force, a new institutional structure has required realizing the policies. Therefore, Housing Development and Public Participation Administration was established in 1984. The Mass Housing Fund has been created in the same year under the Mass Housing Law (Law No: 2985). The institution is divided into two administrations in 1990 as Public Participation Administration and Housing Development Administration (HDA). Some problems have arisen due to transferring the funds, so the mass housing fund was repealed in 2001. Real estate sale, rental returns, credit, and interest income returns were issued after the repeal of the mass housing fund option. HDA was separated from Ministry of Public Works and Settlement and has become an institution directly under the Prime Ministry in 2004. Since 2000, the authorization of HDA has been extended many times (Table 1).

Table 1: Authorization of HDA[1]

| Year | New authorizations |
|---|---|
| 2003 | Establishing housing companies or being one of the partners of it,<br>developing projects for profit,<br>building housing in disaster areas, giving credit |
| 2004 | Transferring authorizations of Land Office to the HDA |
| 2004 | Having power of expropriation and making plans in illegal settlements |
| 2005 | Having power of making urban transformation projects |
| 2007 | Transferring authorizations of ministry in illegal settlement,<br>free acquisition of land belonging to the Treasury,<br>having approval authority to determine rehabilitation, liquidation and prevention areas in local regions |
| 2008 | Having planning authorization of the lands belongs to the Treasury |
| 2008 | Having authority over the Transformation of Areas Under Disaster Risk |
| 2012 | Having authority over reconstruction of places which declared as "Areas Under Disaster Risk " (not only in urban areas, but also in forests, military areas, and so on) |

[1] Savran, S. (2014) Evaluation of TOK Low Income Housing Areas Within The Perspective C Housing : The Case Of Ankara Kusunlar, Master's Thesis, Gazi University, Graduate School Applied Sciences

In the current status of the institution, its authority has been broadened, and it is out of any control mechanism. The initial purpose of establishment of the HDA was to build housing for low-income households. Mass housing projects are currently being built for low-income households, but the HDA is moving away from its initial goal. The main reason of this situation is funding methods. Therefore, the current housing policy of the HDA is frequently discussed in academia.

The HDA provides various types of housing and publishes the percentages of each housing type on the official website (Table-2). The institution produces a significant number of housing stocks, and it can be seen on the table that 85% of the housing is social housing. The ratio of social housing is quite high. Since, the institution accepts all housing groups as social housing except profitable housing supplies.

Table 2: Type of Housing Constructed by the HDA[2]

| **Type of Housing** | **Number of Units** | **Percentage** |
|---|---|---|
| Middle-income groups | 267.229 | %41,15 |
| Low-income groups | 146.546 | %22,57 |
| Transformation of slum areas | 97.997 | %15,10 |
| Disaster housing | 37.613 | %5,80 |
| Rural houses | 5.658 | %0,86 |
| **Total of Social Housing** | **555.043** | **%85,48** |
| Housing for funding (Upper-income groups) | 94.266 | %14,52 |
| **Grand Total** | **649.309** | **%100** |

HDA set income criteria to make public benefits from its affordable housing projects. The household income threshold for projects in Istanbul is 3100 TL and 2600 TL for the rest of them. The payment scheme is shaped as 100TL down payment and 25-year-mortgage plan (TOKI, 2015). As you can see Table 3, there is no info about average cost of luxury houses so we could not calculate possible profits can be transferred from luxury houses to social housing development projects.

Table 3: Cost and Sale Price Comparison of HDA Projects [3]

| | **Average cost per square meter** | **Average Price per square meter** |
|---|---|---|
| **Affordable Housing** | 700-800 TL | 700-800 TL |
| **Low-Income** | 800-930 TL | 900-1050 TL |
| **Middle-Income** | 900-1050 TL | 1000-1150 TL |
| **Luxury Houses** | No info | 1000-9500 TL |

The Housing Development Administration provides housing options not only for low-income but also middle-income households. Therefore, the institution has become one of the leading actors in the housing market of the country. This situation leads us to questioning how much the institution can fulfill its fundamental mission. The case studies help us to answer the question mentioned above.

[2] toki.gov.tr, Updating: 04.05.2015

[3] http://www.toki.gov.tr/en/housing-programs.html, Approximate sales price

### 3.1. Urban Transformation Projects Produced by the HDA

The legal basis of urban transformation process in Turkey has begun to be shaped in 1984. Since then, four laws have been issued which allow urban projects; Mass Housing Law (Law No. 2985), Law on the Protection of Deteriorated Historic and Cultural Heritage through Renewal and Re-use (Law No. 5336), Municipality Law (Law No. 5393), and Law on Restructuring of Areas Under Risk of Natural Disasters (Law No. 6306). As a result of these four laws, especially in metropolitan cities, urban transformation projects have initiated. These projects are realized with the collaboration of the HDA, Ministry of Environment and Urban Planning, municipalities, and private sector. In addition to these actors, sometimes local groups involve to projects. One of the criticisms of these projects, even though these projects are planned and implemented to increase the quality of urban life, these do not cohere with integrated urban planning. On the other hand, these projects are the symbols of neo-liberal policies as explained in earlier sections (Acikgoz, 2014).

The most criticized aspect of urban transformation projects by the HDA is that they disregard unique social and cultural characteristics of spaces, and the projects consist of physical features. The aim of the projects is to use land for annuity instead of solving problems in slum areas (G ze most important reason for this criticism is displacement of populations which occurs in transformation areas (Baysal, 2010; Lovering and T rkmen, 2011). Figure-1 indicates the areas which have a potential of eviction, experienced eviction and second wave of eviction in Istanbul.

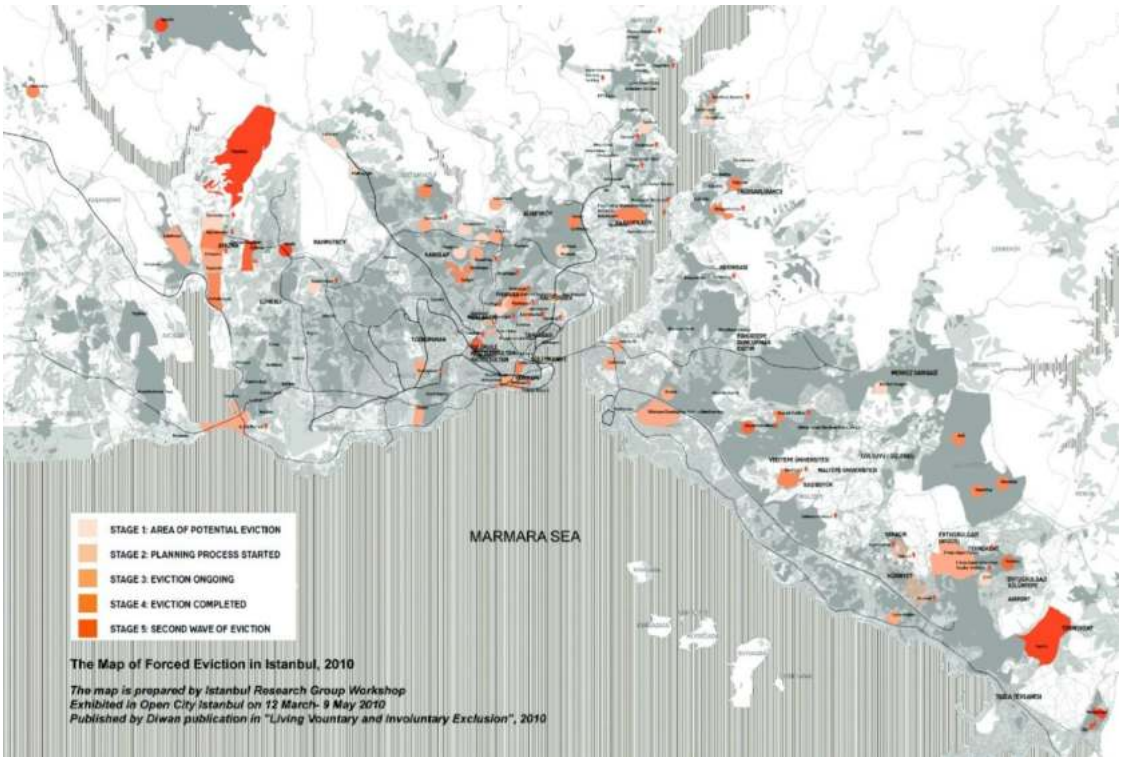


Figure 1: Eviction Areas in Istanbul, 2010[4]

[4] The map is prepared by stanbul Research Group Workshop Exhibited in Open City stanb May 2010

It is expected that urban transformation projects should be built in situ. The HDA states, on all occasions, that their goal is to achieve in situ urban transformation[5]. However, the HDA claims that some areas have earthquake risk and should be evacuated. Nevertheless, these areas are transformed instead of evacuating them. After the transformation, the initial inhabitants and new inhabitants in the projects live together. Either way (in situ or displacement), many households hand over their units. Even if a project is built in situ (or nearby), the population which lives in the transformation area is forced to relocate because of external factors. These factors are mostly based on the increasing cost of living in the region, socio-cultural differences from new buyers, and so on.

As one of the consequences of the urban transformation projects, the forms of housing stocks all over Turkey have been changing (Candan and Kolluoglu, 2008). Both upper- and low-income households have been losing their sense of place and neighbourhood culture. While upper-income households hide themselves behind the boundaries of gated communities , the State forces low-income households to live in high-rise mass housing.

The case studies help us to evaluate how much the Housing Development Administration can fulfill its fundamental mission as mentioned before. Several academics study the adequateness from various aspects. The aim of this study is to examine an urban transformation project within the concept of Affordable Housing. The selected cases experienced the urban transformation that is not built in situ.

## 4. Comparative Study: Sulukule and Tasoluk Housing Projects of HDA

UNESCO (2015) describes displacement as the forced movement of people from t environment and occupational activities . The urban transformation projects of resulted with displacement have some commonalities. Usually, after determining a district as an urban transformation area, the process continues with a demolition procedure. The institution offers three main options to the rightful owner; to pay the compensation of demolished house, to provide a social housing unit which is already completed, to wait for a new unit in-situ. However, the third option is not usually taken into account by the owners as contraction process of the new buildings takes long time and they cannot afford to move out during demolition and construction. Eventually, many of them are obligated to purchase a social house which is usually far from their initial settlements. Furthermore, compensations of their demolished shelters / houses do not cover prices of suggested social houses. At the end of the transformation, these people experience a second wave of eviction or displacement due to high payment scheme of social housing. In this perspective, Sulukule Urban Transformation Project and Tasoluk Social Housing have been selected as case studies to evaluate their transformation processes. Sulukule district is handovered from low-income to upper-income households through urban transformation process and the initial inhabitants evicted to Tasoluk Social Housing as described above.

### 4.1. General Info

***Sulukule:*** Sulukule is located on the borders of historical peninsula of Istanbul (Figure-2). The project area covers Neslisah and Hatice Sultan neighbourhoods. This area is designated as World Heritage Site by UNESCO. Population of the Sulukule project area is approximately 5000 with predominantly Romany population. There were formal and informal constructions in Sulukule.

[5] http://www.toki.gov.tr/haber/toki-baskani-mehmet-ergun-turan-kentsel-donusumde-amac-yerinde-donusum

Figure 2: Sulukule before demolition[6]

***Tasoluk:*** Tasoluk is one of the social housing projects of HDA. The inhabitants of Sulukule have right to buy a unit from social housing projects in Bezirganbahce , Kayabasi and Tasoluk . In this paper, we examine Tasoluk housing project to examine its affordability. Tasoluk is 30km away from Sulukule and one of the newly developing areas of Istanbul. Tenants only have a priority to have a unit from these social housing projects. HDA and municipality have not given any options for them like the homeowners.

Figure 3: Distance between the Initial Settlement and an Offered Social Housing

We should shortly explain the key dates about the transformation process of Sulukule. In 2005, Istanbul Metropolitan Municipality, Fatih Municipality and HDA signed a protocol for transformation project. In 2006, the Ministry passed the urgent expropriation decision (Dincer et al. 2008).

[6] http://upload.wikimedia.org/wikipedia/commons/1/1b/Sulukule_and_the_wall.jpg, Updated: 14.05.2015

Table 4: Legal Process of Sulukule Transformation Project[7]

| | |
|---|---|
| September 2005 | Istanbul Metropolitan Municipality, Fatih Municipality and HDA signed a protocol for transformation project |
| April 2006 | Sulukule is declared as a renewal area |
| May 2006 June 2006 | The meetings with the property owners |
| December 2006 | The Ministry of Public Works and Settlements passed the urgent expropriation decision |
| November 2007 | The renewal plan is approved by the Board for Renewal Areas |
| February 2008 | Chamber of Architects of Turkey - Istanbul Branch sued to cancel the transformation project |
| May 2009 | Demolition has been started (before the court case has been resulted) |
| June 2009 | 4th Istanbul administrative court declined the request of cancellation without any reason,<br>Chamber of Architects of Turkey - Istanbul Branch objected to the decision |
| May 2010 | The construction of Osmanli Konutlari was started |
| April 2012 | The project was canceled because it does not meet with the public benefit |
| June 2012 | Drawing of lots was hold |
| April 2015 | Council of the state approved the cancellation of the project |

## 4.2. Analysis

As mentioned above, affordability is based on the ration between income and housing costs. Therefore, the discussions about affordable and luxury housing projects supplied by HDA are centred on two main aspects. These are to compare ongoing and completed affordable and luxury housing projects according to their residences income levels and suggested payment meth understand difference between selected communities daily lives in Tasoluk and Sulu income, housing prices in market, payment method are adopted as parameters to compare housing affordability.

[7] (Din er et. al, 2008); http://www.radikal.com.tr/turkiye/sulukulede_proje_iptalini_dani Updated: 14.05.2015

Table 4: Features of Sulukule and Tasoluk Projects

| | **Affordable Housing** | **Luxury Housing** |
|---|---|---|
| **Name** | Tasoluk | Osmanli Konaklari[8] |
| Location | Arnavutkoy, Istanbul | Fatih, Istanbul |
| Closeness to City Centre (Taksim Square) | 38.2 km | 8.3 km |
| Project Start Year | 2005 | 2005 |
| Housing Diversity | All blocs are threefold<br>Units: 2+1 and 3+1 | There is 2,3 and 4 floor blocks<br>Units: |
| Project Area m† | 380.000 m† | 91.496 m† |
| Number of Units | 1356 | 620 |
| Average Housing Size (m†) | 85 m† and 110 m† | 68 to 153 m† |
| Property Values | 58.000 75.000 TL | 125.000 TL |
| Current Property Value | 180.000 220.000 TL | 400.000 - 450.000 TL |
| Payment method/plan | 150 month payment without down payment | No info |

The existing owners had three options: compensation, a social housing unit or a new apartment unit. We should clarify that most of the existing owners have not had any regular income. Not having a regular income and limited budget makes harder to apply for the mortgage plans. Their mortgage plan for a social housing unit has been set as 15-year payment scheme between 280TL to 425 TL monthly payments without any down paymen. Only the half of the households moved in the social housing, the rest sold off their units with prices starting form 3000 TL (Daglar, 2009).

If they choose to have a unit from the new project, Osmanli Konutlari , Fatih Municipality offers a housing benefit with a condition: *the new apartment units will be sold to the existing owners if they accept to pay the difference between the current value of their property (that is calculated by the municipality) and the cost of the newly constructed unit by monthly payments of around 200- 250 Euros that last for 15 years* (Dincer et al. 2008). If the existing owners do not prefer moving to a social housing unit or buy a new unit from new apartments, the Municipality offers to pay 500-600 TL per square as compensation for their land (Yilmaz, 2009).

## 5. Conclusion

Current discussions about Turkish affordable housing policies and stocks are of affordability.

Tasoluk units were sold between 58.000 and 75.000 TL price ranges when they made an agreement with the municipality. The reason of this price range is related to units sizes. A agreement, their mortgage plan was 150 months and the households required to make 400TL to 500TL monthly payments. Their minimum household income should be more than 1333TL to accept the unit as an affordable housing option. However, this is more than 30% of household income according to the existing researches. Based on the survey which has finished before the area had been evacuated, the average monthly income of households is categorized under five groups; 24% less than 300TL, 20% between 300 and 500TL, 22% between 500 and 750TL, 17% 750-1000TL and 17% over 1000

[8] Osmanli Konaklari is the name of the new development in Sulukule. However, the project is known as Sulukule in academia and media.

TL (Yilmaz, 2009). People could not afford the social houses due to their limited income, even though there is a long-term mortgage plan without a down payment.

The owners had compensation for their properties in the project area between 50000 to 80000TL but tenants could not have any housing benefit from any authorities. However, we need to take an attention to that a couple of family were living in the same unit. Therefore, the adequacy of these payments is controversial. As mentioned before, these people do not have a regular income, so this mortgage plan is not acceptable as feasible. If we specifically look at the Tasoluk social hosing stock, it is far away from the city centre. In addition to that, we need to clarify that a lot of the Sulukule residence find temporary jobs in the city centre. Thus, there is a tendency to move back nearby neighbourhoods of their initial settlements.

In this point, we should clarify the displacement process in order to conduct an unbiased research. Even though, all of the residences have not moved out to Tasoluk, currently, just one of them lives in there. Although fifty out of nine hundreds of the households have had an agreement to have a unit in the new housing project in Sulukule, only one household lives in the new development. There are two reasons for that. First, they could not get a unit in their blocks as they are obligated to draw lots to designate the units. The second handicap for them was the change of price per square meter that is doubled from 1250 TL to 2500TL (Ince, 2012). The current property values of Osmanli Konutlari is between 400.000-450.000TL. These property values indicate that these are not affordable even for middle-income households.

As can be seen the Figure 4, Sulukule is planned as denser than original neighbourhood and luxury residences with recreational facilities. However, Tasoluk does not have same features. Besides, the characteristic feature of Sulukule, courtyards, has not been used in Tasoluk plan (Figure 4). It made their lives harder and more challenging while adapting a new neighbourhood and life style because they prefer to communicate with their neighbours in their daily lives. Apartment style life is not suitable for that. According to Daglar (2019), 300 of 900 households have decided to have a social housing unit from Tasoluk. However, only one of the households still lives in there.

Figure 4: Sulukule before demolished and Tasoluk

Figure 5: Tasoluk Social Housing[9] and Osmanli Konutlari in Sulukule[10]

Overall, the urban transformation phenomenon is a multi-dimensional process that affects the economic and social structures of not only the project area but also the periphery of it. The households, who are affected from eviction, aim to move back near the neighbourhoods of their initial settlements. Due to the high relative cost of 30% of households income, Tasoluk social housing stock cannot be defined as an affordable option for low-income household, Osmanli Konutlari cannot be even considered for them.

In addition to that, market-driven problems can be summarized as that: the housing market in free and open market economic systems without any government supply for low-income households might cause shanty towns and unhealthy urban environments. A low-cost payment scheme should be guaranteed by the HAD.
Based on Turkish cases and the literature review about affordable housing, we suggest that the Government should consider the following points to promote affordable housing stocks in Turkey through HDA policies.

- The current payment method should be improved.
- Population displacement should not be an option during the urban transformation process.
- Transfer of ownerships of properties should be restricted to eliminate possible second wave of eviction.

[9] http://www.tasoluktokietap1.com/ Updated: 14.05.2015
[10] http://img.fatih.bel.tr/assets/photo/etud%20proje/yenileme%20projeleri/sulukule/911.jpg?w=auto&h=600 Updated: 14.05.2015

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# PHYSICAL AND SOCIAL EFFECTS OF UNIVERSITIES ON THE URBAN PATTERN: CASE OF ISTANBUL

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Keywords : University, Planning, Redevelopment

Abstract

In a world driven by information and knowledge, considering the privilege of un also its key role in process of physical and social change, this study aims to universities on the process of urban development and transformation. Within the not only the differentiations in the built environment, but also changing so environments after hosting a university will be discussed.

As a result of legal regulations, starting from 1990s there has been a signi number of state and foundation universities in Turkey and Istanbul in particula the purpose of the paper, after evaluating the spatial relationship between u Istanbul, the analysis conducted to determine the level of spatial and social selected foundation university neighborhoods of Istanbul will be evaluated.

## 1. Introduction

Modern-day understanding, adopting knowledge based production of goods and se forward by neoliberal policies at the international level has brought univer production. While the fundamental function of universities used to be creatio producing and sharing knowledge in the past; new functions such as cooperation and industries, creation of innovations and contribution to the environment hav traditional roles of universities.

While universities contribute economic development on one side, they also prepa social/cultural conditions of development. Besides social development, unive influential factor in development of physical environment of their surrounding a physical, economic and social/cultural infrastructure of the province also p realization of the above-mentioned contributions of universities (Benneworth et campuses also make use of the social, technical and economic opportunities of t close to them in order to meet the spatial and social requirements they need universities have significant influences on urban development with this feature.

Since the beginning of 1980 s, significant changes started to occur in politica structures with the influence of outward oriented economy policies, which start in Turkey as well. Necessary regulations were introduced both for state univers universities to provide service in Turkey, with metropolises in the first insta serving the need to increase the education and training level of the young popul goal of eliminating the imbalance between regions. Within this framework, consi

most significant factors of economic development, an attempt has been made to
universities in the country.

The campuses of Beykent, Istanbul Bilgi and Kadir Has Universities, located i
Istanbul, were observed with the purpose of evaluating the spatial and soci
universities on spatial and socio-cultural environment of cities; the locations
city, their spatial relations and social influences on the environment were
dimensions in the process of urban transformation.

## 2. Relationship Between a University and a City

In addition to the spatial and functional interaction of a higher education in
which it has been established, it also has social, economic and cultural intera
and location of the university campus, the size of the university and the cit
established are significant factors.

Universities create numerous opportunities to determine the economic future of
their country. When these opportunities are utilized correctly, universities pr
contributions to their cities in addition to their contributions to the developr
contributions can be summarized as follows:

> Urban income, improvement in the economic structure and labor force mob
> Physical infrastructure contributions such as improvement in residences,
> communication and transportation,
> Social and cultural contributions such as increase of cultural activities
> life as well,
> Educational and demographic contributions such as increase in the ratio
> education, decrease in the rates of birth and death, decrease of migrat
> 55).

The physical and spatial form of higher education institutions their discipl
activities, the relations that they establish with the residents and business co
of academic settlements should be the object of careful planning and manager
integration and synergy in local development (Russo,et al., 2007).

Universities also provide significant contributions to the social life of the
located. Arrangements such as seminars and conferences open to the public, spec
and continuous education centers and consultative committees in which different
are represented play effective roles in integration of higher educational inst
and increasing social contribution. Higher education institutions are expe
development as a whole in order to contribute spreading science and scientific
tolerance in the area in order to find solutions for the local community, which
problems. For this reason, it is not a coincidence that the goal of development
universities and the industry has become one of the most emphasized goals of
today s world.

Since the university is also one of the social institutions of urban economy; it
physical, economic and social/cultural development of the city with its legal
academic personnel and students and is also in continuous interaction with po
circles. Within the process, these contributions are spread throughout the
provides contributions to the city for social and economic development such as p

mobility, quality of life, personal development, increase of productivity, fle
decrease in crime rates, development of citizenship consciousness, social orga
2007).

The number of universities, which have significant contributions for developmen
cities, has increased after 1980 s and gained momentum after 1990 s. The higher
Turkey has been undergoing a process of rare expansion and structural change du
of century.

3. Development of Higher Education Institutions in Turkey and Istanbul

The number of state universities was 21 in 1981 in Turkey. During this perio
strengthen the identities of the city and to contribute to the socioeconomic dev
by taking into consideration of the levels of development between regions when
for universities outside Istanbul and Ankara.

During this period, considering regional development differences in Turkey, whil
locations outside Istanbul and Ankara, to strengthen the identity of the host
the socio economic development of the region was aimed (Sarg n, 2007).

The Higher Education Law with number 2547 ruled in 1981 (YOK, 1981) is one of
milestones of Turkish higher education system. Following the legal regulations a
of Foundation Universities , the first foundation university was established in

The majority of 24 universities in 1992, of which 1 was a foundation universit
universities, were established in medium sized cities (Sarg n, 2007). The perio
when the idea of establishing a university in each city and the concept of foun
gained importance gradually ( zt rk, et al,2011).

15 more universities were established in Turkey in 2006 in cities having a p
120,000 with the purpose of decreasing regional development differences, and
development in cities (Sarg n,2007). 17 more universities were added in 2007 an
state universities reached 101 by the end of 2010. Also, at least one universit
cities of Turkey. The total number of foundation universities reached 60 by the
more foundation universities were established between 2011-2013 (Table 1).

Table 1: Distribution of Universities by Type And Establishment Year (produc
www.yok.gov.tr

| | State Universities | (%) | Foundation Universities | (%) | Total |
|---|---|---|---|---|---|
| Before 1923 | 3 | 100 | 0 | 0 | 3 |
| 1923-1981 | 21 | 100 | 0 | 0 | 21 |
| 1982-1990 | 6 | 85.7 | 1 | 14.3 | 7 |
| 1991-2000 | 23 | 54.7 | 19 | 45.3 | 42 |
| 2001-2010 | 48 | 54.5 | 40 | 45.5 | 88 |
| 2011-2015 | 2 | 8.7 | 21 | 91.3 | 23 |
| Total | 103 | | 81 | | 184 |

It has been observed that while there has been a state university in all cit
foundation universities have been established in 14 cities and the majority of
located mainly in Istanbul (55%) and Ankara (Table 2,3).

The ratio of cities having both state and foundation universities have remained
been observed that foundation universities have preferred metropolitan citie
economy and population movements. (Table 2, figure 1)

Table 2: Provinces by University Types (2015) (produced from www.yok.gov.tr)

| | No. Of Provinces | % |
|---|---|---|
| Provinces with both state and foundation universities | 14 | 17 |
| Provinces with only state universities | 67 | 83 |
| Total | 81 | 100.0 |

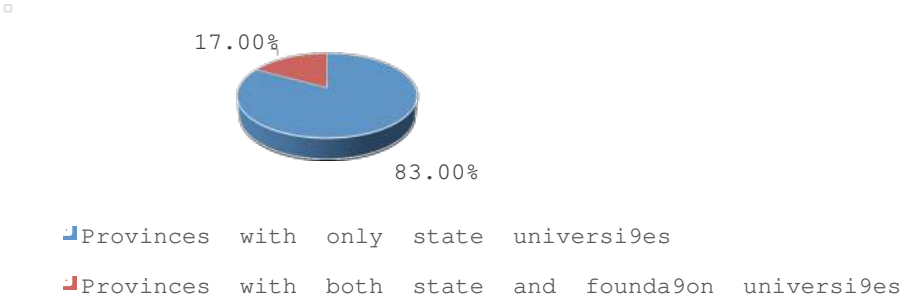



Figure 1: Provinces by University Types (2015)

While the population of Turkey was 77,695,904 in 2014, Istanbul constitutes
population with 14,377,018 persons (TUIK, 2014). 16.6% of the population in Tur
young population in the age range of 15-24 according to the census data of 2013
the table given above is analyzed, it is observed that in metropolitan cities t
universities is higher when compared to state universities. 54.4% of 81 found
Turkey and 8.7% of 103 state universities are in Istanbul. Istanbul constitutes
universities with its technical, social and cultural infrastructure opportunities, t
city and its potential for young population (Table 3 and Diagram 2).

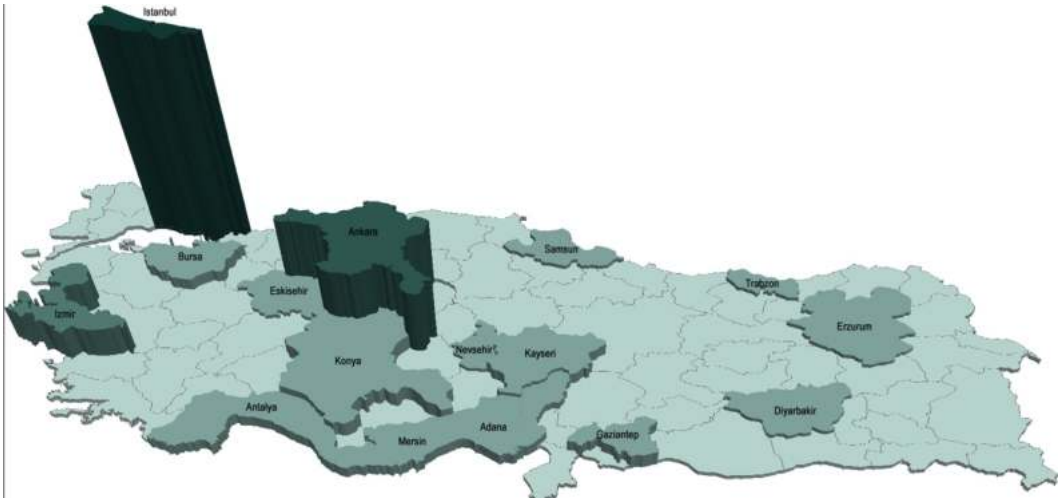
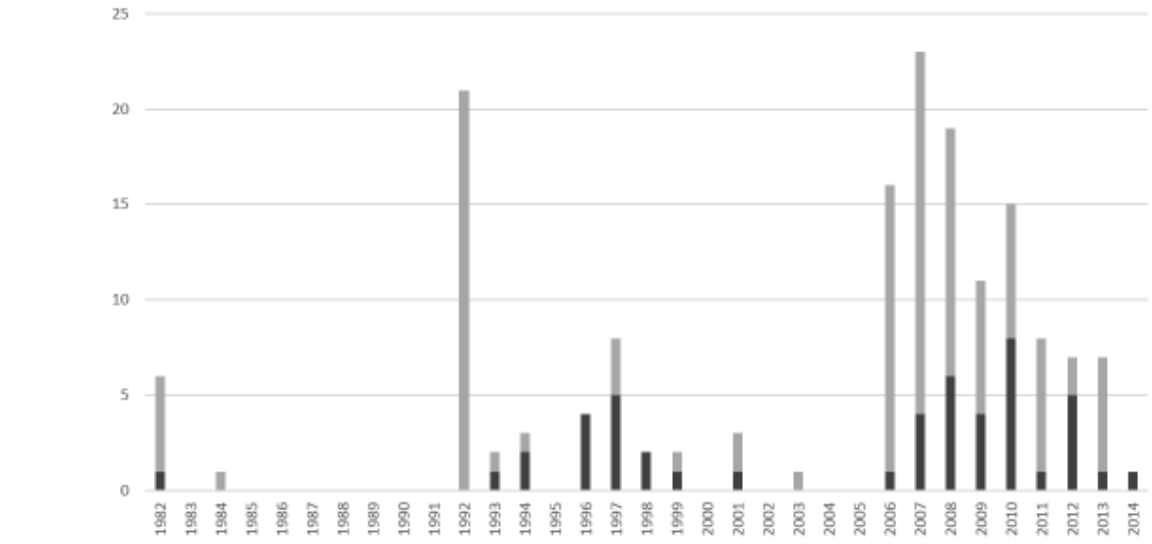



Figure2: Distribution of Universities in Turkey by Cities

Table 3: Distribution of Universities in Turkey by Cities (produced from www.yok.gov.tr)

| | State Universities | % | Foundation Universities | % | Total |
|---|---|---|---|---|---|
| Istanbul | 19 (%18.7) | 19.9 | 44 (%54.4) | 80.1 | 53 |
| Ankara | 6 (%5.8) | 33.3 | 12 (%14.9) | 66.7 | 18 |
| Izmir | 4 (%3.9) | 44.4 | 5 (%6.1) | 55.6 | 9 |
| Konya | 2 (%1.9) | 40 | 3 (%3.7) | 60 | 5 |
| Bursa | 2 (%1.9) | 50 | 2 (%2.4) | 50 | 4 |
| Gaziantep | 1 (%0.9) | 25 | 3 (%3.7) | 75 | 4 |
| Kayseri | 2 (%1.9) | 50 | 2 (%2.4) | 50 | 4 |
| Adana | 1 (%0.9) | 33.3 | 2 (%2.4) | 66.7 | 3 |
| Antalya | 1 (%0.9) | 33.3 | 2 (%2.4) | 66.7 | 3 |
| Icel | 1 (%0.9) | 33.3 | 2 (%2.4) | 66.7 | 3 |
| Diyarbakir | 1 (%0.9) | 50 | 1 (%1.3) | 50 | 2 |
| Erzurum | 2 (%1.9) | 100 | 0 | 0 | 2 |
| Eski ehir | 2 (%1.9) | 100 | 0 | 0 | 2 |
| Kocaeli | 2 (%1.9) | 100 | 0 | 0 | 2 |
| Nevsehir | 1 (%0.9) | 50 | 1 (%1.3) | 50 | 2 |
| Samsun | 1 (%0.9) | 50 | 1 (%1.3) | 50 | 2 |
| Trabzon | 1 (%0.9) | 50 | 1 (%1.3) | 50 | 2 |
| Other Provinces (each) | 64 (%63) | 100 | 0 | 0 | 64 |
| Total | 103 (%100.0) | 55.9 | 81 (%100.0) | 44.1 | 184 |

Since 1982, after the YOK Law came into effect (Council of Higher Education) th
universities in Istanbul, has been parallel to the developments in Turkey. Cor
Turkey, the foundation universities displayed a significant increase in Istanbu
state universities. The number of universities opened in stanbul since 1993 is




| | 1982 | 1984 | 1992 | 1993 | 1994 | 1996 | 1997 | 1998 | 1999 | 2001 | 2003 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Provinces | 5 | 1 | 21 | 1 | 1 | 0 | 3 | 0 | 1 | 2 | 1 | 15 | 19 | 13 | 7 | 7 | 7 | 2 | 6 | 0 |
| Istanbul | 1 | 0 | 0 | 1 | 2 | 4 | 5 | 2 | 1 | 1 | 0 | 1 | 4 | 6 | 4 | 8 | 1 | 5 | 1 | 1 |

Figure 3: Establishment Years of Universities of Istanbul and Other Province

When the spatial distribution of universities in Istanbul is reviewed, 8 of 53 u Fatih district, as the city s historical center, it has strong transportation characteristics (Figure 4, 5). In general, newly founded universities tend to l structure in the city center instead of empty lands in the periphery of the c campuses were established in the city centers and have preferred to develop by economic potential of the area in which they are located. However, as these u continue their development in new campus areas towards periphery of the city an of attractions in these regions. Such as Beykent University in Beylikduzu, I Kadir Has University in Selimpasa and Okan University in Sile etc.

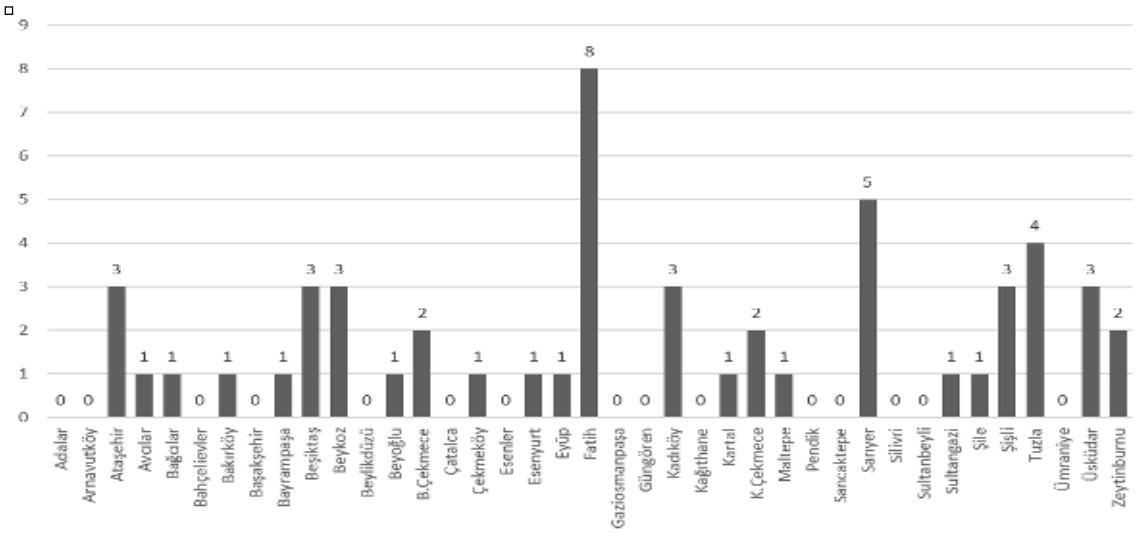



Figure 4: Distribution of 53 Universities of Istanbul by Districts

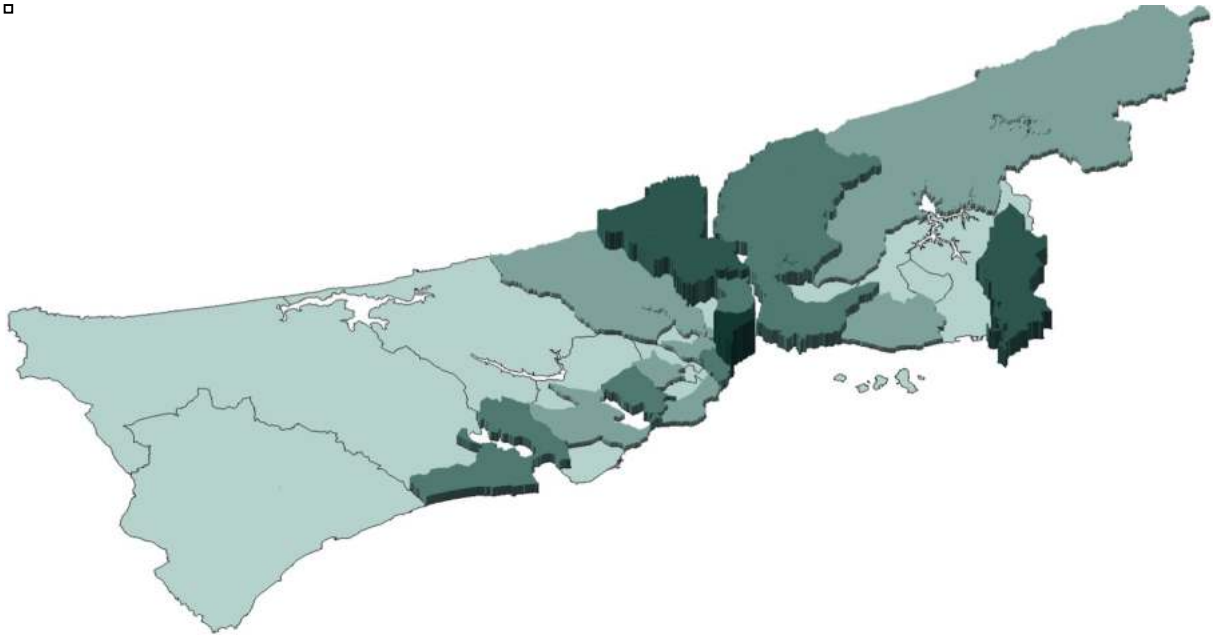


Figure 5: Distribution of Universities by Districts in Istanbul Metropol

## 4. Field Survey: Effects of Beykent, Istanbul Bilgi and Kadir Has Foundation U Their Environment

Within the scope of this research, it has been aimed to evaluate the spatia transformation caused by foundation universities established since 1990 s. universities with campuses close to city centers, having strong transportation income social groups live and are in need of physical/spatial renewal, have b purpose of the study, besides the comparision of spatial analysis of the neighb and 1998 (IBB, 2004), the variation in land values has been investigated and su with residents around the three campuses.

Of the three universities selected, the Cibali Campus of Kadir Has University a Campus of Istanbul Bilgi University are located along the shore of Golden Hor Peninsula of Istanbul, the Ayazaga Campus of Beykent University is close to the of the city (Maslak) (Figure 6).

Figure 6: Locations of the Selected Universities

4.1. Kadir Has University

The Cibali Tobacco and Cigarette Factory founded in 1886 with the purpose of
products became operational in the beginning of 1900 s and continued its produc
Factory, with its materials and construction technique, is an example of con
structures of the era besides the space and size of the factory building.

The building, which has lost its unique function in 1995, remained empty until
Kadir Has Foundation in 1997 and following a restoration of 4 years; it was o
2002 on an area of 12.5 ha as Cibali Campus of Kadir Has University. It is signi
example of introducing the function of a university to an old industrial buildi
The project and its implementation, which created a renewal effect in its periph
the Europa Nostra award for 2003 due to its contribution to revival of the
addition to preservation of the building, which is a part of European Architect
2010).
At the end of 2007, the university enlarged the Cibali Campus by building one m
historical factory and also built a sports salon in the inner neighborhoods of t

The administration of the university also has policies for development of rel
periphery of the campus. The aim of the project named Neighbor s Rights Proje
contributions to economic, social and environmental development of the neighb
university is located and to implement this in cooperation with stakeholders b
between stakeholders. For this purpose, health screenings, environmental landsca
of architectural texture, movie and theater shows for the community in the regi
areas of sports, culture and education with primary schools in the region a
participation of students of the university, its academic administrative pers
the Cibali region (Url: khas.edu.tr)

Figure 7: Views of Kadir Has University

The Ataturk Boulevard passing in the east direction in the vicinity of the unive
The western part of the boulevard in which the university is also located ir
residential area and the east has been used mainly for commercial activities
process. In the period before the University was opened, (Figure 7) low quality
were existed in Cibali. In the spatial analysis of 2013, it was observed tha
extended in a manner that also covers the industrial facility located in the so
functional shift has taken place from residential use to trade and service.

The industrial facilities along the Golden Horn were decentralized between the
were transformed into green zones. In Cibali neighborhood except the transformat
industrial building into a university campus, there has not been any other impo
that would affect land use of the area.

The only exception is transformation of a governmental building, located on t
Medipol University in 2009, which became operational as a Faculty of Medicine
change in 1998-2013 and the distribution of changes are analyzed within this f
concluded that the increase in the number of trade units is to a large extent ba
of the Cibali Tobacco Factory to Kadir Has University.

As time passed, the opening of the university in the Cibali district was also re
per square meter for lands and the prices of lands increased by 612% in terms of
with the prices of 1994 (Figure 10).

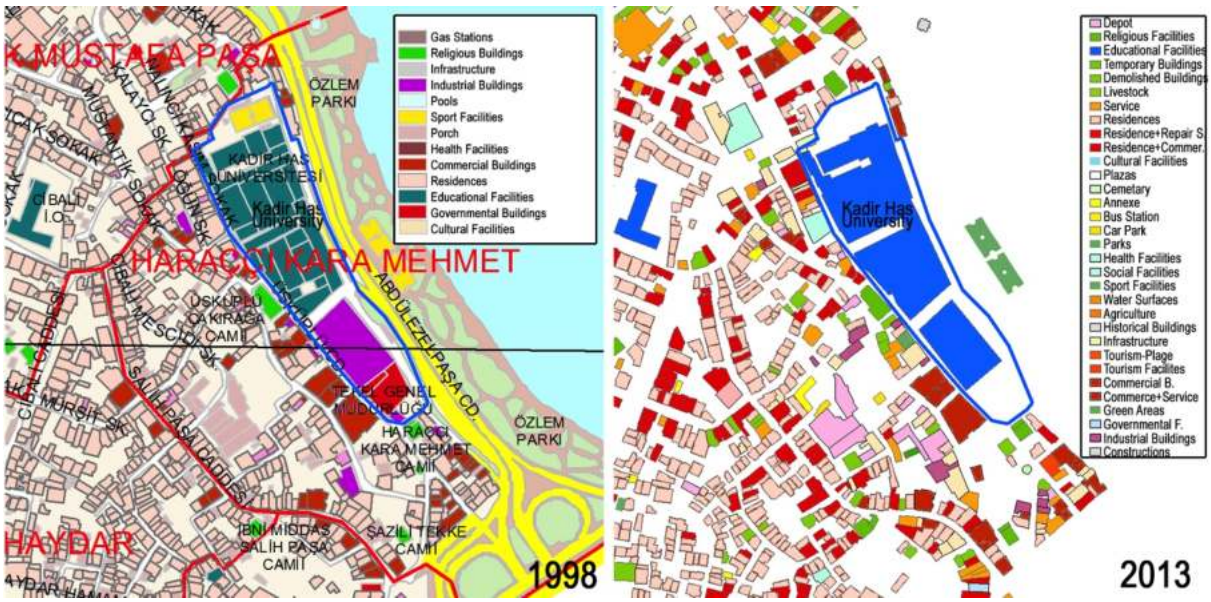



Figure 8: Functional Changes in the Periphery of Kadir Has University (1998–2013
2015)

The surveys conducted lead to the conclusion that following opening of the unive
also taken in place in rental values, in parallel to the increase in the value
this increase as favorable while tenants considered it to be unfavorable.

The users living in the district considered that the new functions that came al
were trade units such as stationary, dry cleaning, supermarket as well as serv
beverage services and also functions such as social and cultural facilities
However, based on the low educational and economic levels of the populatio
neighborhood (66% graduates of primary school), 78% noted that they had not bee
these functions and 20% stated that they used them occasionally. And the funct
limited with service functions and trade functions. 58% of the residents co
university in the place where they live as favorable.

4.2. . Santral Istanbul Campus of Istanbul Bilgi University

The Istanbul Bilgi University was established on 7 June 1996 by Bilgi Educa
Foundation. The Santral Istanbul Campus of the University, continuing its act
campuses in Istanbul, included within the scope of the research is located on
north of the Golden Horn, at the former Silahtaraga Power Plant, for which a new
The Silahtaraga Power Plant, the first urban scale power plant of the Ottom
electricity for the city from its foundation in 1911 until 1983. The Cultural
Preservation Board declared the building as cultural heritage in 1991 (Aksoy, 20

The Plant was allocated to Istanbul Bilgi University in 2004, renovation works w
2004 to 2007 and new additional buildings were also constructed during reno
buildings. It started to provide service as an education and culture complex
educational departments of the University, there are also cultural function
exhibition areas and libraries as well as a guesthouse, places to eat and dr
recreation areas. The efforts to transform the Silahtara a Power Plant, which

heritage, into Santral Istanbul, was made with contributions of the public and p
nongovernmental organizations.

Figure 9: Views of Santral Istanbul and Istanbul Bilgi University

General Directorate of IGDAS (Istanbul Gas Distribution Corporation) is located
University. No functional change that could affect land use of the neighborhood
2007 when the university was opened, however the residential areas in the periph
2 floors height to 4 and 5 floors following a change of plan. When the spatial
and distribution in 1998–2013 is analyzed, it has been observed that existing f
have developed along the road in the east of Bilgi University, that student dor
the same direction and similar development of trade had also taken place along
providing connection of Bilgi University with the northern shore (Figure 8).

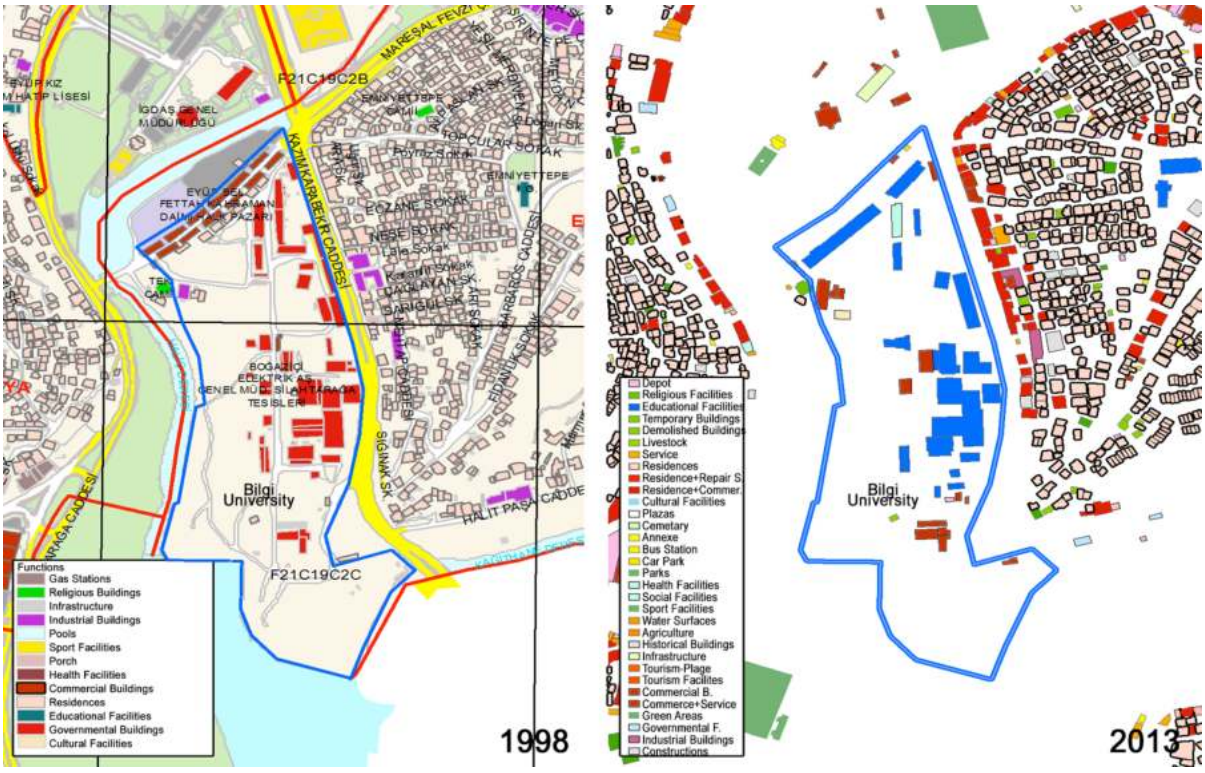



Figure 10: Functional change in the vicinity of SantralIstanbul Campuse (1

The land values around the university did not display a significant increase lik
Has, however the unit prices under $10 in 1994 increased above $120 in 2014 (Fig

Those living close to the university had noted that following opening of the un
and social cultural activities had increased, a health facility had been opened
areas had been made. More than half the population living in the environment
been using the new functions and had found the functional change favorable while
in the region had stated opening of a university in their district had been an u

4.3. Ayazaga Campus of Beykent University

The Ayazaga Campus of Beykent University is located on an area of 0.7 ha on a la
Municipality in 2005. Beykent University is in Ayazaga, located in the north o
been in the status of village until 2014. The campus of the university is lo
residential area. It started to function during the curriculum year of 2005-200
campuses within the scope of the research, it was not transformed from a di
university; it was constructed as a university and started giving education.

Figure 11: Views of 4.3. Ayazaga Campus of Beykent University

While no significant functional change took place until 2013 as settlement in t
Campus of Beykent University, highly intensive residential areas were construct
and northeast of the campus during the last 2 years. On the other hand, the
socioeconomic structure of the region with Islamic political opinions caused
increase continuously during the last 10 years. Especially before local electi
status of a village, the buildings that were 1-2 stories increased up to 5-8 st
increase in the settlements and the trade and service units in the land use in
University will not be correct (Figure 9).

As it has been determined in Bilgi University, 66% of the residents in the peri
consider opening of the university as unfavorable. The increase in the land a
considered favorable by land owners and unfavorable by tenants.

Among the three universities examines, it is the one with the lowest land value
The land values, which were 2 times higher in 1994 in the periphery of Bilgi Uni
change and it still remained as half of Bilgi University ($70) (Figure 10). T
1994-2014 increased by 380% in the vicinity of Beykent University, by 504% in th
Has University and by 1952% in the vicinity of Bilgi University.

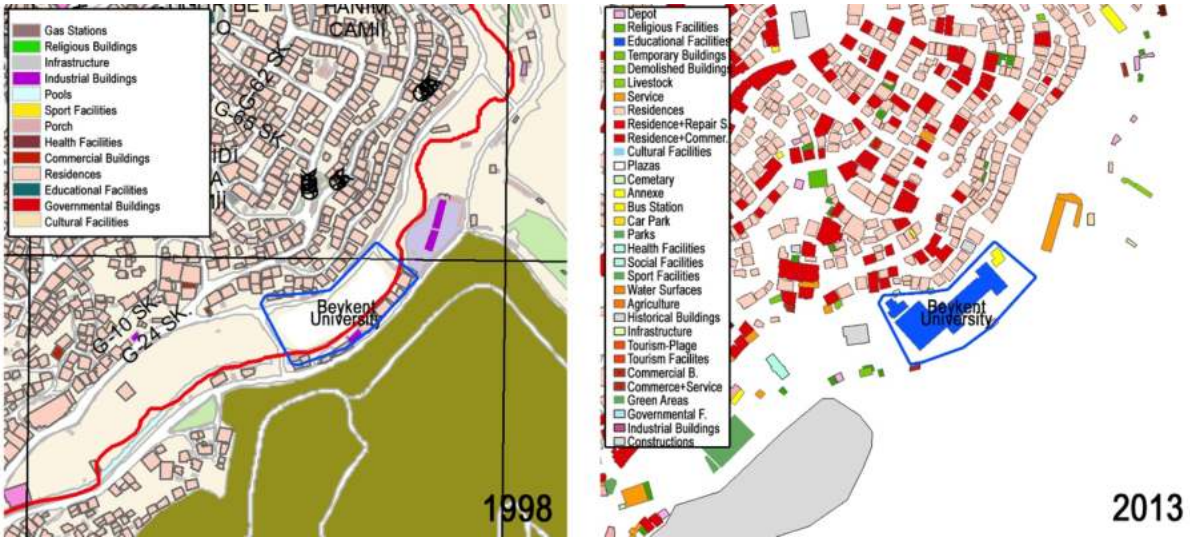



Figure 12: Beykent niversitesi ve yak n evresi fonksiyon de i ikli i

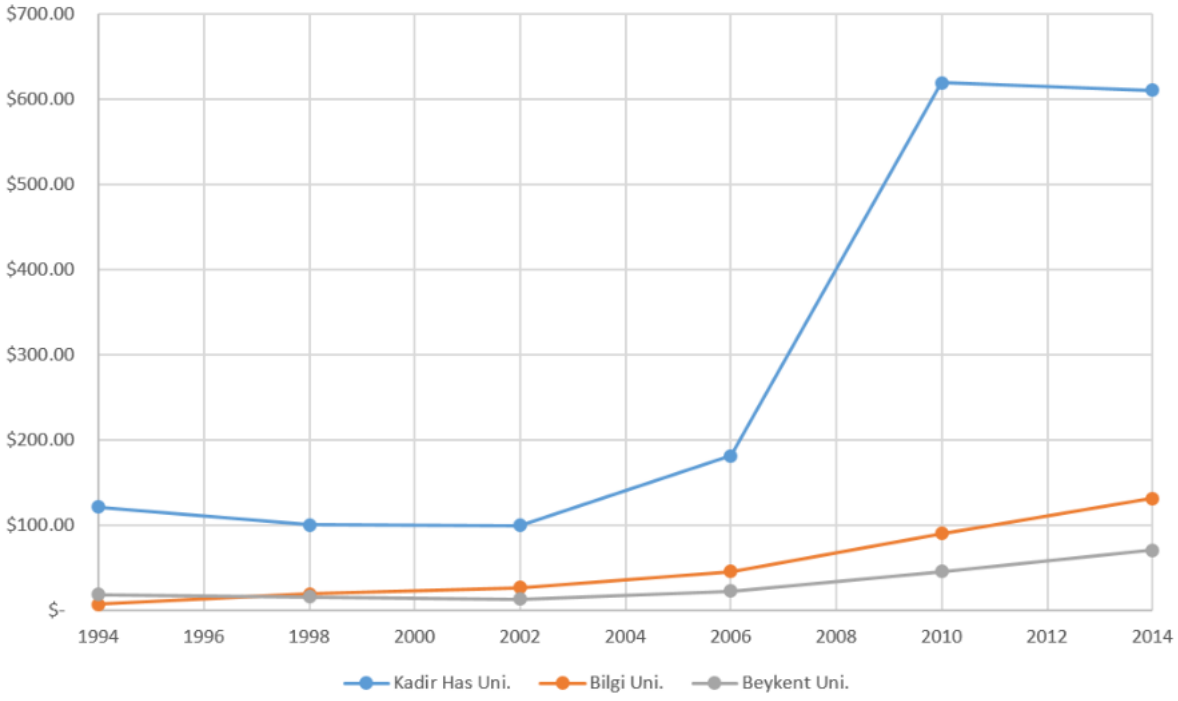



Figure 13: Land prices around the campus sites (Yigiter at al, 2015)

## Conclusion

While some of the universities that started education as of 1990 s chose empty a
in the outskirts of the city, some utilized existing building stocks and prefer
areas. Newly established university campuses can cause beginning of a trans
periphery. The Golden Horn Region, that can be described as historical and cult
has been undergoing a rapid transformation lately, with culture led renovation p

It can be concluded in the study that Kadir Has University is the most successf
effect on urban structure among the three universities, which is followed by Ist
The success of Kadir Has University is based on the facts that it has been evol
heritage area, its periphery is a protected area and that it has been under
residential areas in its vicinity, which are restored and gain value through E
can also be stated that presence of the Zeyrek Mosque in its vicinity and restor
close to it have a positive influence in creating attraction points for tourists
based on changes in the service function in the periphery of universities, refer
in the form of rehabilitation without causing any change in structural / spati
of the university with social projects into this kind of a transformation, also
for preservation of urban heritage, leaves the danger of gentrification, which
most negative part of urban transformation, off the agenda.

Just like Kadir Has University, Istanbul Bilgi University has also been assessed
its structure open to the outside world and also for preservation and developmen
The difference of Bilgi University from Kadir Has University are the facts
protected areas in its periphery, that trade has increased especially towards e
the university and that residential areas are going through an urban renewal p

Although the existing residential areas in the vicinity of Beykent University
transformation in the form of urban renewal, there are no existing efforts at
parcels in the east of the university and the areas that came into existence aft
area are developed in the form of land development.

When the spatial pattern of the three universities are evaluated; it can be co
Has and Bilgi Universities have outward spatial structure because of the num
connection of the campuses with their neighborhood. Especially the facts th
belonging to the old electricity factory in the Campus of Bilgi University are
industrial museum, fairs, concerts and similar activities are organized in the k
and presence of the Rezan Has Museum in the Campus of Kadir Has University ar
proofs of this structure. On the other hand, Beykent University displays a c
universities and a closed structuring is observed as entry of cars and pedest
single door, both students and cars are checked carefully during entries and e
points are not permitted in the campus. The strict structure of the university
limited functional change of the neighborhoods land use.

It is evident that only existence of universities is not sufficient for their ef
For this, it has been considered that in addition to the structural, spatial an
universities, their functions and their relationship with their periphery, the
clear and demanding about the benefits that universities can provide for them.

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# A Preliminary Study on Re-examining Housing Demand from a Homeownership Perspective in Taiwan

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Keywords: Housing Demand, Homeownership, Tenure Choice

## Abstract

*Since the last decade, the peculiar phenomenon of high housing price, high va homeownership rate has occurred due to the changes of housing market and socio-economic conditions in Taiwan. On one hand, the housing supply keep increasing while on the other hand, the housing demand from middle-income families remain unsatisfied due to the ever-increasing housing price. The unbalance between supply and demand in housing markets result in the queries about how homeownership affects the housing market and how we could adjust housing policies.*

*This study re-examined the correlation between housing demand and homeownership, and analyzed its influence on housing market from institutional and economic aspect. Findings show that housing policies in Taiwan have a fundamental stand for advocating homeownership during every developing period, causing the unbalance of housing tenure of choice. From economic perspective, it is concluded that high homeownership rate in Taiwan is affected by anticipation of high house price increment as well as the low taxation of owner-occupied housing, and form a self-reinforcing cycle along with housing price and vacancy. It is expected that further study would use a tenure choice model to estimate the change of the factors to housing demand so as to provide evidence for the theoretical argument.*

## 1. Introduction

Since 2000, the homeownership rate in Taiwan has climbed to 85 percent in 2013, which is one of the highest homeownership rates in the world (Figure 1). Nevertheless, the housing market has both high housing prices and a high vacancy rate. This peculiar phenomenon reveals a doubt that the housing supply does not meet the housing demand.

What role does the government play in the housing market under the circumstances? The conventional notion of where there is soil, there is a wealth has affected the civic perception of homeo the past. Most people considered buying a house as an objective over a lifetime. Policy making, however, was supply-driven, fortifying the preference for homeownership. After the 1990s, real estate was considered the pioneer industry that promotes economic growth. In order to keep real estate active, lenient housing policies stimulated housing supply and demand by market mechanisms, causing the deterioration of housing commodification and an imbalance between housing demand and supply in Taiwan. Not until recently has the government advocated social housing and by enacting the Housing Act in 2011, showing the housing policy s change to demand-oriented development (Huang, 2013).

Past reviews of research indicate that homeownership has positive impacts on society. Roche (1997) pointed out that higher homeownership means a sounder housing finance system, which give citizens easier access to mortgages to purchase their own houses. Coulson (2002) concluded that homeownership has a positive impact on living environment, child rearing, and civic behaviour. However, these arguments are from European and American perspectives. Moreover, their building types, housing

demands, and social environments are significantly different from those in Asian countries.

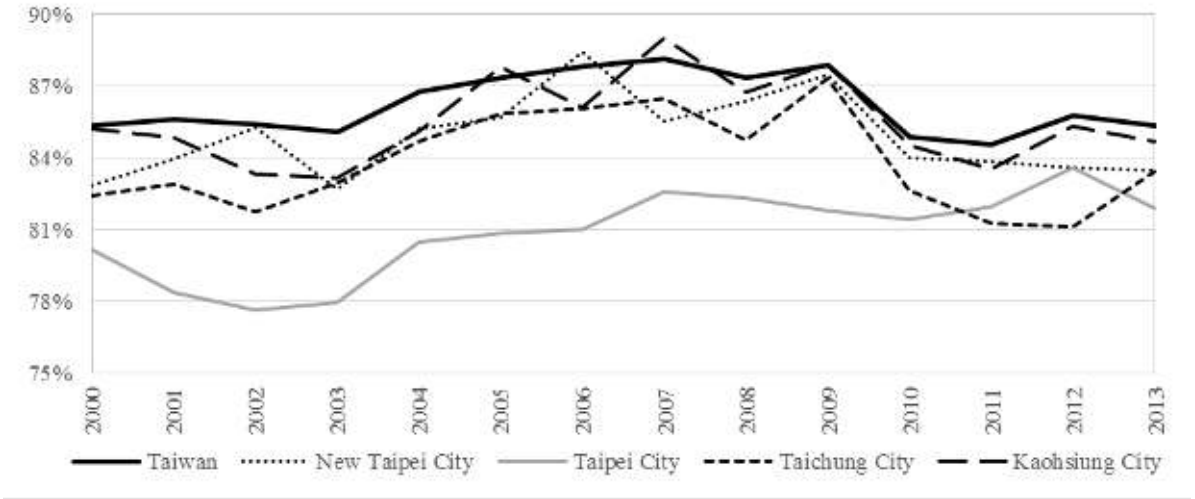


Figure 1. Homeownership Rates, 2000-2013.
Source: Income and Expenditure Survey of Taiwan, 2000-2013.
Note: Before 2010, homeownership rates were considered as the percentage of self-owned houses considering housing tenure. The term "self-owned" means owned by household members and their lineal relatives . From 2010, the term is amended to owned by household members who usually live in this house in accordance with the definition of 2010 Population and Housing Census.

This study raises the argument that high homeownership in Taiwan neither has a positive impact on the housing market nor is the only target that policies should follow. In order to verify this argument, our study provides a conceptual framework for re-examining the housing demand from a homeownership perspective. In the first section, the literature on the development process of housing policy and homeownership is reviewed. Then we explore the economic context for homeownership in the second section. As the relation between homeownership and housing market is presented, we conclude with a judgement on whether or not homeownership brings benefits to Taiwanese society.

In the last section, a discussion on how homeownership applies to the evaluation of housing demand in Taiwan is presented. According to the regulations of central, municipal, and county housing plans, the basic concern within housing policy change is the evaluation of housing demand. Nevertheless, the current method using households as the amount of demand does not take demand reality into account. Moreover, the non-equivalence between supply and demand became apparent after the reorganization of Taiwan administrative regions in 2010, which turn five counties into municipalities (Hsiao et al., 2012). This study seeks an objective method to establish a better understanding in homeownership. Using tenure choice as a mathematical model, it constructs a housing demand model and provides evidence for housing policy making.

## 2. The foundations of Housing Policy and Homeownership in Taiwan

A nation s housing policy is the foundation affecting housing demand and supply. Homeownershi also depends on regulations. In 2013, only 43% of people owned their houses, while 57% choose to rent (Statistisches Bundesamt, Wiesbaden, 2013). This low homeownership rate, compared with most European countries, comes from heavy property tax and a reliable rental market that the government provides. On the one hand, the rate of homeownership in U.K. was 64.6% (Eurostat, 2013). But the

government hindered housing supply over a long period of time, and supply fell short of demand, making it more difficult for citizens to have a home of their own.

The development of homeownership in Taiwan differs from other countries. The conceding housing policy and the conventional notion of owning a house is better may make homeownership a better choice of the housing tenure in Taiwan, leading to a situation that leasehold market is of little account to the housing market. Following are the four major development periods in Taiwan:

## 2.1 1950s-1970s: Provisional Housing Supply Policy

This period occurred when the R. O. C. Central Government retreated to Taiwan. Almost 2 million people flooded into Taiwan. On top of that, a military conflict between China and Taiwan arose from political tension. The R. O. C. Central Government did not take the initiative in formulating housing policy, but only provided shelters (becoming the so-called military dependents villages ) as a temporarily handling the military immigrants.

Due to this method of dealing with insufficient housing, the National Government enacted the Loan for Constructing Public Housing Act in 1957, serving as the predecessor to the Public Housing Act. Before it was annulled in 1975, the government built around 12.6 thousand public dwellings and sold them to low-income households at cost price (Lin W. I., 2006). Overall, the shelters was merely a way to settle the military immigrants down regardless of their living quality. As for the other citizens, the lack of a comprehensive housing policy was not the major concern.

## 2.2 1970s-1990s: Economic-oriented Development

After the aforementioned conflict ceased, the R. O. C. Central Government emphasized economic development. In order to stabilize the rise in housing prices and inflation due to the Oil Crisis of the 1970s, the government enacted the Public Housing Act in 1975, and promoted a Six-Year Economic Development Plan, which provided at least 10 thousand public dwellings. In 1979, the Housing and Urban Development Bureau was established to process related business.

The government revised the Public Housing Act in 1982, given the lack of public housing funds. Construction conducted by the people themselves with government loans , and encouraging private investment were added, hoping to release the government s bu private capital. On the one hand, the government also expected to build public housing on a large scale to stabilize housing prices, making it possible to achieve the goal of every d their own (Mii F. K., 1988). The government constructed 4.7 thousand dwellings

Compared with the previous period, the government took more active actions to stabilize the economy, formulating policies on housing supply and subsidy. It was at this period that homeownership gained political and legal support. But the practical considerations behind the policy were economic development rather than balancing the housing market. The essence of the housing policy was still indeterminate, and a preference for owning a house had begun to change housing supply and demand.

## 2.3 1990s-2000s: Non-interference with Housing Market

In the 1990s-2000s, Taiwan faced further negative impacts on the housing market. Public housing accompanied by urban construction was planned as a solution to handle the rocketing housing prices since 1985. However, problems eventually emerged, such as an excessive supply of social housing and

high housing prices, leading to a suspension of providing public housing in 1999 (Lin W. I., 2006). During the same period, the government tried to increase incentives for private sectors and to expand housing subsidies, which became the trend in the following housing policy (Chen Y. L., 2013).

This period became a turning point in housing policy, since property industry grew rapidly, posing a threat to the housing market. In 1999, policy on public housing failed. By late 1990s, the government tried a pilot scheme of leasehold housing (based on superficies right) in Taipei City. About 416 dwellings were transacted, with usufruct for 50 years. Nevertheless, the purchasers advocated for the right of owning their houses by statement, appeal, or administrative petition. The government, on the contrary, compromised with those purchasers on transferring the ownership of the leasehold housing. Housing policy during this period still had no subject, but it let private sectors take control of the development of the housing market. The government s compromise indicated non-interference in the housing m Homeownership rate in Taiwan thus surpassed 80% in 1990 due to the rapid growth in the property market.

## 2.4 2000s-Now: Form of Comprehensive Housing Policy

After 2000, a wave of protests from social welfare organizations and local citizens arose. The problem of rising house prices remains, forcing the government to face the problem with new strategies. The Comprehensive Housing Policy was enacted in 2005. It was the first comprehensive and long-term housing policy, and an overall review of past housing policy, too. Its context included: improving the housing market, establishing a fair, efficient housing subsidy institution, and enhancing living quality. The concept of social housing was added to the statement for the first time. The importance of the Housing Act (draft) was also noted. But not until 2011 did the government en setting a clear goal for Taiwan s housing policy.

Huang (2013) used path dependence theory to analyse the context of affordable housing policy, and concluded that the context of affordable housing policy fall into a lock in situation, which means that the Public Housing Act has not changed its regulations from the basis in the process of revises over the years. While the Public Housing Act was replaced by the Housing Act in 2011, it showed a transition pattern of layering. In the lock in process of revises, institutions would f reinforcing.

This study agrees with the argument of Huang (2013). A lock in situation proves that while the Pul Housing Act has dominated housing policy over the past four decades, homeownership has consistently affected housing supply and demand. Housing policy was based on the idea of homeownership. From providing public housing, stabilizing economic development, to the failure of public housing, the housing policy has continuously reacted passively. The government tried to promote leasehold housing, but failed to lead the housing market. Housing policy and social culture encourage the owning of houses, causing a high homeownership rate.

## 3. The Economic Context in Homeownership and Housing Market

In the last section, it was noted that high homeownership in Taiwan derives from unbalanced policy, leading to a preference of housing consumption in the society. What role homeownership plays, then, is the main focus of this section.

Past studies often discuss homeownership from the perspective of tenure choice. Lee and Trost (1978) were the first ones to study a joint estimation of tenure choice and housing demand model; Hsueh and Chen (1999) also pointed out that homeownership is the sum of tenure choice of an individual household,

and it is feasible to analyze different factors affecting housing tenure of choice. From the perspective of tenure choice, the following are major factors to be discussed so as to analyze the role that homeownership plays.

### 3.1 House Price and Income

House price and income are two of the factors used to evaluate the ability to purchase a home. Usually the house price to income ratio has been regarded as an index of housing affordability. Figure 2 shows a rapid change of house price to income ratio, from 4.5 times in 2002 Q1 to 8.4 times in 2014 Q3. The rate has almost doubled the number in the ten years, especially in Taipei (15.2 times) and in New Taipei City (12.8 times), where transactions are most thriving. Since the homeownership rate has a slightly drop in 2009, does there exist a directly proportional house price to income ratio?

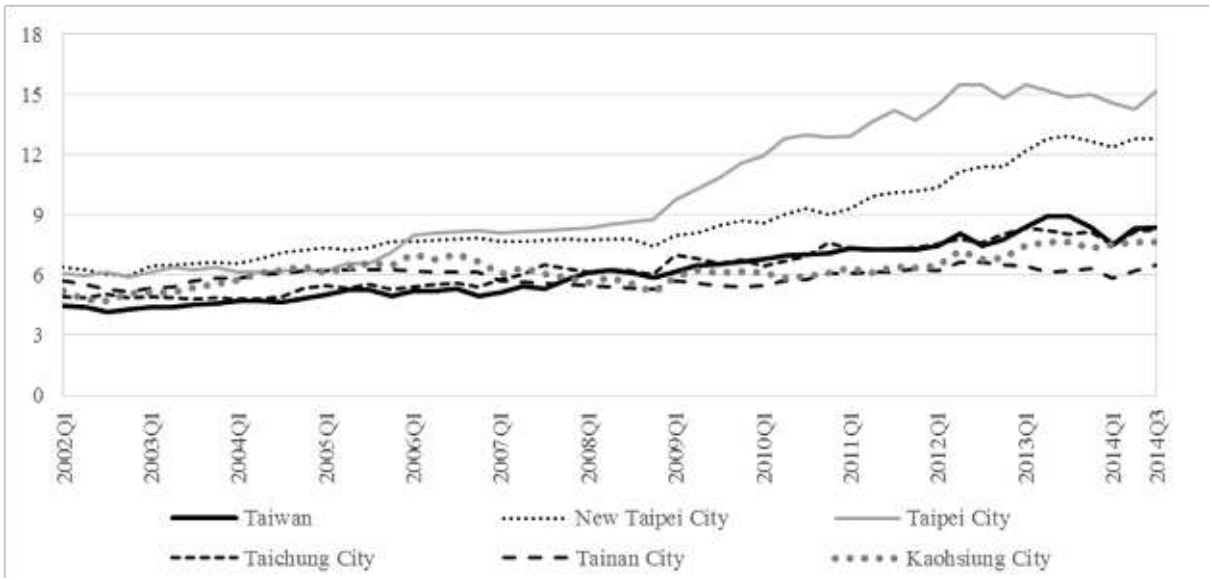


Figure 2. House Price to Income Ratio, 2002-2014
Source: Construction and Planning Agency, Ministry of the Interior, 2002-2014.

There are different aspects for house price and income available to evaluate the effect on tenure choice. Hsueh and Chen (1999) indicated that when housing prices increase, the user cost of owning a house relative to renting also increases. An individual household would lean towards renting rather than owning a house. On the one hand, income is the major factor in the category of household attributes (Hsueh and Chen, 1999; Shieh and Lin, 2000; Peng and Tsai, 2012). Higher income represents a better ability to pay off a mortgage. A permanent income in particular has better accuracy of evaluation than a current income (Goodman, 1988).

Nethertheless, the expectation of house price appreciation has a more positive impact on housing tenure choice than house price and income. Goodman (1988) and Hsueh and Chen (1999) both considered the expectation of house price appreciation increase regarding the expected utility of buying a house. An individual household would choose to own a house if housing becomes a favourable investment. Peng and Tsai (2012) had a further point of view on the argument stating that a continuous rise in homeownership derives from the excessive expectation of house price appreciation, especially in an area of high expectation of house price appreciation, where house price and income have a relatively low impact on homeownership. This may explain the fact that homeownership in Taipei City has stayed at

the current level since 2009 while housing prices keep increasing.

There is a similar consideration between the expectation of house price appreciation and the property ladder. Based on the investment potential and the desire of owning a house, first-time buyers get on the property ladder and then use the capital gained to move up as quickly as possible (Earley, 2004). However, there are other significant factors affecting the housing market, so as to make people have easier access to buying houses despite high housing prices.

### 3.2 Taxation of Homeowners

Taxation is also a major factor. Shieh and Lin (2000) indicated that increased property tax would make individual households tend to rent to reduce the cost instead of owning a house. Property tax has an even bigger effect than income.

In fact, many preferential treatments in housing demand were formulated to encourage homeownership. Take Income Tax Act for instance. The interest payable on a loan from a financial institution by a taxpayer, one s spouse and dependent for the purpose of a house for one s own u from one s consolidated income, with the deductible amount not to exceed NT$ 30 tax return. Another instance shows a subsidy on repurchases of a self-use residence. If the cost of the new building exceeds the original sales price, it may be deducted or refunded from the consolidated income tax payable. The provisions also are applicable to the taxpayer who buys first and sells later. In the current tax system, the higher the marginal tax rate, the more subsidies one can apply, and hence reduce the relative cost of owning, thereby encouraging owning a home (Shieh and Lin, 2000).

Other studies show that taxation has a more significant effect on homeownership rate. Bourassa and Peng (2011) explained that through simulation of change in tax policy, a percentage of increase in the property tax rate or a percentage of decrease in expectation of house price appreciation reduces the homeownership rate by about 12%. Besides, the low user cost contributes to high homeownership, indicating that the cost of owning may count for much in tenure choice.

As the subsidy on buying a home and taxation deduction has been in place for years, the low cost of owning may provide a suitable environment of encouraging homeownership. On the contrary, subsidies in renting market seldom get much attention, making this option less favourable for households.

### 3.3 Housing Vacancy Rate

In addition to the factors mentioned above, it is necessary to take vacancy into account, which represents practical demand and supply in the housing market. This section also sums up the peculiar phenomenon of high housing price, high vacancy rate and high homeownership rate, acquiring the current situation the housing market face.

Hua (2001a) discussed the relation between vacancy, homeownership rate, and housing price, finding that the positive impact on housing price homeownership rate exert is stronger than the negative one that vacancy exerts. Although the government could formulate a subsidy policy to stabilize housing prices, encouraging homeownership would also increase vacancy at the same time.

Besides that, the consumption of a second home in Taiwan could also be a possible factor increasing ownership rate and vacancy rate. The rate of owning two or more houses was around 16% in Taipei City and New Taipei City in total (Yang and Chang, 2001). Peng (2005) evaluated the difference between the equilibrium vacancy rate and the practical vacancy rate in Taipei City and New Taipei City, respectively.

It turned out that the difference was much closer than expected, and the equilibrium vacancies were both on the high side, indicating that a certain amount of second homes was not involved in the housing market. Thus, this would not affect housing prices even if the vacancy rate rises. Nevertheless, surveys on second homes in Taiwan have not been completely established compared with other countries, so the amount of second homes remains uncertain.

The current situation of the practical vacancy rate in the housing market has shown a contradictory phenomenon. The housing vacancy rate in Taiwan has keep rising in the recent 20 years, from 13.3% in 1990 to 19.3% in 2010 (Figure 3). This high vacancy rate shows a serious problem of vacant dwellings, compared to 13.5% in Japan, and 2.6% in the U. K. It seems that the past theoretical statements are in accord with the current situation.

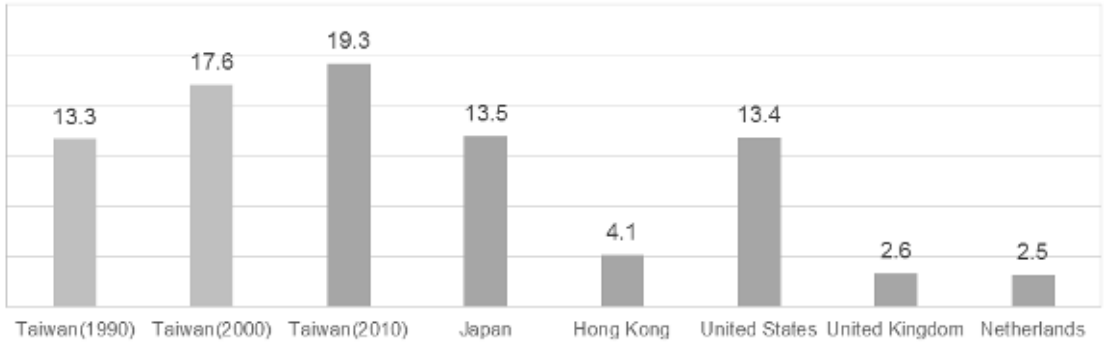


Figure 3. Housing Vacancy Rates for Selected Countries
Source: Population and Housing Census, Accounting and Statistics, Executive Yuan, R.O.C., 2010; Ministry of Internal Affairs and Communications Statistics Bureau, Japan, 2013; Department (R&VD), Hong Kong, 2013; U.S. Census Bureau, U.S., 2014; Department for Communities and Local Government, England, 2014; Central Agency for Statistics, Netherlands, 2014.

It is suggested that Taiwan belongs to the first quadrant of high homeownership rate and high vacancy (Figure 4), representing the condition of excessive housing supply and consumers being obsessed with buying houses (Hua, 2001b). From the analyses of house price to income ratio, taxation and vacancy, it is concluded that high homeownership has become an endogenous variable rather than the outcome of housing market operations. High homeownership also causes a negative impact on the housing market. Thus, the argument mentioned in the introduction is supported by the reviews of research.

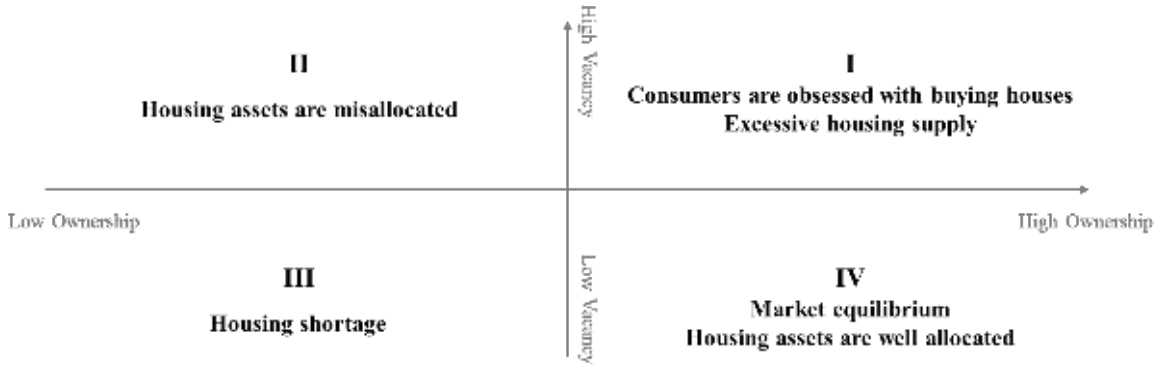


Figure 4. Relationship between Homeownership and Vacancy
Source: Hua, 2001b.

## 4. Empirical Hypothesis and Methodology

### 4.1 Empirical Hypothesis

In this section, an empirical hypothesis is constructed based on the argument that high homeownership in Taiwan may not have a positive impact on the housing market. Figure 5 shows a brief diagram of a housing market cycle in Taiwan. All factors in the study mentioned above form a self-reinforcing cycle. The plus and minus signs represent a positive or negative relationship between two variables at both ends, respectively. Since there are even minus signs in the cycle, the cycle tends to reinforce itself through a feedback loop, and never tends towards equilibrium.

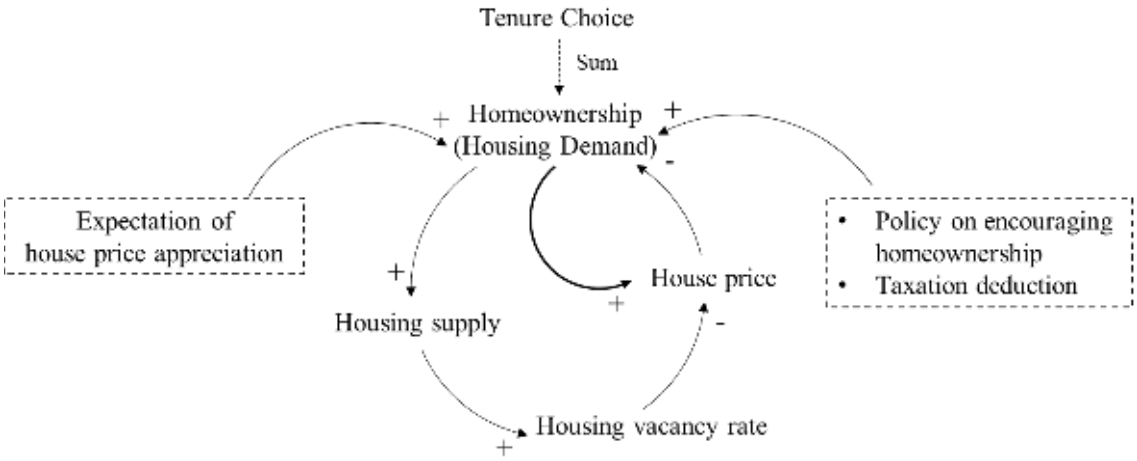


Figure 5. Diagram of Housing Market Cycle in Taiwan
Source: Hua, 2001b; Modified by author.

It is assumed that individual households would follow these factors when making a tenure choice decision. Under the influence of high expectation of house price appreciation and policy on encouraging homeownership, most people choose to become homeowners. But after the Housing Act was enacted in 2011, more social housing projects will change the housing supply and housing prices. According to Social Housing Advocacy Consortium (2015) statistics, the total amounts of social housing stock in Taiwan are 7,312 dwellings, while 6,641 dwellings are in Taipei City. New Taipei City and Kaohsiung City, the largest and second-largest cities in Taiwan, also take part in the construction of social housing. Besides, appropriate housing sells at a price that is lower than the market price; the rent of social housing is 70% of the market price, indirectly restraining the rise of housing prices.

Although the concept of social housing is at a preliminary stage, it is the key construction project of housing for other cities and counties with a legal basis. The quality of the renting market may be improved, since housing policy directly affects tenure choice from the supply aspect and puts emphasis on homeownership. How would the cycle vary if the condition of housing supply changed? Would homeownership tend to decline due to the change? Most important of all, would housing demand meet housing supply in the long term?

Hence, the empirical hypothesis of this study was designed to evaluate the change in homeownership when taking social housing into account. The housing market cycle would function in a slightly different way. More changes in percentage of renting derived from tenure choice may lead to a decline in homeownership, especially for those areas having more amounts of social housing.

## 4.2 Methodology

Because homeownership is based on tenure choice, past studies had wide discussions on how individual households act when making a tenure choice decision, apart from the aspect of theoretical basis of behavior, and apart from the econometric perspective, describing possible factors which may affect tenure choice (Lien, 2009). This study used a probit model as the tool for empirical analysis. This can be seen in the following formula:

$$P(OWN = 1) = F(a_0 + \sum a_j X_j)$$

OWN=1 refers to the condition that household has one house of their own. The formula of P(OWN=1 f(X)) indicates the conditional probability of homeownership. The individ possibility of owning a home (OWN*) can not be observed in practice (Hsueh and Chen, 1999), so it can be described as OWN=1 if OWN* > 0; otherwise, OWN=0. F refers to a cumulative distribution function which complies with normal distribution, while $a_0$ is a constant term, and $X_j$ is for explanatory variables.

The empirical model was expected to acquire the impact of those variables on homeownership, and to find the implicit housing demand. The current evaluation of housing demand only uses households in Taiwan as the amount of demand. It is suggested that the difference between housing demand and supply can be observed when a comparison of current evaluation and a housing demand model from homeownership perspective is made, and the empirically analyzed results can also provide a policy feedback.

## 5. Summary

This study re-examined the correlation between housing demand and homeownership, and discussed whether there is a phenomenon that shows higher homeownership provides better social or external benefits in Taiwan. From the literature review of housing policy, we concluded that there is a fundamental stand for advocating homeownership in most policy making. Thus, housing policies during four major developing periods in Taiwan only reinforce the preference of owner-occupied housing, and cause the insufficiency of renting market mechanism.

As for the role that homeownership plays in the housing market, we indicated that homeownership, housing price, and vacancy form a self-reinforcing cycle. High homeownership, which correspond closely to the anticipation of high house price increment and housing policy, brings along high housing prices and high vacancy rates at the same time, leading a deteriorated housing market. Thus, we concluded that high homeownership may be one of the factors that cause the unbalance in the housing market. While social housing is an ongoing policy, it may haves a chance to get involved in the cycle, and it may moderate the high homeownership impact from the supply aspect. Hence, there is a need for understanding the practical housing demand on the basis of tenure choice to adjust related housing policy. Further study would use a tenure choice model to estimate the change of the factors to housing demand so as to evaluate the impact on homeownership considering social housing supply, and provide evidence for the theoretical argument.

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# Affordable or unaffordable? A Preliminary study of a reasonable social housing rental price range in Taipei City

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**Abstract**

*The central government in Taiwan enacted the Housing Act in 2011, in which social housing was firstly well-defined in the housing policy history. In the Article 3, social housing built by the government or private sector with subsidies from the government that is primarily rented. Hence, each local government is required to develop the pricing model based on the housing demand. However, Taipei City for instance, the average rental price of social housing is unified by 30% off market price and apply to any income levels households. It is questionable of whether certain standard could really meet the affordability of the disadvantaged groups. The past researches were mostly concentrated on the quantity and the distribution of social housing provision. There are few studies discussing about the rent setting system, which is probing whether the pricing is actually affordable or not.*
*Therefore, this paper intends to examine that the social housing in Taipei City was unaffordable no matter in the past or now by using rent-to-income ratio. Furthermore, this research will review the target group, rent setting and providing mechanism in different countries. Through the case studies, Taipei City can learn the practice of other countries, and improve the problem of unaffordable social housing. According to above, this paper would practice one rent setting system of the countries, which is considered by similar economic and society structure to Taipei City, as a preliminary study of reasonable social housing rental price.*

## 1 Background

In order to solve the housing problem, most states protect people s housing rights, which seen as basic human rights through the enactment of legislation. However, in Taiwan, housing rights is not a constitutional right (constitutional interpretation no. 558). Until the Housing Act was passed in 2011, housing rights was accepted as a basic human right, which entitled people to improvements in the quality of housing, and thus allows all citizens to enjoy suitable housing and a dignified living environment.

Although awareness of housing policy counselling subjects has become more and more common, it is still impossible to provide housing rights, which are aimed at helping all citizens enjoy suitable housing, especially the economically disadvantaged. In addition to the small amount of social housing available, the other reason this policy is not valid is because the policy does not consider the affordability of housing in the case of those who are disadvantaged.

In the Cold War (1950 s), Taiwan was subsumed into the anti-communist policy that was led b United States. At the time, the society and economy of Taiwan was unstable, and the government was unable to solve existing problems. One of the reasons for this was that almost 85% of the government budget had to be used for military expenditures, and only 15% of the budget could be used on housing supply, education, public infrastructure, and so on. The only way to solve the problem was to use the United States plan to provide loans, which was entitled the Construction of Public Housing Lending Regulations (1957-1975), to stimulate the housing market and promote economic development (Mii, F. K., 1988). At that time, the social housing (also meaning public housing in Taiwan) policy in Taiwan was a contingency system aimed at accommodating a large number of post-war immigrants and homeless citizens.

In the 1960 s, Taiwan for the first time successfully entered a period of interr
and economic development was based mainly on external trade, which kept the domestic economy growing and the national income increasing. Due to the growing economy, the housing filtering process improved the national ability to enter the housing market and solve the housing problems existing at that time.

However, in the early 1970 s, as a result of the global economic downturn and c
stagnation made the housing supply system inoperable. Upper middle class household incomes could not keep up with housing prices, and the low-income households could not afford basic living needs. In response to the situation, the government enacted the Public Housing Act in 1975, which was an attempt to build a large number of public housing projects to protect the housing rights of the disadvantaged (Mii, F. K., 1988).

According to Article 16 in the Public Housing Act, the public housing price was set in reference to the market price of nearby properties with specific deductions. In this period, public housing prices were lower than general housing prices, but there was still a gap between public housing prices and the affordability of housing for low-income households. According to the population based on a housing survey, vacant public housing stock rose to 820,000 units, which highlighted the problem of unaffordability (Executive Yuan, 1994). As a result, the housing policy involved the consumption of a large amount of public housing stocks, and private investment was no encouraged in the construction of public housing after 2000 (Lin, W. I., 2003).

After the Housing Act was announced in 2011, the government began to supply social housing that was primarily rental housing, which was built by either the government or the private sector with subsidies from the government. In the draft of the Regulation on Lease of Social Housing in Taipei, the rents for social housing were to be set in reference to the market price of nearby properties with specific deductions just like the price setting for public housing. Due to the increasing housing prices in Taipei, rent, which was deducted from the market price, was limited to protect the housing rights of low-income households.

## 2 Literature review

### *2.1 Social housing in Taipei City*

In order to meet the housing needs of low-income households and to make housing affordable to citizens, after the Housing Act passed in 2011, the administration in Taipei City began to promote acquiring a house by leasing rather than buying. The government combined the resources from the government and private sector to increase the supply of social housing; on the other hand, the government improved the affordability of housing for low-income households through providing subsidies to them.

Government properties are the key to driving the modes of supply of social housing in Taipei City, including construction directly by the government, reconstruction or renovation of a public building, and coordination with urban renewal (Department of Urban Development, 2012).

The operation of social housing involves the government retaining ownership of the land and buildings, where applicants for social housing can enjoy use rights during the period of the lease. To maintain quality of living, the government entrusted the private sector to with the management of maintenance of these properties. The Taipei City government established a housing fund to ensure that the operation was successful, which involved the use of subsidies from the central government and social housing revenue as the funding sources.

In order to protect the housing rights of low-income households, the applicant qualifications set a limit to age, household composition, household income, and so on. On the other hand, the rents were set according to the local rent standards, with the social housing rent being set at usually 30% less than the market rent (Liu, H. S., 2014).

Table 1 Taipei City social housing statistic

| Social housing Program | Dalongdong | Dunhuang | Hsingtien Temple | Wanlong | Jingwen | Yongping |
|---|---|---|---|---|---|---|
| Households | 110 | 3 | 30 | 41 | 39 | 51 |
| Average living area ($m^2$) | 137.09 | 109.09 | 42.98 | 70.18 | 111.83 | 155.37 |
| Applicant qualification | Household income at the first and second quintiles: annual income under 1,190,000 NT dollars ➔ monthly income under 99,167 NT dollars | | | | | |
| Average rent | 16,600 | 21,900 | 12,150 | 14,785 | 19,375 | 12,050 |

| Social housing Program | Longshan Temple Station | Gangqian Station | Taipei Bridge Station | Xindian Depot Station |
|---|---|---|---|---|
| Households | 11 | 14 | 327 | 218 |
| Average living area ($m^2$) | 80.10 | 39.67 | 49.59 | 42.98 |
| Applicant qualification | Household income at the first and second quintiles: annual income under 1,190,000 NT dollars ➔ monthly income under 99,167 NT dollars | | | |
| Average rent | 23,100 | 24,600 | 20,300 | 18,000 |

Source: Social Housing Advocacy Consortium (2015)

According to the Taipei City Family Income and Expenditure per Household Survey conducted in 2013 (Table 2), qualified applicants accounted for 38.48% of all households in Taipei City whose monthly income ceiling was 100,000 NT dollars. While the household income was in a range between 67 to 75 thousand NT dollars per month, the affordable resident expenditure was under 22.5 thousand NT dollars, which is lower than the 30% rent-to-income ratio. Although these households were qualified to apply for social housing, they may not have been able to afford it, such as the social housing at Longshan Temple Station and Gangqian Station. These kinds of households, who qualified to apply for social housing without the ability to afford it, accounted for 28.11% of all households in Taipei City; on the contrary, the households who both qualified and could afford the housing made up only 10.37% of all households in Taipei City.

Table 2 Taipei City Family Income and Expenditure per Household Surve

| annual income (thousand NT dollars) | monthly income (thousand NT dollars) | households | percentage | Accumulated Ratings |
|---|---|---|---|---|
| 0 - 5 0 0 | 0 - 4 2 0 | 41,847 | 4.10% | 4.10% |
| 500-600 | 420-500 | 27,071 | 2.65% | 6.75% |
| 600-700 | 500-580 | 43,441 | 4.25% | 11.00% |
| 700-800 | 580-670 | 48,625 | 4.76% | 15.76% |
| 800-900 | 670-750 | 64,355 | 6.30% | 22.06% |
| 900-1,000 | 750-830 | 61,795 | 6.05% | 28.11% |
| 1,000-1,100 | 830-920 | 53,628 | 5.25% | 33.36% |
| 1,100-1,200 | 920-100 | 52,272 | 5.12% | 38.48% |
| 1,200-1,300 | 100-108 | 59,718 | 5.85% | 44.33% |
| 1,300-1,400 | 108-117 | 55,493 | 5.43% | 49.76% |
| | | | | |
| 2,800-3,000 | 233-250 | 20,353 | 1.99% | 91.61% |
| 3,000-4,000 | 250-333 | 55,678 | 5.45% | 97.06% |
| Over 4,000 | Over 333 | 30,009 | 2.94% | 100.00% |
| Total | | 1,021,434 | 100.00% | --- |

Resource: Taipei City government DGBAS (2013)

According to the Health and Welfare Department of the Taipei City government, middle-income and low-income households are identified by the monthly income per person, which is 19,461 NT dollars and 14,794 NT dollars, respectively. By using these values to multiply by the average number of household members (3.21), lower-middle-income households can be identified by a household monthly income of under 67 thousand NT dollars. Thus, the household monthly disposable income can be calculated as 20,100 NT dollars, which is lower than some social housing rental fees. Therefore, unaffordable social housing is a concrete actuality in Taipei City.

*2.2 Case Study*

According to the preceding discussion, the major reason that social housing is unaffordable is that the rent is set based on the peripheral market price rather than the affordability of the applicants. Therefore, this research is an attempt to use experiences, including the use of target groups and the rental systems of other countries whose social housing development background and supply are dealt with in a manner similar to those in Taiwan.

Governmental participation in social housing can be divided into 4 types according to different supply modes and the degree of involvement. The first type is absolutism, where the housing supply relies entirely on the government such as is the case in some communist countries. The second type of social housing supply is mainly provided from the government such as is the case in Singapore. The third type of supply mode is similar to a public  private partnership in which the government shares the burden with the private sector; for instance, in the Netherlands and Japan. The last one is a mode inducing the private sector to participate in the social housing supply through urban planning, housing standards, and the encouragement of development that is controlled by the government, for example, the United States (Chang, C. O., 1990).

By integrating the operation of social housing in Taipei as discussed in Section 2.1 with the classification used by Chang (1990), the supply mode, including the provider, the supply method, and the management of social housing are the third type, which is approximately the same as that used in the Netherlands and Japan. On the other hand, the funding and provision of social housing in Taipei tends to be the forth type and are similar to the mechanism in the United States. Therefore,

the following table provides an analysis of these three cases for supply operation, target group and rent setting for social housing.

Table 3 The form of governmental participation in social housing in

| **Taipei City** | | | |
|---|---|---|---|
| Target group | Social housing provider | Land provider | Funding |
| lower-middle-income households | Local government<br>Private sector | government property (local government) | Housing funding (local government) |
| Supply modes | Property | Management | Rent setting |
| 1. Build directly by government<br>2. Participate in urban renewal | Local government owns the ownership.<br>The applicants own the use right. | Private sector | 30% off the market rent |

### 2.2.1 The Netherlands

After the Housing Act passed in 1901, the government paid a great deal of attention to formal housing associations (HAs) which had the authorization to privatize, and entitled the HAs to funding and basic rights. Social housing was supplied by the cooperation of the government and the institutions for which the government was responsible for providing financial support, including subsidies, long-term low-interest loans, or providing cheap land for building sites, and the HAs took charge of the construction.

Because of housing shortages and the fact that a lot of houses had to be renovated or rebuilt after the Second World War, extensive construction of rental housing was promoted, and the rent was set at a lower price to provide social housing to all citizens with housing needs durin 1950 s. To maintain the lower rent, the government regulated the setting of re and loans, which made the supply-demand relation between the HAs and the tenants more dependent on the government. As a result, the subsidy burden on the government became higher in the late 1980 s (J. van der Veer, D. Schuiling, 2011)

In the national policy report Housing in the 1990 s , a regime shift, in whic social housing and subsidies changed from including all citizens to only low-income households, social housing was announced, which has now been implemented for years. In response to the change, the HAs had to transform into financially independent self-financed social enterprises.

The new cabinet after the 2010 election suggested a gradual increase in the limit on the social housing applicant qualifications. The suggestion was enacted in the new regulation announced in 2011, and the most important measure was that 90% of all new lettings of social housing had to be allocated to households whose income was below the annual income standard at the time. The rent of all rental housing including social housing was set by a governmental rent point system. The system scores the housing points using a scale, location, structure, form, furnishings and so on. A higher score indicates better housing conditions which are allowed to charge a higher rent. The minimum score is 40 points, corresponding to an annual minimum rent of 19,466, and the marginal price is point.

### 2.2.2 Japan

After the Second World War, the Japan government started to improve housing quality for low-income households. Thus, the government established the Government Housing Loan Corporation for the purpose of providing low-interest loans starting in 1950. The next year, the government enacted the Public Housing Act. In 1955, the government empowered the Japanese Housing

Corporation to manage construction and planning. These acts and corporations are the three pillars of the Japanese public housing system (Liu, D. W., 2007).

In the early 1990 s, Japan experienced a severe financial crisis, which was a turn housing policy. The Prime Minister, Hashimoto, raised the need to curtail public spending in 1997; therefore, the private sector took the initiative to promote a public private partnership, and enacted the PFI Act in 1999. Since the PFI Act passed, social housing activities have integrated public assets and private funds; that is to say, while the private sector builds and owns the social housing, the management and contracts are controlled by the government.

The Public Housing Act mandated that social housing be provided by the local government and housing corporations. The central government was only responsible for providing capital subsidies, which were separated into two kinds of subsidies. One included the construction or acquisition costs, and the other type of subsidy was for the landlords to subsidize the difference between the rent benchmark price and the market price.

The operational mode of Japanese social housing is determined by the local government, who manages the social housing allocation procedures, including the announcements, acceptance of applications, qualification assessments, rent setting, and so on (Mao, S. J., 2010). In addition to the household income level, there are more factors to be considered in the rent setting system, such as the family composition and the characteristics of the housing in different locations (Maruyama, G., 2013). The formula for setting the rent is shown below.

Rent = The rent benchmark price  Urban land price coefficient

Area and scale coefficient  The life time coefficient  Convenience coefficie

The target group for social housing is households whose income is under the first quartile (25%) of all households, and the monthly income is under 200,000 yen. The rent benchmark price is set by 70% off the monthly income. The urban land price coefficient is set by the land price index variation, which reflects the urban land price fluctuations. The area and scale coefficient is the ratio of living area to the standard housing area per household. The life time coefficient considers the depreciation and age of housing, which is different from the building composition and materials. Lastly, the convenience coefficient reflects the influence on pricing from location, transportation, and surrounding facilities.

### 2.2.3 The United States

Affordable housing programs in the United States are carried out through a partnership among the federal government, local housing associations and private property owners.

During the Great Depression, the Housing Act of 1937 allowed the state governments to establish local public housing authorities (PHAs) as a provider of social housing to promote more employment opportunities and satisfy the housing needs of low-income households. In the Second World War period, the housing issue was not taken seriously until the war was over, and housing demand was inflating. To solve the problem, the Housing Act of 1949 was passed and revived the social housing program.

The government turned the concept of eliminating urban poverty using social housing into a living purpose-driven program which was aimed at improving the housing quality of the lower-middle class and reducing urban recession (Huang, Y. M., 2013). With this in mind, the federal government handed over the responsibility of the social housing program to the US Department of Housing and Urban Development (HUD) in 1965.

However, members of the US Congress and the Nixon Administration amended the Housing Act of 1937, creating a new Section 8 Housing Assistance Program, which is responsible for providing affordable housing for households whose income is under the local median income, to replace Section 23.

J. Gresley (2011) pointed out that Section 8 makes use of a private market investment and ownership structure. Two of the important programs in Section 8 are the Housing Choice Voucher (HCV) program and the Project Based Section 8 program, which are coupled with HUD morto

In the HCV program, social housing applicants have to examine the qualifications according to their household income and then set a part of their income as rent (usually 30-40% of their total income). The difference between 30% of the household income and the fair market rent announced annually by HUD decide the value of the HCV. The households pay their rent directly to the owner, while the housing associations make a payment to the owner monthly which covers the difference between the household rent and the fair market rent.

The Project-Based Section 8 program allows HUD to set secured credit for developers, who can get a low-interest loan from banks and reduce the cost of construction to provide housing within a lower rent range. The operational mode of the Project-Based Section 8 program is similar to that of the HCV program, which sets 30% of the household income as the social housing rent, and the difference between the social housing rent and the fair market rent is covered by HUD.

As the subsidy standard, the fair market rent is usually set at the 40% quantile of the market rent. The fair market rent, which can be impacted by the scale, quality, location, age, and the furnishings of the house, is adjusted in accordance with the annual Consumer Price Index.

#### 2.2.4 Summary

According to the cases from different countries, housing associations in the Netherlands are the main planners, providers and operating units for social housing. Cooperation between local governments and corporations is the key to operating the social housing system. The federal HUD in the United States guides the supply of social housing with abundant funding through both market mechanisms and subsidies.

Table 4 Case study in the Netherland, Japan, and the United St

| Countries | The Netherland | Japan | The United States | Taiwan |
|---|---|---|---|---|
| Target group | lower-middle-income households | the household income under 25% of all citizens | the household income under 50% of all citizens | lower-middle-income households |
| Social housing provider | HAs | local government private sector | associations and developers | local government Private sector |
| Land provider | government | government property and private land | associations and developers | local government |
| Funding | HAs government | central government | federal HUD | local government |
| Supply modes | HAs | 1. build by government or corporations<br>2. PFI | associations and developers | 1. build directly by government<br>2. participate in urban renewal |
| Property rights | rent from HAs | rent from the local government or corporations | rent from the house owner | rent from the government |
| Management | HAs | corporations and private sector | house owner | private sector |
| Rent setting | rent point system | The formula (1) | 1. 30% of the income<br>2. Fair market rent | 30% off the market rent |

Relative to Taiwan, there are neither social entrepreneurs as large as the housing associations in the Netherlands, which are able to assume the supply of social housing independently, nor is there a public sector as rich and influential as HUD is in the United States. As a result, the most similar case to Taiwan is the Japanese social housing system including a societal structure, provider and operational mode. Because the system of social housing rent setting is unfinished in Taipei City, this article is an attempt to use the rent setting formula and coefficients in Japan to assess the affordable rent price range in Taipei City as a preliminary study.

## 3 Empirical research

### *3.1 Research Design*

In this paper, Taipei City is taken as the research field, and the household income and expenditure survey conducted in 2013 is used to discuss the low-income household affordable rent range for the

2 social housing programs under construction, which are the Dongming and Xinglong social housing programs.

First, parameters are set, including income grading, the urban land price coefficient, area and scale coefficients, and the convenience coefficient. Income grading is used to ensure the applicant qualifications for social housing, for instance, the households in Japan whose income level is less than 25% of all citizens. The urban land price coefficient is used to react to the urban land price fluctuations and is set by the Land Price Index from each region. The area and scale coefficients refer to the concept of standard household housing areas from the social housing in Japan. The lifetime coefficient refers to building depreciation and differences among structures. Because the social housing in Taiwan has been developed recently, take a social housing program founded in 2011 in Taipei City for example, the life time coefficient would be 0.996. The convenience coefficient is mainly used to react to the impact of location and building characteristics. After setting the parameters, the affordable rent is calculated using the coefficients and the rent benchmark price.

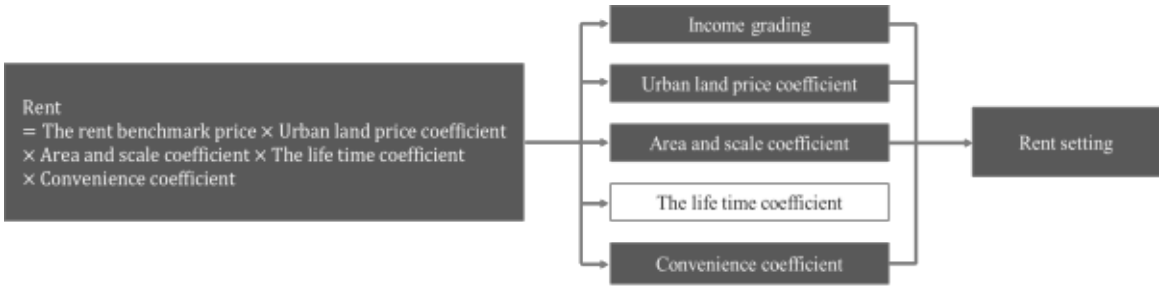


Figure 1 Research lifetime

*3.2 Research Procedure*

3.2.1 Income grading

The applicant qualifications for social housing in Japan include households whose income level is less than 25% of all citizens and a limit on monthly household income is set at 200,000 yen; 70% off the household monthly income is set as the rent benchmark price.

According to the household income and expenditure survey in 2013 in Taipei City, the monthly disposable income is divided into five equal parts. The target groups for social housing in Taipei City are in the first and second quintiles, namely the households whose monthly income is under 78,061 NT dollars, and the rent benchmark price is under 23,418 NT dollars.

Table 5 The household income and expenditure survey

| Quintile | 1st (0-20%) | 2nd (20-40%) | 3rd (40-60%) | 4th (60-80%) | 5th (80-100%) |
|---|---|---|---|---|---|
| Average annual income | 572,682 | 936,732 | 1,315,989 | 1,800,832 | 3,100,837 |
| Average monthly income | 47,724 | 78,061 | 109,666 | 150,069 | 258,403 |
| rent benchmark price | 14,317 | 23,418 | 32,900 | 45,021 | 77,521 |

Resource: Taipei City government DGBAS (2013)

3.2.2 Urban land price coefficient

The urban land price coefficient is intended to react to urban land price fluctuations and is set according to the land price index from each region. The larger the city, the higher the coefficient. The value is announced yearly by the Ministry of Land, Infrastructure, Transport and Tourism

(MLIT) in Japan. Due to the narrow range of land price changes after 1996, the coefficient is in an area within 0.7-1.7.

Relatively, the measurement of the coefficient in Taipei refers to the fluctuation rate of the land price index. The higher the fluctuation rate is, the more concentrated the development is. According to Table 6, the urban land price coefficient in Taipei City is 1.0406.

Table 6 The fluctuation rate of land price index in 5 municipa

| | **Taiwan** | **Taipei City** | **New Taipei City** | **Taichung city** | **Tainan City** | **Kaohsiung city** |
|---|---|---|---|---|---|---|
| 2014 | 110.38 | 108.84 | 116.72 | 112.45 | 107.85 | 111.71 |
| 2013 | 105.79 | 104.59 | 108.55 | 110.00 | 104.36 | 105.51 |
| fluctuation rate | 1.0434 | 1.0406 | 1.0753 | 1.0223 | 1.0334 | 1.0588 |

Resource: Taipei City government DGBAS (2013)

### 3.2.3 Area and scale coefficient

The area and scale coefficient is assessed by the ratio of living area to the standard housing area per household, which is 70 m2 as announced by the Public Housing Enforcement Order in 2006.

Due to the high urban density, the expensive land prices, and the similar forms of housing, the standard housing area uses the average living area of an apartment or studio apartment per household. According to the residential and real estimate statistics in 2013 in Taipei, the standard housing areas for apartments and studio apartments are 96.41m2 and 41.30m2, respectively.

In order to respond to the applicant s family composition, there are four different social housing provided in Taipei. Therefore, as Table 7 shows, there are 4 coefficients in each case of social housing in Taipei.

Table 7 The 2 developing programs of social housing in Taipei Ci

| | **Dongming social housing** | | | | **Xinglong social housing** | | | |
|---|---|---|---|---|---|---|---|---|
| Room type | Apartment | | | Studio apartment | Apartment | | | Studio apartment |
| No. of Rooms | 1 | 2 | 3 | | 1 | 2 | 3 | |
| Living area ($m^2$) (A) | 36.36 | 56.20 | 76.03 | 29.75 | 41.32 | 54.55 | 69.42 | 26.45 |
| Standard housing area ($m^2$) (B) | 96.41 | | | 41.30 | 96.41 | | | 41.30 |
| Coefficient (A) (B) | 0.38 | 0.58 | 0.79 | 0.72 | 0.43 | 0.57 | 0.72 | 0.64 |

Resource: Taipei City government DGBAS (2013)

### 3.2.4 Convenience coefficient

The convenience coefficient is intended to mainly react to the impact of location and the building characteristics, which is different from transportation convenience, peripheral facilities, furnishings in the building, and so on. The relation between the factors can be formulated as:

$$\text{Convenience coefficient} = \frac{\text{site condition}}{\text{Urban land price coefficient}} \quad \text{furnishings condition} \tag{2}$$

The site condition in Japan is the ratio of the social housing asset price to the surrounding real estate asset ceiling, which can be formulated as:

$$\log_{10}\frac{\text{social housing asset price}}{\text{surrounding real estate asset ceiling}} \quad (3$$

Two cases in Taipei City that are under construction are used for assessment, and the site condition value is shown in Table 8.

Table 8 The convenience coefficients of the 2 program

| Program | Social housing asset price (NT dollars) (A) | Surrounding real estate asset ceiling (NT dollars) (B) | ( ) | ( ) | Site condition |
|---|---|---|---|---|---|
| Dongming | 3,421,052 | 44,500,000 | 6.5341597 | 7.6483600 | 1.1705193 |
| Xinglong | 10,909,090 | 31,500,000 | 7.0377885 | 7.4983106 | 1.0654356 |

The furnishings condition in Japan is similar to the rent setting scoring system in the Netherlands. In Japan, the furnishings condition is used to check whether the provider supplies the basic furnishings or not. Contrary to Japan, both of the cases in Taipei City provide bedding, sink and other basic furniture to allow people to easily move in. Therefore, the rent setting in Taipei City eliminates the furnishings condition.

### 3.2.5 Summary

To integrate all of the coefficients and bring the different household income levels into consideration, the formula for the rent setting system is shown below.

$$\text{Affordable rent} = \text{The rent benchmark price} \times \text{Urban land price coefficient} \times \text{Area and scale coefficient} \times \text{Convenience coefficient} \quad (4)$$

In response to the four types of rooms for Donming and Xinglong social housing, and the two levels of household income, we can obtain 16 affordable rent prices calculated from the formula.

Because Donming and Xinglong social housing is still under construction, the government only indicates that the rent is unified by 30% off the market price. According to the surrounding housing rent through transactions from the period 2011-2014, the average rent of the housing nearby Donming social housing is 19,250 NT dollars per month, which means that the Donming social housing rent could be 13,475 NT dollars per month. On the other hand, the average rent of the housing nearby the Xinglong social housing is 45,000 NT dollars per month; that is, Xinglong social housing rent could be 31,500 NT dollars per month.

In one respect, some of the affordable rents are higher than 30% off market price, which means the government can set a lower price as the social housing rent. In addition, when the affordable rent is lower than the reductive market price, the government should provide subsidies from housing funding in Taipei City to cover the difference or cut the social housing rent to meet the affordability of the applicant.

Table 9 The coefficients and affordable rent range in Taipei City

| | Income level | Room type | | rent benchmark price | Urban land price coefficient | area and scale coefficient | Convenience coefficient | Affordable rent |
|---|---|---|---|---|---|---|---|---|
| Dongming social housing | 1st quintile (0-20%) | Studio apartment | | 14,317 NT dollars | 1.0406 | 0.72 | 0.854322 | 9,164 |
| | | Apartment | 1 room | | | 0.38 | | 4,837 |
| | | | 2 room | | | 0.58 | | 7,382 |
| | | | 3 room | | | 0.79 | | 10,055 |
| | 2nd quintile (20-40%) | Studio apartment | | 23,418 NT dollars | | 0.72 | | 14,990 |
| | | Apartment | 1 room | | | 0.38 | | 7,911 |
| | | | 2 room | | | 0.58 | | 12,075 |
| | | | 3 room | | | 0.79 | | 16,447 |
| Xinglong social housing | 1st quintile (0-20%) | Studio apartment | | 14,317 NT dollars | | 0.64 | 0.938583 | 8,949 |
| | | Apartment | 1 room | | | 0.43 | | 6,013 |
| | | | 2 room | | | 0.57 | | 7,971 |
| | | | 3 room | | | 0.72 | | 10,068 |
| | 2nd quintile (20-40%) | Studio apartment | | 23,418 NT dollars | | 0.64 | | 14,638 |
| | | Apartment | 1 room | | | 0.43 | | 9,835 |
| | | | 2 room | | | 0.57 | | 13,037 |
| | | | 3 room | | | 0.72 | | 16,468 |

## 4 Conclusion

Through the calculation, the social housing rent can be turned into a quantification formula, which considers not only household income level, but also residential location, convenience and other factors affecting the rent. Compared to the deduction from the market price, the rent calculated from the formula is more able to prove that it is affordable.

However, the formula in this research is still rough and limited to data acquisition; for instance, income grading. The income grading should be subdivided into more levels, and household monthly income per person instead of average monthly household income should be used to take household structure into consideration.

To maintain affordable rent, the rent setting formula is not adequate. There also needs to be subsidies from the government to keep social housing management operating. Taking the United States as an example, one of the methods used to achieve affordable social housing has been to cover the difference between the rent and market value rent for the landlords.

In conclusion, to make social housing in Taipei more and more affordable, besides bringing refinement to the formula, the related policies and mechanisms should be collaborated on.

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# A MIXED METHODS APPROACH TO MEASURING NEIGHBOURHOOD SOCIAL CAPITAL: A CASE STUDY IN SOUTH EAST QUEENSLAND, AUSTRALIA

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Keywords: social capital, neighbourhood, urban planning

## 1. Abstract

This paper investigates how a mixed-methods approach to measuring social capita urban planning contexts to enhance best practice outcomes. Literature in the c capital, health, participation, resilience and sustainable development suggest capital at the neighbourhood scale can increase community cohesion, trust, recip capacity, civic participation and resilience. Exploring how bonding, bridging capital is expressed in a middle class coastal community on the Sunshine Co Queensland, Australia, a mixed methods approach to measuring social capital benefits of qualitative methods in particular provided an in-depth and understanding of social capital at the neighbourhood unit of analysis. Further fluid construct, where growth in one dimension of social capital, such as bo contribute to growth in bridging social capital, and vice versa. The authors social capital is often invoked in an urban planning context to identify socio the social capital construct and its comprehensive measurement holds far greate planners and developers when applied to urban planning best practice in neighbou

## 2. Introduction

High levels of social capital are said to contribute to a wide range of po individuals and communities, including higher income, life satisfaction, soc community welfare (Middleton et al., 2005; OECD (Organisation for Economic Co-O Development), 2001). In particular, stocks of social capital are considered e communities from a range of stressors through enhanced social participation and of diverse networks which contribute to community cohesion, trust, and feelin security (Kirkby-Geddes et al., 2013; Ziersch et al., 2011; Lyons and Snoxell, 2009; Bromell and Cagney, 2013; Magis, 2010; Poortinga, 2012; Smith et al., 2012

The relationship between urban planning and positive human health and wellbei well acknowledged, with equitable access to resources, distribution of power a and physical wellbeing positively correlated with the presence of social capi (Jackson, 2003; Borgonovi, 2010; Baum et al., 2011; Leskosek, 2012; Wakefiel 2005; Szreter and Woolcock, 2004; Rogers et al., 2008). Nevertheless, Cuthill persistent and negative social outcomes associated with contemporary developm Australia and internationally for the past 10-30 years. Cuthill argues that thi a weakening of family, community and democratic values and relationships, and towards political processes can be attributed to a combination of interrela declining infrastructure provision, structural changes in the economy and wor demographic and social changes (Cuthill, 2010). This requires empirical insigh capital can contribute to best practice urban planning outcomes. Consisten observations, Baum et al. (2011) suggests there is a need for planning approa social outcomes (such as trust, social and civic participation, bonding and bri

development outcomes (including community and retail services and recreational
et al., 2011). Case study research in South Australia demonstrated that integr
and physical planning considerations had contributed to better than expected o
capital and mental health in at least one community; suggesting that the quali
physical environment in the local neighbourhood can have a positive impact on m
and social capital in the longer term (Ziersch et al., 2011).

In this paper, we contend that social capital holds great potential for u
mechanism to deliver improved best practice planning outcomes. However, as
evidence, comprehensive analysis of social capital using mixed methods is cr
relevance to local residents and context. This paper uses a case study approa
contrast the benefits of using quantitative and qualitative data to measure
neighbourhood unit of analysis. The findings from the quantitative data are co
key themes elicited from the qualitative data to provide not just the status
neighbourhood, but insight into ways of improving it. This is the key strength
approach in overcoming limitations present in studies employing a narrower
generation and analysis techniques.

## 3. Key Concepts and Measures

A lack of consensus on how the social capital construct is defined, the elemen
construct, and the absence of a suitable conceptual framework for an urban pla
made measurement difficult, resulting in limited practical application in an ur
(for a synthesis see Authors, forthcoming). Consequently, it has been sugg
planners must strive to understand the different facets of social capital if
practical use of it (Rohe, 2004). One approach to understanding social capita
the dimensions of bonding, bridging and linking social capital. Despite the ch
definition and measurement of the social capital construct, research by Stanley
found that there is likely to be significant dollar benefits where policies and
bonding and bridging social capital networks, thereby reducing the risks of soc
a result, improve personal well-being. Bonding social capital is defined
relationships that look inward and reinforce exclusive identities and homogenou
family, close friends and neighbours (Putnam, 2000; Hutchinson et al., 2004).
that these types of social networks contribute to enhanced sustainable developm
focuses on trust and reciprocity to build relationships between people (Rosela
and de Groot, 2003; Cuthill, 2010; Bijl, 2011; Dale and Newman, 2010).

Bridging capital is defined as the links and relationships that are outward lo
people across diverse social divides accessed through participation in local or
interest or volunteer groups (Putnam, 2000). Several authors suggest that th
networks allow for greater diversity in the individual s social network, a great
for novel information to flow (Portes, 1998; Granovetter, 2005). Further, it is
relationships between people enhance civic participation and resilience (Baja
2010) and that civic participation (a characteristic of strong bridging socia
communities to adapt to the effects of climate change through social processes
Flora, 1998). In addition, it is suggested that social capital is the most
buffering against the detrimental influences of neighbourhood deprivation (
Hutchinson et al., 2004), with bridging and linking social capital emphasis
(Middleton et al., 2005).

A third dimension of social capital, linking social capital, can be defined as networks of trusting relationships between people who are interacting across institutionalised power or authority gradients in society (Szreter and W Strengthening bridging and linking social capital is recognised as one of the poverty and disadvantage, as social capital can overcome multi-scalar barriers silos and structural holes in communities to access decision makers, and it diverse connections that enables community resilience (Dale and Newman, 2010). been suggested that cities and regions with strong social networks can facilita (Carillo, 2004; Yitgitcanlar et al., 2012). However, in a review of the urban social capital is largely invoked in studies to identify and regenerate low-soci example, Middleton et al. (2005) observes that the World Bank suggests a causal between social networks and economic wealth, and as a result, focuses on increa linking social capital in developing countries to increase social networks and welfare of communities. A review of the related literature revealed limited regarding how social capital is measured in communities that are not soci disadvantaged. In addition, the review identified limited use of the concept (authors, forthcoming).

Measurement of social capital at the neighbourhood unit of analysis in publi generally concerned with either qualitative (Kirkby-Geddes et al., 2013; Kingsl 2006; Wood et al., 2013) or quantitative approaches (Middleton et al., 2005; Z Cabrera and Najarian, 2013; Poortinga, 2012). However, singular method studies neglecting the intricacies of the social capital concept and omitting contextu For example, a quantitative study by Middleton et al. (2005) found that examini unpacking it into the dimensions of the construct did not always match the suggested by the academic literature in relation to age or socio-economic acknowledged that the use of quantitative methods only, may have methodological therefore use both qualitative and quantitative methods to provide a broad overv social capital in a neighbourhood, as well as a deeper understanding of reason solutions to practical improvement, particularly from a planning perspective.

## 4. The Case Study

The findings in this article are based on research in a coastal suburb on t Queensland, Australia. Part of the rapidly growing South East Queensland region is an emerging suburban area consisting of a number of subdivisions built in situated in close proximity to the regional centres of Caloundra and Maroochyd beaches, and highway access to the State capital of Brisbane 1 hour south. kilometre area of Little Mountain the total population is 9,045. The age coh population is 5-14 years (1,576 17.42%), followed by 35-44 years (1,418 15 years (1,092 12.07%), with a median age of 39 years (Australian Bureau of Limited housing diversity is evident, with 2,410 predominantly detached homes compared to 252 townhouse/unit dwellings. A large proportion of residents are (2,309 dwellings), with 605 public and private rental dwellings. The median income per week is $1,113 with a median rent of $380 per week and a median mortg of $1,983 per month. Of the 6,891 persons over 15 years of age, there was a 6. rate with about 37% not in the labour force, made up of retirees and stay (Australian Bureau of Statistics, 2011). One of the reasons for studying this factors that might contribute to social capital in the face of major future deve the area. These include a residential subdivision, a residential and mixed use

around a future railway station, and a potentially innovative development incor
affordable housing and community facilities, the latter of which will also be av
the broader community.

## 5. Methods

The study utilised a mixed methods explanatory sequential design in three phas
gain a deeper understanding of what might contribute to social capital in the
community. It provides empirical evidence of the factors arising from a mixed
using quantitative data from an adult residents Neighbourhood Survey, with
deepened by use of qualitative data from adult residents focus groups. Inter
residents were conducted at a local shopping centre to triangulate a portion of
This research forms part of a larger study that includes quantitative reside
between 15–17 years, qualitative focus groups with youth residents and planning
staff at the Local Council, reported elsewhere (authors, in prep).

### 5.1 Phase 1

A quantitative survey instrument was used to measure social capital at the ne
The sampling strategy invited 2,000 households in a delineated catchment area
participate by letterbox drop in an online neighbourhood survey, or to request
copy survey. The neighbourhood survey returned 102 adult respondents (n=102
possible households (0.051%) between April–June 2013. Due to the low respons
contribute to random sampling of the data set, Intercept Surveys were also
neighbourhood social capital survey instrument was developed based on existin
tools found in the literature to test the dimensions of bonding, bridging and
(Bullen and Onyx, 1998; Rohe, 2004; Olsen et al., 1985; Middleton et al., 2
Woolcock, 2004). These included elements that are understood to positively c
presence of high levels of social capital, such as subjective wellbeing and he
and variables are detailed in Authors (forthcoming), where the qualitative ph
investigated in detail. Further, five open ended questions were posed about soc
neighbourhood, including frequency and preferences regarding participating in
neighbourhood, the features they like best about their neighbourhood, and wha
most improve the neighbourhood. The results of the neighbourhood social capit
analysed by statistical relationship between variables in SPSS. The data from
questions for focus groups conducted in Phase 2 to explore in greater depth
meaning behind the survey results.

Due to the low response rate to the Neighbourhood Survey, Intercept Surveys were
further random sample of resident perspectives about the neighbourhood and
Intercept Surveys (n62) were conducted at a local small scale shopping centre
location. Of the participants, 37.1% were aged 18–35 years old, 43.55% were
11.29% were 51–70 years old and 8.06% were 70+ years of age. The demographic
participants generally matches the community age profile , however there was a
female participants in the Intercept survey than the community gender profile w
male to female compared to 48.41% male and 51.59% female in the broader populati

The intercept survey instrument focussed on asking residents about the types
facilities needed in the neighbourhood, including a range of community and c
firstly unprompted, and then followed up by prompting participants to select
answers to a range of community and commercial uses for the neighbourhood.

survey also probed for bonding, bridging and linking social capital linkages
community or commercial uses were important to the participant, and how the use
help the broader community. The Intercept survey results were entered into Sur
ended questions were thematically coded and the quantitative results were analy
using graphs and percentages. It is important to note that due to the s
Neighbourhood Survey (n102), the Intercept survey (n 62), and the nature of
community and social capital construct, this research should be considered an e
social capital at a neighbourhood scale of analysis. These survey findings
generalised, not just because of the low sample size but because the social
contextual and unique between spatial locations.

### 5.2 Phase 2

In Phase 2, two adult resident focus groups were conducted to explore in greate
and meaning behind the survey results (n-12). Focus group participants self-se
through completion of the neighbourhood social capital survey, where respondent
option to participate in a focus group. The results on bonding, bridging and
from the neighbourhood social capital surveys were reported to focus group part
were asked if they could confirm if the results matched their perspectives in
the findings. The focus group participants were then asked if they could pro
local examples of their perspectives and the findings to provide a deeper un
context of the findings and of the neighbourhood. The focus group sessions wer
and content was analysed using thematic analysis in Nvivo. The addition of
component was included to provide greater understanding of social capital, whic
relative from the perspectives of an individual in a community and between locat
This qualitative phase is an important methodological contribution to the
understanding of social capital at the neighbourhood scale.

## 6. Results

The number of participants was: neighbourhood survey (n-102), focus groups (n-1
surveys (n-62). To facilitate a comparison of the quantitative and qualitative
we report the results of each method of data collection together under the t
bridging and linking social capital, aspects of community life (such as sense
and safety) and local meeting places.

### 6.1 Bonding social capital

The neighbourhood social capital survey found evidence of bonding social c
reasonably large social networks and familiarity with neighbours. The survey fou

39% of respondents counted more than 12 close friends;

41% knew more than 12 people to speak with in the neighbourhood and
respondents socialise with their neighbours or people in their neighbourh
times in a one year period; and

Almost 70% had neither friends nor family living in the suburb prior to
40% had friends and family located in other areas in the Sunshine Coast re

Length of residence varied, with the largest cohort (36%) of respondents indica
residents in Little Mountain for between 4-7 years. The constraint on using only
it can overlook a deeper understanding of the reasons for these characteristic
do not indicate if there is a desire to socialise with neighbours or if exis
neighbours are sufficient.

Results from the residents focus groups illustrate the benefit of includi
Participants identified potential isolation from their growing new neighbourhoo
often do not have friends and/or family already living in the neighbourhood. Fo

> People can't move to be near their mum or their friends because they were
> the first place. So if they come here they're coming into virgin territo
> Resident 1)

When asked what the barriers were to developing connections and interaction
capital) between neighbours in the community, participants observed that bar
physical determinism of homes and neighbourhoods, and how patterns of casual i
neighbours have changed over time. To illustrate:

> I think the way that the community has been built leads directly to
> situation. You've got houses instead of . apartments [where] you bump
> . at the mailbox, in the driveway, putting the bins out, collecting the
> laundry. You see them; then you get to know your neighbours a lot better
> isolated in your own little cocoon you drive into your garage and shut it
> the shop or you drive to the supermarket in another suburb to get your bo
> don't walk to the shop and meet someone on the way. Yeah, so it's death
> (Male Resident 2)

Contrary to the limitation of the findings in the quantitative survey where the
socialise or get to know neighbours could not be determined, the interce
demonstrated that there was interest in building bonding and bridging social
residents in the neighbourhood. For example, when participants were asked why
chose could benefit the broader community, more than 58% of residents sugge
provide opportunities to meet others in the community (58.06%), to enhance c
(32.26%), and to give kids something to do (24.19%). The importance of bondi
was demonstrated by intercept survey participants as a method of contributing
the community and fostering a greater sense of community through interactions w
neighbourhood:

> ..it would bring people together. Most people are good in the community; p
> houses nice. Community facilities would provide a local place to meet. (
> participant)

> ..if you know each other you care for each other. If you don't know each
> give a hoot. (intercept survey participant)

> ..allowing people to bond, friendships. (intercept survey participant)

### 6.2 Bridging social capital

In terms of bridging characteristics, the neighbourhood survey results found tha

> 42% of respondents participated in a local organisation or club between 1 month period;
>
> Almost 64% had not taken part in a local community project in the past ye
>
> 85% of respondents stated that they did not often participate in neighb When asked 'why'? as an open ended question, 47% were not aware of any a 30% stated that other commitments were an issue. When asked what kind o participate in by open ended question, 55% said community events, 36% er care and 35% social groups.

Almost 29% of respondents volunteer in the Little Mountain community and 41% other communities. This is a reasonably high rate compared with Sunshine Coas participating in voluntary work observed in the 2011 Census (20.2%), Queenslar across Australia (17.8 %) (Thomsen et al., 2012).

One of the key impediments for growing bridging social capital identified by resident focus groups was the lack of an identifiable centre or activities catchment for residents to meet and socialise in their neighbourhood. Furthe groups suggested the neighbourhood does not provide a sustainable or affordabl access to most facilities such as groceries, coffee shops, shopping, restaurar required a car or bus trip. Those relying on public transport found it cont isolation.

In the Intercept survey, when participants were asked by open ended questior activities, services or facilities they would like if they were available for t thematic responses were activities for children and teenagers (46.77%), a c (20.97%), and a coffee shop or restaurant (16.13%). When participants were aske important to them, the top 3 thematic responses were: to give kids things to d opportunities to meet others in the community (46.77%), and to provide a h (22.58%). The results of the intercept survey further clarified how improved within the neighbourhood could contribute to bridging social capital through p generational interaction. For example:

> ..it would bring all ages together and help [contribute to] sense of cor survey participant)
>
> ..everyone wants to feel part of a community – especially older people wh (intercept survey participant)
>
> ..anything that gives people things to do and purpose and meaning. Also special needs kids to meet others in their neighbourhood. (intercept surve

In addition, participants in the adult resident s focus groups suggested that t to begin to access information about what was going on in the community and/or volunteer or participate. This is despite the fact that schools, church gr organisations and others in the community have a range of activities available participate in if they were interested. This evidenced a gap in access to info happening in the community and opportunities for civic interaction at the neighb

> ... schools and sport but churches too, they have multiple community proje
> time. So there are lots of opportunities around that people have got to be
> to know about and things that would interest them. (Male Resident 1)

There was also an acknowledgement that the tendency and desire to participate
differed between places, people, and their lifestyle. For example:

> We have gotten to know a lot about our older neighbours, and get help for
> the other side there's a couple who just don't want to talk. So you don
> needs are. I guess the answer is communication, interaction, doing
> community, getting to know each other. (Male Resident 1)

It could also be evidenced bonding social capital had led to bridging soci
community action against development in the past. For example:

> we would never have met (Male Resident 4) if it wasn't for responding to
> community action here and that segued into being here. (Male Resident 2)

The focus groups found that in addition to community organisations, sporting
faith based organisations, children are also an important facilitator of social
families, where adults may not have participated otherwise. One participant sai

> I know personally from my experience that I've gotten to know other p
> wouldn't have known if my children weren't playing soccer. (Male Resident

> We put out 1200 flyers, stick them in the mail and ask people to come alo
> day or a Clean Up Australia day. You don't see a lot. What we found is
> schools; you have to get the kids. If you can convince the kids then you
> and pa!. (Male Resident 3)

### 6.3 Linking social capital

Results on linking social capital were drawn from the neighbourhood survey and
as the intercept survey did not directly engage with questions relating to link
did any issues (other than traffic congestion) arise from discussions with
intercept surveys. The neighbourhood survey found that while 78% of responde
would contact Council or their local Councillor if they identified a problem o
there was less clarity regarding the extent that residents can have input an
issues. For example, while 49% of respondents agreed that they had been as
communities needs were and how to address them, 40% disagreed and 13% were unsu
43% of residents agreed that they could influence what happens in their communit
and 30% were not sure.

In the focus groups, barriers to linking social capital were attributed to a l
work collaboratively with local Council about local issues, such as traffic
schools and low use of public transport due to infrequent service and poor c
resident participant suggested a more flexible alternative to the significant
mass of residents required for good public transport:

> nobody catches it anyway ... buses are empty .if you had a private enterp
> come in and establish little vans you're away (Male Resident 2).

Focus group participants also identified opportunities for building better link
Council and other institutions, need for greater integration of community facili
greater involvement and capacity building at the neighbourhood level. One reside

> .... a multi-dimensional approach is needed. We need to work in conjunct
> and other groups to get some help here and there, land, plants, signage, c
> ... Help the community get groups up and running and then drop in to se
> going as a group in terms of support. (Male Resident 4)

## 6.4 Aspects of community life

While the quantitative results appeared to indicate some sense of community, the
among respondents about whether it was a close-knit community. For example,
respondents indicated that they are proud to live in the neighbourhood, 64% agr
the neighbourhood seem to share the same values, 76% agreed that most pe
neighbourhood can be trusted and 61% agreed that most people in the neighbourhoo
help their neighbours. More than 57% of respondents indicated the sense of con
moderately strong or very strong, and while 42% of respondents agreed it
community, 32% disagreed and 26% were not sure. Sense of community in Litt
appears to be lower than the Sunshine Coast region where 75.3% of respondents
level of agreement with the statement I feel part of my neighbourhood or comm
expressed high agreement with the statement My neighbourhood is a friendly
(Thompsen et al. (2012). Results from the intercept survey suggest that resi
have greater opportunities to meet and get to know people of all ages in their
suggested a range of community facilities and places to congregate would allow
youth to access activities and opportunities for social interaction without the
travel to nearby suburbs.

Further insights also emerged from the qualitative data derived from the foc
respondents provided a greater depth of understanding about what contributed
community; which was largely associated with the quality of the surroundings,
parkland and natural amenity, perceptions of safety, security and shared co
Residents indicated they were attracted to Little Mountain by the quality of
amenity; affordable housing compared to older housing stock closer to the beac
lifestyle a short drive away. However, there was also some ambivalence by resi
communities were changing and becoming more socially fractured and in particu
sense of community, visual amenity and safety and security. Residents also ir
that natural amenity is increasingly under threat by development, with clea
bushland particularly affecting residents' sense of place.

## 6.5 Local meeting places

While the survey found almost 50% of respondents used local parks and facilit
times per week, they were not the predominant meeting place for residents to
family. 36% of respondents met at a private home, a cafØ (16%) followed by lo
The quantitative data does not indicate if this is due to insufficient me
neighbourhood, if respondents prefer meeting at private residences or wheth
contributed to this result. However, responses to the short answer question a
services or facilities were missing or need improvement in the neighbourhood
roads paths and public transport (40%), community facilities (30%), communit
(23%), more retail shopping (21%), and better parks and facilities (21%).

The rationale for outcomes of the quantitative survey became clearer through th absence of an obvious hub or community space is problematic for residents. Th the emphasis of any future community facility should be on a community gather than commercial premises (i.e. restaurant, coffee shop). This suggests that the inclusiveness and accessibility for all age groups is important. Adult focu particularly supported the idea of a not-for-profit coffee shop run by hig undertaking business or hospitality vocational training courses through the ne The type of place that would be most valuable would be one that offers someth regardless of age and ability, and a space that is adaptable to offer some activ

## 7. Discussion

One of the challenges in measuring social capital is that it is unclear how the capital are inter-related, and whether certain factors influence the growth whether they are a flow-on effect (Woolcock, 2010). This study demonstrates t elements of social capital are inter-related, and can grow cumulatively. relationships developed through a previous neighbourhood response to a develo (bonding social capital) were used by locals to help recruit people to particip focus group, which exposed them to other residents from different backgrounds). with the spiralling up phenomenon described by Emery & Flora (2006), (where a form of capital advances the performance of another capital in the framework, phenomena similar to the mutual metamorphosis described by Light (2004) and Bo

Quantitative results showed a high level of bonding social capital due to large and family, although these networks were often outside the spatial proximity of The addition of qualitative results revealed that some residents considered approaches to housing and neighbourhood design, with an emphasis on privacy, exclusivity, as elements that may inhibit opportunities for casual interaction Further, a lack of information about events occurring in the neighbourhood opportunities for casual interaction within the local community. This suggests and other urban professions, can contribute to best practice urban planning by social infrastructure within a neighbourhood coupled with strategies to assist build on bonding, bridging and linking social capital through community even promotion of neighbourhood organisations, and participation and increased colla local government organisations, local business and local community organisations and financial resources to address neighbourhood issues.

The neighbourhood survey revealed low bridging social capital based on 85% r participating often in activities in the neighbourhood. The inclusion of qual provided insight to a solution: a central community space within a walkable ca beneficial for residents to meet each other, thus fostering greater bridging neighbourhood. This concurs with the research of Kirkby-Geddes et al. (2013) Woolcock (2004) who suggest that that in order for social capital to grow, ther kind of physical structural environment in place, where individuals can meet, a ties essential for bridging social capital can flourish. The intercept survey d were interested in building bonding and bridging social capital, and felt t particularly effective through the provision of community facilities and pl congregate in the community; in particular to provide activities for children study found that children were an important facilitator of civic participati

community, which is consistent with the findings of Wood et al. (2013) who found important role in facilitating relationships for their family members in the com

Further, it was found that there was a lack of coordination among institution about events happening in the neighbourhood. Research by Kirkby-Geddes (2013) presence of respected people or organisations who can provide skilled and c leadership is just as important as the provision of physical infrastructure in to grow. The implications for urban planners suggest that the provision of phys not a panacea for social capital growth. Programs which foster greater capacity self-organise or are supported by a facilitator to encourage community develop by Baum et al. (2002) are suggested to have greater success in fostering social Wood et al. (2013) found that environments that cater to children and famili contribute to building and strengthening of social capital and neighbourhood adults

Quantitative data in the neighbourhood survey indicated that linking social cap respect to resident perceptions of their ability to influence decisions concerni 43% of residents agreed that they could influence what happens in their communit and 30% were not sure. This is consistent with a study examining sustainabili found 31.6% of respondents on the Sunshine Coast indicated a high level of ag statement I have opportunities to participate in and contribute to local decis study even fewer respondents (27.7%) indicated a high level of agreement with believe my feedback influences Council strategies, policies and decisions (Tho compared to this study (43%). However, qualitative data revealed that there wa residents to build their capacity to respond to local issues by working collabo municipal Council, which is an opportunity to increase positive perceptions influence decisions in the neighbourhood (linking social capital). Residents f spoke of the need for greater innovation and in particular, the need for great uses and community facilities for the benefit of all residents to minimise c facilities and inefficient land use.

As a middle class suburb, Little Mountain exhibits lower bridging and linking would be expected from the academic literature. Research by Middleton et al. (2 differences in bridging and linking social capital between low and high socio-e to inequalities in wealth and power, but little difference in the bonding socia areas. We contend that as a solution for addressing socio-economic disadvanta holds some application for urban planners, by increasing housing diversity e income approach to development. Moreover, the opportunities for contributing urban planning outcomes through reducing impediments to accessing community infr programs and fostering community capacity building would contribute to equitab communities. In this case study, qualitative data illustrated that the inc community spaces and facilities and opportunities to work collaboratively with on local issues would assist in developing bridging and linking social capital.

While research by Middleton et al. (2005) suggests that bonding, bridging and li have limited application as a measurement tool, their research does acknowledg limitations exist in using quantitative techniques only. Further, a review of forthcoming) found limited examples of mixed method approaches regarding soci urban studies. We contend that a mixed methods approach to examine bonding, linking social capital can elicit the unique local context which quantitative articulate This research builds on the work of Middleton et al. (2005) to illu

notwithstanding, the social capital dimensions of bonding, bridging and linkin
particular merit for urban planners to progress best practice urban planning out

## 8. Conclusion

In this study, we investigated how a mixed-methods approach to measuring social
in urban planning contexts to enhance our understanding of how to develop
communities. Exploring how bonding, bridging and linking social capital is ex
class coastal community on the Sunshine Coast, Australia, qualitative methods i
deeper understanding of social capital at the neighbourhood unit of analysis.

However, some of the limitations of this research must be acknowledged. First
make broader claims about generalisation to larger populations. The low re
neighbourhood survey is suspected to be a result of the letterbox invitat
participation through a weblink. This process relied on the self-selection of
the research. Second, focus group participants self-selected following
neighbourhood survey by indicating their interest to participate in a focu
unintentionally include residents who are predisposed to participate and/or wh
capital themselves, and may not be representative of the socio-demographic prof
a factor pointed out by Stanley et al. (2012). The study however did aim to
response rate to the neighbourhood survey, by introducing the intercept survey
from a random selection of residents. Future research investigating social cap
scale may wish to give consideration to the applicability of the methodologica
here. However, this article does illustrate the strength of a mixed methods
social capital and provides valuable information useful to urban planners o
findings are particularly applicable to a local scale context and additional
required for extrapolation to larger scale development or a broader spatial cont

The use of a mixed method approach to investigate social capital in a middle cl
five key findings of this research. First, qualitative research methods foun
design of their homes and communities somewhat restrictive in allowing for cas
neighbours in order for bonding social capital to grow. This is a role for u
consider the value of public open spaces (including space for children and
catalyst for fostering bonding and bridging social capital within a neighbourhoo

Second, qualitative methods found that the provision of a non-commercial centr
offering a range of affordable activities for all ages and abilities would p
bonding and bridging social capital to grow. However, leadership and support t
and activities will be integral to success. Third, qualitative methods revealed
in collaborating with the local municipal Council to address community issues.
organisations through access to information and resources is a useful approach
take to foster the growth of linking social capital as well as to assist in inc
and enhancing opportunities for engaged governance approaches.

Finally, we contend that while the social capital construct is often invoked
context to address socio-economic inequities, it holds far greater opportuni
developers to contribute to best practice urban planning outcomes, by fosterin
in neighbourhoods. This would be enhanced through using mixed methods in the
social capital to give direction to the potential priorities in a neighbourho
residents and the local context. .

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# ACHIEVEMENTS AND CHALLENGES ON INCLUSIONARY HOUSING AND LAND VALUE CAPTURES INSTRUMENTS IN BRAZIL TO PRODUCE SOCIALLY MIXED NEIGHBOURHOODS

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## Abstract

Since the 1980s in Brazil there s a recognition of irregular settlements struggle for their urban integration in a way that transformed public action on these spaces, creating a new way to intervene in order to qualify the urban settlements and environment and city and housing rights, guaranteeing l settlements tenure . In this context, emerged the instrument of Special Social Housing Zones (SSHZ), designed initially focused on the recognition of the struggle of the residents of informal settlements and their integration in the city in the 1980s.

In 1990s, another strategy was chosen using the same instrument over subused of empty areas: to overcome social territorial exclusion models through urban regulation. The hypothesis was that to intervene in urban regulations can produce the opposite effect zoning historically promoted: exclusion, segregation, gentrification.

This paper shows some Brazilian experiences that tried to combine SSHZ with land value capture in Master Plans to combine resources captured in Urban Operation (public + private partnership), to spent in social housing projects to promote inclusion and avoid segregation. B circle: not always the resourses are enough to support the housing deficit in the area, the exclusion happens inside the urban project by defining big areas as the perimeter to receive resources, and often, we can find more public budget funding housing and transport interventions that should be the aim of land value capture.

Highlights that the slum upgrading is not used on these strong market contexts, and points to the hypothesis that it can be also a part of a strategy to overlook the gentrification process that can happen, considering the characteristics of the relocation process.

But yes, Brazil is using land value capture traditional instruments to be combined with slum upgrading, although, it s more often used the more expensive option: public budget to fund slum upgrading, outside the market driven context of urban operations.

# ACHIEVEMENTS AND CHALLENGES ON INCLUSIONARY HOUSING AND LAND VALUE CAPTURES INSTRUMENTS IN BRAZIL TO PRODUCE SOCIALLY MIXED NEIGHBOURHOODS

## 1. Slum isn t (more) a problem

Since the 1980s in Brazil there s a recognition of irregular settlements struggle for their urban integration in a way that transformed public action on these spaces, creating a new way to intervene in order to qualify the urban settlements and environment and city and housing rights, guaranteeing l settlements tenure . Slum upgrading projects that respect their spatial and social organization, ensuring security of tenure to occupiers, became the keynote of urban interventions in the 1990s, mainly at metropolitan region. These, people living in slums exceeds half of the total population in cities like Recife, and although Rio de Janeiro and São Paulo presented smaller percentage, the population living in the house irregularly exceeded one million.

Changed the vision of the slum as "problem", which is expressed through a social construction which considered: (i) critics about the distance between formal projects and settlements urban realities; (ii) vision against industrial and massive house projects, usually at peripheral areas; (iii) understanding that people can produce their own housing projects, more diverse and less unive housing projects use to be; (iv) adding value to self-construction project as a contribution to local economy; (v) observation of housing policies results and its effects like people who can·t pay urban services return to slums ; (vi) dwellers resistance wanted to stay, don´t want to be removed, wanted to keeping social nets and practices (Valladares, 2005).

It was in this context that the instrument of Special Social Housing Zones (SSHZ) was designed initially focused on the recognition of the struggle of the residents of informal settlements and their integration in the city in the 1980s.

After that, another strategy was chosen: to overcome social territorial exclusion models through urban regulation. The hypothesis was that to intervene in urban regulations can produce the opposite effect! The approval of City Statute (Federal law n. 10.257/01) and its requirement that municipalities need to do their master plans until 2006 was seen as opportunity to disseminate and implement the Special Social Housing Zones instrument.

The use of this instrument in Brazil has initiated before City Statute Law approval, in cities like Recife, Pernambuco State, and Belo Horizonte, Minas Gerais State, in the late 1970s, initially as a tool to facilitate urbanization and regularization of areas already occupied irregular and with low income population.

It was after its inclusion in City Statute Law, that Special Social Housing Zones started to be included in cities master plans and zoning laws, becoming one of the main instruments of land policy adopted by municipalities that are designed to help the implementation of social housing programs and projects (Rolnik & Santoro, 2013; Cymbalista, 2005; Bentes & Trindade, 2008; Reali and Alli, 2010).

## 2. Squatted and empty Special Social Housing Zones

### 2.1. Concept

Special Social Housing Zones (SSHZ) means inclusion, in urban plans and zoning, of social housing zones that aims priorize affordable housing projects production. In Brazil, there are two typologies that are more often used by municipalities:

i. Squatted Special Social Housing Zones aim to do slum upgrading in urban popular informa settlements, with the objective of recognize informal settlements and integrate them to the city.

ii. Empty Special Social Housing Zones aim to reserve urban land that s consi used or sub-used land in urbanized and infrastructured regions with the objective of increase infrasctructured land offer to produce new social housing projects.

The idea beyond urban land reserve in areas with good urbanization was also to amplify affordable land to families that can t afford market prices, under market rules.

The areas that they should be designed were conceived to produce the opposite of the zooning effect, that is to concentrate high income families together and push low income families to cheaper places, usually periferical ones where the land is affordable, or even, where they don t can not be urbanized or even that can be environmentaly preserved, promoting irregular settlements.

As a zoning, the empty SSHZ aims to overcome the best and better use dictatorship imposed by the market that looks for higher profitabilities, throught proposing social housing use in well located and central areas. At the same time, reverses the role of zoning as a land reserve of urban conditions for elites widely discussed in the literature (Villaça 1998, 2011; Rolnik, 1997), ensuring that the place for the poors is in the city is in an area already urbanized, well infrastructured and with equipment, and not outside it. Would thus avoid urban segregation. Therefore its defended that its demarcation on the map should be strictly directed to promote socially mixed neighboors.

It is a key instrument to build a housing policy since it aims to produce affordable housing in advance (*ex-ante*), through an urban policy in order to avoid the high extent of urbanization costs (*urban sprawl*) and processes regularization and urbanization retrospectively (*ex-post*), usually traumatic and time consuming.

According to Municipal Indicators Survey (MUNIC) conducted by Brazilian Institute of Geography and Statistics (IBGE) in 2009, 1,489 cities across the country have specific legislation on Social Housing or Social Interest Zones, which corresponds just under one third of Brazilian municipalities, but also, the most widely used instruments among others available by City Statute Law. These results give support the hypothesis that there was a great spread of Special Social Housing Zones by municipalities, although the instrument has been used much longer to recognize the existence of informal settlements and facilitate its consolidation as Squatted SSHZ that Empty SSHZ that changes the land market expanding land offer for the production of HIS.

### 2.2. Main achievements experienced by Brazilian municipalities

The main achievements with municipalities uses of the instrument Rolnik & Santoro (2013) founded in a compilation of cases and in literature on the subject were grouped in five spots:

**(i) to increase land offer to produce social housing**. Diadema municipality was the experience more documented and evalutated. Started in 1982, with the election of an opposition government supported by a coalition of workers and popular movements, that begins an slum urbanization process. Its Master Plan creates Empty SSHZ on former industrial sites that were going into disuse, increasing from 3% to 6.5% of the municipality total area for legal production of new social housing developments.

This effort to urbanize the slums and provide the basic infrastructure, was effort that resulted in 20 years of continuous investments that reached in 2010: 219 former slums areas of which 152 fully urbanized, reducing the number slum dwellers from 30% to 3% of the total population and providing 90% of paved and water and sewer served, tripling the 30% identified in 1982 (Filippi Jr., 2011).

**(ii) to recognize housing rights and avoid evictions**. Special Social Housing Zones have been widely used as a tool for recognition of ownership, guaranteeing the right to housing, avoiding forced evictions, often violent. Some municipalities have recorded Squatted SSHZ next Empty ones trying to articulate housing needs with opportunities (under or sub-used land), making possible to enable, in many cases, families resettlement of population in risk areas in the same region, due to urbanization works in the settlements.

Salvador, at Bahia State, is a municipality that tried to articulate slum upgrading with new housing projects near by or inside the informal settlements in peripheral areas. Salvador also brings this articulation in Pelourinho, its historical center, in a experience that although is under construction, is trying to mix heritage with housing policies, and promote social inclusion.

Another emblematic case is Jardim Edith Special Social Housing Area, in São Paulo municipality, São Paulo State, which will be detailed later on in this text. In this example, being an area of ZEIS make possible that the squatters obtained in court the necessity of municipal government produce new social housing in the area to receive the former residents. The case is groundbreaking because the court used the fact that the area be a SSHZ to argue and decide about the permanence of this population.

**(iii) to offer and put land on market, through strong mediation, negotiation orchestrated by public government, that had to do an active management of local housing policy**.

This is a condition to the instrument work. The most successful experiences of implementing the instrument demonstrate that the mere provision of SSHZ in municipalities zoning is not able to induce a social interest residential use. Cases like Diadema, Taboão da Serra and São Paulo, all in São Paulo State, show that the existence of subsidized housing resources through programs to fund the production, as well as a pro-activity on the part of local managers is essential to enable its implementation.

The achievements mapeed showed that SSHZ that had active participation of public government as a mediator: have implemented more projects or have negotiated more land, avoiding land speculation (ex. Diadema have more than70% of land negotiated); had better project qualities, architectural and urban quality; used a more diverse option of housing projects funds (subsidized or not) municipal, state or federal.

**(iv) trying to get scale production, with the combination of instrument use with a huge Federal Housing Program**.

São Paulo `s case` is illustrative of the effect of the combination of SSHZ with a subsidy policy for new social housing (subsidy to demand) and the heating of the housing market. This is a complex case , best developed in Rolnik & Santoro (2013 ) , from which its possible to highlight some points.

Their analysis sought to differentiate what social housing was being produced in Special Zones of Social Interest BEFORE (2002-2009) and AFTER the Federal Program called My House, My Life (2009-2012), which gave grant to people who demand social housing in Sao Paulo. In summary:

(a) before the Program, most of new social housing developments in SSHZ were made bypublic government (69%) (Caldas, 2009), which is reversed in the second period studied. According to the Real State Union, SECOVI, before subsidies, "the bill didn t close" and needed other gains in profitability associated with the inclusion of a mix of uses in SSHZ (which was possible at certain percentages, according São Paulo zoning 2004), including commercial uses or housing supply for higher income families.

(b) after My House My Life Federal Program there was a real estate market heating, including social housing production in SSHZ, the production of new social housing unitsincreased from 45,000 units were produced between 2003 and 2007 to 68,000 units between 2005 and 2010.

(c) as a result, from the total of 1 million square meters of ZEIS , 51% were occupied and received new projects, 23.8% of these homes were produced by the government, other 22.1% by the private sector. Also there was a distortion of the instrument: 22.2% of the production were not social interest housings and 31.9 % were public and social equipments.

(v) the instrument as more of the same . Happened to find examples of bad uses of the instrument like using it to permit less infrastructure exigencies or to allow small plots or unit areas, etc.

## 3. Possibilities of Special Social Housing Zone (SSHZ) as inclusionary housing instrument or combined with land value capture instruments

Debating with international urban literature, Special Social Housing Zones i housing intrument in strictu sensus although it could be used combined with land value capture instruments that exists in Brazil.

### 3.1. ZEIS is not an inclusionary housing intrument in *strictu sensus*

Special Social Housing Zones is not an inclusionary housing instrument in strictu sensus, if we look to literature this concept is associated with capturing resources from market. Inclusionary housing is a means of using the planning system to create affordable housing and social inclusion by capturing resources created through the marketplace (Calavita & Mallach, 2010, p.1).

Inclusionary housing is a program, regulation, or law that requires or provides incenti developers to incorporate affordable or social housing as part of market-driven developments, either by incorporationg the affordable housing into the same development, building it elsewhere, or contributing money or land for the production of social or affordable housing in lieu of construction (Calavita & Mallach, 2010).

Special Social Housing Zones is not necessarily produced by land value capture instruments, moreover it s rarely produced with these resources, although it could be! This paper intends to pr experience of existing slums in areas that could use land value capture instruments, recognizing that Brazil have lots of land value capture instruments that could be used to produce social housing projects of slum upgrading.

The experiences described, focused in São Paulo municipality, will show that sometimes the housing policies used resources that come from founds that received money from land value capture instruments**.**

### 3.2. Brazilian land value capture instruments

Brazil has laws and experiences of implement land value capture instruments and this idea is growing popular in a context of fiscal decentralization policies; growth of urban planning and management; the strength of neoliberal agenda centered in privatization associated with the idea of efficiency, that helped to reduce ideological resistance to value capture. Smolka (2013) approaches to Latin America also points the influence of multilateral agencies in stressing their arms to cost recovery of public investments as good practices and other pragmatic considerations, like the macroeconomic stabilization of some countries, clearly addressing to Brazil s case, where pr value increments and also inflation mixed, bringing trouble to differentiate one of another.

But is the motivation of having resources extra municipal budget, increasing directly covered by regular taxes and revenues, that makes governments realize the gains in terms of implementing land value capture instruments. Like Smolka points: value capture often pragmatic substitute for the poor performance record of property tax collections and other instruments (Smolka, 2013, p.12). We can add to what Smolka brings to Latin Am there s a concept of redistribution involved when you look to City Statute princ 2o, IX until XI).

The most usual Brazilian instruments are fiscal ones, like taxes the most used is Property Tax , Betterment Contributions, and extractions and other negotiations for changes for building rights or for transfer and development rights, with two more often founded in Brazilian municipalities: Charges for Additional Building Rights (*Outorga Onerosa do Direito de Construir – OODC* in Brazil), also translated as Selling Building Rights Permits, and Urban Operations, also known after City Statute Law as Jointed Urban Operations.

Nevertheless they exist and are used, the critics reinforce the idea that it s p and capture more resources of plenty of them by overcoming: the weak design and implementation, that may demolish the instrument; ideological resistances, more than logical ones, that are based on the idea that land value capture is insignificant or can t be justified if you consider administ costs; the conception that is convinced by the need of local legislation and understanding national legislation can be sufficient to allow some jurisdictions to use this potentially powerful funding mechanism to implement a variety of tools adapted to their local needs; and others (Furtado & Smolka, 2004; Smolka, 2013).

### 3.3. Charges for Additional Building Rights

City Statute, Brazilian Federal Law 10.257/01 brought principles that allowed municipalities to value capture, like the idea of a property has to fulfill its social function determin the separation of building rights from land ownership rights, concept that are the basis to the instrument Charges for Additional Building Rights.

Charges for Additional Building Rights is an urban regulatory instrument that allows a owner of some property to buy building rights form the government to construct more than basic construction limits until maximum. Basic and maximum coeficients have to be established oriented by infrastructure support and determined at the municipality master plan. The money obtained goes to a Special Fund,

usually called as Urban Development Fund, that must have social and participatory processes to decide where the resources will be invested.

City Statute determines that the resources can be used to: slum upgrading and regularization, social housing programs and policies; land bank; urban sprawl regulation; urban equipments; leisure areas; environmental conservation policies; and historical, cultural and landscape protected areas. As we see, it s possible to use these resources do promote social housing projects and po few Brazilian experiences used Urban Development Fund to produce social housing, and more rarely to slum upgrading. It s often used to produce new houses that usually reproduce patterns of social exclusion and ghettos of powerty in perifercial areas. One example is Curitiba, Paraná State, that produced almost 41 thousands of social housings (houses, plots, land tenure/slum upgrading) in 5 years (between 1991-1996), all in periphery areas (Briceño, 2004).

São Paulo city had a Urban Development Fund that raised almost 1 billion of reais (R$ 1.087.674,00) in five years (between 2007 and 2012), almost 220 million a year (São Paulo City Hall, 2013). Only28% of the total (R$ 304.889,00) were used to urban regularization of informal settlements in these five years 8 areas used to regularization and 2 used to slum upgrading, always at peripheral areas, where there s a concentration of informal settlements.

### 3.4. Urban Operations

Urban Operations can be designed at municipalities master plans to promote structural changes of large urban areas through land-based incentives offered from public-private partnership (Castro, 2006; Montandon & de Souza, 2007). The idea was to have a specific instrument to urban transformations, as renewal projects, large areas with land uses transformation (de-industrialization), and others.

Before City Statute some municipalities have experienced instruments that originated the actual conception. The former formulas started in 1985 in São Paulo, and were reviewed after its approval, in 2001.

The Federal Law determine also that a Jointed Urban Operation (also can be translated as Consortial Urban Operation) needs a urban plan definition, it defines with interventions will be done to transform structurally the area and the infrastructures and urban improvements that will be founded with land value recover.

Selling building rights permits to get resources to fund the investments established in the Urban Operation law. Resources are located apart from Public Budget, has a special account and Fund which resources have to fund interventions.

Brazilian law don t previewed the use of land readjustment, but some experiences like Faria Lima Urban Operation stimulate joining parcels.

The main differences from Jointed Urban Operations to pure selling building rights concern: value is produced and captured at the same area, in re-valuating processes; and Urban Operations can use Building Rights Certificate (CEPACs), a kind of bonds. These bonds are purchased by competing developers through public electronic auctions regulated by the *Comissão de Valores Mobiliários* (CVM, the Brazilian equivalent of the U.S. Securities and Exchange Commission).

A critical view based on what were experienced in São Paulo pointed that land value is produced and captured at the same area in re-valuating processes; the Urban Operations had no urban plan, only a list of interventions, mainly mobility and transport ones; there s no relation between t costs and the benefits achieved with selling of building rights; and, no Urban Operation had a period of time to finish, some started on 1991 and some interventions were done, some don t.

## 4. CASES of slums in Urban Operations

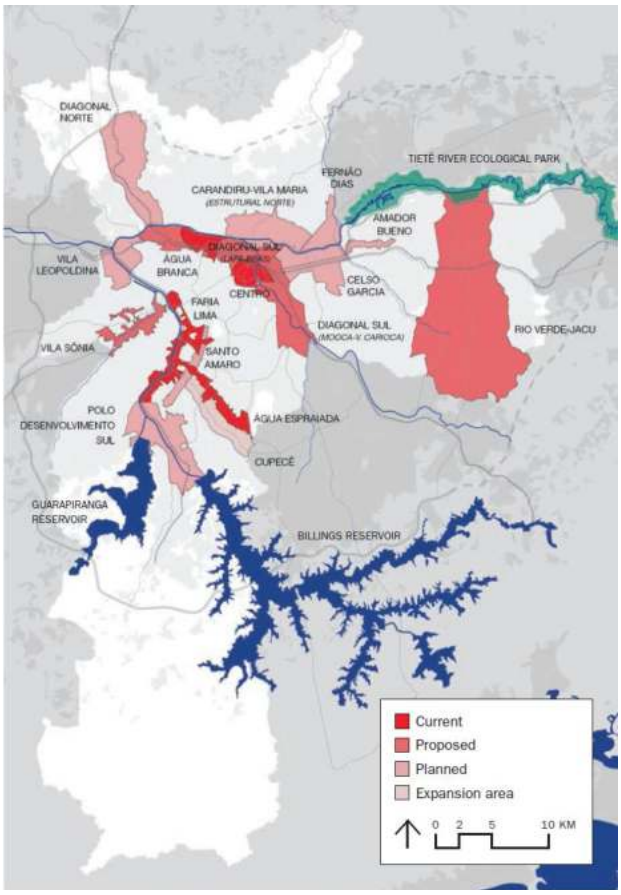
As seen, Brazil has and uses land value capture instruments. But there s no dir land value capture and social housing investments. If we focus in São Paulo s case, however, is possible to see that there are lots of informal settlements in Urban Operations areas, but the investments on social housing project doesn t reach barely 10%: Faria Lima reached 8%, Águas Espraiadas 7% e Água Branca didn t spent a peny (see table above). And these investments h happened very recently.

Table 1. Social housing in Joint Urban Operations Sao Paulo

| Joint Urban Operation | Number of houses (built or under building) | Planned houses | Financial resources involved | | | |
|---|---|---|---|---|---|---|
| | | | Social rental assistance | Expropriation | Executed | Planned |
| Faria Lima | 807 | 1167 | R$ 7.410.329 | R$ 7.810.807 | R$ 181.000.313 | R$ 163.000.000 |
| Agua Espraiada | 534 | 4000 | | R$ 155.454.195 | R$ 124.294.012 | |
| TOTAL | 1341 | 5167 | R$ 7.410.329 | R$ 163.265.002 | R$ 305.294.325 | R$ 163.000.000 |
| **Overall total expenditure** | | | | | **R$ 475.969.657** | |

Source: São Paulo City Hall, 2013.

Figure 1. São Paulo Urban Operations 2013.




Source: Municipal Secretary for Urban Development, São Paulo, 2013.

Although the focus of Sªo Paulo s Urban Operations were to make structural transformations through interventions in transport and mobility, almost all the Urban Operations that existed in São Paulo had slums into their perimeter.

Some authors inclusive believed that the best formulation of an Urban Operation should involve urban problems, in a way that the resources obtained with selling of building rights could be used in interventions that had a social impact, more than the traditional economic land.

The major part of Urban Operations recognized the existence of slums and previewed some sort of resolutions like relocation at the same urban perimeter, construction of new social housing units, but just a few of them previewed slum upgrading.

The **Faria Lima Urban Operation** (1995 ) was one of the first to preview slum upgrading. This is considered on their specific goals and guidelines: the need to build social housing considering the squatters families, admitting the need of their relocation. It also previewe that would be expected to spent 10 % of total investments in slum upgrading. On occasion, were identified the slums within the perimeter: Coliseum Street Slum, Real Park Slum, Panorama Slum and one at the corner of Av. Luis Carlos Berrini and the extension of Av. Águas Espraiadas, which later will be part of another operation, Jardim Edite Slum, that will be treated as a special case in this paper (Law 11.732 of March 14th, 1995 and its attachments).

The operation was partially reformed in 2004 (Law no. 13.769/2004) and in 2011 (Law no. 15.519 of December 29th, 2011).

According to Castro (2006, p. 110), in March 2004, EMURB and COHAB, both Municipal Urbanization Company and Housing Company, planned the removal of Coliseum Slum and a partial removal of Real Parque slum, to the construction of 480 new social housing on land expropriated from the Jockey Club at an estimated cost of about 14 million. The author also mentioned that Jardim Panorama Slum had no provision of public investment.

However, although this decision may have been issued in 2004, the Coliseum Slum remains in the area until now, enduring various threats of removal and offers to buy their properties. The Real Parque Slum in the last administration of Mayor Gilberto Kassab (2009-2012) was partially removed and received the construction of new 1.135 units with funds from Urban Operation.

The **Urban Operation Água Branca** (Law n . 11,774 of May 1th8, 1995), again, although essentially foresaw road interventions, also recognized in its initial objectives the need to intervene in areas occupied by slums, foreseeing the "financing and construction of housing social interest to the settlement of slum population residing in the region" (objective), through financial returns from Selling Building Rights or Betterment Contributions that would be invested in FUNAPS - Fund for Assistance to people living in substandard housing, a public fund that produced social houses by the public administration between 1979 and 1993 (Gomide & Tanaka 1997 *appud* Castro, 2006) .

Its revision in 2006 included the specific objective "to build in appropriate places, located within the perimeter of the Urban Operation, housing for the low income population residing in the area of Urban Operation , in precarious conditions" and sets a maximum of 630 housing units for new social houses to receive the residents (Law 11.744/95).

Until today nothing has been invested to social housing under this Urban Operation.

Recent discussions about this Urban Operation revision advanced towards recognizing that exist precarious slums in the nearest region of the Urban Operation. The law approved predicted that these would integrate this expanded perimeter, which would not generate resources by selling of bulding rights but could use the proceeds from the sale of building potential for social housing in these areas, involving up to at least 22% of the funds raised.

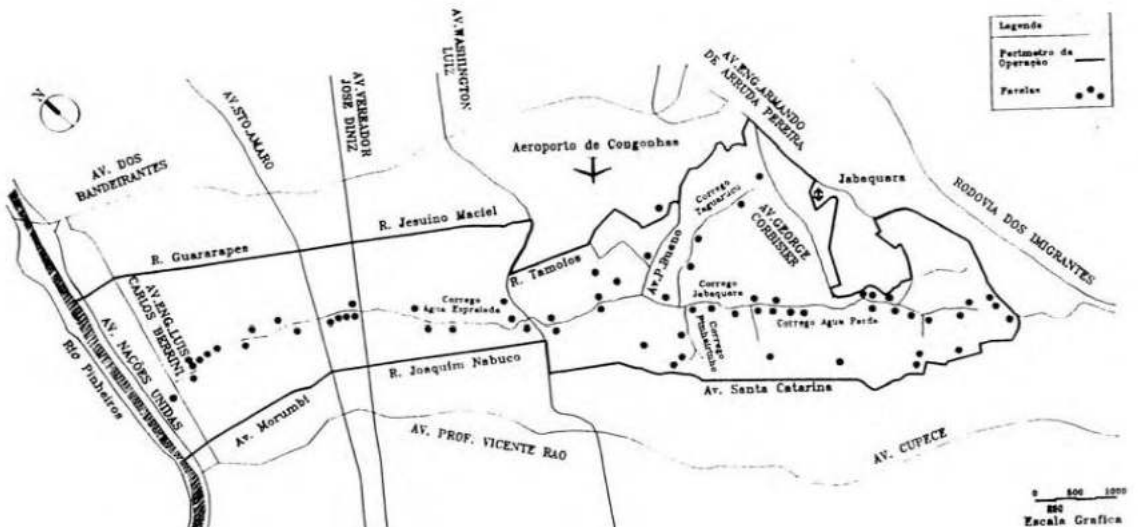
The new Urban Operation Água Branca, approved in 2013, also forecast the segregation of this percentage of resources under a separate account, seeking to prevent that the resources for social housing were not left aside, to be used later, not the last of a priority list, as it used to happen in the experiences studied. However, there are fears that the segregation of these resources will mean a delay in housing production, since the operation will have to be raised considerably until it reaches the value of a work in its entirely to be started. This proposal differs from other proposals that appeared in the public debate that suggested establishing housing as a top priority list, and commitment that 100% of the initial resources would be used to this theme, which can be spent quicklier than at the segregated fund.

The case of **Urban Operation Águas Espraiadas** is relevant case to note the existence of slums and the solutions proposed for them, because, since its inception has been identified the existence of a substantial slum population in the Urban Operation perimeter.

Many years before the aproval of this Urban Operation, in 1984, the Railroad Department (Departamento Estadual de Rodagem DER) had planned to open a mini ring of roadways and to do that had started to expropriate some properties around Água Espraiada River. As the project didn t started up, the legal situation of the properties were fragile and until now some expropriations are on course, didn t ended yet, creating an instability.

The first study to do an Urban Operation considered to open one avenue on the border of Água Espraiada River identified 6.481 families in slums in 1987 (first perimeter was smaller than actual).

The Urban Operation Environmental Impact Study, that started in 1987 and have been formalized in 1991, the existence of 6.500 families in informal settlements that had to have a housing solution. The study estimated that 23% of the money obtained by selling rights to built was going to be used to produce housing solution to these 6.500 families, but also part of the money obtained with housing finantiation.




Map with slums areas identified along Água Espraiada River in 1991. Font: Castro, 2006.

In 1994, the Sªo Paulo s Major Paulo Maluf (1993-1996) started to open Águas Espraiadas avenue, making a river canal and a considerable part of the slum had been evicted. Fix (2007) summarized the housing solution adopted as: approximately 15% of the families were evicted and relocated in new social housing in Jaguaré, 10 km from original place; 5% were to East Zone, 30 km from original place; and the majority received money to come back to their original city (São Paulo metropolis had a strong inter-state migration in 1970s) (Fix, 2007).

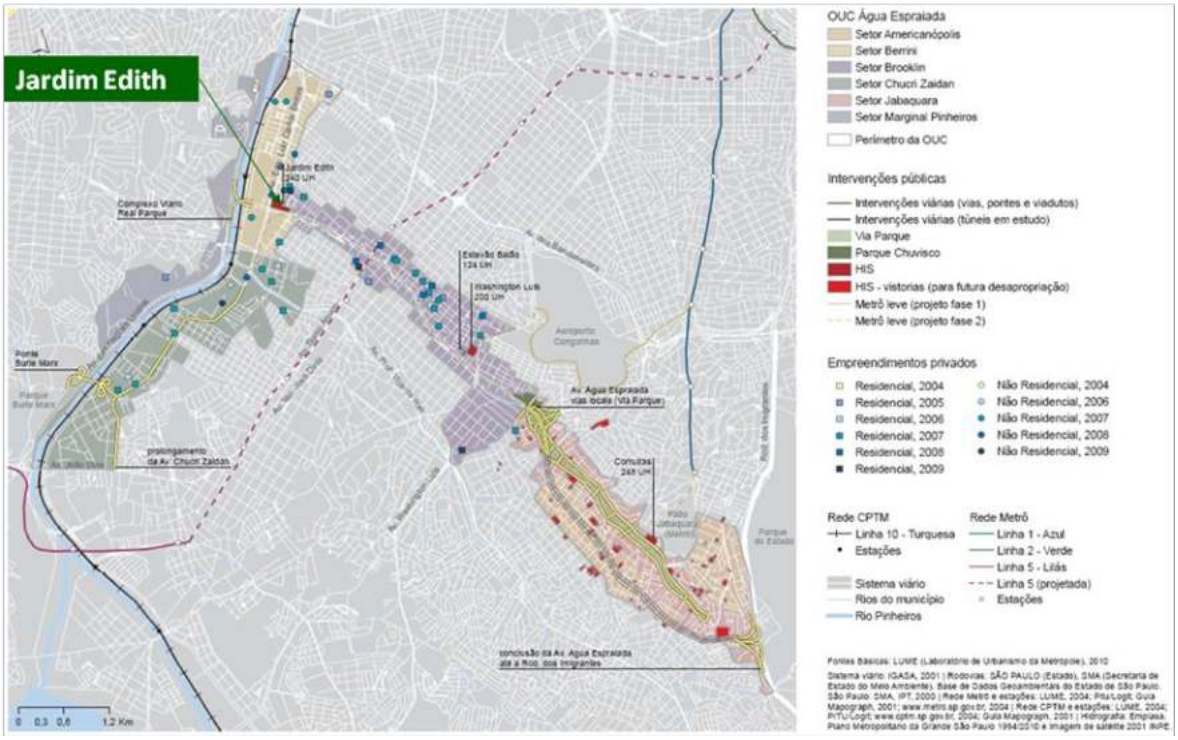
None of these solutions used resources from Urban Operation Fund, because it wasn t approved as law, so social housing solution, however precarious and just a few, were finantiated by the Municipal Budget.

It was only in 2001, that the Urban Operation law revision (Lei 13.260/01), stimulated by the City Statute approval (Federal Law 10.257/01), included 24 perimeters of Special Social Housing Zones recognizing informal settlements and permitted that the resources obtained with the selling of building rights could fund the construction of social housing projects as betterments, slum upgrading or new social housing projects, given definitive relocation for the families that were affected by the interventions inside the Urban Operation perimeter. This revision included also the creation of a Group that monitorate this Urban Operation.

Years later, in 2011, were included in the Urban Operating new projects as a new avenue Roberto Marinho Avenue , a Linear Park over a Tunnel and this demande a partial amendment of the law (Law 15.416/11).

These projects Environmental Study, in 2009, pointed out that, for these works (avenue, tunnel plus park) would be expropriated 8,194 properties, 1,104 of these formal and 7,090 informal former squatters of 14 slums: Alba (700 properties), Americanópolis (50), Babilônia (650), Beira Rio (540), Fonte São Bento (250), Guian Corruíras (600), Henrique Mindlin (750), Imigrantes I (236), Muzambinho (300), Rocinha Paulistana (814), Taquaritiba (1.000), Vietnã (1.200). Most informal properties that should be expropriated were located in the linear park, 6,040 real estate project. Some of these slums are demarcated as Special Social Housing Zones, and will not receive housing under the argument that it is possible to predict social housing allocation to green areas and social facilities (Law 13.885/40, art. 139, § 1 , II).

Actually, this Urban Operation already has begun to work in social housing projects on four areas Jardim Edite (252HIS + área institucional), Corruíras (241 HIS), Washington Luis (200 HIS), Rua Estevão Baião (124 HIS) totaling 817 housing units (Urban Operation Group, 22nd Sept. 2011). Moreover, according to the same Group presentation, 47 areas were enacted for expropriation order deployment of HIS, which would total 115,000 $m^2$ and potential care housing units 6,500 in Jabaquara and Americanópolis Sectors. It is seen that this option transfers the resident population of the most valued areas of Urban Operation to less desirable areas, even within this huge Urban Operation without realizing fully meet the affected population, excluding the population that has already been removed when the opening Águas Espraiadas Avenue.




Jardim Edite at Urban Operation Map. In red, social housing perimeters. Fonte: Maleronka, 2010, p.136, based on EMURB and Urban Operation Group until 2009.

Although there were the recognition of these slum areas in terms of law, designing SSHZ in municipal zoning and in Urban Operations, eviction was a very common process.

Jardim Edite is one example of that, it was one of the 24 perimeters included as Special Social Housing Zones in `guas Espraiadas Urban Operation Law. It s a special and very case because it was included as SSHZ as a recognition of housing rights, but it didn t avoid evictions. Eviction happened in a huge and intense conflict, that need to articulate a strong social net and mobilization against it that ended in court, with the decision that the families that were evicted had to be relocated at the same place.

Jardim Edite location in on the corner of Águas Espraiadas Avenue and Luís Carlos Berrini Avenue, a business and office region and one of the most evaluable areas of São Paulo. The promise of implementing a most rentable use in Jardim Edite land pressured for the eviction of the slum families. And it was the fact it was as Special Social Housing Zone that imposed this use for the area. The judicialization involved a Civil Process against Public Government ordering to promote a Social Housing Project at the same place where there was a slum, arguing it was a Special Social Housing Zone. Between 2010 and 2013 the project were conceived and built to 800 families.

The project was made by one of the best architectural offices of São Paulo, with a very interesting mixed used program.

The families that can pay for the fund housing program are moving to the new apartments, what pointed some questions about the housing solution: Why the option was for a new project, and not to urbanize? How difficult will be to manteing poors in the inner city and evaluated areas like this one?

The same Urban Operation had two different social projects **Estevão Baião** and **Corruíras** that didn t needed evictions, were done previously and will receive relocated popula

projects at the area. The Social Housing were produced by the municipality government using finantial resources of the Urban Operation.

A third experience, at the same Urban Operation, happened with the slums **Comando** and **Buraco Quente**. Although they were inside the Urban Operation, there were no housing project planned to urbanize, upgrade or produce new units to these slums. They were evicted for the construction of Monorail that been done for the 2014 World Cup. The majority of families received for the tenure land and for the benefits constructed, but some of them could opt by staying at the same area after the social housing construction. These new housing were going to be payed by the State Housing Company, with State budget, without using Urban Operations Fund, because this transport intervention was not planned by the Urban Operation Law when it was conceived.

In a summary, three different ways of intervening in slums could be found in these three studied Urban Operations Faria Lima, Águas Espraiadas and Água Branca: (i) evictions and relocation at the same place, as a result of a strong conflict and negotiation that finished on court recognizing the area as SSHZ (Jardim Edite case); (ii) construction of new housings near the slums, with future relocation, without conflict; (iii) evictions with expulsion for other areas, or waiting for new houses payed with other budget, not with Urban Operation Fund.

## 5. Final remarks

These three examples of slum intervention happened in a context of a value capture instrument Urban Operation of a strong and active land market.

By these descriptions it s possible to consider that not always informal settlements, like recognized as permanent, and had its rights considered, and listed as one intervention that should be financed by resources obtained by Urban Operations, used on Special Social Housing Zones.

Also is very usefull (although it was little discussed in this paper) that people assume the pressure for better uses, better achievements as a goal, guaranteeing bigger private rentability, logic over public interests/needs, what usually promote evictions.

The re-valuation processes that happen in Urban Operation increases land prices, trying difficulties or turn unfeasible the social programs implementation, such as social housing programs. Or the land is very expansive and, even if much is spent for housing production, are just a few units being produced (the money goes to pay land), distancing themselves from the care of the housing deficit. Or the people who s relocated doesn t have conditions to stay in the area, after the taxes, paying mortgages, and starts to happen a gentrification process. To avoid that, some authors defend the social rent and public property as a goal to be achieved.

The use of land value captures instruments in a strong land market in São Paulo is one example of how do NOT guarantee the production of socially mixed income neighbourhoods. On the opposite, the market rental logic imposed promote evictions and usually concentrate higher family incomes at the housing projects, in a gentrification process promoted by the market logic.

This paper tried to show that, Brazil have instruments to do land value capture; have money/resources obtained by these capture in Urban Operation, but not always we spent these to social housing projects, not always the money is enough to support the housing deficit in the area, and often, we can find public budget funding housing and transport interventions that should be the aim of land value capture.

Highlights that the slum upgrading is not used on these strong market contexts, and points to the hypothesis that it can be also a part of a strategy to overlook the gentrification process that can happen, considering the characteristics of the relocation process.

But yes, Brazil could use land value capture traditional instruments to be combined with slum upgrading, although, it s more often used the more expensive option: public budget to fund slum upgrading.

Some cases showed tried to sign that it s central to a housing policy to do anticipating demand, avoiding high pos-urbanization costs, including social ones! The Corruíras case is a example that no conflict in the relocation process, because families weren

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# TRACK 13

# Transport Planning and Mobility Policies: Available and Affordable Transportation

## Track description

Co-chairs: **Angela Hull**, **Morten Skou Nicolaisen**

Spatial mobility is key prerequisite for access to space-related opportunities like jobs and facilities for education, health, services and leisure-time activities. Our urban systems evolved in ways that count on mobility to increase. New transportation infrastructures allow for faster and higher-capacity services but they often also increase the disparities between those places and people that are served and those not served. Is the ESDP idea of equal access to opportunities and facilities for all citizens of EU countries still viable? Is it economically sustainable? Is planning still responsible for it?

# Mapping Barriers and Solutions for Coping with Uncertainty and Complexity i Planning

Sheila Binesh[1]

Abstract

Uncertainty is a phenomenon that is ever present in planning transportation projects. As c are intertwined, dealing with them appropriately for the right type can be difficult. Alt have been proposed for coping with uncertainty and complexity in academic literature, impl seems to stay far behind. There is little research on if and why this is the case. Insigh understanding of (coping with) uncertainty in transport planning and our understandings o practices. This paper reports followed a three tier approach along the following questions planners in the Amsterdam Metropolitan Region (MRA) currently cope with uncertainty, such what are their barriers in appropriately coping with uncertainty, and; (3) what are possib barriers. These questions were answered through a review of the relevant literature and involved in transport planning within MRA

## 1. Introduction

Uncertainty is a phenomenon present in all aspects of life and is inescapable. It considering the future and in transportation planning. The way transport uncertainty mysterious and fascinating. Uncertainty represents the human vulnerability of the control over happenings, which can be frustrating for planners. This desire for co a desire that cannot be reached and is not acknowledged. In the same line of thoug planner s core function as the provision or appearance of provision of future cer unstable, dynamic and inherently uncertain world (Gunder, 2008; 189).

Unpredictability in transport planning (and in general) can be costly, not only in time, energy and people as well. As the globalization and interrelationships betwee importance of conscious decisions becomes crucial. In the Netherlands, billions of traffic and transportation projects. Meaning, a great amount of money is involved i in times of economic crisis should be used efficiently. The problem here is how to and complexity in the most appropriate and efficient way.

However, it is still unclear how transportation planners are coping with uncertain their projects, if at all and what the barriers are. Their approach depends on the interpret uncertainty. With the different definitions of uncertainty comes along d approaching it. The research question is: What are the barriers for dealing with u complexity different transport actors face in the Amsterdam Metropolitan Region an overcome?
And it will be addressed in the following sub-questions:

1. What are the theories about uncertainty and complexity and how to deal with planning?

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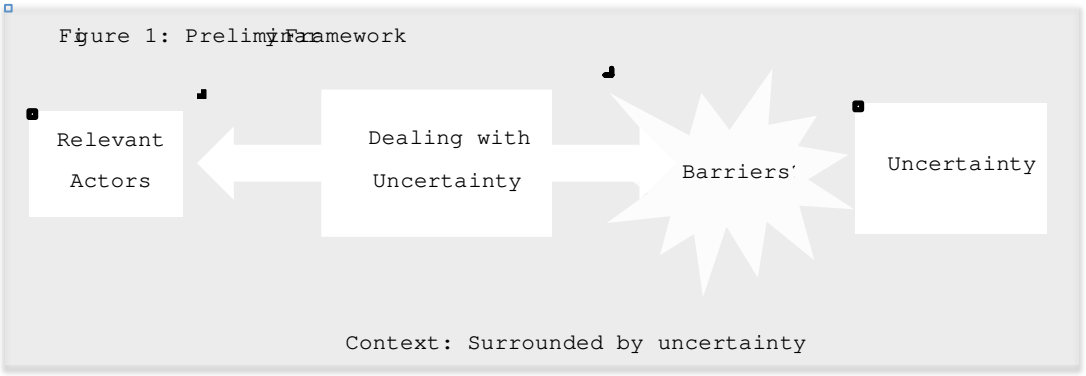
2. What complexities and uncertainties do transport actors in the Netherlands f
3. What are transportation actors approaches in coping them in practice?
4. What are the barriers to adequately addressing uncertainty in practice and s

This question was answered in the exploratory methodology through theoretical revie
literature and interviews with those involved in transport planning

Uncertainty is something commonly feared, not welcome and an uncomfortable place fo
be in. In planning for the future, many uncertainties may be present. The initial
question 1) served the purpose of gaining insights, background and familiarity on c
uncertainty, as well as creating a grounded theoretical framework of the issues sur
The theoretical context clarified the existing concepts, which were tested in compa
gathered from answering the rest of the questions through interviews.

The next questions (2, 3, 4) directly targeted Dutch transport actors use of copin
they approach unknowns. Their responses were studied and compared to the various ap
from the literature. Accumulating this information lead to identifying the barriers
uncertainty and complexity in transportation projects.

It was appropriate to take on an explorative research to delve into the lack of aca
topic. This included creating a preliminary framework of the key research elements,
figure 1.




This shows how the relevant actors work within their context of uncertainty in deal
reach their objectives and the barriers preventing them. There are two main assumpt
framework: that individuals working in transport function within a context of uncer
are barriers existing between managing those uncertainties. It will be expanded and
added insights from literature and then interviews.

## 2. Methodology

The first question was answered though theory development. The rest were through se
interviews with different actors involved in the transport planning and projects to

information. The units of the analysis were the beliefs and actions of those involv
to paint a clearer picture of both what is actually taking place and how these indiv
concepts directly from the field (source). Their views and ways of managing uncerta
variables. The interviews were combined with the theory to draw grounded conclusio

The scope of this research looked at those involved in transport planning and proje
Metropolitan Region (MRA). The MRA is an informal association of 36 municipalities
North Holland and Flevoland and the Amsterdam City Region. The metropolitan area in
territory of the northern part of the Randstad; it extends from IJmuiden to Lelysta
Haarlemmermeer .The focus will be on the MRA because it is the largest region in th
important economically for the country and thus receives the most funding for trans
projects. The large amount of money spent on this region makes it a more sensitive
uncertainties not being managed accordingly can result in a mismanagement of money
useful to use the MRA as a scope of this study since money is connected to many unc
very precious in times of crisis.

At least two members at each level or organization were interviewed: National, Pro
and Local (Municipal), with the inclusion of non-governmental organizations: a citi
consultant. Each of these levels is directly or indirectly involved in transportati
region, which was the criterion. The criterion was broadly defined to gain a divers
and to address the possible vulnerability of the research: not enough participants
The variety in responses was crucial in compiling a well-rounded picture, since inc
contexts, working backgrounds and fields may have different experiences. This wide
also meant that personal biases (from position, experience and background) are incl
Interviewees were planners, project managers, advisors, engineers, and directors, a
transport actors here. The 20 non-hierarchized participants covered:

Municipality:
- Amsterdam
- Almere
- Haarlem

City Region:
- Amsterdam

Province:
- North Holland
- Flevoland
- Utrecht

National:
- Ministry of Infrastructure and Environment
  Rijkswaterstaat (Infrastructure and Water)

Other:
- Consultant
- Citizen organization

They were all at least asked:

What are your ideas, views, and definitions of uncertainty (like unpredictab

How (or if) you manage/cope/deal with uncertainty and the process

The approach to analyzing the interviews in this study is a combination of inductiv
approaches. Coding is the method used for testing the theory compared to the interv
obtained from the interviews was analyzed through classification and coding to oper
concepts. This was to translate the theoretical concepts and theories, such as the
with uncertainty (which can be abstract) into categories of data and codes that may
practice. The concepts of the classification were: uncertainty and complexity, mana
barriers (and solution). There were two sets of codes: deductive and inductive whic
defined.

The first round of coding was essentially thematic analysis of the transcribed inte
literature coincided with the experiences of those interviewed. This was to find th
based on the description from the literature in the interviews. Even though there i
theory on the topic, this theory, for the most part, has remained untested and unpr
importance of the subjective experiences of social reality over constructed works o

Not only was the goal to test the theory in the MRA, but to reflect and add to it t
theory-driven codes were combined with data-driven codes. The second set of coding
inductive manner, which looked for emerging themes within the transcribed texts and
to highlight issues not mentioned or explained in the literature, yet existing in p

As for the deductive coding, a code from the theory was assigned to a piece of text
more than one code possible. A similar process took place for the inductive codes.
identified compared and turned into codes. Tables tallied the repetition of inducti
to show how often certain topics came up. This indicated the importance and prevale
Although presented as a linear, step-by-step procedure, the research analysis was a
reflexive process.

## 3. Theory

### 3.1 Defining Uncertainty and Complexity

To understand uncertainty, what is encompassed by it needs to be established. Re-e
of certainty in relation to uncertainty points out the assumptions surrounding certa
knowledge, which is considered known-knowns ( i ek, 2008). Knowledge is usually
(especially scientific knowledge) and seen as objective and superior (Van der Slui
level of certainty could be dependent on the representation of it, which is rela
1991). Certainty is prized and craved, thus it is strived for. Uncertainty (and c
system, meaning they are interpreted based on the cultural and contextual value sy
uncertainties there will be human and technological limitations preventing com
uncertainty (Christensen, 1985).

The concept of uncertainty can be difficult to grasp since it is about the poss
Walker et al. (2003) define it as  any deviation from the unachievable ideal of c
knowledge of the relevant system.  The possible natures of uncertainties are l
variability, as the root attribute of the uncertainty. For the location, a majorit

the context of the project (Walker et al., 2003). This happens from internal and/
the different levels of uncertainty, risk is essentially statistical uncertainty b
Structural uncertainty is more uncertain than scenario uncertainty; the occur
possibilities cannot be predicted. Recognized ignorance is a deeper level of unce
thing known is that ignorance is present (Walker et al., 2003). All the above
(statistical, risk, scenario, structural and recognized ignorance) fall under
unknowns. The deepest level of uncertainty is an unknown-unknown, which is essen
unconceivable unknowns and total ignorance. However, outside of the linear spectru
the unknown-knowns. These are also unrecognized and can be potentially more harmf
unknowns (Mohammadzadeh, 2012).

Complexity breeds uncertainty and uncertainty contributes to complexity in project
relationships and interactions we do not fully comprehend or of which we may not
(Salet et al., 2012; 3). Furthermore, complexity is a relative concept, based on e
Scarcity of space is the context. An increased amount of interests involved create
plans bringing more opinions, which can have positive and/or negative effects (c
inertia and chaos). Previously made political or management decisions set up the
plan. EU regulations have slow time cycles of change, making them a context of unc

There are three areas of complexity found in transport projects: technical, or
contract types) and environmental (stakeholders, perspectives) (Bosch-Rekveldt et al., 2009). The
newness of technology serves as a source of complexity due to the unfamiliarity of
organizational category, trust is an influential factor.

Common sources and outcomes of complexity are time and cost overruns, decen
privatization, geopolitical trajectories and politicians desire to leave a legacy
to the sources of complexity, some outcomes have introduced more complexities in
Optimistic thinking, strategic misinterpretations, and desired representations o
complexity in a more layered way (Flyvberg, 2008).

The characteristics of uncertainty and complexity outlined in this section illu
difficult to get a hold of, especially when precious funds are involved.

3.2 Dealing with Uncertainty and Complexity

For the contextual issues, similar to the idea of evolutionary planning is that the
definition arises simultaneously. That is when a problem is defined a solution is
limited resources usually decide the end of a project despite other factors. Imple
continuous and irreversible. Finally, space for experimentation is limited because pla
accountable for their decisions. This way of dealing with uncertainty is through a
being alert and open. Communication of the certainties and uncertainties also gene
throughout those dealing (Rittel and Weber, 1973; 164).

For managing complexity, institutional change and commitment are important in build
consensus as well as creativity. To bring about this change, a right moment in time
spark the energy as a catalyst for change. Finding possible options and narrowing t
Actions at the individual level can be taken: creating a learning or safe environme

can address some social and contextual uncertainties. Having experience or a needed set can be useful in dealing with different locations and natures of uncertainty. The comb cooperation and competition that includes variation rather that uniformity is good

Planners take on various roles when dealing. The manager role evaluates, the pragma incrementalism, the resource allocator uses tactics such as facilitating and power charismatic leader provides public confidence. There are different responses to dea ends and/or means. When both technology and goal are known programming and monitori to keep up to date. When the goal is unknown bargaining and compromise is needed. U technology used is unknown research and experimentation can be used. For both unkno finding is needed (Christensen, 1985).

Four ways of coping with the monster of uncertainty are exorcism, adaption, embrac assimilation. Exorcism extracts uncertainty by reducing it or covering it. Adaption to make it fit within the scope. Embracement of uncertainty lets fascination and wo reality of it. Lastly, assimilation judges uncertainty based on cultural values (Va

As for planning methods, incremental planning takes plans and pieces then into smal Evolutionary planning realizes that transportation systems are evolutionary and con use reliance and adaptability (Bertolini, 2007). Resilience active, as in using i it, and adaptability is a way of reacting to unforeseeable change in a system. This system functions and is still able to change in the case of uncertainty. Adaptive p robust rather than optimal solutions. It includes goal finding and monitoring to ke hedging and flexing to cope with unknowns (Marchau et al., 2008). Implementation is enough information is available to progress. In addition, the plans are continually new events and technology that may arise.

More technical ways of approaching uncertainty is using scenarios and models. Forec fulfilling scenario, predictive sets out what is most likely, the explorative looks normative sets up with a goal in mind. In using models, the lens used should be related openness/closure of the system: strategic is wide and operational is detailed (Naes

Various ways of coping with uncertainty and complexity have been presented. Obvious tactics, in general and in terms of transportation and planning.

## 4. Results

### 4.1 Areas of Uncertainty: Deductive

The most (repeatedly) agreed upon code of the entire research was financing as a so Money is one of the three major sources of uncertainty that creates the triangle of two corners being scope and time (S). Most risks have consequences for one or more categories. The focus/priority depends on the political decision makers. The second agreed upon code was political factors as a source of uncertainty. Political uncert outside of their realm of influence, thus uncontrollable. The repetition of this co transport planning actually is and the need for coping methods, which is expanded u

Changing roles of government creates new working contexts; Privatization and redistribute power, particularly responsibility, but not always money (J). Howeve responsibility requires a structure and knowledge base to understand how to dea involved in the transition. With privatization the image is that responsibilities groups however, without proper regulations, private groups do not fulfill their ne practice, privatization is pushing responsibilities of dealing with uncertainties of government onto the private level without private actors fully being aware of must deal with, nor the repercussions of being responsible. Delays and failures of may be pushed back onto the public.

Since transport is traditionally a result of a public-public cooperation, it is hi privatization of transport companies, their actions, projects and decisions are sti more compared to urban planning.

Elections are known to bring change every 4 years, resulting in discontinuity in th times there are discrepancies between the goals of political actors and the opinion latter of which, in the end, don t have the final say. However, new politicians can catalyzers; this happens when a new politician is elected and takes a stagnate proj the influence and power from her or his position (Q).

4.2 Dealing with Uncertainty: Deductive

The simultaneous identification of issues and solutions can be problematic. The mindset is geared towards thinking in terms of projects and not in terms of chall are identified first and separately, solutions that relate to the context can be s (P). When solutions are already in mind, they do not leave space for innovati unidentified problems, which can be costly. However, this point of view appro scientific problems because the systems-approach of understand then solve unnatural for the type social uncertainties transport planners face (Rittel and W other hand, goal and problem defining (through research) are useful to gain coherence understanding the uncertainties involved. Open means and solutions help prepare fo make it easier to adapt to them.

One crucial, yet unpredictable, tactic is creating or using a moment as a catalyst the moment of inertia makes timing a crucial factor in uncertainty (P). This point as momentum: the right moment in time to take advantage of an act or timing, des aspects/information being available (B).

Research studies are widely trusted and esteemed, especially scientific research, as deal uncertainties; this may be because the initial impression of uncertainty is thought uncertainty. Conducting a risk analysis can be used for lower levels of uncertaint scenario and structural. At times the risk analysis occurs early on when some parts worked out (B, C), but it is used to get a clearer picture of the situation and mir (E/F). Although risk analyses identify possible risks, they do no always propose ac control them (E/F).

Creating a learning environment for an open attitude is important to learn from one persistently and actively, is a way to continually deal with uncertainties by continua information to battle unknown-knowns (B). This also includes having a better unders context of political and social uncertainties through political awareness session grasp a better understanding of the elements and their complexities involved; exper members bring a sense of confidence or safety.

Innovation and experimentation are other ways to deal with uncertainty to open up t way a range of options can be openly developed and narrowed to the most-suited. Dra wisdom of the city.

From adaptive planning, identifying certain and uncertain vulnerabilities can creat for realizing the uncertainties involved. Vulnerabilities are forecasted early in t scenarios and in the overview (C, D, E/F, I). They look at what can go wrong and w the way (E/F) and to distinguish the known-unknowns and unknown-unknowns (G). T for finding new uncertainties and realizing that the identified ones will never b to take action for needed information helps to link to current progress, demand and that a point in time (J). Adapting information with technology, growth and events, deadlines can is more attuned with reality and points reached. Determining the mon through monitoring to keep track of trends, progress and failures for balanced lear evaluation allow for adjustments and improvements to be made when needed; however t be reactionary rather than proactive. Monitoring should be clearly communicated whi convincing tool

Institutional change, as a process, is a way of solving systematic barriers (C). C reorganization of planning teams and departments, which integrates different ways while N mentioned to need for Institutional change from the top down culture (espec Decentralized decision-making can address imbalance power relations and the existin in (planning) (N). Offering more opportunities for citizen s decisions (C, J) can uncertainties and have larger implications of institutional power restructuring (N). Di is needed to bring new ideas, opinions and perspectives for a fresh approach to unc decision-making and power restructuring can help but the change brings complication

Keeping an open mind towards uncertainty creates alertness and awareness. Being (personal) expectation management for uncertainties in projects. Many recognized awareness of the existence of uncertainties; uncertainty can keep people sharp aware of the possibilities by identifying, categorizing and giving them a place limitations puts the project and uncertainties into perspective. Building trust with open dialogue and no secrets to build personal relationships though learni work (C). Building trust can loosen tensions when involving many different pa interest and is good for image and reputation (C).

4.3 Barriers: Deductive

4.3.1 Institutional

Path-dependency structures are not always conducive for dealing with uncertainty a and regulations take very long to adjust, meaning policy from 10 years ago is still in use surrounding the process and the ways power, money and decision-making are divi barriers (C, Q). Legislation requirements are hard and strict while uncertainly i difficult to match them. In addition, lack of political support and stability c project (B, I) since major decisions are political ones. When there is no amba support or influence a method, is it difficult to initiate new tools being use influence can act as a catalyst or a barrier.

4.3.2 Social

Representation of issues can affect the way they are perceived and approached. Effi can help gain influence over uncertainty, because planning involves people not only of issues, such as for problem finding, is influenced by political ambitions, espec high (B). Planners find it difficult to shape research and deal with political expe transparency and presentation (B). Political influences on framing act as a barrie representing uncertainty.

Fostered connections between different parties involved are important in building t tensions, and understanding each other s work (C, G). Putting in time for one-to-on understand perspectives, expectations and interests creates a safe environment for weak points (because different people react differently) (G, L). Working out disagr only project participants, but also users and residents can address social uncertai early, less prestige, emotion, money and time is invested which makes room for thos together and form a sense of joint ownership (G). Connections are affected by mana and lack of integration (structurally, inter-personally, and with other disciplines seamlessly with others (B). Without involving others early on, projects can be halt secrets, and bad experiences (C).

Lack of communication about the way others work and not keeping others updated (shari can cause many problems in projects (G, B). Understanding others assumptions early openness of knowledge flow can help to tackle blame. Continuously meeting to share create a combined knowledge inventory to address unknown-knowns and recognize known Without transitions and clear direction from communication, separation and dissecti people and phases, especially when different people are involved at different phase with many involved, it is difficult to communicate every detail so a level of trust (B).

4.3.3 Individual

Personalities are pertinent because planning includes working with people and their louder than planning theories (G). Human behavior determines how people step into c situations. A tunnel mindset can be destructive and prevent understanding between p technical mentality is part of the reason that infrastructure ideas don t fit well Different working cultures (i.e. strict requirements in transport where uncertainty lead to different goals Traditionally, transport planning follows of the spatial de look to transport planners to ensure their future development will be accessible, a

look to developers to ensure their transport networks are supported with enough use
different heartbeats for different functions.

The mentality of fearing change is a result of not having a fluid perception of p
people to get attached to predetermined views. Mind set change begins at schooling

4.4 Areas of Uncertainty: Inductive

The distribution of responsibility in large transport projects can be crucial
uncertainty if not clearly detailed. Responsibility between building companies
government is often blurred (L). Dividing responsibility becomes a struggle of
money lies (J). When great amount of funds are involved, responsibility becomes a
determine early on. Transport planners feel the responsibility to meet all imposed
responsibility is slowly being shifted to the market (Q).

As responsibilities are changing, the involvement of consultant s and contracts a
source of uncertainty. This transition period comes with uncertainties, such as
contracts that can add complexity to the process by bringing parts together (E
contract is that it s fixed, with strict details, so changes to be open are co
lawyers. This provides difficulties for dealing with uncertainty in an open adapt
tension (Q). Large long-term contracts involve high stakes in interest and money
availability of contracts, the details become more crucial (Q). The problem occu
multiple options are not clearly discussed beforehand to allow for the company to
to uncertainties (Q). There is a lack of understanding between the pressures each
each develops decisions, and works with uncertainty.

4.5 Dealing with Uncertainty: Inductive

The use of rhetoric in presentation skills is referred to in planning theory and
uncertainty. This includes methods of proving, explaining and giving reasoning to back u
The way information is presented influences how it is perceived and in this case
of convincing others involved (decision makers, stakeholders, etc.) of her/his s
explaining in a manner that allows for others to understand the context (whilst
expectations) of the situation and be slowly led through the process together (es
(M). This allows for others to get more comfortable with uncertainty when they a

Although reports alone no longer suffice, using convincing power, accurate and up-
gaining importance because reports are given meaning though people (M). Even wri
political act, especially when planners have to sell their stance in a game like
servants are realizing their role in such political decisions and they receiv
accordingly to political context.
Prioritization is a response gaining popularity as available finances are cut. A
plans are rated on necessity and level of relevance in order to prioritize the m
initiatives. Prioritizing projects helps deal with most importance issues first, w
uncertainties since they are more needed. Prioritizing, however beneficial for de
can also have negative drawbacks for completing projects.

Money, a source of uncertainty mentioned by everyone interviewed, can also be used with uncertainty. Many uncertainties are costly and functioning in a highly budgeted transportation, it is a scarce resource. Solutions can be to adapt to the budget sources of funding, to be active rather than reactive and relying on spatial dev Gathering a surplus of funds for a project can make uncertainties less threateni stability (O). However more realistically, saving money by making projects cheape soberly is way of managing monetary uncertainties. Prioritizing helps in reduc money is spent on what is really needed, which is why all who mentioned money as uncertainty, also mentioned prioritizing. Spending more cost-effectively can be th for coping with uncertainty such as through research and monitoring (M). The prog exemplifies cost efficiency by better utilizing existing infrastructure (Q). Cre extra un-programmed money helps deal with the financial uncertainties.

Related to being cost efficient in light of uncertainty is downsizing the scale of are realizing (from forced circumstances that pressured them into changing) large longer feasible (L, J, C, E/F). Large-scale development are complex and costly, th towards small-scale to humanize infrastructure (T). Usually politicians and co projects (maybe to leave their mark or political legacy) however those are too e realistic (L). Despite the more manageable scale to reduce complexities, is also Due to the fact that transport planning traditionally follows spatial planning an needs density and higher user-ship/ ridership in order to function and sustain it (spatial) developments do not offer this stability. This lack of stability caus transport despite the de-complexifying of spatial developments. This results in ev other to make a move.

The Multi-Year Investment Programme (MIRT), which combines infrastructure, spati goals for 10-15 years, offers a structured strategy (T). At the regional level, with advisors from all substantial regional parties and Rijkswaterstaat to give framework lays out the standard steps in conducing basic project research for p options while excluding the variable of cost to bring creative solutions. Once all co narrowed down and divided into phases, each ending with a go/no-go decision (P) attempt to de-complexify and rationalize decision-making processes to deal with po do not enjoy deliberation (T). Developed in a top-down format from the national sc processes are invented to manage complexities and gain power over them (P, T). T that uncertainties do not fit easily into such structures; they are dynamic.

The MIRT plan seeks to rationalize and neutralize the public decision making pr complex sectorial-organized system. Within this system they speak an abstract la networks) and have difficulty speaking in terms of cities and people at the occupati command and control system is highly based around large amounts of money with pow

Privatization has been seen as a way to deal with less public money by leaving the variability up to the market - since they may be more attuned with demand and can of necessities (J). This means that the government is stepping back to make way fo solve problems, leaving responsibility to the market (Q). It is seen as a wa initiatives and work in a more integrated way (J, C). Looking to market develo attracting private parties in projects is increasingly important (C). This is t

market taking over projects much earlier so they can develop plans in times of mu
what comes up (C). When involving the market, active policy is needed and strict rule
imposed (C, J). This requires more discussion between the public and private to f
uncertainties in privatization (J). However, they too fear political uncertainties
policy process, even private initiatives are hesitant toward the constant chan
uncertainty and long-term visions can help (J).

Privatization is also a way (or an attempt) to depoliticize transportation as th
making exists frequently between public realms of government: civil servants ar
makers. Privatization opens up those processes to civil society, spreading the
public-on-public to public-on-private interactions, more similar to urban planni
thus a way to moderate political uncertainties by making politics less dominant.
money involved, since private money is less contentious than public money.

Seeking the expertise of consultant groups, under various contract types, is incre
way of being flexible to gain different perspectives, and cheaper implementation.
emphasize a flexible approach while others claim to work with full certainty (L).

4.6 Barriers: Inductive

Lack of control over situations of uncertainty bars them from actually being addr
traditional sense of them being beyond control, rather, having the power lie elsе
power to address uncertainty is recognized and exists but is not directly access
power serve as barriers: top down forms of power structures (despite the state cla
past. Power and money often coincide: There is a constant struggle between wher
where the money is (J). The status of power (and money) of who is leading the di
considered. Those from government and civil society who don t have access to the
tend to have a sense of vulnerability towards uncertainties (A, I).

The lack of power is mostly experienced in relation to political uncertainties with the fee
few actions to be taken to prevent them (A, C, S). Privatization and MCAs[2] can be a tool in dealing with uncertainty in the face of political decision makers who have the fi
their mind (B, M). It is difficult to gain influence over uncertainty without po
with power (B). Political decision makers add as a source of uncertainty (if they
as a barrier (since they have the final say) (C). Working with political pressu
affects the way ideas are communicated and presented (C).

Although complete control is impossible, involving individuals of influence in
support for handling uncertainty. Gaining the attention of powers comes through a
convincing power (B, M). Depending on where the power is affects projects moving
stopping it completely (B).

Governance structures can act as barriers, especially the governance surrounding f
Old governance models still in use are not open to flexibility and cooperation (J,

[2] Societal cost benefit analyses

down models are strict and have long decision-making processes that cause much unc
conducive to flexible initiatives (C, N).

Time works as a barrier when there is too little and too much. Long processes (i.
invested resources exacerbate complexities and increase vulnerabilities. Deadline
(which is connected to power) always put pressure on the space give to adequately a

Reserving future budget for a project with many uncertainties is difficult and the
to more stable & guaranteed projects. Thus, complex regulations/frameworks and
structures create barriers to accessing money. Rigid money accessibility prevents
uncertainties quickly. Transport projects cost money rather than generate it like i

Dealing with uncertainty involves using a level of uncertainty, which can be di
imagine abstract ideas.

4.7 Solutions

Desire and awareness to learn about uncertainties is a continuous process
organizationally). External influences are useful to push past the fear. One way
from successful experiences and to help ground abstract concepts with examples,
debate) and excursions. Realize uncertainty is natural by identifying it to reli
level of courage and confidence is needed to face uncertainty; instilling pride
established together can improve perspectives and create a sense of ownership for t

Maintaining consistent policy and having active policy to deal with the chang
landscapes. Starting early garners the awareness and helps building trust to know
Beginning early when people and investments are still impressionable and creating a
(in time, research, process, budget and technically) is helpful. Citizens also s
involved early on to increase understanding of the uncertainties transport actors f

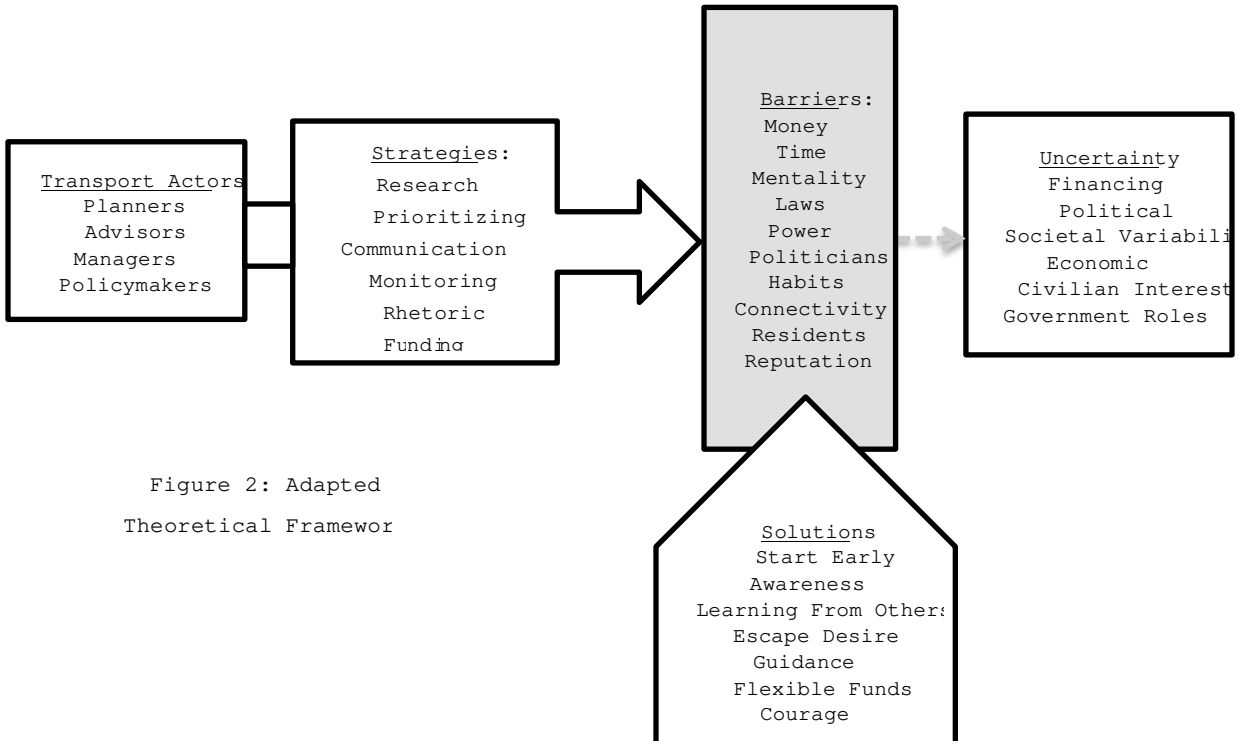



Figure 2: Adapted Theoretical Framewor

## 5. Conclusion

Many barriers were the sources of uncertainty themselves and many ways of addres
previously identified ways of dealing with uncertainties. Such emphasis placed
proportional to the theory. Transport planners tend to shy away from talking abou
they are involved in, but it should be accepted and addressed. Transport planners
independent of politics which is what the theory failed to expand upon.

Another issue underdeveloped in the theory was the type of mentalities present
domain. The traditionally hard structured technical culture that transport is emb
tunnel vision. A cultural shift of closed mentalities is needed to be able to co
integrated. Creating a learning environment should be emphasized to move away from
for all types of uncertainty and complexities, awareness is needed. It is the bas
must be acknowledged.

For transport planners that deal with much uncertainty and high stakes (with t
involved), identifying and addressing uncertainties is crucial in carrying out
understand the realities with conscious decisions. Otherwise efforts will be waste
society without immunity and are always responsible (Rittel and Weber, 1973). The go
planners past the fixation on risk to the awareness of the other unknown aspects i
is not intended to be followed by fear or confusion, rather courage and understand
planning environment. Planners can work better when enlightened.

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# ¿Mobility for the urban poor? Cable-car systems in Latin American cities

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**Keywords**: Cable-cars, public transport, Latin America

**Abstract:** The first cable-car system as urban public transport was introduced in Medellín (Colombia) in 2004, and attracted much interest. Medellin now has three cable-car lines in operation, and there are two working in Caracas, two in Rio de Janeiro, and three in La Paz; all four cities have plans to implement more lines, and several other cities in Latin America are planning similar systems. The first generation of cable-cars was novel in the sense of introducing old tourist technology as public transport systems in poor urban areas. Cable-cars co inaccessible hilly areas where conventional solutions such as road or rail systems were unfeasible. By offering better accessibility for geographically and socially marginalised sectors of the population, cable-cars posed the question as to what extent this new mobility option could contribute to poverty alleviation and social inclusion. This paper presents an overview of the topic, the results of ongoing research on the urban and social effects of cable-cars in the cities of Medellin (Colombia), and the perspectives for the cable-cars in Caracas (Venezuela), Rio de Janeiro (Brazil) and La Paz (Bolivia). It is argued that whilst the mechanics of cable-car systems is identical, once put in context each system is highly different in its urban implications and social effects. There appears to be a typology emerging based on different urban functions, each of which has particular consequences for social inclusion in city life for the urban poor, mediated by public/private ownership, integration to existing mass-transport infrastructure, tariff policies, and political conjunctures.

## 1. Introduction

There has been a fast-expanding interest in cable-cars as part of urban public transport systems since the introduction of the first one in Medellín (Colombia) in 2004. There are now two operating in Caracas (Venezuela), two in Rio de Janeiro (Brazil), and three in La Paz (Bolivia), and all four cities have plans to implement more lines. Colombia s capital Bogotá is about to start work on the first of three lines and more recently the Chilean government announced cable-car systems for Antofagasta and Valparaiso.

This represents a startling innovation in urban public transport, and not only in the sense of the recycling of old, ski-slope and tourist-site technology into everyday use in urban areas. The most striking thing is the implementation of such systems in the poorest and most inaccessible sectors of cities. Cable-car systems have the obvious advantage of being able to reach steeply inclined areas otherwise difficult to access by conventional road-based means. Such areas are generally inhabited by the urban poor, often through historical processes of informal development. The topographical challenges to road access are therefore combined with basic infrastructure limitations and dense development. Significant road improvements in such areas would be extremely costly not just economically but also in political terms due to the population displacements involved.

Cable-car systems therefore have a positive social dimension denied to road-based transport. Major road improvements or urban motorways frequently cut aggressive swathes through poor urban areas, restricting local communication and deteriorating the environment. Cable-cars, on the other hand, sweep quietly and

cleanly over residential areas. They have a completely different aesthetic, and tend to attract visitors even to dangerous areas rather than provoke abandonment and decline. The sense of social inclusion which a cable-car can bring is therefore more than a simple act of improving mobility and facilitating fuller access to the city; it also operates at the symbolic level.

Cable-cars do, of course, have their limitations. They are not mass-transit systems, with their capacity effectively limited to around 30,000 passengers/day, and whilst they are convenient for moving people they are of limited use for transporting goods. They do however have considerable political attraction, being relatively cheap, quick to build and with a high impact factor.

This paper firstly provides a conceptual introduction to the question of mobility and its relation to poverty reduction and social inclusion. Secondly, it describes the growth and future projections of cable-car systems in Latin American cities, and the analyses the social and political issues that existing projects have brought to attention. Thirdly, the paper concludes with a provisional typology of cable-cars as urban infrastructure projects, and some practical recommendations concerning the implementation of cable-car systems and the direction which further research might take.

## 2. Mobility and cable cars: ideas and experiences

This section introduces briefly some of the ideas and arguments which help explain the attractiveness, and limitations, of cable-car systems. Beyond the obvious advantages of connecting poor communities in inaccessible areas, it poses the question as to what extent a cable-car can extend the reach and efficiency of a public transport network and contribute to poverty reduction and increase social inclusion.

Much contemporary discussion hinges around the multiple understandings of the term mobility. In general terms, mobility is understood as a defining characteristic of flexible, globalised economic organisation, within which the ability to be mobile, real or virtually, is a social requirement for individual participation in economic and social life. Mobility has been hailed as the new paradigm for the social sciences (Sheller and Urry, 2006; Urry, 2007), replacing the solid structures of institutions as the foundational principle of social organization. Mobility, it is argued, is a new form of capital, thereby raising the stakes of the transport question from a functional to a structural level. For Kaufmann et al. (2004), transport infrastructures and *access* to them (in terms of availability, cost and other constraints) is just one dimension of motility, the others being the *competences* required (whether physical, cognitive or organisational) and the mode of *appropriation* or the needs, plans, aspirations, motives, strategies of being mobile.

The extent to which the sociological understanding of mobility/motility is shared by transport planners and city administrators is questionable. Certainly accessibility is an increasing concern, albeit in a limited form. On the other hand, the complex and overlapping rhythms of contemporary life, in which mobility patterns are individualized and fragmented, makes coordination across physical and social space a major challenge, for individuals and experts alike. Modeling multi-modal and multi-purpose journeys, as well as the qualitative factors influencing trip decision-making, is a major technical challenge for transport planning. Understanding the mobility patterns of different social groups is of vital importance (Avellaneda and Lazo, A. 2011; Ureta 2008; Jensen, 2009; MacDonald and Grieco, 2007), and failure to do so can lead to serious problems in major public transport system implementation (Jirón, 2014).

Perhaps the most problematic aspect concerns the social assumptions behind transport planning. Whilst regular movement patterns clearly exist, this does not necessarily imply uniform or common mobility

goals and aspirations. Transport modeling tends to assume a standardised social structure and normatised mobility behavior or, at least, that transport planning can be undertaken reasonably on such a basis.

The above has important implications for poverty reduction and social inclusion, on which there is a broadening literature (Kenyon and Lyons, 2002; Preston and Rajé, 2007; Ohnmacht, Maksim and Bergman, 2008; Jiron, Lange and Bertrand, 2010). Access to transport facilities is deemed a condition for the full participation in urban economic, social, cultural and political life, yet this high moral pretension tends to underestimate the fragmented and increasingly unequal nature of contemporary urban societies. In transport planning practice, this complex question tends to be reduced to the question of transport costs (in time and money). Whilst this is undoubtedly important, especially for the urban poor whose transport costs can be a high proportion of total family income, it does not necessarily follow that poverty will be reduced and social inclusion increased. Research on the effects of the Medellín Metrocables ( Davila, 2013), for example, reveals that over the first 5-year period of operation there was little increase in non-essential trips and that the rise in living standards in the area of influence was inferior to that of the city average.

Transport and mobility studies tend to focus on the demand side and the recipient population, yet transport infrastructure provision has a long historical association with the exercise of government power and state spatial control. Accessibility is bi-directional. The Medellín study (Brand and Davila, 2011; Davila, 2013) highlighted the phenomenon of increased institutional presence and state control via the city s Metrocables, over what was a largely a no-go area for the rest of the city, and a highly restricted and conflictive field of action for local government operations. This aspect can be seen in subsequent cable-car systems in other cities, most notably Rio de Janeiro, increasingly associated with slum tourism .

At the same time, this state presence, as expressed through capital investment, the innovative application of technology, institutions working in permanent and close relation to local communities, figuration on the urban agenda, and national and international attention, all contributed to the de-stigmatisation of the area, and the creation of authentic *sensations* of inclusion on the part of residents. For their part, city administrators could also enjoy national and international recognition, further enthused by the fact that a cable-car system can be designed, contracted and built within the mayoral period of office.

In short, the politics of cable-cars is a complex issue involving many factors. Whilst the Medellín case was technically-led and carefully administered within an overall plan for the development of an integrated public transport system, this has not always been so in other cities which have adopted cable-car technology. Without due regard to the basic questions of natural topography, urban morphology, effective social demand, inter-modal connection, tariffs and so on, there is no guarantee that a cable-car will function effectively even in the most basic sense: as a simple transport system. The importance of these issues, explored initially in the case of the Medellín Metrocables, will be evident in the description of the introduction of cable-cars that followed in other Latin American cities.

## 3. The growth of cable-car urban transport in Latin American cities

This section outlines the expansion of cable-car systems across Latin America, highlighting the different politico-administrative conditions, technical characteristics and urban implications that cable-cars have acquired in the process.

### 3.1 Medellín: the pioneering experience

The first cable-car system was built in Medellín and came into operation in 2004. Known as Line K, it became the reference for future projects, and as such its origins deserve special attention. Medellin is located in a steep sided valley, and the main metro system had been completed in 1995, running along the valley bottom and through the city centre along an elevated section. Initial use was far below projected levels, with a little over 200.000 passengers/day compared to a capacity of well over 900.000. The metro project had experienced severe delays, legal disputes and over-costs, and there was an urgent need to get more passengers on to the metro.

These potential passengers were located on the steep hillsides, usually with very limited road access. As chronicled in Dávila (2013), the metro company began developing the idea of a cable-car system to bring passengers down the hillsides. When the idea was presented to mayoral candidates in the year 2000, it was received with incredulity and some ridicule. However, the only candidate to give outright support to the project turned out to be the electoral winner, and work began immediately with the technical backing of the French group Poma. There are four points worth emphasising:

Firstly, although boldly pioneering in style, the cable-car was based on coldly calculated transport engineering and financial considerations. An agreement was reached under which the metro company would finance that portion of total capital costs which could be recuperated over a ten-year period (45%) through increased passengers, whilst the city authority would finance the rest (55%) as social investment.

Secondly, the metro company is publicly-owned, property of the Medellín city authority and the Antioquia province. This facilitated the articulation of the cable-car into the integrated public mass transport system; it was, de facto, part of the metro system itself. Not only was there a functional articulation but also one of tickets and tariffs. The metro operates on the basis of a single fare for any journey, and as the cable-car was part of the metro (Metrocable), its use involved no extra cost for passengers who would use the main metro itself. This meant considerable transport cost savings for users involved in long journeys previously involving bus-bus or bus-metro trips, especially low-paid workers in the formal sector.

Thirdly, it was only after the completion of the project that its urban-upgrading potential was realised. As mentioned earlier, the first Metrocable was built in the poorest and most infrastructure deficient sector of the city. With its origins in informal development and land invasions in the 1950 the century it was also the most densely developed sector of the city (reaching 440 dwellings/ha), and although well serviced in terms of basic public services, it was severely lacking in terms of housing quality, public space, education and recreation facilities, environmental protection, and so on. Describing new urban interventions as part payment of the city s historical debt to the sector, subs administration used the Metrocable as an axis for more integral urban upgrading, and the area became the experimental ground for what was termed social urbanism . Over the period 2004-2010 investme complementary urban projects was seven times more than the cost of the Metrocable itself.

Fourthly, the urban sector was the afflicted by extreme violence, centre of the Pablo Escobar cartel, and substantially outside state control. The Metrocable not only increased mobility options for the urban residents but also improved accessibility to the sector from outside . What impenetrable and stigmatized sector of the city suddenly became more accessible for public sector officials of all kinds, facilitating a gradual formalisation of relations to the city and the extension of state control. The Metrocable also became an instant tourist attraction for city residents, who could now glide securely over a vast area of the city completely unknown to them before, and this tourist element became consolidated with the later construction of a second cable system linking the terminal station to a new

**Figure 1: MEDELLÍN cable-cars: basic data**

Line K, Medellin

Line J, Medellin

| | Line K | Line J | Line L |
|---|---|---|---|
| **Inauguration date** | 2004 (August) | 2008 (March) | 2010 (February) |
| **Construction time (months)** | 14 | 15 | 10 |
| **Length (kms)** | 2.072 | 2.782 | 4.479 |
| **Travel time (minutes)** | - | - | - |
| **No. of stations** | 4 | 4 | 2 |
| **Average distance between stations (ms)** | 690 | 927 | 4,479 |
| **No. of gondolas** | 93 | 119 | 27 |
| **Operating capacity** | 3,000 passengers/hour | 3,000 passengers/hour | 1,200 passengers/hour |
| | | | |
| **Operating company** | Metro de Medellín (public) | Metro de Medellín (public) | Metro de Medellín (public) |
| **Construction company** | Poma | Poma | Poma |
| **Total cost ($US millions)** | 24 | 47 | 21 |
| **Cost per km** | 11,2 | 16,9 | 4,7 |
| **Finance** | Metro de Medellín/ Municpality | Metro de Medellin/ Municpality | Metro de Medellin/ Municpality |
| | | | |
| **No. passengers/day (weekdays)** | 45,000 (average total for both lines) | 45,000 (average total for both lines) | - |
| **No. passengers/day (weekends)** | - | - | - |
| **Basic tariff 2015** | COL$ 1,810 (US$0.75 approx.) | COL$ 1,810 (US$0.75 approx.) | COL$4,200 (US$1,75); from COL$200 (US$0.1) for local residents. |
| **Subsidised (Yes/No)** | No | No | |
| **Integration to mass transport system** | Yes (direct connection with metro station) | Yes (direct connection with metro station) | Yes (connection cable and metro stations) |
| **Tariff integration** | Yes | Yes | No |

public park above the hillside. The Metrocable and associated upgrading projects were the civic complement to increased police and military presence (Brand, 2013).

The above points are key considerations for understanding the success of the first ever cable-car as part of an integrated public transport system in poor urban areas. Its impact was considerable, attracting huge interest in specialist journals, the international media and among city administrations. The Metrocable and Medell n model received recognition from the Organisation of American States, and numero delegations arrived from other cities. For city mayors, the cable-car was seen as a relatively cheap and politically attractive way of addressing the problems not just of transport and mobility, but also of social inclusion and the integration of marginalized sectors into city life; and all within the political time-scale of an electoral period.

Medellín itself went on immediately to build a second line but with some import differences. The Line J was completed four years later in 2008, involving the same principles of co-financing, ticket and tariff integration (increasingly extended to connecting bus services), the complementary upgrading projects of social urbanism , and implementation in what had then become the most violent and out-of-control s of the city. However, the close relations with the local communities weakened, and more significantly, the line connected to the main area of expansion for social housing. The various possibilities of cable-cars became evident.

### 3.2 The first follow-up: Caracas

Caracas was the second city in Latin America to implement a cable-car system, in early 2010. Undoubtedly influenced by the Medellín experience, the troubled relations between the Colombian and Venezuelan governments probably explain the lack of direct consultation with Medellín and the presence of a new technology supply company Doppelmayr of Austria and a Brazilian company responsible for the civil engineering works. Nevertheless the technology itself is essentially the same, although the nature and effects of the Caracas Metrocables show some distinct characteristics.

***San Agustin Metrocable 2010***

The San Agustin Metrocable was led by central government rather than the city administration. President Hugo Chavez, who s Socialism in the 21st Century government was still fuelled by high oil decided on its implementation in the San Agustin neighbourhood, historically famous for its militancy against earlier dictators and corrupt capitalist governments. It was, in short, a political decision, but also one that what have serious practical disadvantages. The San Agustín neighbourhood occupies a small hill in central Caracas, bordering a main road. Its population was relatively small and although steep sides made access difficult, it was questionable, from a technical viewpoint, whether such a small neighbourhood justified such a large capital outlay. In the event capital costs soared over the construction period. Passenger numbers have remained low, around 6,000 per day, compared to the operating capacity of 15,000 (Naranjo, 2013).

The cable-car system has a U-shaped form, starting and finishing at the same major road, connecting with a metro station at one end and bus services at the other, with three stations on the top of the hill. The main complementary urban project is a large cultural centre serving a wider population. As with all public transport in Caracas, the cable-car is publicly owned and operated, and heavily subsidised.

**Figure 2: CARACAS cable-cars: basic data**

The San Agustín Line (2010)

The Mariche express line (2013)

| | San Agustin | Mariche | Petare (cable tren) |
|---|---|---|---|
| **Inauguration date** | 2010 | 2013 | 2014 |
| **Construction time** | - | - | 5 años (first fase) |
| **Length (kms)** | 1,8 | 4,5 | 0,9 (first fase) |
| **Journey time (minutes)** | 12 | 17 | 4 |
| **No. of stations** | 5 | 2 | 3 |
| **Average distance between stations (metres)** | 600 | 4,500 (express line) | 450 |
| **No. de gondolas** | 32 | 120 | (2 trenes) |
| **Operating capacity** | - | - | 3,500 hora/dirección (complete project) |
| | | | |
| **Operating company** | Metro de Caracas (public) | Metro de Caracas (public) | Metro de Caracas (public) |
| **Construction company** | Doppelmayr-Oderbrecht | Doppelmayr-Oderbrecht | Doppelmayr-Oderbrecht |
| **Total cost (millions US$** | 318 (including complementary works) | 505 | - |
| **Cost per kilometre** | 176 | 112 | |
| **Finance** | Gobierno central - FONDEN | Gobierno central - FONDEN | Gobierno central - FONDEN |
| | | | |
| **No. passenger/day (weekdays)** | 7,000 8,000 | 25,000 | 20,000 22,000 |
| **No. passengers/day (weekends)** | - | - | - |
| **Tariff** | - | - | - |
| **Subsidised (Yes/No)** | Yes | Yes | Yes |
| **Tariff integration** | No | No | No |
| **Integration with mass transport system** | Yes (metro station Parque Central) | Yes (metro station Palo Verde lifts under construction) | Yes (metro station Petare) |

***The Mariche express cable-car***

The second Mariche cable-car has vastly different characteristics. Inaugurated in 2013, it consists of a 4.5 km line connecting the city centre to the outlying suburbs, with no intermediate stations. The Mariche cable-car enables efficient access to hilly areas above the city centre which are otherwise poorly served by existing road infrastructure, cutting travel times considerably. A second almost parallel line is planned in the future to provide access for more in-lying areas. Capital costs per kilometer were considerably less than the earlier San Agustin line.

The publicly-owned transport system facilitates articulation to the integrated mass transport system via a metro station in the city centre terminal. The current options are a steep stairway or a short shuttle bus service, but works are underway to provide direct lift access between the two terminals. Use has been high, with an estimated 25,000 passengers/day.

### 3.3 Rio de Janeiro

The first urban transport cable-car in Rio de Janeiro, completed in 2011, was undertaken in close cooperation with Medellín. The Medellín Metro company acted as consultant and the cable technology was supplied by the same Poma Group. It was built in the Complexo do Alemão favela, as renowned as the Comunas 1 and 2 of Medellín for its violence, drug-trafficking and conflict with the city authorities. Its success, however, has been much more limited than that of Medellín.

The Complexo do Alemão has similar origins and urban characteristics to the Medellín case, but with poorer levels of basic service provision. Population density is high (over 300 inhabitants per hectare) and the street network narrow and tortuous on steeply-sloping hillsides. Public transport was largely informal vans and motorcycle-taxis. The city authorities began developing an urban upgrading project in 2007 known as the Programme for Accelerated Growth (PAC) inspired by the Medell n exp urbanism , initiated in the Complexo do Alemão en 2008 (Amorim da Silva, 2013). The area seemed ideal for the replication of the Medellín Metrocable, but the practical experience has been plagued with difficulties. Designed with a capacity similar to that of Medellín (30,000 passengers/day), use by residents remains low (6,000 passengers/day initially and currently around 12,000 passengers/day on average, more than half of which are estimated to be non-residents, principally local and national tourists (SuperVía, 2013).

- The importance of topography. The Complexo do Alemão, consisting of fifteen informal neighbourhoods, is built on a sequence of hills known as the Sierra de la Misericordia. The cable-car stations are situated on the top of each hill, so that users are restricted to the population on the upper part of the peaks; access further down involves walking long distances or climbing steep stairs paths.

- Transport system articulation. The main terminal of the cable-car links with a station of a suburban rail line. In principle this is positive but the suburban service is inadequate. The Complexo do Alemão is close to a major road, so that the motorbike-taxi and bus alternative is still an attractive one. Furthermore, the cable-car is run on the basis of a private concession. Residents of the sector have the right to two free journeys per day, extra journeys have a preferential cost (R$1) compared to that for non-residents (R$5). A municipal public transport system also means that integrated fares and ticketing is limited, and the cost of public transport in general is a very sensitive political issue in the city.

**Figure 3: RIO DE JANEIRO cable-cars: basic data**

Complexo do Alemao cable-car

Providencia cable car

| | Complexo do Alemao | Morro da Providencia |
|---|---|---|
| **Inauguration date** | 2011 (July) | 2014 (July) |
| **Construction time** | - | - |
| **Length (kms)** | 3,5 | 0,72 |
| **Journey time (minutes)** | 16 | - |
| **No. of stations** | 6 | 3 |
| **Average distance between stations (metres)** | 700 | 360 |
| **No. of gondolas** | 152 | 16 |
| **Operating capacity** | 3,000 passengers/hour | 1,000 passengers/hour |
| | | |
| **Operating company** | SuperVía Trens Urbanos (private) | Consorcio Porto Novo (private) |
| **Technology provider** | Leitner-Poma Group | Doppelmayr |
| **Total cost (US$ millions)** | 103 | 38 (R 75 millones) |
| **Cost per km** | 29,4 | 52 |
| **Financiación** | Government | Consorcio Porto Novo |
| | | |
| **No. pasajeros día (semana)** | 12.000 (average for week) | * |
| **No. pasajeros día (fin de semana)** | - | * |
| **Tariff** | RS 1,00 (US$ 0,32 abril 7, 2015) (for residents of area) | Free during trial period |
| **Subsidised** | Yes (two free journeys per day, for residents) | Yes (in trial period) |
| **Tariff integration** | Yes | * |
| **Integration to mass transport system** | Yes (suburban train station) | Partial (Central train station) |

- Inconsistent urban upgrading. The PAC programme, of which the cable-car forms part, has received considerable criticism. It is argued that the cable-car, which accounted for more than a quarter of the overall budget, did not respond to community priorities and like many projects, was carried out with insufficient community participation. Evictions caused by project construction, although in most cases involving aided relocation in new nearby housing developments, also caused widespread concern. Many small-scale projects suffered delays and incompletion.

- State presence/pacification. Despite Brazil s progressive urban legislation (Cities Statut conflict continues to dominate most of Rio de Janeiro s favelas. The Pacificatio conceived as a way of community policing, has come under intense criticism for its militarization of the favelas, corruption and human rights violations.

The Rio de Janeiro experience highlights the importance of urban context in a number of ways. Whereas the first Medellín cable-car had an important effect of creating sensations of social inclusion, Rio s first cable-car has, if anything, accentuated local discontent and conflict. The wider urban context also needs to be taken into account. Rio de Janeiro s commitment to mega-projects such as the World Cu Olympic Games has provoked widespread protest over their social consequences. The fact that the Complexo do Alemão cable-car is becoming more of a tourist attraction than a local transport facility offering greater mobility to local residents only serves to accentuate local discontent.

Rio de Janeiro s second cable-car became partially operative in September of 2014. Less than a kilometer long, it connects the main railway station to a major redevelopment project in the old port area of Porto Maravilha, passing through one of the oldest favelas of the city. Opposition has been fierce.

### 3.4 High stakes in the high Andes: La Paz/El Alto

President Evo Morales inaugurated La Paz s three new cable-car systems in July 2014. Two of Red and Yellow lines) connect central La Paz with its municipal neighbor El Alto, which stands on a plateau high above the rocky valley in which sits the country s capital. The president had vis and was apparently enthralled with the cable-cars there. His closer political ties with Hugo Chávez in Venezuela were probably influential in enabling a quick contract with Doppelmayer.

Certainly the daunting topography of La Paz is ideal for cable-cars, and the very limited road connection between La Paz and El Alto (3,660m and 4,070m above sea level, respectively) were an inviting prospect for cable-car transport. The airport is located in El Alto, but this was not the principal motive. El Alto is a bustling town of 850,000 people (100,000 more than the de facto capital), with close relations to La Paz in terms of the local labour force and an extraordinarily diverse and substantially informal retail market. Each line has one or two stations on the way up, with parts of the terrain is so steep and densely built that even cable-cars stations are difficult to fit in. The third (Green) cable line is but an extension of the Yellow line which leads fairly flatly to the fast-growing middle class and business centre of the capital.

La Paz cable-cars were built in record time. As in Caracas, they were a presidential initiative, and on this occasion the city mayor, of a different political party, was opposed to the project, having his own RBT as an alternative transport programme. The combination of these two factors fast construction, uncoordinated planning, and policy differences between central and city government implied little policy coordination and poor articulation of the different transport modes. Even connection to major

**Figure 4: LA PAZ cables-cars: basic data**

Red Line

Yellow Line

| | Línea Roja | Línea Amarilla | Línea Verde |
|---|---|---|---|
| **Inauguration date** | 2014 (May 30) | 2014 (Sept. 15) | 2014 (Dic.04) |
| **Construction time** | | 16 months (March 2013 July 2014) | |
| **Length (kms)** | 2.660 | 3.880 | 3.830 |
| **Journey time (minutes)** | 10 | 13 | 16 |
| **No. of stations** | 3 | 4 | 4 |
| **Average distance between stations (metres)** | 1330 | 1300 | 1280 |
| **No. de gondolas** | | 427 (total 3 lines) | |
| **Operating capacity** | | 6.000 pasajeros/hour in each line (both directions) | |
| | | | |
| **Operating company** | | Empresa Estatal de Transporte por Cable Mi Teleférico | |
| **Construction company** | | Doppelmayr | |
| **Total cost (US$ milliones)** | | 234.7 (all three lines) | |
| **Cost per km (US$ millions)** | | 22.6 | |
| **Finance** | | Central government | |
| | | | |
| **No. of passengers/day (weeldays)** | 17,805 (15,096 excluding Thursdays average 28,647) | 36,833 | 9,416 |
| **No. passengers/day (weekends)** | 41,244 (Sunday) 18,756 (Saturday) | 36,540 | 11,959 |
| **Basic tariff** | | 3 bolivianos (US$0.42) (2014-2015) | |
| **Subsidised (Yes/No)** | No income excedes operating costs) | | |
| **Integration with mass transport system** | Limited (bus stops) | Limited (bus stops) | Limited (bus stops) |
| **Tariff integration** | No | No | No |

highways and conventional bus routes is weak, whilst integration into the existing urban fabric and future urban development or the upgrading of low-income settlements is precarious.

The cable-cars are run by the public Empresa Estatal de Transporte por Cable - Mi Teleférico. After a short period in operation passenger numbers are encouraging but show some particular characteristics. By December 2014 the Red Line had an average weekday use of 17,800 passengers/day and the Yellow Line 36,800 passengers/day. The Red Line figures for Thursdays and Sundays market days in El Alto rise to an average of 28.600 passengers/day and 41.200 passengers/day, respectively (Mi Teleférico, 2015a). The Yellow and Green Lines also have the highest use on Sundays, Thursdays and Saturdays, in that order, though to a much lesser degree than the Red Line. Another curiosity is the absence of marked peaks in early morning and late afternoon, indicating once again the importance of the El Alto market and suggesting a range of journey motives beyond the typical journey to work.

The existing lines have been sufficiently successful in technical, financial and political terms as to justify central government s commitment to the construction of a further five lines in the combined total length of nearly 20 kilometres, the longest 4.9 kms. This second stage includes complementary urban projects for better articulation to urban context and other transport modes, including for the three existing lines (Mi Teleférico, 2015b).

## 4. Conclusions

The analysis of Latin American cities indicates a considerable diversity of urban experience with cable-car systems. The pioneering Medellín projects quickly developed into a strategy for more integral urban upgrading of poor areas. This strategy, however, has encountered limitations and opposition among community groups, even in Medellín itself. Subsequent projects in Caracas, Rio de Janeiro and La Paz/EL Alto have adopted weaker or less defined urban development aims.

A typology of cable-cars seems to be emerging. Whereas the technological component is identical in all cases, this standardized technological system acquires vastly different connotations according to the urban context within which it operates. This can be partly explained by the planned intentions behind the introduction of such systems, but the fuller implications the integral effects on the areas of influence is emerging through practical experience over time, a learning curve which can produce unexpected outcomes, especially in the face of experimentation and sometimes improvisation in the planning process itself. Four different but sometimes overlapping urban characteristics can be identified:

- Urban upgrading/pacification/tourism: This is the case of the earliest cable-car systems built in Medellín, Caracas and Rio de Janeiro, where the urban upgrading and social aims of cable-car were combined (though to a lesser extent in Caracas) with security issues and the re-establishment ( pacification ) of state (police/armed forces) control. Slum tourism has been an ironic off-shoot.
- Urban expansion/suburban transport: the second cable-car systems in Medellín (Line J, 2008) and Caracas (the Mariche Metrocable, 2013), and the Green Line (2014) in La Paz/El Alto, are basically suburban transport systems related to urban expansion plans with little or no social or urban improvement pretensions.
- Intra-metropolitan connectivity: the Red and Yellow lines (2014) in La Paz connect the m12unicipalities of La Paz and El Alto, dominated by labour market and street market considerations in this increasingly diversified and segregated metropolitan context.

- Property development/large-scale projects: The latest (Providencia) cable-car system in Rio de Janeiro, although combining the pacification pretensions of the first (Complexo do A project, is closely related to the major Porto Maravilha waterfront redevelopment project.

Within this diversity of urban intentions, the rationale of transport seems to be replacing the more socially-centred logic of mobility. This is not to imply, however, that cable-car systems have been implemented within the systematic development of an integrated urban transport system. Cable-cars are politically attractive, having an important novelty factor, a high aesthetic impact and are developable within the time-scale of a city administration. Public transport oriented cable-cars have often been built without adequate planning. Furthermore, the two technology companies present in Latin America have clearly seen new market openings, having established regional offices (Poma has subsidiaries in Colombia and Rio de Janeiro; Doppelmayr has regional offices in these two countries plus Argentina, Chile, Venezuela and Bolivia) and are clearly keen to develop this market potential not only for urban public transport but also on visitor sites within a growing tourism industry in Latin America.

As existing cable-car systems consolidate and new ones come into operation, the monitoring and evaluation of their spatial, social and political implications provide a compelling area for further research.

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# Ethics and Transport Policy: a working paper


## ABSTRACT

This paper outlines the ongoing work of a partnership between UCL s Transport Public Policy. This is a multi-disciplinary project intended to bring together academics from disciplines such as moral and political philosophy, civil engineering, geography and transport and town planning combined with contributions from policy makers. The project has explored the hypothesis that, whilst transport decisions may have considerable distributional effects, ethical considerations are rarely explicitly considered in the policy making process. Unacknowledged ethical assumptions such as those implicit in decision support tools like cost benefit analysis have been examined in order to understand their impact on policy decisions. The paper considers three different ethical theories through the lens of transport policy making utilitarianism, the capabilities approach and the work of John Rawls. The paper concludes with a snapshot of one of the positions developed and the argument that if transport is treated as part of the welfare state then this opens policy making up to the consideration of a wider range of values than is the case under current practices.



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## Introduction

This paper sets out an initial report on a work in progress. This is an initiative Institute in partnership with UCL Public Policy. The Transport Institute works across the University to foster cross-disciplinary transport research and increase the policy impact of that research. UCL Public Policy is an initiative from the Vice Provost again aimed at enhancing impact and the engagement of policy makers in UCL research. This particular initiative aims to examine the role of ethics in transport policy making with the aim of producing a series of policy recommendations. Our contention here is not that current practices are unethical *per se* but rather that ethical considerations are in the background or worse still unacknowledged. The aim of the paper is to set out, first, the approach and second, some of the ethical theories examined and positions developed by the multi-disciplinary group of practitioners, geographers, moral and political philosophers, civil engineers, planners and transport specialists. In examining the different ethical theories it is hoped that this may contribute to a process of bringing ethics and the ethical implications of transport policy to the fore, something we would hope would enable policy makers to become more aware of the frameworks they are using and the limitations of different ethical theories. In place of a conclusion this paper closes with one of the positions currently under development as an example of the approach taken.

**Work in progress**

As this is a work in progress we are happy to invite comment from fellow academics. To begin with it is useful to set out the approach we have taken as there are some differences from one that a conventional study might adopt. The first major difference is the lack of what would n starting point of a piece of research, a systematic review of the literature. This does not mean that no use has been made of academic literature, something that will be discussed in more detail later in the paper, but rather the starting point of the enquiry has been the intuition that ethics has been poorly addressed in current UK transport policy making. This approach stems from the way in which philosophy with its emphasis on argumentation and conceptual clarity appears much more comfortable working from a much smaller evidence base than many of the more empirical disciplines involved.

This intuition has been largely confirmed in interviews conducted with practitioners and academics involved in transport policy making and research. Whilst it is possible to find individuals that are open to or interested in the ethical implications of their work or their research it was hard to find anyone who believed that current practice conceived of transport policy making in explicit ethical terms. Responses, such as the quote below, suggest that whilst the ethical *content* of transport decisions were sometimes acknowledged there was resistance to considering transport decision-making as an area where the explicit consideration of ethics has a role to play.

> I don t consider it ethical its just the right thing to do ethical is not use (Academic Interviewee)

This may well reflect the commonly held view that value positions are in some way a matter of personal preference and that practice and policy making ought to, in some way, remain value free. Something that from a philosophical perspective is in itself a value position (Wolff, 2010). This is not to say that different issues that could be considered ethical are not under consideration in transport policy making. The group has heard evidence from the UK Department of Transport (DfT) on the way in which distributional issues are considered part of the WebTAG (DfT, 2014) transport appraisal process. This indicates there is certainly more than the conventional cost benefit analysis methodology at play in policy making. Where, as discussed below, this creates a problem is when the normative positions inherent within tools such as cost benefit or distributional analysis are unacknowledged.

There has been little in the way of consideration of transport issues in the work of philosophers contributing to public policy, this may be as the moral philosophical issues are not as interesting to philosophers as, for example, the clear ethical questions that surround issues such as abortion, assisted dying and drugs policy. Indeed with its emphasis on argumentation, the identification of novel, even irritating positions that are resistant to refutation (Wolff, 2011) the probl transport policy making present difficulties for philosophers and those working with philosophers. In particular the trade-offs between what is technically possible, environmentally desirable, fundable or politically acceptable create a gulf between the reality of policy decisions or project implementation and the absolute positions reflected in different ethical theories. For philosophers inconsistency in positions is often seen as refutation, undermining the position adopted, in contrast inconsistency in public policy is common and does not necessarily provide a justification for alternative policy (Wolff, 2010). Yet from the perspective of researchers in transport policy there has been some interest in philosophical frameworks for transport decisions (Tyler, 2004; Martens et al., 2012; Van Wee and Roeser, 2013). One feature of some of this work is a tendency to seek to replace one ethical framework with another (Tyler, 2004; Martens et al., 2012). From the perspective of this enquirey it is probably the work of Van Wee and Roeser (2013) that is most interesting as it considers selecting different ethical theories and how they might be incorporated into existing practice.

**Role of Philosophy in Public policy**

In contrast to those that seek new ethical models for transport decision-making the aspirations of this project are, less overtly ambitious. The aims are not to convince policy makers that they are in some way wrong or that the positions they adopt are in some way *un*ethical. To do so would risk confirming the worst stereotype of academic practice in explaining to hard pressed practitioners that what they are doing is wrong based on a process of abstract theorising. Notwithstanding t

practitioners has confirmed the belief that there are aspects of transport policy making and practice that make the implementation of measures to which they are committed, difficult. These commitments, although as the above quote suggests, are often not expressed as such, take the form of ethical positions. These are questions of what is the right thing to do about the ratio of cyclists right thing to do in increasing mobility and making public transport more accessible. Wha thing to do in managing the distributional effects of transport infrastructur born by the most vulnerable.

The aims of the project are also, on the face of it, more modest than the top-down theorising characterised (or possibly caricatured) above, what is adopted here is a more bottom-up problem-driven approach to applied ethics. One where the task is to;

> try to understand enough about the policy area to be able to comprehend moral difficulties, and then to connect those difficulties or dilemmas to patterns in philosophical reasoning and reflection. (Wolff, 2011)

The multi-disciplinary nature of the groups has been invaluable in gaining the necessary understanding of the policy area. In addition to this there has been empirical research such as interviews, focus groups and review of policy tools. Yet in seeking to connect dilemmas, such as the ethical dilemmas, identified by practitioners, discussed above, the project aims go beyond simply making the connections. We contend that in making these connections overt we are contributing to making more transparent what is often implicit in transport policy making.

This practice of seeking to make explicit what is implicit is of particular relevance to the interaction between philosophy and public policy. This is a practice and application of philosophy that can be seen in the work of Michael Sandel who, in his teaching on *Justice* seeks to draw out the ethical and value positions that underlie current political debates on issues such as the valuation of human life, property rights and same sex marriage (Sandel, 2011). Policy problems do not begin from a blank sheet; there is always a bias towards the *status quo* with changes requiring justification. Therefore it is worthwhile to both draw out the implicit value positions within the *status quo* and to examine the justification, in terms of values, for any changes.

This is one possible contribution of philosophers, or at least a philosophical approach: the examination of different arguments, distinctions and ways of reframing questions. This may not be restricted to philosophers, as many academics are capable of adopting a similar approach, yet it is seen as something that senior decision-makers and public figures often struggle with (Wolff, 2010). Whilst this is a valuable role played by any academic involved in the policy making process, and something that fits well with current expectations of academic impact, this does not necessarily discount the role of philosophical positions in longer term shifts in values. Pointing out that a situation is unjust or ethically inconsistent may not bring about its immediate resolution. However it may contribute to a wider shift in values. If one takes the example of slavery, an economic justification is now inconceivable in almost all societies yet prior to abolition contemporary arguments certainly weighed costs of compensation against extending principles of individual freedom to all. In the same way it may be that in exposing the inconsistency and intolerable conditions that are currently accepted in transport policy making a contribution can be made to future debates where cyclist fatalities, pollution or unequal distribution of costs and benefits are considered as intolerable as we now consider slavery.

**Ethical theories examined**

The following section of this paper sets out the ethical positions examined as part of this research. It is far from an exhaustive review of different possible ethical theories but rather an examination of key ethical positions that appear to have some relevance to transport policy dilemmas. In each case a full analysis of the philosophical position considered is beyond the scope of this paper. Rather each position is considered through the lens of transport policy with the discussion hinging on the value or difficulties created by adherence to or ignorance of the ethical framework that underpins policy. The first of these frameworks considered is utilitarianism, as one would expect there is a long history of its application via cost benefit analysis (CBA) and an equally long history of criticism of its use in transport policy

making. Following this there is a discussion of the essentialist positions that are currently associated with the work of Nussbaum and Sen and their application to transport policy via the establishment of minimum standards of, for example, accessibility. Finally there is a discussion of the work of Rawls and the way in which transport can be treated as a means of accessing primary opportunities and self-respect, crucially these are the type of goods distributed by government and have a bearing on the design of public institutions.

**Utilitarianism and Cost Benefit Analysis**

The prominence of utilitarianism in transport policy making is through its provision of the foundations for the commonly used practice of CBA. Its basis on the principle that the total benefits of a decision ought to outweigh the total costs was conceived, in its early use in infrastructure decision-making as an alternative to decisions where benefits accrued to a small minority or interest group (Shapiero and Schroeder, 2008). Indeed Bentham s original concerns that government s role was total of happiness or utility was similarly a challenge to decisions taken in the interests of an, then aristocratic or wealthy, elite. In this light it is clear how Bentham s utility principle has as self-evident. As its application through the techniques and practices of CBA has been developed and refined it has increasingly become seen as a value neutral decision support tool (Mackie, 2010). It is useful to first deal with the fundamental criticisms of utilitarianism and its application through CBA and then to consider why and how it has come to be seen as in some way value free and the consequences of this.

One important fundamental criticism is of the utility principle itself. As an alternative to the benefits of government action accruing to an already wealthy elite the idea that the benefits ought to be maximised across the population has an in intuitive appeal. However the wholesale adoption of this principle may conversely make it harder to argue for costly measures that benefit a *dis*advantaged minority as, in some cases, greater utility could be achieved if the same resources were used for improvements that benefit the majority. *In extremis* the adoption of the utility principle can allow, what are from an alternative ethical perspective, major injustices. In the case of transport this could be the loss of property or even life. The response to this is that in reality CBA never quite functions in this way as it is contained within a range of alternative moral positions. For example one could not conceive of a justification for a transport intervention that resulted in the death of even a single named identifiable individual, no matter how great the benefits were. While it is true that the cost of human life is often included within CBA it is in a highly abstract form such as the increased risks of death or injury distributed amongst a large group.

Even if we accept that the fundamental objections to utilitarianism as permitting injustice are addressed in the practices of actual CBA there are further problems with the utility principle. The way, in current practices, money is taken as a suitable proxy for utility shows up some of these objections. The economic models on which CBA relies assume the maximisation of economic benefits is a self-evident good. As Frank (2001) points out everyone, rich and poor alike are seen as having an interest in maximising the economic pie as everyone will get a larger slice. Yet this ignor and the potentially corrosive effects of high levels of inequality (Wilkinson and Picket, 2011). Indeed it may actually be better for economic benefits to be evenly distributed even if this is at a cost to overall economic growth. Overall utility or economic growth may actually have to be reduced if distributional fairness is to be achieved. The monitisation of benefits is also, potentially problematic due to the inherent biases that may occur. As it has been noted the value of a unit of currency is not the same to everyone (Self, 1970) and the use of money as a proxy for value may well entrench existing inequalities in wealth as costs to the wealthy, measured in financial terms, tend to be greater than costs to the poor. There is also some criticism that this ignores externalities by favouring costs and benefits that are monetisable, however unless we accept that there is some fundamental objection to seeking to place a value on some things then this objection, at least theoretically, can be overcome. The response from advocates and practitioners of CBA is that in real life decision-making values are always assigned and weighed against each other. The limitations of the tool are acknowledged yet it is still seen as a better alternative than anything else on offer. One response from practitioners was to ask what alternative there was to CBA. These justifications are in many ways compelling, also as Sen (2000) points out so

to is the language of costs and benefits. It would be hard to argue the reverse, a course of action with high costs and little benefit. Therefore it is possible to find quite broad acceptance of the, albeit contentious basic principles (ibid) without acceptance of all of the current practices.

Examining some of the other claims made for CBA is necessary if we are to understand why it has come to be seen as in some way value neutral and the consequences of this. It is claimed to be a means of preventing inefficient decisions (Sunstein, 2001) and overcoming the rational failings of political institutions (Richardson, 2000). This establishes efficiency as a key value in decision-making, possibly to the exclusion of others such as justice or fairness. The implication that other (political) forms of decision-making are in some way inefficient is important here. In the practice of CBA this can be seen in the blurred distinction between CBA as a decision *support* tool or as a decision-*making* tool. The argument here is that if, as those advocates of CBA argue, the solution to the problems are more and better data (Vickerman, 2007) then there comes a point at which, when all relevant values have been included, it becomes hard to claim that it is supporting decisions. If one assumes that all relevant values have been calculated and weighed up then it becomes hard to argue for any conclusion other than the one reached by the analysis. This lends governmental authority to the tool and the principles embedded within it (Dean, 1999), in addition it creates a privileged and arguably undemocratic position for the technical experts whose role it is to administer the tool (Dahl, 1989; Fischer, 1990). The practical implication of this is that the judgment of decision-makers is removed or reduced due either to a lack of trust in that judgement, an undue faith in CBA, or both. Where those decision-makers are democratically elected this becomes even more problematic.

The removal of judgement certainly does not remove value judgements from CBA. As Kelman (1981) points out the calculation of values may in itself be a mathematical exercise however it is the decisions about what values to assign, and the equivalencies between values where judgements take place. The practices of discounting and reaching conclusions about values based on economic methods such as willingness to pay or willingness to avoid are suspect here, in part due to the reasons discussed above with reference to the way this can favour the more affluent. There are further criticisms of these tools as simplistic and not representative preferences which are often complex with individual preference often shaped by the role or the conditions under which it is expressed. For example I may choose not to donate to the victims of some disaster as an individual but that is very different from stating publically that I do not care about the victims or for that matter electing a political representative who says they would ensure the state does nothing to help those same victims. The strong criticism of CBA here, or at least as it is generally practiced, is that it allows no room for the deliberation of values. Nussbaum argues that this allows us to lose sight of the tragic nature of decisions; some of the i by the application of the utilitarian principle. Deliberation over values has intrinsic worth that is neglected by CBA, something of particular relevance to the planning and delivery of transport infrastructure.

> Awareness of the wrongness inherent in the chosen course of action, ev justified, should not be lost as this can motivate policy-makers to make amends in some way to those wronged, and to try and change the overall situation so that less of these tra arise in the future

The conclusions reached in our study of utilitarianism and its application through CBA are useful in the sense that they illustrate the value of the approach taken to our examination of ethics in transport policy making. Our findings here are that whilst there are flaws within a tool such as CBA the basic principles have considerable justification when its application supports decisions and sits within a wider ethical framework. Where it becomes problematic is when the ethical assumptions and value judgements inherent within the practice of CBA are unacknowledged and it is presented as value neutral. This leads to an assumption that efficient, potentially undemocratic, decision-making and economic maximisation are the dominant values in transport policy. This may be the case however these values would be better acknowledged. This would allow challenges to these values, the consequences of adopting these over other values to be acknowledged and possible alternatives to be suggested. A situation that, if it facilitated deliberation of and some agreement over values, could then allow for CBA or variations on the same, essentially utilitarian, theme such as social cost benefit analysis or multi criteria analysis

(MCA) which claims to bring a wider range of values into calculation (Thomopoulos et al, 2009; OMEGA Centre 2010). Whilst the debate on whether different forms of CBA or MCA are inherently superior is one we have sought to avoid, the question our analysis poses to any such proposed tool is; to what extent does it make the ethical assumptions that are embedded within it transparent.

***Wellbeing***

Before considering an alternative to the utilitarian ethical framework reflected in CBA it is of value to consider another iteration of utilitarian thought with particular relevance to transport policy making. Former London School of Economics economist Richard Layard seeks to update the ideas of Bentl utilitarianism bringing together recent insights from psychology and economics. He calls for policy to be based upon the greatest happiness principle (Layard, 2011) and that actions should be desi increase happiness. Evaluation ought to be against this principle with actions judged on their consequences in increasing happiness or reducing misery for those who are affected with every individual equal in this respect. He argues this offers an alternative to economic principles that establish growing GDP as the ultimate aim and measure of government policy. This is based on a wealth of data that, beyond a certain point, increasing income does not appear to increase happiness. The consequences of this focus on growth, combined with the individualism and restlessness of modern societies have had a negative impact on what he identifies as the big 7 factors influencing happiness (ibid). These a defined, in order of importance as;

1. Family relationships
2. Financial situation
3. Work
4. Community and friends
5. Health

The last two, personal freedom and values are not ranked implying they are of a different order.

The evidence he cites is the declining reported rates of trust, particularly in America and the UK, participation in community organisation and activities, rising job insecurity and rates of mental ill health. He argues that advances in psychology and neuroscience now enable us to treat happiness as something objective and measurable through the observation of brain activity and its correlation with self-reported happiness. Economics, he believes is still valuable in providing a basic framework for evaluating costs and benefits based on the idea of individuals as self-determining agents. However on its own it is limited requiring the input from other social sciences. Layard favours the northern European social democracies as performing better on many of the measures he cites as well as offering greater stability in terms of employment, housing and community. The policy predictions that flow from this analysis are quite radical in some respects. The first is that, as it is measurable governments ought to be in the business of measuring the average national happiness (ibid), something t now undertaking to do (Office of National Statistics, 2015). Taxation has an important role to play and needs to be rethought less as a burden and more as a means of dealing with the externalities produced by economic activity. Here he mostly talks about status seeking behaviour and the negative effect it has on relative social status. However under this he also identifies many of the negative externalities produced by increased mobility, the damage to communities, family life and mental health.

In relation to transport Layard s arguments provide a, somewhat superficial, justification for priva over public transport, for the reduction of long-distance commuting that may have a negative impact on family and community relationships and action on more active travel in order to promote health. However when it is applied to real policy making the question of measurement of happiness becomes apparent. In order to apply Layard s views in the context of transport policy, we still need a universally accepted technical solution of how precisely interpersonal comparisons of utility can be made. Even if it was assumed that it was as possible to objectively measure happiness and unhappiness, for the purposes of transport decision-making there would still be similar objections to those faced by CBA. For example it may have the same bias towards the *status quo* making it harder to subject regular commuters to the misery of disruption in order to carry out upgrades. It may also favour investments to existing infrastructure to reduce the misery of congestion at the expense

may offer regional economic benefits or long-term environmental benefits to future populations for whom levels of happiness can only be inferred.

**Capabilities**

An alternative approach to that of Layard that avoids these criticisms is the focus on capabilities. This approach to human well-being is not merely concerned with achievements (for instance being happy), but rather argues that freedom to choose to live what Aristotle termed the good life importance to a person's quality of life. The emphasis, under the capability approach, is not only on how human beings actually function, but also on their having the capability, which is a practical choice, to achieve outcomes that they value and have reason to value (Sen, 2001). Drawing upon the Aristotelian tradition that posits essential features without which human life Nussbaum (1992) defines ten basic human functional capabilities of these the particular, clear, relevance to the examination of transport policy making.

> 1. Being able to live to the end of a complete human life, as far as i prematurely, or before one's life is so reduced as to be not worth living.
>
> 2. Being able to have good health; to be adequately nourished; to have adequate shelter; having opportunities for sexual satisfaction; being able to move from place to place.
>
> 3. Being able to avoid unnecessary and nonbeneficial pain and to have pleasurable experiences. (ibid)

She states that all are of central importance and all are distinct in quality . Something she argues limits the trade-offs it is possible to make and the scope for forms of cost benefit analysis. A deficit in one cannot be substituted for by an increase in another essential capability. As Sen points out, the freedom to choose is central. Likewise for Nussbaum the role of government is not to push individuals towards choosing to act in certain ways but rather to provide them with the nece establishing minimum thresholds and conditions for individuals to act in ways consistent with their choices. If one takes the first of Nussbaum s capabilities and applies it to tra would be no objections to someone choosing to use a form of transport that was inherently dangerous to the user alone even though it may result in premature death. However if all forms of transport were associated with high risks of death or life altering injury (due to poorly maintained infrastructure, lax safety standards or inherently unsafe transport technologies being the norm) then government would be deficient. It would have failed in ensuring citizens have the necessary resources and conditions and would have in effect removed choice. This is given that the option not to move does not exist, movement being another essential human capability rooted in the experience of embodiment. A concrete example is failure to provide sufficient cycling or pedestrian infrastructure to ensure that there was not an undue risk associated with these modes. Here not moving is not an option, and given that these forms of transport, in contrast to more sedentary modes, also generate good health this provides a strong justification for more investment and a reduction of rather than acceptance of road deaths for pedestrians and cyclists.

One feature of the capabilities approach that proved particularly challenging for the members of the group familiar with transport planning and decision-making was the need to establish minimum thresholds and the inability to trade-off between capabilities. Trade-offs are a well-understood feature of the decision-making around transport infrastructure where it is acknowledged that there are, by definition winners and losers in any transport decision. Furthermore when this is applied to transpor infrastructure the costs of ensuring everyone is above a certain threshold can appear to be prohibitive. To use another real life example there are many rail and underground stations that are not fully accessible to people in wheelchairs, something that appears to violate the principle of allowing everyone the capability to move from place to place. Inaction is justified on the basis that there is insufficient resources to achieve full accessibility and fulfil other priorities for the rail network. In reality there are other mechanisms (mobility vehicles, subsidised taxies etc.) to allow the vast majority of people in wheelchairs to move freely, indicating that capabilities are not usually the responsibility of a single

institution. However if this were not the case it would, under a capabilities approach, be impossible to justify not spending what may be very large amounts of money on a relatively small group.

On the face of it, it may appear that an ethical framework that states that each individual possesses capabilities that cannot be negotiated or reduced has little to offer policy making where resources are often limited and trade-offs must be made. A framework that requires vast expenditure on a small group may result in situations where there are few resources available to meet the needs of the majority. However a closer examination reveals situations where basic thresholds have been established. In most developed countries now, regulations stipulate full disabled access as a planning condition of new transport infrastructure and it would be hard to conceive of this being argued against on grounds of cost. The example of existing infrastructure, if anything, confirms an acceptance of much of the capabilities approach as the alternative mechanisms provided to people in wheelchairs are often resource intensive yet these costs are not born by the infrastructure owners and operators but other parts of the welfare state. Finally, there is value in an ethical framework for addressing situations such as unacceptable road deaths due to lack of cycle and pedestrian infrastructure even though this may not instantly bring about change. As Wolff points out, it may underline the essential injustice of the current situations. Something that denies those responsible the ability to claim that their failure to act is in any way justified

**Rawls**

The final ethical theory considered by the group has been that of John Rawls who, with his difference principle, argues that actions that improve the situation of the most well-off in society are only justifiable in so far as they also improve the situation of the least well-off. This principle has been used to justify a greater emphasis on public transport and, beyond a certain point restricting car use as a means of prioritising the needs of groups who require accessibility over those who require ease of movement (Tyler, 2004). This is the point at which car use begins to impinge upon groups, such as people with disabilities, who benefit from mobility and access to public transport. It has also been suggested as an ethical principle with which to guide transport policy making. This is as a means of ensuring that any attempt to improve average levels of accessibility still ensures the gap between the neighbourhoods or areas with the greatest and the lowest levels of accessibility remain within predetermined limits. In short it ensures that any attempts to raise overall levels of accessibility must improve accessibility for those with the least, consistent with Rawls differe 2012). Whilst this is seen as requiring a shift in current practices of equity analysis conducted by transport authorities the introduction of a different ethic is seen as a contribution, made by Rawlsian principles, to wider shifts in values (ibid).

The other relevant component of Rawls theory, discussed by the group, has been his use of the origin position in relation to the design of society s public institutions (Rawls, 1999). I we are asked to identify principles that should regulate our society s public in the original position are supposed to be representative of you and I. They are mutually disinterested and aim to secure as large a set of primary goods for the people they represent as possible. Rawls defines primary goods as, rights, liberties, and opportunities, income and wealth and the social basis of self-respect. In the original position the parties only have general knowledge. R ignorance such that the parties cannot exploit any personal knowledge about how will be affected by any agreement. Among other things, they are denied knowledge of the personal preferences, the economic and social position, and the talents of those they represent.

The veil of ignorance is justified on the grounds that knowledge of how any agreement will affect different individuals will bias the parties towards certain agreements and aga view, this would be unfair. Broadly, the parties in the original position reason as follows. Initially, they agree to an equal division of goods. They cannot agree to an unequal division because, as they do not know whether those they represent would benefit or lose from an unequal division of goods, there is no rational basis for agreeing to unequal division of primary goods. However, given well-known arguments about the benefits of inequality the parties *do* consider unequal distribution. If it is the case that, inequality generates more in absolute terms of a certain good, then we have a reason to depart from equal distribution. Rawls explanation of this is based upon the idea that politica justified to those whom power is exercised over. His solution is the difference principle (discussed

above) on the basis that if inequality can be justified to the least well-off, as, to use Frank s terminology, their piece of the pie gets bigger, then inequality can be justified to the rest of society. The implications of incorporating Rawls theories into the *design of public institutions* related to transport is discussed in the following, final section of the paper.

**Ongoing discussions**

It would be wrong to present the final section of this working paper as a conclusion as it is, in reality, a snapshot of an ongoing discussion. However there is some value in drawing together the different strands that have coalesced around a developing position that has emerged from the work we have conducted so far. This position comes from the Rawlsian emphasis on rational design of public institutions taking the position that transport is not currently seen as part of the welfare state despite evidence that there is, in some areas, acceptance that the state has a role in assisting citizens to meet their transport needs. The argument here is that this is inconsistent and that considering transport as part of the welfare state will engender increased sensitivity to values that are currently neglected, yet considered in other areas of state provision.

**Transport and the welfare state**

The position being developed here is that transport most obviously connec opportunities and their income and wealth, Rawlsian primary goods . Citizens need access to get to work, and to change job when they want to or when this becomes necessary. This is particularly important in countries where there are regional disparities in economic opportunities. Yet transport also facilitates other opportunities such as seeing family, engaging in cultural activities, attending sporting events, and more generally to exercise what Rawls called individual s conception of the good . When we consider the UK Department of Transport s definition of their own role, it is clea acknowledgement of a role in helping people meet their transport needs.

> We [the DfT] work with our agencies and partners to support the transport the UK s businesses and gets people and goods travelling around the count invest in transport infrastructure to keep the UK on the move (DfT, 2015)

Yet in other areas there is an acknowledgement that the state does have a role, the provision of additional facilities for wheelchair users discussed above or policy that sees over £1 billion spent on free bus transport for pensioners (Mackett, 2014). Whilst this appears inconsistent many of the measures, such as the provision of vehicles for people in wheelchairs, are not provided by the DfT. In theory this could lead to situations whereby the actions of the DfT, in not funding measures to increase mobility for all, may inadvertently increase the claims on other departments who are required to fund these supplementary mobility services.

The case for treating transport as part of the welfare state is twofold. First it is the case that transport facilitates citizen s access to primary goods, certainly opportunities, income and wealth, and there is also an acceptance of the role of the state in enabling some citizens (the elderly and those with disabilities) to access those goods. Second, there is clear evidence of market failure. In areas where markets provide for basic needs there is general acceptance that these activities can, largely, be left up to the market. If one takes the provision of food, the state may have some role in regulation and ensuring standards but by and large the business of feeding the population is left to market actors. In contrast transport, as with health, education or policing is an area which, if it were left purely to market forces would result in serious inequalities and injustices. It may seem contradictory to be suggesting transport be treated as part of the welfare state at a time when neoliberal conceptions of the state appear to be seeking to reduce its scope. However this neglects the evidence that even in states, such as the UK where there has been a prolonged period of neoliberal governance there is still considerable public expenditure, in the UK it has hovered around 40 per cent since the late 1980s (HM Treasury, 2015). Whilst this expenditure may have been dictated by different values under neoliberalism, liberty as opposed to equality for example, from a philosophical perspective there are still value positions associated with this particular form of public expenditure.

The questions raised by treating transport more overtly as part of the welfare state are potentially interesting ones. As discussed above some distributional analysis is already part of transport appraisal but were values such as the equality of opportunity, that is reflected in the aims of the Department of Education, to drive the provision of transport then this would have to shift to the fore;

> The Department for Education is responsible for education and children s s
> We work to achieve a highly educated society *in which opportunity is equal for children and young people, no matter what their background or family circumstances*. (Department for Education, 2015 emphasis added)

If other areas of the welfare state are considered then, for example, in health it is established practice to consider quality of life issues in appraising the outcomes of medical interventions. In the UK the measurement takes in both quality and length of life expectancy offered by any medical interventions. These are measured in terms of QUALYs or quality adjusted life years. One year at full health is measured at 1 QALY, death is 0 with minus scores possible for some health states which are considered, effectively worse than death. Estimates of willingness to pay are between £20,000 and £30,000 per QUALY (Philips, 2009). This enables the development of a cost/utility ratio as a means of measuring the value of, or comparing the benefits of different interventions. Whilst this is by no means uncontroversial it does represent a systematic attempt to include values other than simply the valuation of time which is the dominant feature of CBA used in transport appraisal. One final observation of the implications of considering transport as part of the welfare state comes again from the field of healthcare. Members of the group, trained philosophers, are currently working on medical ethics boards, groups made up of physicians and philosophers. Something that is common practice and can result in the need to provide ethical advice at very short notice in the event of an emergency. This raises an interesting question of whether or not the treatment of transport as part of the welfare state might not see similar, more overt, consideration of the ethical dimension of transport policy decisions and even the establishment of transport ethics boards.

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**Positive Interaction between Transportation Hub and Urban Space in Mega-city Redesign the Generation of Urban Design Strategies at Shanghai West Railway Station**

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Key words: traffic hub system design, interaction and urban vitality, strategy generation

*Abstract: With the high-speed intercity passenger transportation gradually entering peo definition of intercity railway transportation has been changing. Meanwhile, high-speed intercity passenger service station and the surrounding areas are still stuck in outdated facilities and chaotic image. The essay focus to figure out what is the positive interaction between transportation hub and urban space. It aims to provide people available and affordable transportation not only with traffic and infrastructure planning, but also with outstanding urban design quality and its Social Dimension. As the rapid development of China's mega-cities, Shanghai has a dominant role in transportation in the Yangtze River Delta region. Through the description of current situation between urban space and transportation hub at Shanghai West Railway Station, the redesign intends to put forward the challenges that Shanghai West Railway Station will face at present and in the future development, evaluate the transformation of the old city with concrete examples, design and bring forward the corresponding strategies in six aspects: space, transportation, function, form, ecology and the connection to the surrounding area, determine a more appropriate and more extensive updates and development from multiple angles on the basis of a variety of factors so as to improve the vitality of the region gradually. On this basis, this paper will make an objective analysis on how to enhance the quality of the environment around the station and along the railway and improve the split urban space caused by the rail lines, thus creating a more effective system design mode to make sustainable development in Shanghai West Railway Station area.*

## 1. Introduction

1.1 Background

High-speed railway features in Shanghai West Railway Station transportation. Therefore, how to enhance the quality of the environment around the station and along the railway and improve the split urban space caused by the rail lines has become station designer and urban designer s common concern (Figure 1).

Figure 1. Current situation of Shanghai West Railway Station and its surrounding urban space

1.2 Research object

Formerly known as Zhenru Station, Shanghai West Railway Station is 5km west from Shanghai Railway Station, 196km from Hangzhou Railway Station, and 1458km from Beijing Railway Station. It is an integrated transport hub of intercity rail transport, urban rail transport and urban public transport. With the two functions of external transport and urban transport, it plays an important role in the transport network planning of Shanghai and the Yangtze River Delta region (Figure 2). Due to the above mentioned reasons, it is in urgent need of urban design from the city functionality, accessibility, connectivity, etc. Urban designers should make full use of the constraints and opportunities in railway and station reconstruction, think about how to improve the overall environmental quality of the region, enhance the links and transfer between the railway station area and urban rail transport, give guidance and make control of urban form so as to build up the overall image of Shanghai Zhenru area as the city s sub-center.

Figure 2 .Shanghai West Railway Station land plan and the major functions of its surrounding area

1.3 Situation analysis

1.3.1 Current situation of transfer efficiency

Through field research, it has been found that Shanghai West Railway Station transfer lines are very complex and inconvenient to connect urban public transport. Pedestrians often have to go across the entire West Railway Station area to transfer (Figure 3), which forms a certain impact on traffic efficiency.

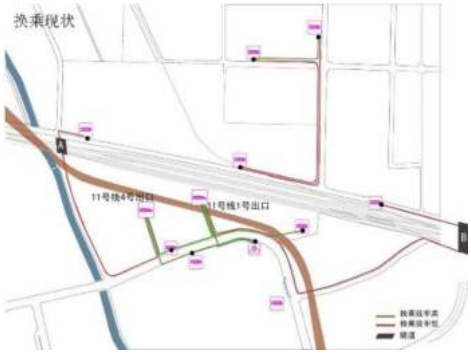



Figure 3.Shanghai West Railway Station Transfer Situation Analysis

1.3.2 Current situation of urban space

Most of Shanghai West Railway Station surrounding area is occupied by residential district and the commercial is underdeveloped. But it plays an important role in boosting the development of Zhenru sub-center. It has the advantage of making high-end talents gathering and circulating. In addition, Caoyang Road is now the focus of commercial zone. So it is worth considering the possibility of the urban space replacement for business functions or mixed residential and commercial use so as to promote the interaction between traffic space and urban space.

1.3.3 Current situation of surrounding commerce

Shanghai West Railway Station External Commercial is arranged around the station and is quite dispersed. Some business is proposed in the underground passage, but the planning commercial proportion is not large. Compared with Shanghai Railway Station and Shanghai South Railway Station, Shanghai West Railway Station hasn t formed an effective commercial space. Bec business once was used as a cargo terminal and near the industrial area, the surrounding businesses are mainly some large building material and agricultural products market, thus forming a citywide logistics center (Table1).

Table1.Surrounding commercial comparison of Shanghai Railway Station, Shanghai South Railway Station, Shanghai West Railway Station

| site | Shanghai Railway Station | Shanghai South Railway Station | Shanghai West Railway Station |
|---|---|---|---|
| Internal business | Corridor type layout, waiting to buy, easy to use | Around the layout, purchase before the waiting, more convenient | Not available |
| external business | Scattered layout, popular feeling, more chaos, traditional business model, ground-based business | Concentrated layout, popularity decreased, feeling clean, modern business model, underground business | Scattered layout, less popular, feeling cluttered, traditional business model, ground-based business |

## 2. Problems raised

2.1 Immensity of passenger flow between urban transit and rail interchange

The passenger flow between urban transit and rail interchange at Shanghai West Railway Station is important. If not organized well, it can easily lead to crowd congestion. When the train arrives, there will be a large number of passengers evacuating from the station to different directions in a short time. There will be very long queue of passengers buying urban transport tickets at this time and thus cause the congestion of the channel (Figure 4).Concourse level should be set up at urban transport station to solve the problem of too many passengers buying tickets and the organization of passenger flow. In addition, the setting of concourse level at urban transport station can also reduce the impact of convergence between railway and urban transport.

Figure 4. Zhenru sub-center traffic demand forecast

2.2 Lack of convergence in transfer modes

At the area of Shanghai West Railway Station, traffic problems are embodies in the following aspects: first, the public transport station is very dispersed and the waiting area is too small; second, the subway station is set away from the street; third, the social vehicle parking spaces are insufficient to cope with the future railway passengers; fourth, the taxi drop-off area is too crowded and in disorder; fifth, the current setting of tunnel cannot meet the needs of residents on both sides of the railway; sixth, illegal operation vehicle control deficiencies.(Table 2)

Table 2. Shanghai West Railway Station area travel choice proportion

| Travel mode | Travel proportion | Travel times (million/d) | Converted into trips(PCU/d) |
|---|---|---|---|
| Public transport | Rail transit 30% | 14.4 | 9.4 |
| | Ground public transport 20% | 9.5 | 6.2 |
| Passenger car taxi included | 25% | 7.8 | 5.1 |
| Walking and Cycling | 25% | 7.8 | |
| Total | 100% | 31.2 | 5.1 |

2.3 Lack of vitality in city nodes

Either at the Square or in the waiting room of Shanghai West Railway Station, the green landscape is more focused on the flow of distribution, which makes the urban space lack of a pleasant, attractive environment for people to stay, thus leading to the low urban vitality (Figure 5).Because Shanghai West Railway Station originally featured in cargo transport, the flow of people is low, the surrounding commercial is underdeveloped and the commercial node is not obvious. There are food square and seafood market, but they are not closely linked to Shanghai West Railway Station. The author believes that setting up a number of commercials in such areas as Shanghai West Railway Station will play a good role in enhancing the city s vitality.

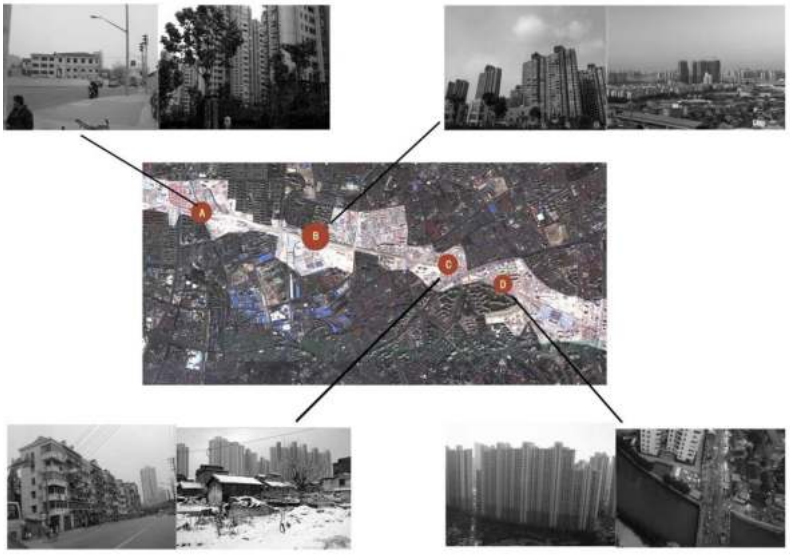



Figure 5. Insufficient urban vitality near railway station area

2.4 The issues of split urban space by railway

Railway Station Square is an endpoint of urban space. The square and the train station are generally separated by the closed façade of the station. Urban space comes to an end at this place. This will cut the continuity of the urban space and the railway line will link to another city. The train track set results in the uneven development on both sides of the track at the urban station area, which split the balance around the line (Figure 6). In north part of the West Station area, traffic is heavy, small plants and small-scale shantytowns creates noise, pollution and harsh environments. The West Station area, the supporting station and hotels are in the south part. The status quo is that the north and south channels are not convenient enough to meet the needs of the residents living on both sides. In the city the railway station area cuts the connection of different regions bluntly, which is not conducive to the common development of the surrounding area; meanwhile the surrounding areas near the train station also become the forgotten space, which deepens the barrier effect of railway lines. The expectation of the design is by redefining the railway lines around the functional space (cultural, recreational facilities), to establish a moving platform which links north to the south, to achieve a balanced development of the north and south. Meanwhile, the flow of people brought by railway and the future

subway can activate the surrounding areas, including commercial and cultural facilities.

Figure 6. Impact of rail lines on the city  uneven development on both sides

2.5 Lack of consideration for future traffic circle development

Shanghai has come to a stage of urban rapid development. There are more and more exchanges between Shanghai and other Yangtze River Delta cities; the people in some medium and small cities in the surrounding areas also expressed the integration requirements. As the central city, Shanghai s radiation on the surrounding area has been further strengthened. However, the railway system of Shanghai metropolitan traffic circle bears very low flow of passengers, which is far below the level of international metropolis. Due to the limitations of administrative divisions, comprehensive transportation planning of the overall urban planning in Shanghai is only confined to Shanghai city administrative area. Yangtze River Delta is lack of regional development planning agency; transport system connection is poor, and lack of integration. Through the development of commuter rail, breaking through the limit of traditional administrative divisions, achieving the regional linkage, it is very necessary to guide Shanghai metropolitan traffic circle to healthy and orderly development. With Shanghai to metropolitan development, urban space expands. Shanghai will be integrated with its surrounding cities and form a new large metropolitan area. It is very necessary to have a fast transport in the process of Shanghai s developing into metropolis. Obviously, public transport transport is lack of adequate capacity in supporting Shanghai s metropolis ext rapid rail and commuter rail will be the inevitable choice for the large city to develop into metropolis[1].

## 3. Design

On the basis of planning, Zhenru area will integrate regional resources, establish Shanghai Zhenru sub-center at Cao Yang Road and Zhenru rail cargo terminal area, which will focus on the

[1] Compared with other international metropolis, the railway at Shanghai metropolitan traffic circle only borne the flow of passengers into the center 1.4% of that in Tokyo, 19.4% of that in Paris, 10% of that in New York. If calculating the number of travelers per capita, it is only 0.001 times/person, less than 1% in Tokyo, 2.73% of London, 4.95% of Paris, 3.62% of New York, even lower than Los Angeles.  International Metropolis traffic circle railway traffic statistics, 2010

development of modern logistics industry, construct business office area, large logistics enterprises, hotel service area and low dense cultural facilities. Core area of Zhenru area is located in Caoyang Road and Zhenru freight yard. The land area is about 144 hectares. The vision of total gross floor area of commercial office will be limited within 1.8 million square meters. The planned construction features in resource allocation centers with modern logistics services, international trade procurement, and new-element market. Regional headquarters of large enterprises, market centers, R & D Centers, purchasing centers, investment centers and settlement centers from domestic and foreign companies are introduced and developed. Pedestrian Street is an important part of urban space and a concentrated expression of the city s geographical features. The commercial and financial center axis of the sub-center will be extended from Caoyang Road to the South Square of West Railway Station, and the commercial and financial viability of the sub-center will be spread to the north of West Railway Station through the setting of commercial axis at West Railway Station area. At the same time, this will create a good commercial atmosphere at eastern plots, thus forming a three-dimensional business climate.

The strategy of Zhenru sub-center planning horizontal and vertical axes, north-south double should be continued; the development of West Railway Station area in the sub-center future planning position should be strengthened; Treating West Station as the support center so as to spread the vitality to the northern urban areas (Figure 7).

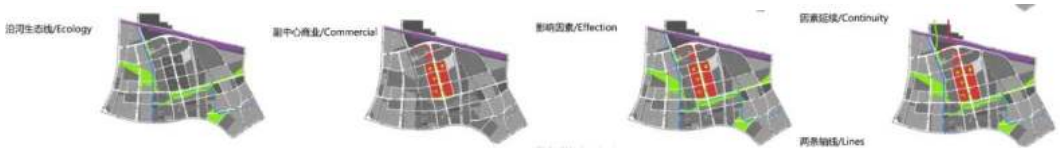



Figure 7. Spatial form analysis at Zhenru area

## 4. Strategy generation

Facing the market, railway station should not only make full use the advantage of its speed and safety, but also improve the comfort of traveling and efficient travel route so as to increase its competitiveness. Meanwhile, as part of the city, the railway terminal in urban development should also play a promoting role in enhancing the city s openness and sharing.

The author conducts practical investigation on China s major railway terminal and areas and makes strategy analysis, comes up with the following improving strategies and preliminary design conception.

4.1 Space: Design strategy of urban spatial structure

4.1.1 Convergence of split urban space caused by rail lines

In urban spatial structure design strategy, designer should find the urban problems and impact on the design of the station area traffic brought by the rail lines. First it is the split of urban space by rail lines. Suture will be the way to deal with the split. In addition to the existing planning, design helps to suture the spatial texture of the city. Design of transit elevated line mainly provides the passage for taxies and private cars.

The vehicle will unload the passengers and leave at 15m layer. Passengers who will get off from north to south should go through 15m layer and check in at 10m layer to the waiting room, through the business district and then check in. So entering the station separately from both sides can help to avoid the confusion of crossing the line, and traffic can be more efficient (Figure 8).

Figure 8. Suture the split of urban space by rail lines

4.1.2 Improvement strategy of urban vitality

(1) Public space

The setting of elevated walking path provide means of crossing for the leisure people along the ecological leisure axis in the west (Figure 9). Meanwhile, this viaduct not only has traffic function, but also has been set many ecological vegetation and gathering points according to its own leisure characteristics. Such as the viewing leisure platform along the rail lines. Ecological axis is also connected to many public buildings and hotel buildings. Functional combination of this compound will attract different crowd, probability of occurrence of sporadic behavior will also increase.

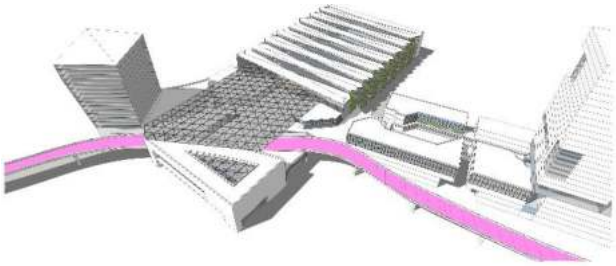


Figure 9. Elevated walking path

(2) Commercial cluster

The main commercial factors that will influence the development of railway station are:

First, flow elements. The flow of people at large railway station include the flow of arrival, departure, transit, the flow of people who meet passengers, surrounding residents and none-passenger flow. Second, traffic elements. Large railway stations are also the distribution center of buses and taxies. Railway stations, together with light rail and subway, form an urban traffic switching center; third, cultural elements. As the doors and windows of the city, large railway stations landmark and are bound to reflect the city features and city culture. Fourth, regional characteristics. Different positioning of the city in railway transportation will also lead to the difference of commercial space at railway stations.

To develop the railway station area, more importantly, government should base on the location of the

station in the city, combine with the foundation of regional business, the flow of passengers and actual level of demand, with excellent consumer environment and convenient traffic condition, form commercial centers which can not only attract passengers but also urban civilians. This is the most fundamental driving force to turn transport hub into economic hub, so as to integrate the railway station into the city (Figure 10).

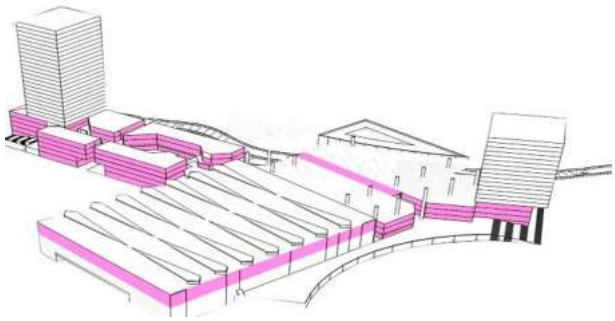


Figure 10. Commercial integration

4.1.3 Generation strategy of urban spatial structure

(1) Leisure eco-axis to increase the vigor of Taopu River on the west, set the boat dock, art industrial park, increase the spatial quality along the river, set ecological platform across the railway line and establish a continuous pedestrian system. Thus form a leisure eco axis which connects north and south(Figure11).

Figure11. Ecological axis plan

(2) Commercial viability axis extend the sub-center business climate, set 10min walking laps throughout Taopu Road to West Station North Square. In the north, the City Square is the endpoint of the axis. The sub-center commercial viability will be radiated to the northern regions.

(3) Office financial axis  set centralized office and financial area on the eastern side of the railway, improve the regional competitiveness and vitality of Zhenru sub-center. Establish close ties between centralized office area and Zhenru sub-center by the elevated setting (Figure 12).

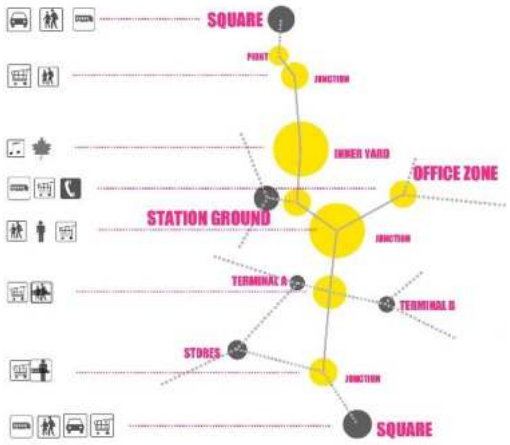



Figure 12. City functional integration strategy

4.1.4 Urban function integration strategy

In planning, the concept of multi-functional and three-dimensional concept will be used. Not only function layout will be done in the horizontal level but also functions will be superimposed in the vertical space. The commercial and office functions will be integrated in the planning and arranged in the highest value of the land plots in the south and east side, consisting of a series of commercial office building. Due to the focus on the development of high-capacity commercial and business office space, a portion of green space is preserved. Green belts will be set along the city s main ro open Green Park will be set in the promoter region, thus forming density space and increasing environmental quality. As the growth ridge 3-D commercial Pedestrian Street is throughou commercial buildings. This street starts from subway station R3 line terminal, including ground floor, first floor and basement commercial pedestrian shopping space. Community-based street layout will be set along the street to gather popularity and create living atmosphere. This layout fully reflects the value of the land, so that the overall value of land development will reach the maximum in the permitted plot ratio, while maintaining the high quality of the urban environment (Figure 13).

Figure 13. City functional decomposition

4.2 Transport  transportation system design strategy

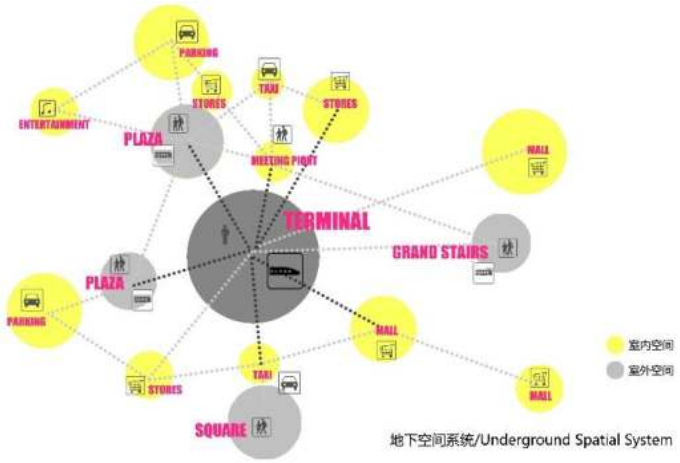
4.2.1 Zero transfer strategy

Efficient transfer is critical in railway station design. We have been very profitable in the previous data collection. In this design, we focus on the efficiency of transport interchange.

4.2.2 Spatial design strategy for highly dense passenger flow

From a large number of case studies[2], we can see that the design of underground space in urban railway station area is crucial, because the arrival floor of the train and subway is located underground (Figure 14). The crowd here will disperse to their destination, so enormous flow of people will be gathered here. Because of this, three main sunken plazas and two secondary ones are set. North-South Railway Station Squares and the sunken plaza which is directly connected to the station are the core area to evacuate the flow of people. So it is very important to set vertical guidance to guide the flow of people. Meanwhile, enormous flow of people can also become the potential consumers. Surrounding basements are also connected with the underground throughout the whole station. So the garage use and functional links are also highly integrated (Figure 15).

Figure 14. Shanghai West Railway Station city design floor plan




[2] Such as the Paris transfer center at the Paris North Train Station, Berlin central train station in Germany, the author notes

Figure 15. High-density space design strategies and spatial integration

4.2.3 Regional transport integration strategy

Planning through 3-D transport network will separate various traffic flows in different channels and levels, especially the traffic and vehicle separation (Figure 16).On the basis of this, encryption will be done to the road network density. The dense road network can bear it without having to increase the burden of high-grade roads. High-grade road only needs to take the transit and distributed passengers, so as to improve the traffic situation.[3]

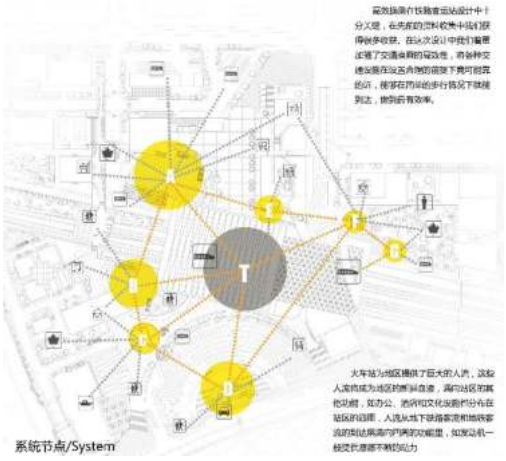



Figure 16. System nodes and urban complexes

4.3 Ecological aspects: people-oriented

Good ecological environment is not only an important constraint to the urban transport development, but also constitutes an important part to the railway station landscape space. In this regard, Shanghai South Railway Station provides a good reference: large green setting not only increases the vitality of the city, but also makes the scale of the entire South Station area closer to people s promotes the vitality of the entire region.

4.4 Contact with the surrounding area: giving full play of the leading role of the city s sub-center

The transition of traditional railway station to transport complex and a variety of modes of transport agglomeration has the geographical advantage and high accessibility which has a strong guiding role to the development of the surrounding area (Figure 17).

4.4.1 Impact on the form of the land layout

According to the circle theory, within 600m around the public transport spots, mixed development of high strength can be achieved, showing Business-Hotel-Residential layout stru railway station complex is different from a general public transport station. The developing model has

[3] In domestic city center railway station area road network, the secondary roads, especially the branch roads are of low ratio. At the central area of China cities, the ratio of secondary and branch roads with main roads in railway station area is far inferior to that in foreign countries. The road density at railway station area in the urban central district in China is comparatively low. The total road density in China is only 1/3 1/4 of that as in Europe, Japan and South Korea. China Urban Planning and Design Institute, Beijing, 2000

its own characteristics. For example, a large number of railway plots are scattered around, which split the city greatly; it is difficult to form very upscale business hotels or residential areas due to the large flow of people around.

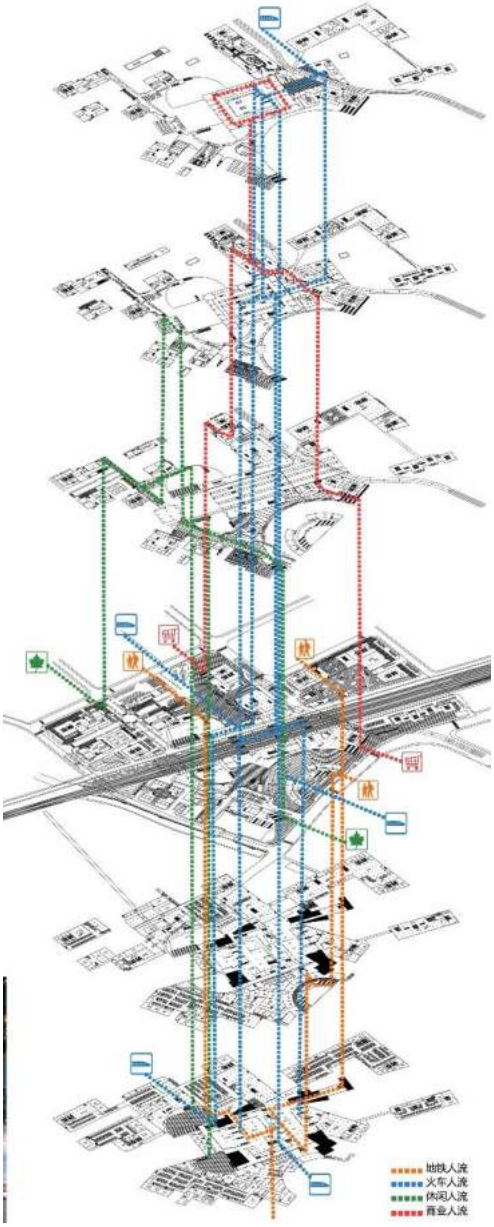



Figure 17. Vertical space planning

4.4.2 Impact on the state of agglomeration of the development

There is a high correlation between means of transport and land use. Bearing capacity of infrastructure is an important measurement of redevelopment strength around the railway station complex and traffic distribution capability is one of the key evaluations. A high density land use can promote the development of public transport, while low-density land use will promote the popularity of cars.

Meanwhile, different transportations will play a strong reaction to urban land use. Large-capacity public transport has the most significant influence on land development.

4.4.3 Railway station becoming the extension of urban space

The interior design is an organic part of city design, so city activities should not stop outside the station elevation. From the city s aspect, contemporary large railway station interior by the visitors.

Although the establishment of railway station complex has a significant impact on the surroundings, using the station project to help urban development is a complex process. Research shows that the successful development of the station area also depends on many other basic conditions, such as a vibrant local economy, idle land, healthy capital market, developed transportation network, strong public investment, etc. Only when these factors are complete, construction projects as a catalyst can really play a role. To achieve successful catalysis, perfect hub functions and rational planning of the surrounding areas are only part of the conditions, the development in reality will also depend on local conditions and improve continuously.

## 5. Conclusion

It is a systematic and complicated process to transform the traditional railway station which splits urban space to a comprehensive transportation hub which creates a positive interaction between traffic space and urban space. The author makes a case study on the generation of urban design strategies at Shanghai West Railway Station in order to illustrate the possibility of realizing a positive interaction between railway station traffic space and urban space (Figure 18). The highly integrated complex of urban business and traffic architecture will make more traffic activities occur. Meanwhile, in this highly integrated system, the surrounding areas of the plot will also be vitalized.

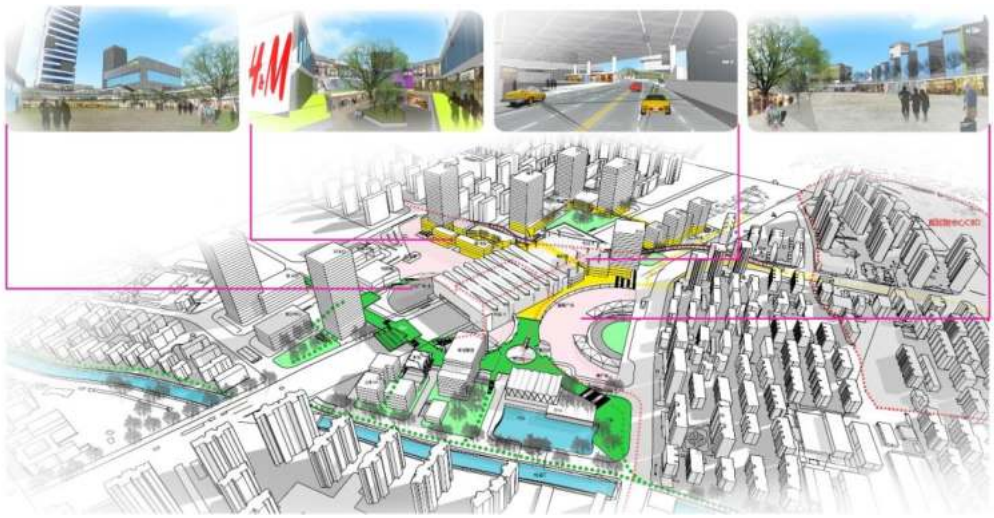


Figure 18. Positive interaction between railway station area and urban space

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# Exploring Equity Dimensions of Rail Transit Impact: A case study in a Chinese large city

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Key words: Rail transit; Urban regeneration; Equity

*Abstract*:
With both regeneration and development aims, public rail transit systems are continuing to be built or upgraded especially in those rapidly developing Asian cities with problems of congestion and decentralization. As it is widely acknowledged, the rail transit provides travel convenience (as its direct effects), and potentially also leads to land development, property price increase, economic and social changes (as its indirect effects).However, the regeneration effects of rail transit aggregate to exert different impacts on geographic locations and population groups. Disparities in social equity, in relation to public transport provision, arise because of different levels of accessibility. Moreover, value uplift of land and property price, change of physical and social environment, living cost and employment opportunity etc. also have diverse impacts on population groups. Transport provision can often fail to meet specific or even minimum needs in terms of social characteristics, ability, affordability, preference and attitudes. When distribution of impacts across spaces and groups has disproportionate benefits or burdens, the problem of inequity emerges. This research is applied in a newly emerging large city, Chongqing, in China. It aims to understand how the impact of rail transit on development and regeneration differs by location, assessing who gains and who loses from the value uplift associated with the transit investment, exploring the equity dimensions arising from the transit investment.

## 1. Introduction

With both regeneration and development aims, public rail transit systems are continuing to be built or upgraded especially in those rapidly developing Asian cities with problems of congestion and decentralization. There is a substantial body of evidence suggesting that rail transit system tends to benefit certain locations rather than others. Moreover, it is put forwards by plenty of research that regeneration effects of rail transit aggregate to exert different impacts not only on geographic locations, but also on population groups. Previous evidences have also made it clear that transit s effects on land and property value uplift, physical and social environment change and employment opportunity increase etc. have diverse impacts on certain groups. Disparity in social equity arises because different groups disproportionately benefit or are affected from the effects of transit system.

This research is applied in a newly emerging large city, Chongqing, in China. A brand new rail transit system is being built in recent years stretching from the core to the fringe of the city region, in order to stimulate growth in both mature and undeveloped areas. The research aims to understand how the rail transit effect on development and regeneration differs by locations and population groups, and to what extent groups are disproportionately benefited or adversely affected from the transit system. It then assesses who gains and who loses from the value uplift associated with the transit investment, exploring the equity dimensions arising from the transit investment.

The research is based on a comparison study among locations and population groups. Time serial census data was collected to explore the changes across time in different locations, and a questionnaire survey was carried out to explore transit impacts on different groups of people.

In contrast to the previous empirical studies, as a conclusion of this paper, there is no viable dichotomy of population groups such as the users and the affected by the transit impact. In fact the most frequent transit users are the lowest income people and at the same time receive most adverse impact from the regeneration caused by the transit. It makes the benefit and compensation issues complicated. Meanwhile, income level is a potential threshold of benefit distribution. The effect of rail transit tends to benefit a certain group of people most. The mid-low income group exhibits highest evaluation of transit impact on themselves.

The rest of the paper is organized as follows: Section 2 outlines the literature and highlights the critical social equity issues in transport investment. Section 3 describes the methodology, research framework and data resources of this paper. Section 4 presents the analysis results. Section 5 summaries the key finding and discusses the implications.

## 2. Literature review

In the local scale, the general regeneration effects of the rail transit consist of four widely recognized aspects. These are the direct aspect of travel convenience, and the indirect aspects of economic, urban, and social effects.(BANISTER and HICKMAN, 2003) In actuality, they are internally connected and all the other three aspects have their social effects.

In the society with great mobility, in order to figure out how transport disadvantages contribute to social inequity, it is necessary to extend the understanding of transport advantage to include the concept of motility, which consists of access, competence and appropriation. (Lucas, 2012, Cass et al., 2005, Kaufmann et al., 2004) It is proposed that transport disadvantage can be understood as an outcome of a lack of a series of criteria, such as access to basic resources, skills and abilities, and cognitive knowledge. (Lucas, 2012, Schwanen et al., 2015) It means that transport disadvantage among individuals will not result in social inequity only because of disparity of transport provision or spatial accessibility. What makes the situation significantly worse is when the disadvantage interact directly or indirectly with other dimensions relating to individual characteristics, such as a lack of opportunity, competence and appropriation.

Previous literature indicated that the benefit of the rail transit system in the city is distributed disproportionately in terms of geographic locations and population groups. (Feitelson, 2002) However, it has also been argued that research on the relevance of social impacts should not only focus on geographic inequity, but also address aspects of disproportionate distributed benefits and accumulated social impacts across population groups. This is because not all groups, as is suggested, for example differentiated by income, gender, race, ethnicity, age, geographical region, etc., will be affected by

specific transport policies or investments. (Geurs et al., 2009)

Therefore, it is necessary to disintegrate the process of how transport investment generate its social impacts and result in social inequity. Social impacts of transport are argued to exert both positive and negative influence either on individuals or collectively on population groups, social categories and society. Individual sensitivity to social effects from transport varies. When the effect exceeds their sensitivity level, it turns into social impact. People belonging to a certain social category tend to bear similar impacts. If the impacts are unacceptable according to the values and standards of society, it tends to bring about social injustice problems. (Geurs et al., 2009) It provides a reference for carrying out analysis exploring whether social inequity from transport investment exists.

## 3. Methodology:

As is introduced, this research adopted a comparison study among locations and population groups. Changes across time in transit station catchment areas are compared to those in reference and control areas. Data from both census data and questionnaire survey is analysed.

### 3.1 Context of case study areas:

As shown in *Figure 1,* three reference regions were selected according to the demographic census boundary. The reference regions are quite typical to reflect the trends of both regeneration in the built up regions and development in the rural or undeveloped lands. Within these reference regions, four station catchment areas and one non-station affected area were selected. A radius of around 500m catchment area was identified. Statistics gained from the community level is averaged according to its proportion within the radius boundary.

One of the reference region is in the old city region, just west of the old city centre, which is called Daping Sub-district (DPSD in short). The sub-district resides many old residents in a poor living condition, who are either redundant workers or once farmer years ago. It is also a popular destination of migrants to the city. Now it is experiencing massive urban regeneration with the refilling trend to the city centre. Within Daping Sub-district, the transit station catchment area Daping locates at the junction of two rail lines going across the reference region. It is called DP for short.

The other two reference regions are in the new developing region on the north bank of the river, which are called Longxi Sub-district (LXSD in short) and Longta Sub-district (LTSD in short). With the towards north developing trend in Chongqing, the once farm lands have become prosperous new city centre within just 20 years. Most of the residents are new well- offs moved from the old region or outside the main city area along with the urbanization trend in China. The two catchment areas in LXSD are called Jiahzhoulu (JZL) and Huahuiyuan (HHY). JZL located along Line 3 on the main transit corridor linking north and south of the city. Now it s a fast developin
a huge commercial centre being built just at the station. The catchment area in LTSD is Hongtudi (HTD). Both HHY and HTD are long Line 6 but off the main transit corridor. They are both mature

residential areas, which are developed respectively in the 1990s and within the last 10 years. The control area is also located in Longta reference area. It is a large residential area called Luneng (LN). Though off the transit corridor, it is a comparatively wealthy residential area.

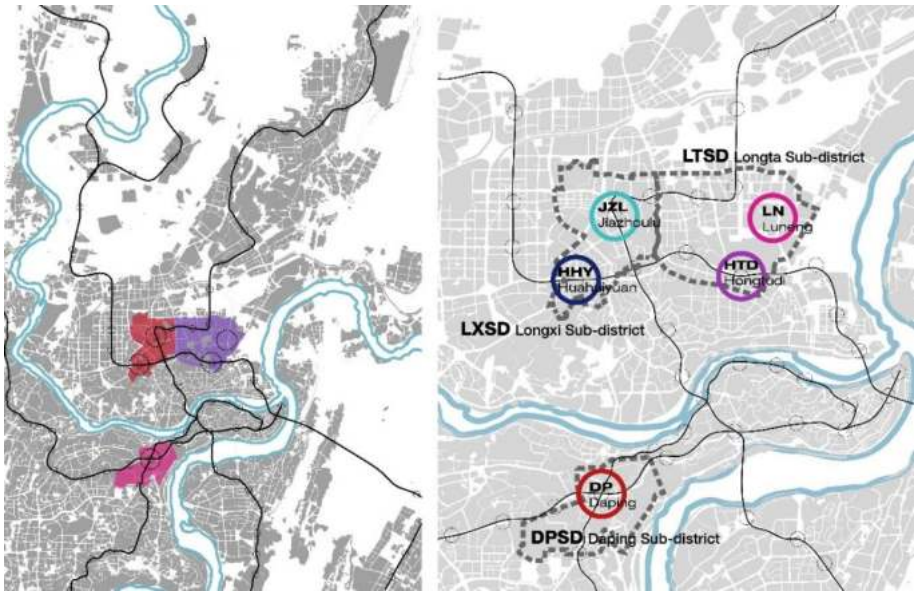


Figure 1: Reference regions, station catchment areas and control area

### 3.2 Survey research framework

In the questionnaire survey, 1100 questionnaires in total were sent out. About 30-40 questionnaires were sent to each community in the station catchment area. 1000 questionnaires were returned and 752 were reliable after checking. In the survey result, 50.1% of the respondents were women. When compared with the proportion of 49.38% in annual census data of Chongqing, the sample appears fairly representative of the population. People above 65 years old are slightly under sampled, with the percentage of 5.5% compared to 11.9% in the 2013 census data. Migrants from outside the City are slightly over-sampled, with 9.4% in the survey versus 4.83% in the 2013 census data. The survey sample of car ownership around station catchment areas is fairly representative when compared to the 2014 citywide travel survey.

People can be categorized into groups according to their social attributes. Potential vulnerable groups were identified as low income groups, migrants, elder people (age), and those who do not have access to private cars. This paper especially focus on the impact on different income groups, as it is the most straightforward criteria to distinguish population and relate to social impacts. As shown in *Table 1,* the respondents of the survey are divided into four groups according to their chosen income level in the questionnaire. People are divided into the lowest income, the middle low income, the mid high income and the highest income groups. Notice that the three kinds of name shown in the table below may appear in the whole paper from now.

Table 1: Income group identification

| Group number | Group income level | Annual household income (RMB_yuan/year) |
|---|---|---|
| Group1 | Lowest income group | Below 50,000 |
| Group2 | Mid low income group | 50,000-100,000 |
| Group3 | Mid high income group | 100,000-200,000 |
| Group4 | Highest income group | Above 200,000 |

In the questionnaire below in *Table 2*, questions can be categorized into well recognized dimensions of transit impact as economic, urban, social and travel. Respondents were asked a series of questions in the following two facets. One facet aims to explore their perceived transit effects in their living area in thirteen aspects. The other one aims to explore impacts of some transit effects on themselves or importance of some changes potentially caused by transit to themselves in the same 13 aspects. Respondents were asked to choose the degree from -2 to 2.

Table 2: Question list

| Perceived transit effects in this area | Individual impacts or importance of changes caused by transit effect in this area |
|---|---|
| Q23 Property price | Q20 Impact of property price rising |
| Q24 Property rent | Q21 Impact of property rent rising |
| Q25 Living cost | Q22 Impact of living cost rising |
| Q36 Land development, urban image and open spaces | Q26 Importance of land development, urban image and open space improvement |
| Q37 Pedestrian environment | Q27 Importance of pedestrian environment improvement |
| Q38 Noise | Q28 Impact of noise |
| Q39 Neighborhood Safety | Q29 Importance of neighborhood safety improvement |
| Q40 Employment opportunity | Q30 Importance of employment opportunity increase |
| Q41 Commercial and service facilities | Q31 Importance of commercial and service facilities improvement |
| Q42 Community population change/floating population | Q32 Impact of community population change/floating population increase |
| Q43 Community harmony | Q33 Importance of community harmony improvement |
| Q44 Daily commuting convenience | Q34 Importance of daily commuting convenience improvement |
| Q45 Weekend travel convenience | Q35 Importance of weekend travel convenience improvement |

## 4. Exploring social equity issues among different groups of people:

### 4.1 Social equity in different geographic and social contexts

Comparison study is based upon the four widely recognized dimensions of transit impact, which are economic, urban, social and travel impacts. Among different geographical locations, data are collected at two time periods before the opening of transit in 2011 and two periods after the opening. Their related impacts on individuals explored in the survey are also presented together to show the disparities in different social contexts.

As shown in *Figure 2*, for those mature station catchment areas, such as HHY and HTD, though a slight faster increase was seen after the opening in 2011, the increase rates are still slower than their corresponding reference regions. In the old city region, there was a significant increase in 2010 in the catchment area DP but returned slow again after that, which was due to a new residential property development. However, for those developing areas, such as catchment area JZL, there is a strong increase right after the opening. Therefore, in maturely developed areas, the effect of transit on

population accumulation is not so patent in a short period of time. However, in an area with a strong developing trend, the population accumulation effect is quite obvious.

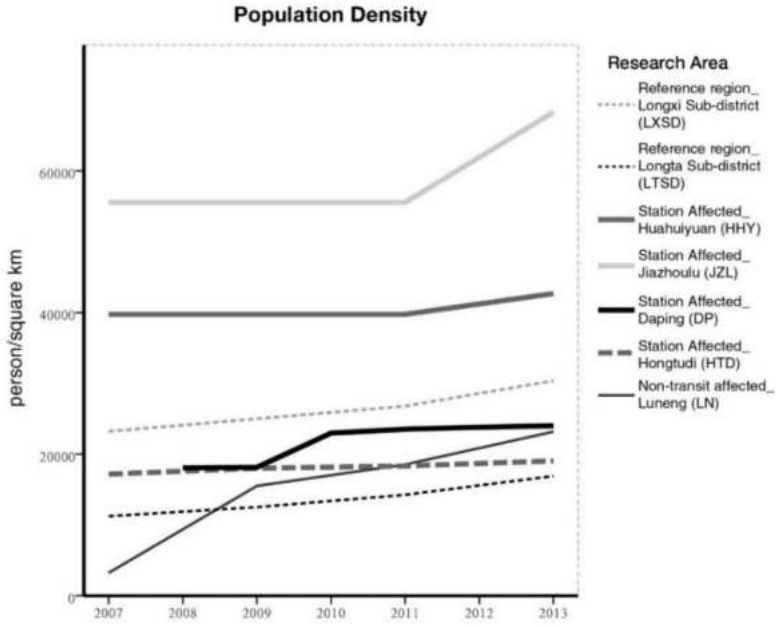


Figure 2: Population density in research areas

Source: Chongqing census data

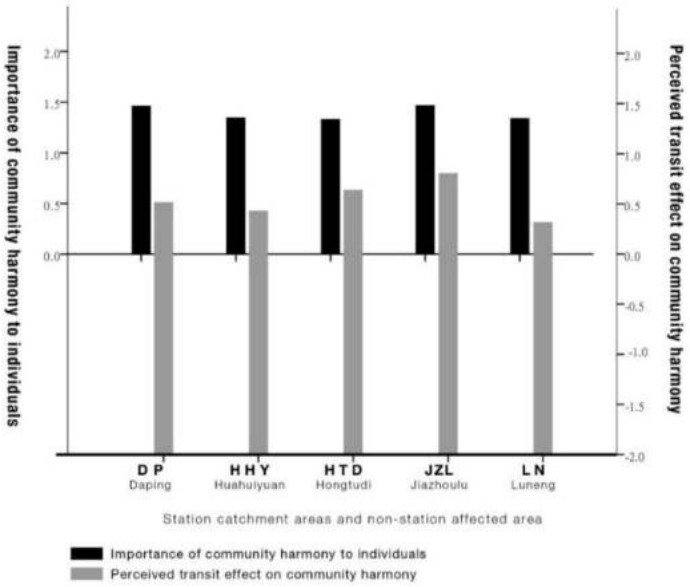


Figure 3: Perceived transit effect on community harmony and its importance to individuals

Source: primary survey data

In the survey (*Figure 3*), in relative aspect as perceived transit effect on community harmony (the grey columns), residents in mature developed area such as DP and HHY shows a lower evaluation of transit

effect on community harmony. Meanwhile residents in DP exhibits a higher importance of community harmony to them (the black column). However for fast developing area as JZL, residents tends to present a more positive attitude towards the transit effect on their community as well as a higher level of importance to themselves. Looking back at the census data, the population increase in the mature developed areas is actually much lower than in the fast developing area. That is to say, the survey result suggests residents in the mature developed area are more sensitive towards the community harmony change brought about by the transit. At the same time, the residents in the old city endowed more importance of community harmony to themselves.

As is shown in *Figure 4*, in catchment area as DP, employment increase is indeed obvious, although its population increase is not distinct. It suggests business and economic development in the old city is promoted by regeneration trend in the area. However, there is a great disparity of correspondence of residents and local employment. (see, *Figure 5*) It means lower proportion of residents in the area actually work there, and most of the new residents work in other parts of the city. Meanwhile most of the increased employment are provided to employees not residing there. On the other hand, as expected, in the developing region, in station catchment area as JZL, the employment increase is promoted greatly. However, for station catchment area as HHY, which is maturely developed but off the main transport corridor, both employment and population increase there is not so distinct.

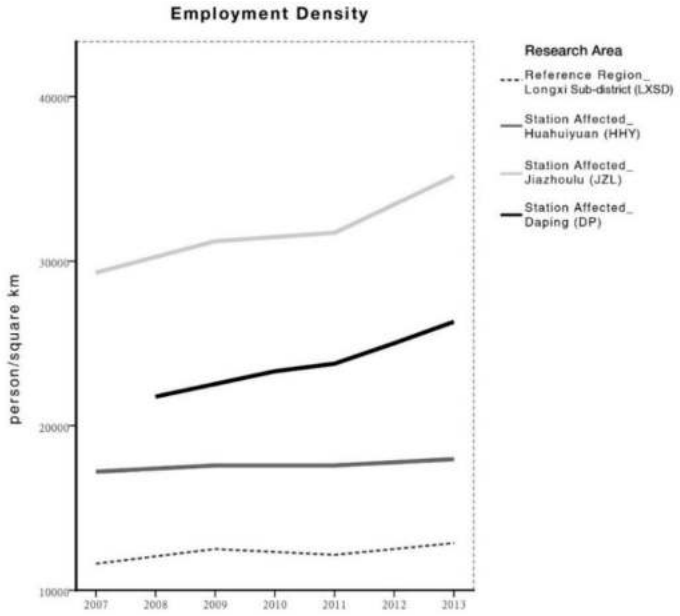


Figure 4: Employment density in research areas

Source: Chongqing census data

There is a disparity between the perceived transit effect on local employment increase in station catchment areas and importance to residents, across mature developed area and developing area, as well as across the old city and the new city. (see, *Figure 6*) Generally, residents in mature developed areas as DP, HHY, and HTD endowed relatively higher importance to local employment opportunities (black column) than developing areas such as JZL and LN. HHY exhibits the most disparity of highest

demand of local employment (black column) and lowest recognition of transit effect on its increase (grey column). In contrast to the fast employment increase in DP, the relatively high demand of local employment indicates the increased jobs are mostly not for the residents.

On the other hand, as shown in *Figure 6*, new developing catchment area JZL has lowest demand for local job compared to other station catchment areas, and highest recognition of transit effect on this aspect, which is consistent to the actual fast increase shown in the census data. The low importance of local employment for residents in this developing area indicate they are not restricted to work in the local area as others might be, because of higher car ownership or social privilege.

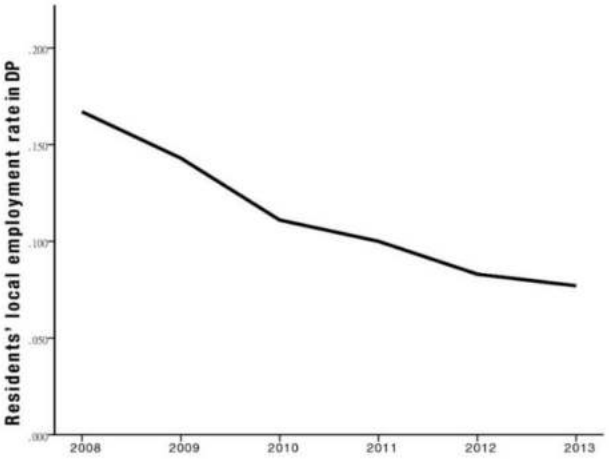


Figure 5: Local employment rate change in Daping Sub-district (DPSD)

Source: Chongqing census data

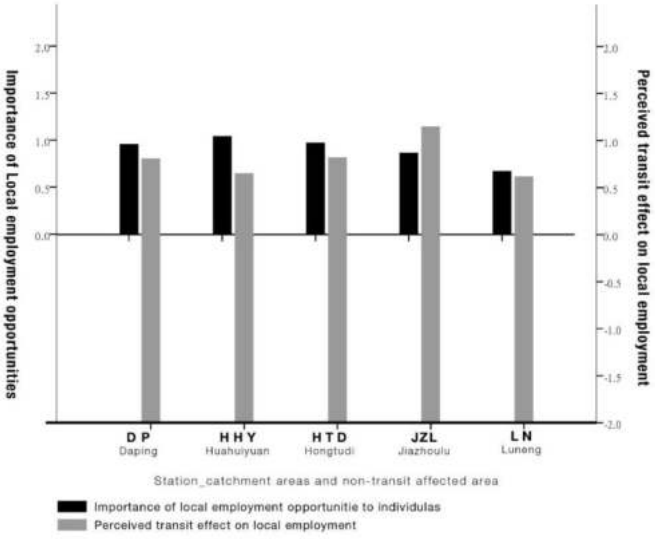


Figure 6: Perceived transit effect on local employment increase and its importance to individuals

Source: Primary survey data

## 4.2 General individual impact evaluation

*Table 3* shows correlation analysis of income groups and transit use frequency, which is statistically significant. The table below shows the lower income level the groups belong to, the higher percentage of them choose transit as frequent travel mode and thus the more they depend on transit for their daily travels. What to be noticed is, though the low income group exhibits higher percentage of frequent transit use, it does not mean they have higher travel demand than other groups. The paper will analyse later in actuality their travel demand is much lower due to their opportunities and competence.

Table 3: Household income groups and transit use frequency

**Household Income Groups( Yuan/Year) and Transit Use Frequency**

| | | Transit use frequency proportion | | | | | Sum |
|---|---|---|---|---|---|---|---|
| | | at least once every day | at least once every week | at least once every month | once several months | less than once last year | |
| Household Income Groups(yuan/year) | below50,000 | 22.90% | 37.70% | 16.50% | 15.80% | 7.00% | 100.00% |
| | 50,000-100,000 | 15.60% | 40.00% | 19.40% | 21.10% | 3.90% | 100.00% |
| | 100,000-200,000 | 13.30% | 33.70% | 19.90% | 22.30% | 10.80% | 100.00% |
| | above200,000 | 8.70% | 17.30% | 26.90% | 25.00% | 22.10% | 100.00% |

Source: primary survey data

An ANOVA test is conducted on comparing the evaluation of the general impact of rail transit on their lives of different groups. Robust Tests of Equality of Means is checked and shows a significant difference among the four groups in general. Planned Contrast Tests reveal that evaluation of the lowest income group is significantly lower than the rest ($p$=0.000), and that of the mid-low income group is also significantly higher than the mid-high and highest income group ($p$=0.073). By plotting the data below in *Figure 7* it shows a quadratic trend. The mid-low income group exhibits the highest evaluation towards the transit impact on their lives, while the lowest income group exhibits the lowest evaluation.

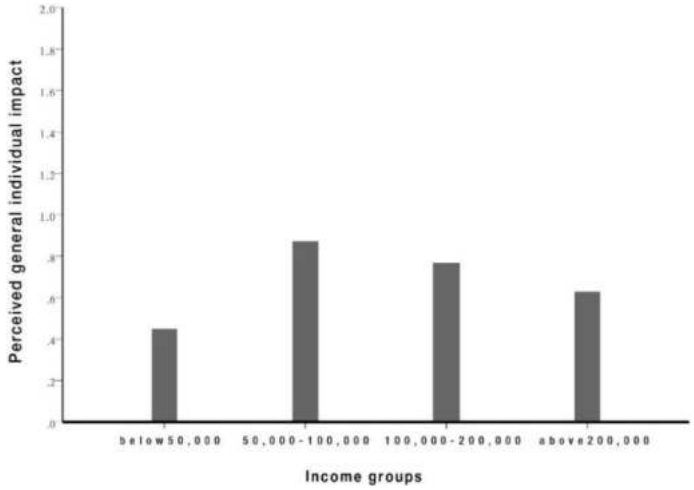


Figure 7: perceived general individual impact of transit among different income groups

Source: primary survey data

### 4.3 Multivariate analysis of separate aspects

In order to find the difference among population groups in the two facts of questionnaire study, which are perceived transit effect and individual impact, MANOVA analysis was adopted first. The MANOVA analysis was conducted on all variables together, aiming to count in any combined effects among variables. Furthermore, to break the linear combination in more detail, a discriminant analysis is carried out following the significant MANOVA, to detect what exactly distinguish the groups.

### The perceived effect of rail transit

In the MANOVA analysis, using Pillai s trace, there was a significant differentiation groups on perceived rail transit effect by a linear combination of Q23, Q25, Q36, Q37, Q38, Q39, Q40, Q41, Q42, Q43 and Q44. The following discriminant analysis revealed three discriminant functions as shown in *Table 4*. The first explained 60.7% of the variance, canonical $R^2$= 0.068, whereas the second explained 25.1%, canonical $R^2$=0.028. In combination these discriminant functions significantly differentiate the income groups *(p=0.000)*. After removing the first function, the rest functions also significantly differentiate the income groups (*p=0.062)*.The correlation (see *Table 5*) between outcome variables and the discriminant functions revealed that Q25, Q23, Q39, Q40 loaded highly onto the first function, and Q43, Q41, Q42, Q44, Q36 loaded highly onto the second function.

Table 4: Eigenvalues: perceived transit effects of different income groups

**Eigenvalues**

| Function | Eigenvalue | % of Variance | Cumulative% | Canonical Correlation |
|---|---|---|---|---|
| **1** | .068[a] | 60.7 | 60.7 | 0.253 |
| **2** | .028[a] | 25.1 | 85.8 | 0.166 |
| **3** | .016[a] | 14.2 | 100 | 0.126 |

Table 5: Structure matrix: perceived transit effects of different income groups

**Structure Matrix**

| Perceived transit effect | Functions | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| Q25 Living cost | .761* | -0.320 | 0.208 |
| Q23 Property price | .645* | -0.095 | -0.291 |
| Q39 Neighborhood safety | .527* | 0.115 | 0.173 |
| Q40 Employment opportunity | .476* | 0.338 | -0.172 |
| Q43 Community harmony | 0.466 | .571* | 0.320 |
| Q44 Daily commuting convenience | 0.239 | .549* | -0.296 |
| Q41 Commercial and service facilities | 0.378 | .516* | 0.223 |
| Q42 Community population change/ floating population | 0.278 | .492* | 0.298 |
| Q36 Land development, urban image and open space | 0.314 | .374* | 0.286 |
| Q37 Pedestrian environment | 0.294 | 0.048 | .401* |
| Q38 Noise | -0.041 | -0.054 | -.100* |

In *Figure 8*, the group centroids and function plot showed that Function1 variables Q25, Q23, Q39 and Q40 significantly discriminated the lowest income Group1 from the highest income Group4, and Function2 variables Q43, Q44, Q41, Q42 and Q36 significantly discriminated the mid-low income

Group2 from Group4 and 1.

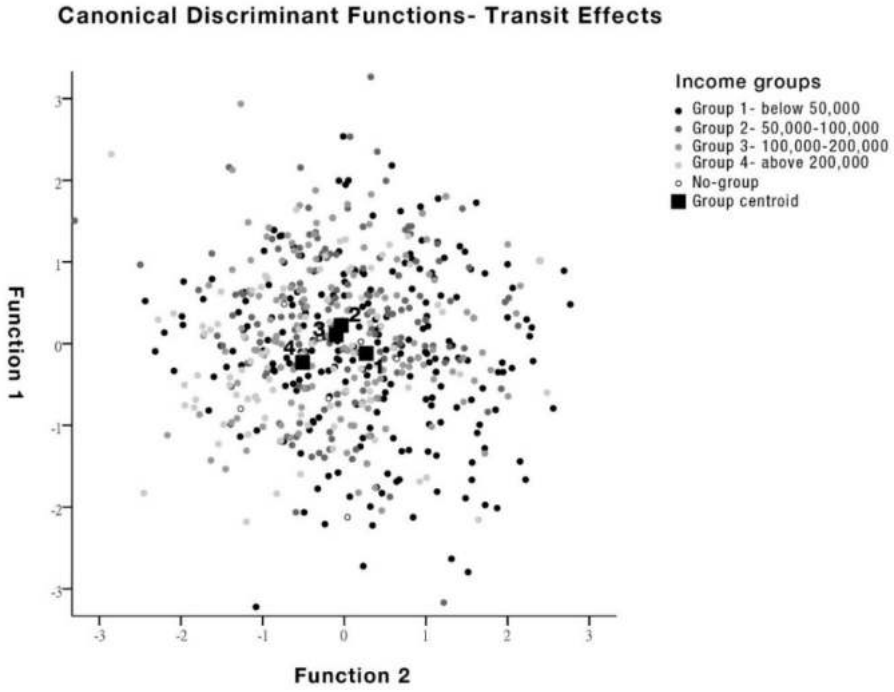


Figure 8: Canonical discriminant functions of perceived transit effects

## The impact on individuals

Similar statistical analysis process was conducted on outcome variables of individual impact and importance of transit effects. MANOVA analysis suggests there was a significant differentiation ($p$=0.000) among income groups by a linear combination of Q20, Q22, Q26, Q28, Q29, Q30, Q31, Q32, Q33, and Q34. The following discriminant analysis revealed three significant discriminant functions. (*Table 6*) The first explained 84.5% of the variance, canonical $R^2$= 0.267, whereas the second explained 12.2%, canonical $R^2$=0.039. The correlation in *Table 7* between outcome variables and the discriminant functions revealed that Q20, Q22, Q30, Q31, Q29 load highly onto the first function, and Q26, Q34, Q33 load highly onto the second function.

Table 6: Eigenvalues: individual impacts and importance of transit effects of different income groups

**Eigenvalues**

| Function | Eigenvalue | % of Variance | Cumulative% | Canonical Correlation |
|---|---|---|---|---|
| **1** | .267[a] | 84.5 | 84.5 | 0.459 |
| **2** | .039[a] | 12.2 | 96.7 | 0.193 |
| **3** | .010[a] | 3.3 | 100.0 | 0.101 |

Table 7: Structure matrix: individual impacts and importance of transit effects of different income groups

**Structure Matrix**

| Individual impacts of some transit effects or importance of some changes caused by transit | Functions | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Q20 Impact of property price rising | .780* | 0.322 | -0.111 |
| Q22 Impact of living cost rising | .651* | -0.362 | 0.178 |
| Q30 Importance of employment opportunity increase | -.381* | 0.272 | 0.373 |
| Q31 Importance of commercial and service facility improvement | .329* | -0.057 | -0.267 |
| Q29 Importance of neighborhood safety improvement | .205* | -0.111 | -0.062 |
| Q26 Importance of land development/urban image/open space improvement | 0.009 | .560* | 0.125 |
| Q34 Importance of daily commuting convenience improvement | 0.223 | .392* | -0.08 |
| Q33 Importance of community harmony improvement | -0.013 | .210* | -0.198 |
| Q32 Impact of community population change/floating population increase | 0.238 | -0.063 | .715* |
| Q28 Impact of noise | 0.012 | 0.004 | -.173* |

In *Figure 9*, the group centroids and function plot showed that Function1 variables Q20, Q22, Q30, Q31 and Q29 in combination discriminated the lowest income Group1 from the highest income Group4, and Function2 variables Q26, Q33, Q34 in combination discriminated the mid income Group3 (and Group2) from Group4.

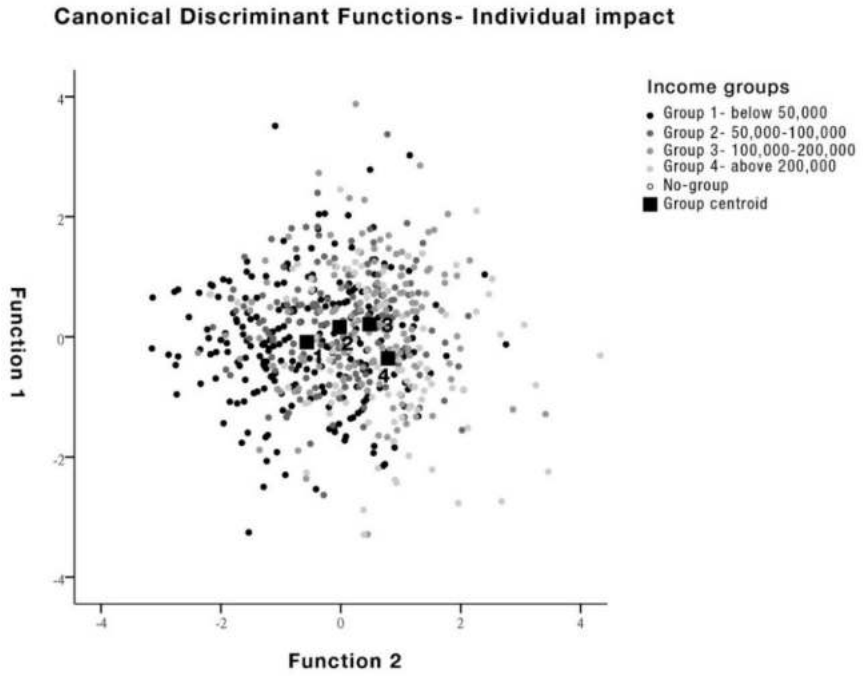


Figure 9: Canonical discriminant functions of impacts and importance of transit effects

## 4.4 Results

Derived from the MANOVA and discriminate analysis results, variables in the two facets that are perceived transit effect and evaluation of individual impacts and importance of transit effects,

respectively formulate two similar functions. The two kinds of functions in each facets have similar models to distinguish difference income groups. Variables that consist the two functions are presented with black and grey backgrounds in the table below. *Table 8* shows a correspondence of variables of the same function in the two facets.

Variables of Function1 can be amalgamated as `critical issues of living` affected by the rapid rail transit system. Property price, living cost, safety and local employment opportunities together form a linear combination and significantly distinguish the lowest income group from the highest one, in terms of both perceived transit effects and individual impacts. Secondly, variables of Function2 can be described as `further requirements influencing living standard` . Community harmony, daily co convenience, commercial and service facilities, community population change and floating population, urban image and open space form a second linear combination, which significantly differentiates the middle income groups from the highest income group.

Table 8: Variables of two discriminant functions to distinguish income groups on two facets of questionnaire study

| **Perceived transit effects in this area** | | **Individual impacts or importance of changes caused by transit effect in this area** | |
|---|---|---|---|
| Q23 Property price | Function 1 | Q20 Impact of property price rising | Function 1 |
| Q24 Property rent | Delete | Q21 Impact of property rent rising | Delete |
| Q25 Living cost | Function 1 | Q22 Impact of living cost rising | Function 1 |
| Q36 Land development, urban image and open spaces | Function 2 | Q26 Importance of land development, urban image and open space improvement | Function 2 |
| Q37 Pedestrian environment | Not significant | Q27 Importance of pedestrian environment improvement | Delete |
| Q38 Noise | Not significant | Q28 Impact of noise | Not significant |
| Q39 Neighborhood Safety | Function 1 | Q29 Importance of neighborhood safety improvement | Function 1 |
| Q40 Employment opportunity | Function 1 | Q30 Importance of employment opportunity increase | Function 1 |
| Q41 Commercial and service facilities | Function 2 | Q31 Importance of commercial and service facilities improvement | Function 1 |
| Q42 Community population change/floating population | Function 2 | Q32 Impact of community population change/floating population increase | Not significant |
| Q43 Community harmony | Function 2 | Q33 Importance of community harmony improvement | Function 2 |
| Q44 Daily commuting convenience | Function 2 | Q34 Importance of daily commuting convenience improvement | Function 2 |
| Q45 Weekend travel convenience | Delete for multi-collinearity | Q35 Importance of weekend travel convenience improvement | Delete for multi-collinearity |

Below in *Figure 10* and *Figure 11*, difference among the groups of the two facets are explained below respectively in the two Functions. In *Figure 10*, Function1 variables named `critical issues of living` are plotted. It shows consistence of variables between the above two facets. For individual impact of property price and living cost rise, evaluation of the lower income group is much more adverse than the higher income group. Though appraisal on the safety effect of transit in the catchment area by lower income group is also much higher than the higher income ones, their demand of safety in surrounding area is lower than others, as well as need of commercial facilities and service. Especially, evaluation of on perceived transit effect on local employment increase by lower income group is much higher than higher income groups. However, they also express much higher importance of local employment increase to them than the higher income ones.

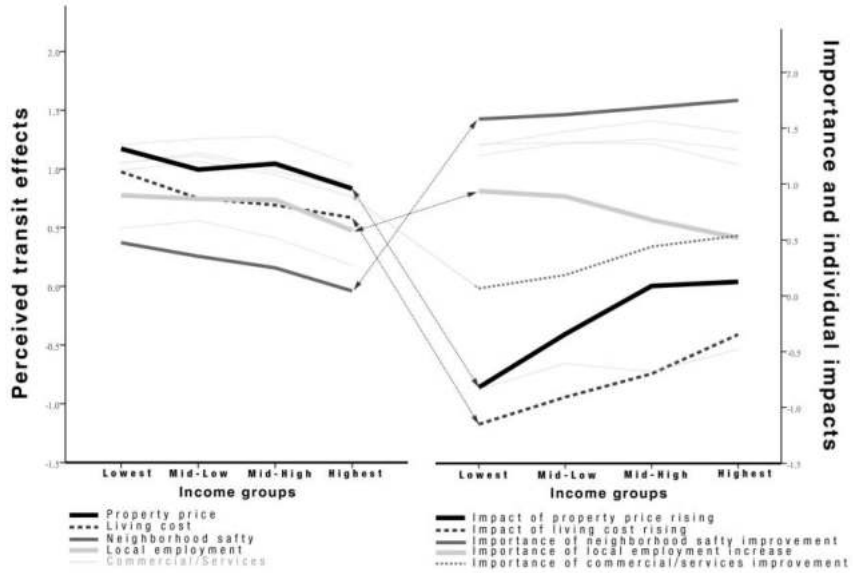


Figure 10: Function1 variables `critical issues of living`

In *Figure 11*, Function2 variables named `further requirements influencing living standar` plotted. It also shows consistence between the two facets. On commuting convenience, the lowest income group shows the least importance of commuting convenience to themselves. However, the mid high income group exhibits the highest importance of commuting convenience to themselves. What need to notice is a sensitive issue as the community population change and floating population increase in this area. The lower income groups exhibit more awareness of this aspect caused by the transit-lead development and acclaimed to receive the most adverse impact of it.

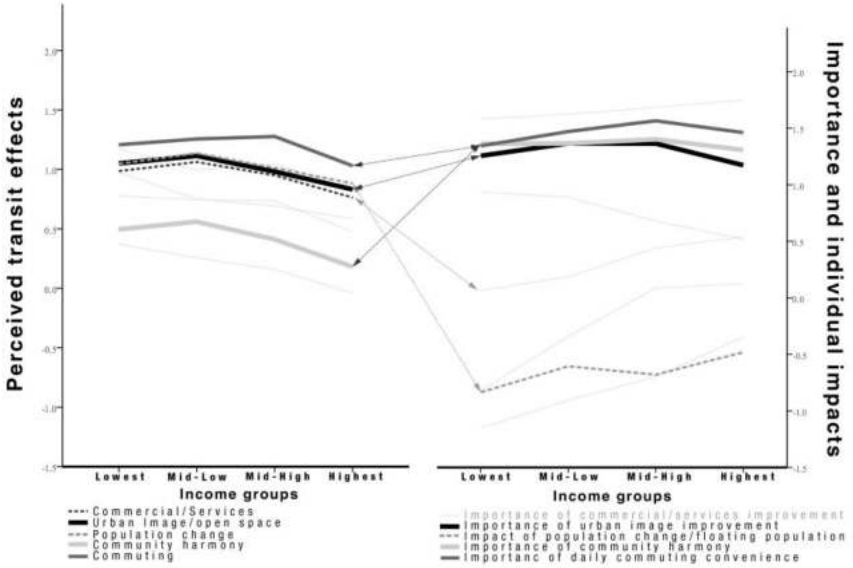


Figure 11: Function2 variables `further requirements influencing living standard`

As a result, the lowest income group generally exhibits comparatively higher level of sensitivity towards the transit effects on all the aspects above, as shown in Perceived transit effects in both Function 1 and 2. But in Function1 critical issues of living , impact of these changes on themselves are often much worse. However, for the mid low income group, their evaluation of perceived transit effects is the highest in Function2 further requirements influencing living standard . Meanwh mid high income group also exhibits the highest importance to themselves in Funtion2 variables. Also to be surprised, the highest income groups exhibits the lowest evaluation on perceived transit effect on nearly all aspects in both Function 1 and 2, although importance of some issues to them are much higher, especially those in Function2 variables.

## 5. Conclusion

Many researches put forward the argument that benefits are often distributed disproportionately among population groups, especially between the users who benefit from the use of a transport system and the affected who bears the adverse impacts. (Feitelson, 2002)There is also a substantial body of evidence suggesting that the low-income group bears the most adverse impact of new infrastructure investment. Often, however, the argument that people can be distinguished as the users and the affected are predicated on the assumption that the usage of that transport facility depends on the privilege of access. It can mostly be applied in circumstances of transport investment such as roads construction.

However, as for public transport investment such as rail transit system, this research finds that there is no viable dichotomy of population groups such as users and affected, depending on who benefits or loses. The users do not necessarily enjoy the benefits. In fact, the most frequent users can be those who are most adversely affected at the same time. As they often don t belong to the social advantage class, they depend more on public transport for their travel. As shown in *Table 3* of transit use frequency of each group, in comparison the lowest income group has much higher transit use frequency than the higher income groups daily and weekly. Although they can live near the transit station and enjoy the access advantage, they also suffer from the adverse impacts of the rail transit. Their scanty benefit from travel convenience is diluted by the adverse impacts they bear. The lowest income group exhibits the lowest evaluation of transit impact on their lives. It makes the benefit and compensation issues more complicated.

Meanwhile, the argument that assume poorer people receive more adverse impact is also predicated on a flimsy understanding of what aspects impact contains. It overlooks a threshold of equal benefit distribution of the transit system. The threshold is the demographic characteristic of income. The effect of rail transit tends to benefit a certain group of people most, as it does among locations. While the research result indicates the lowest income group receives the worst regeneration effect from the transit system, arguably, the mid-low income group are not so badly affected by the adverse impacts such as land and property value uplift. In fact, they exhibit positive attitudes towards the transit effects and the highest general evaluation of the transit impacts on their lives. Thus they can be said to benefit most from the transit investment. Meanwhile, the highest income groups exhibits receiving the least

benefit on all the aspects. The benefit distribution for them is not equal either.

In order to explore why the lowest income people benefit least from the transit, in a cross-tabulation of income groups and where people coming from, the proportion of migrants is much higher in lower income groups. The migrants of the lowest income group, who mostly come from the countryside and don t own property in the city, bear the adverse impact of property value uplift around the station. At the same time, the old residents of the lowest income group, though with proximity to rail transit stations, lack the competence required by the increased employment opportunities. With land redevelopment around the station, increased jobs are mostly either low level service jobs in restaurants and shops, or high level office jobs. Being not capable of taking the new office jobs, the old residents are also reluctant to take the service jobs which are considered by themselves more suitable for rural migrants. Combined with their economic constrains, many old residents would rather take the subsistence allowances from government than seek a job far outside their living area. This is why their commuting need is largely reduced. Therefore, although the lowest income group are quite acknowledged of transit effect, they also express their benefit are quite limited.

This research suggests that regeneration effect of transit system cast different social impacts across locations and populations. The expected results varies greatly from area to area, influenced by locational factors. Moreover, disparate individual impacts tend to aggregate among certain kinds of people. It exerts worse or better impacts on certain groups of residents in certain areas. These aggregations can trend, which potentially causes social inequity problems.

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# Highway investment planning: Why CBA scarcely affects the prioritization of projects in Norway

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**Keywords:** Cost-benefit analysis, Road planning, Prioritization

***Abstract:*** *It is well documented that the benefit/cost ratio is virtually uncorrelated to the likelihood of a Norwegian classified road project entering the list of projects selected for investment in the National Transport Plan. All candidate projects are cost-benefit analysed, so the parliamentarians have the information required to take social net benefits into account, should they want to. As the politicians have requested the cost-benefit analyses, their modest use of the results calls for an explanation. The paper describes the steps of the priority setting process, and for each step outlines procedural characteristics and political mechanisms that have the effect of pushing the results of cost-benefit analysis into the background. The points dealt with are of a general nature and do not pertain only to Norwegian conditions. For example:*

- *Perverse incentives: Local influence is not related to responsibility or cost coverage*
- *Agencies expected to give professional advice may be too keenly listening to political signals*
- *Equal allocation of projects to various counties trumps implementation of the economically best investments*
- *Choosing the project with the highest benefit/cost ratio is supplemented by so many other assessment criteria that the difference between professional and political judgment is dissolved*

*The prioritization effect of the formidable revenues to the Norwegian state from oil and gas production, is also considered.*

## 1 Introduction on cost-benefit analysis in Norwegian national transport planning

It is well known and documented that economic net benefit to society plays a very modest role in setting priorities among investments on classified roads in Norway (Eliasson et al. 2014, Odeck 2010, Sager and Sørensen 2011, Welde et al. 2013). Correlation of 1 between the size of the benefit/cost ratio of projects and their likelihood of entering the list of prioritized investments in the National Transport Plan (NTP) would be unreasonable, as it would be an indication of technocratic and bureaucratic power strong enough to make parliamentary politics virtually superfluous. A certain positive correlation between the result of a project s cost-benefit analysis (CBA) and its appearance on the list of selected investments could however be perceived as reasonable from a democratic point of view. The positive correlation would indicate that the Directorate of Public Roads puts a certain weight on the analyses for which it is responsible. Instead, the factual situation is that a positive correlation has not been found. Surely, the politicians take into account some of the benefit items included in the CBA, especially time savings and reduced number of traffic accidents, but the aggregated consequences measured in monetary units means little to their priority setting (Odeck 2010). Eliasson et al. (2014: 2) survey the varying degree of CBA-influence on the prioritization of road projects in several countries of Western Europe and the Americas.

The Norwegian experience is the point of departure for the present paper, which explains how characteristics of the planning and decision-making process can lead to low emphasis on economic outcome. The process starts with the local project proposals put forward by municipalities and counties, continues via project assessment in the regional and central offices of the Norwegian Public Roads Administration (NPRA), and moves on via the political adjustments of the Ministry of

Transport and Communications (MoT), to the final political comments and subsequent decisions made by the Storting (Parliament).

In 2010, 17 200 km of formerly classified roads were converted to county roads. The remaining classified roads are European highways, main connections with neighbouring countries, or important roads between provinces. On matter pertaining to classified roads, the NPRA is under the direction of the MoT. The list of prioritized investments on the national road network is worked out by the Directorate of Public Roads every fourth year. It is an important part of the transport administ common proposal for the National Transport Plan, which is handed over to the MoT for political treatment. The big difference between what the results of the cost-benefit analyses suggest, and the actually proposed investments, emerges during the NPRA s work on priority setting; that is, pre the political treatment of the NTP at the national level. It is therefore a point of discussion whether the recommendations of the Directorate of Public Roads are sufficiently freely given on a basis of professional knowledge and research.

The National Transport Plan presents the Government s visions and plans for the transport se the coming ten-year period; it is a rolling plan that is revised every fourth year. Proposed investments are listed each time, and unfinished road projects from the previous list are included in the next one. Nearly all candidate projects are economically assessed using CBA. The Storting has instructed the NPRA to prepare such analyses in accordance with guidelines from the Ministry of Finance (Direktoratet for økonomistyring 2014, Finansdepartementet 2014).

The priority setting among road projects in the NTP discloses some features deserving critical debate. First, the national politicians in the Storting (the Parliament) have a clearly stated aim of steering strategically at the coordinated and superior level. It is not clear, however, which principles of priority setting make up their platform, and whether they stick to principles and criteria at all. Second, the transport bureaucracy loyally complies with the political demand for cost and benefit estimates for every investment project in the network of classified roads, but without demonstrating the importance of these calculations in its own selection of recommendable projects. The Directorate of Public Roads recommends instead an investment portfolio that seems partly politically motivated and rests in part on professional considerations that are foreign to CBA.

The purpose of the cost-benefit analysis is not to tell the decision-making authority what to do. The analysis does not provide a complete foundation for making political decisions, and it should not aim to do so. The aim should be the more modest one of informing the politicians of which planning alternatives are the best, seen from the economic point of view. It seems reasonable to claim that the list of selected road projects should reflect that net benefit to society is an important consideration, as this importance has been laid down repeatedly by the MoT and by the Storting s standing Committee on Transport and Communications (Samferdselsdepartementet 2014: 12, Transport- og kommunikasjonskomitéen 2013: 54). Nevertheless, it cannot be demonstrated that CBA has got a breakthrough in practical politics judging from the four white papers on national transport plans that have been published since year 2000.

It could be regarded as bureaucratic steering if priority setting in the NTP was in line with a technical or economic criterion, for example, the benefit/cost ratio. On the other hand, political arbitrariness can be suspected if neither professionals nor lay people are able to identify the criteria sustaining political decisions. CBA can just as other analytical evaluation methods be given a comprehensive and technically complicated design making it very hard for politicians and the general public to grasp how results are generated. However, without publicly known criteria, the choice processes taking place in the heads of decision-makers will be just as inaccessible as the algorithms of a formal model. Black-box problems can be caused both by extended use of mathematical modelling and by diffuse subjective decisions. In both cases it is difficult for interested groups and individuals to get involved in meaningful ways, and the legitimacy of the political decisions is weakened.

The following sections describe the decision process and show that downgrading of CBA-results takes place even before the candidate list of road projects reaches the Ministry. It is then argued that the Norwegian state s ample oil revenue is an unlikely explanation for the low CBA influence. In the search for alternative explanations, the remaining sections analyse political signals, process characteristics, and critique of CBA.

## 2 The planning and decision-making process for investments in classified roads

This section follows the prospective road projects from local politicians, via bureaucrats and planners, to politicians at the national level. Planners at various levels of the bureaucracy affect the selection of road projects by contributing to the political agenda; for example, by making traffic forecasts identifying future congested areas, by reporting on serious lag in road maintenance, and by estimating the extra costs to private business due to traffic jams. Planners also gain power from describing and evaluating possible investment projects. The portrayal of strong and weak sides can attitudes to the project. The politicians also form the agenda of the day. They affect priority setting by deciding on the goal hierarchy that planners must take into account, and obviously by allocating money to projects. The balance of professional and political knowledge and the interplay of bureaucratic and political power are essential for the priority setting of the NTP.

Political signals about important themes and planning tasks are emitted very early in the national transport planning process, as guidelines from the Ministry of Transport and Communications. These are general instructions that are unrelated to particular projects. Far more concrete and project-oriented preferences are expressed by local actors at the level of municipalities and counties. The need for uniform road quality over longer distances and the wish for road capacity matching the traffic volume and corresponding to road guidelines and standards, are much used reference points for new project proposals. The counties in a region can find it opportune to launch common demands and proposals. Counties and municipalities often get involved in the planning through a Regional Transport Forum or an interim board working for improvement of the road standard in a particular corridor crossing several municipalities or counties.

The five regional offices of NPRA convey wishes from local political actors and put forward ideas of their own. The Directorate of Public Roads receives proposals from the regional offices about which road projects to include in the National Transport Plan. The CBAs conducted by the regional offices of NPRA or their hired consultancies are checked and controlled for inconsistencies as part of the assessment process. Ideas for new projects are seldom launched by the central offices of the road administration. The Directorate makes a list of prioritized road projects based on the local input. The list is an important part of the transport administrations common proposal for the

The list of recommended projects on classified roads is submitted to the Ministry of Transport and Communications. The MoT adjusts the list according to all the political considerations that have to be made by the Government. The Ministry also requests comments on the proposal from the counties and the four biggest city municipalities. The Government s NTP is sent as a report (white paper) to the Storting. This is common procedure when the Government wants to raise a matter in the Storting without a draft resolution. The white paper is handled politically by the Storting s standing Committ on Transport and Communications. The Committee aims to visit all counties to prepare for its deliberations on the NTP. The politicians thus have extensive local information to their disposal, in addition to expert analysis, when considering the plan and making budget decisions later on. Extra input is received through open hearings organized by the Committee, in which 74 organizations and political bodies aired their views on NTP 2014-2023. All the largest political parties are represented in the Committee and comment on the plan. Comments and recommendations are put forward in a report to the Storting.

The full Storting debates the report on the NTP and votes over the proposed comments to the plan. It is not voted over the NTP itself, though, as it is the Government s plan and no Storting can nevertheless ask the Government to change the economic frame of the plan or to

distribute funds in a different way, as the Progress Party proposed during the parliamentary debate in 2013. Usually, the elected representatives also advance several so-called loose proposals to the matter , drawing attention to actions which the Storting should ask the Government to implement in the planning period. No loose proposals passed in 2013, not even any of the 27 proposals that were listed in the report from the Committee on Transport and Communications. The only proposal that passed under the Storting s treatment of NTP was that Report no. 26 to the National Transport Plan 2014-2023 is enclosed with the minute book .

It is not up to the parliamentarians to pass or discard the Government s trans investments in the NTP are not formally approved until funds have been allocated over the national budget, or a motion about road tolls has been carried by the Storting. Moreover, the Storting can comment on the plan and put forward requests and appeals to the Government, which may send strong signals about the action plans to be made for each transport sector to follow up the NTP. The Storting s political discussion of the National Transport Plan is therefore an importa priority setting for projects in the network of classified roads.

## 3 Marginalization of CBA takes place in the pre-Ministry stages

It is important to the overall argument of the paper that the downgrading of the CBA-results does not start with the Ministry s political work on the NTP, but is well under way much earlier in the process, already when the regional offices of the NPRA adopt many of the project suggestions from local politicians.

Surely, the Ministry of Transport and Communications may expand the road investment budget compared to the economic framework on which the Directorate s recommendations are based (Martinsen et al. 2010: 8). In the current plan, NTP 2014-2023, the increase is due to new rules for VAT calculation and, moreover, the fact that detailed planning of some projects revealed underestimation of costs. When the budget ceiling is lifted, many projects will be supplied with more money in the Government s plan than in the proposal from the transport administrations, few will suffer small cuts and thus slower progression. With changes of this kind, the Government makes certain economic reallocations, while the social profitability of the project portfolio stays virtually the same as in the proposal from the Directorate.

It is, by and large, the same set of road projects that is proposed by the Directorate, considered politically by the Ministry, sent to the Storting by the Government, and funded by the parliamentary majority. The consistency between the prioritizations of the road bureaucracy and the Government can be documented for the planning period 2014-2023. This is done by comparing the maps showing the location of the projects on classified roads in the transport administrations proposal and the Government s plan (Samferdselsdepartementet 2013: 248-249, Sekretariatet for Nasjo transportplan 2012a: 182-183). Protection against avalanche and landslide is specified as a separate category in both sources, which is useful, as a significant part of the differences between recommendation and final plan pertains to such projects. The maps in the Government s plan display 155 projects on classified roads, of which 24 are of the protection kind.

In order to underpin the statement that the national Government tends to make only small changes in the investment proposals from the Directorate of Public Roads, the following demands should be satisfied:

- The maps in the proposal and the final NTP show almost the same set of projects; that is, the Ministry discards only a small number of the projects recommended by the Directorate, and it includes few new ones.
- Nearly all projects that are included in the Directorate s proposal only under framework (main budget alternative plus 45 %), must be selected by the Government for start-up in the second part of the planning period (that is, 2018-2023).

- Nearly all projects recommended by the Directorate even within a narrow economic framework (the main budget alternative), must either be under construction already or be planned by the Government for start-up in the first part of the planning period (that is, 2014-2017).

Comparison of the maps marking the location of the Directorate s and the Government s projects respectively, shows that the number of projects that enter or leave the list of prioritized road projects is less than 4 % of the total. The share of projects proposed by the Directorate even under a narrow framework, but still placed late in the planning period by the Government, is around 8 % (13 projects). More than half of this share (8 projects) protects against avalanche or landslide. In the NTP white paper, projects of this kind are more frequently moved to the second part of the planning period than other types of projects. Six projects that were prioritized by the Directorate only in the case of a wide budget limit, are nevertheless planned by the Government to be started in the period 2014-2017. Thus, this goes for less than 4 % of the total set, and none of the projects are of the protection kind.

It can be concluded from these quantifications that the set of prioritized projects on the classified road network undergoes only small changes on its way from the Directorate to the Storting via the MoT. It is by no means self-evident that the technical-economic experts and the politicians should make very similar judgments as to which road projects deserve priority. The results above thus justify a closer look at the relationship between the Ministry and the Directorate in a later section.

Each regional office of the NPRA is allotted an economic framework, which the regional NTP coordinator can fill up with desired road projects. Consequently, the Directorate of Public Roads can construct its list of prioritized projects on classified roads mainly by adding up the five regional lists. The Directorate does not have to remove many suggested projects to prevent breaking the total budget limit decided by the MoT. Available data does not allow quantification of the alterations made by the Directorate to the regional lists, as these lists are not made public. Based on interviews with project managers and the regional NTP coordinators, Strand et al. (2015: 10) nevertheless infer that the central level [the Directorate] makes only small changes in the regional propos that the portfolio of prioritized road projects is not changed much throughout the planning and decision-making process starting with the political-technical proposals generated locally, and ending with the set of projects receiving state funding.

Influence runs in both directions between the actors at the local and national levels. This section nevertheless indicates that the local level, represented by municipalities, counties, and the regional offices of the NPRA, holds a strong position in the planning process leading up to the final selection of road investments in the NTP. The judgment of the Norwegian Productivity Commission is that the decision-making system seems to have a weakness, in that it does not clearly lay down that unprofitable projects desired by special often local interests, should not be built (Produktivitetskommisjonen 2015: 364). The local level is powerful even if the NTP portfolio is made up of projects on classified roads including European highways; that is, roads satisfying national needs. Some consequences of the national politicians and the national competent a willingness to comply with local interests and demands are discussed in a later section.

## 4 Does the abundant petroleum income cause indifference to CBA-results?

The extraction of oil and gas from the North Sea has given the Norwegian state huge revenues and permitted the build-up of the Government Pension Fund Global, which exceeded 7 000 billion NOK by the first half of 2015. One might suspect that the good financial situation is what makes Government and Storting downplay the criterion of maximizing the benefit/cost ratio when selecting road investment projects. The idea is that the country is so materially well off anyway, that it does not matter much if politicians place political, social, and unpriced environmental benefits above the realization of economic gains. A more specific hypothesis is that Norwegian politicians at the national level do not have to set aside the many projects with negative expected net benefit to society, as enough money can be allocated over the national budget to implement both the profitable and the

unprofitable proposals. Generous budgets diminish the need to set priorities and can weaken the incentives to top-rank the most cost-effective projects. It is necessary to scrutinize this idea in order to motivate for the subsequent discussion of alternative explanations of the modest weight given to CBA-results.

In this context, it is essential to know that the Storting has restricted the transfer of petroleum income from the Fund to the national budget. All political parties except the rightwing Progress Party voted for the Budgetary Rule of 2001, according to which a maximum of four per cent can be allocated to the national budget yearly. This corresponds to the Fund s effective rate of return, which has averaged 3.7 per cent annually since 1998. Even if the limit prescribed by the Rule has been somewhat overstepped in several years, the current rightwing government with a Minister of Finance from the Progress Party transferred only 2.33 % in 2014 and is budgeting with 2.9 % for 2015. This means that one in nine NOK spent by national and local government this year is transferred from the Fund (Ministry of Finance 2014: 9). The arguments below give reasons to doubt that the prosperity of the state is the crucial variable explaining the Norwegian reluctance to invest in roads according to CBA-results.

First, as far back as the second half of the 1980s, when income from the Norwegian petroleum sector was modest, investment priorities were not set in accordance with the benefit/cost ratio. Odeck (1991) studied the selection of road projects for the Norwegian Road and Road Traffic Plan 1990-1993. The projects were assessed politically in the late 1980s and were located in six counties from the eastern, western and northern parts of the country. It is known that the distribution among counties of state funds for classified road investments was influenced much more by regional politics and fairness than by CBA-results (Elvik 1995). But the internal priority setting of each county was expected to be relatively disconnected from distributional politics and thus thought to give more room for priority setting in line with CBA. Nevertheless, for candidate road projects in each county, the conclusion was that the probability of being selected for the plan did not increase with higher value of the benefit/cost ratio. Net economic benefits to society thus turned out to be held in low political regard even when Norway had barely begun to harvest the riches of the North Sea reservoirs. By 1988, the state s net cash flow from the petroleum sector had exceeded 50 billion 2011-NOK annually for only seven years (Norwegian Government 2012).

Second, use of petroleum revenue has not raised the standard of Norwegian roads to a quality level from which further improvement will add little economic welfare. The density of the network and the percentage of roads with motorway quality are among the lowest in Europe (IRF 2014). The Norwegian network of classified roads has undergone a long period of deterioration. Sund (2012: 29) shows that it will cost around 25-40 billion NOK to eliminate the maintenance backlog. Furthermore, NPRA s cost estimate is 1000 billion NOK for bringing the entire classified road network up to the quality prescribed by the highway standards and specifications, in addition to implementing the most significant shortenings of classified routes and the building of important bridges to substitute ferries (Statens vegvesen 2015: 7). The upgrading would take more than thirty years with the current rate of investment. The marginal net benefit of proposed road projects is not low in general. The number of candidate projects on the Norwegian classified road network that is profitable according to CBA, is high enough to fill the entire NTP-budget for roads (Sekretariatet for Nasjonal transportplan 2012b).

Third, even an unlikely confirmation of the hypothesis that Norwegians feel sufficiently well-off to be more or less indifferent to further economic gains, would not give reason for political disinterest in CBA-results. Investment policy in line with the criterion of maximum benefit-cost ratio is only partly about accumulating extra wealth. It is to a higher extent about appropriating travel time savings and traffic safety gains. For a large part of the road projects in the NTP, these are the main components on the benefit side of the CBA-account. For a sample of 32 classified road projects in Norway, Welde (2009) found that the value of time savings and safety gains made up 70 per cent of the social benefit, but it is not known how representative this is for the full portfolio of NTP-projects. For a German sample ten times the size of Welde s, Holz-Rau and Scheiner (2011) demonstrate that the share of t savings and reduced fatality risk in total benefit varies widely with project type. Only a part of each

component is directly related to increased monetary income. A large portion of the travel time savings will not be transferred to working time. Concerning car travelling in Norway, 59 % of the trips by car take place during leisure time, and the occupancy is higher than for work-related trips (Vegdirektoratet 2014: 82). Moreover, around 80 % of the value of a statistical life in Norway does not reflect loss of income, as it is a willingness-to-pay measure including loss of welfare and quality of life (Veisten et al. 2010: 1). There is no evidence that safer travelling and faster journeys outside working hours are less appreciated in high-income countries. On the contrary, the income elasticity of the value of travel time is positive (Börjesson et al. 2012), which is also the case for the income elasticity of the value of a statistical life (OECD 2012: 69).

Fourth, Norway is not alone in giving low weight to cost-effectiveness when setting priorities in the road sector. The UK has a much smaller petroleum sector than Norway relative to GNP, but Nellthorp and Mackie (2000) still found that benefit/cost ratios did not seem to impact decisions on road investments. Nilsson (1991) reported very limited correlation between CBA-results and road investment decisions in Sweden. More recently, Eliasson and Lundberg (2012) found that the politicians in Sweden, without a significant petroleum sector, put very little weight on CBA-results when ranking road projects.

The reason why the Government and the great majority of the Storting do not want extra money for national road investment (and numerous other good purposes) to be readily available from the Fund, is the need to protect competitive industries from the higher wages and product prices that would result from increased overall domestic demand. Instead of heating the Norwegian economy by spending more oil revenue, the state weakens private purchasing power by making motorists pay around half of the investments on classified roads in user charges (Norheim et al. 2013: 16). If it were unproblematic to collect the money from another source, it would be politically futile to annoy potential voters by withdrawing nine billion NOK in road tolls from them in 2014 to improve the classified roads.

This section strongly indicates that the high income from the petroleum sector is not the main reason for national politicians' deviation from the maximum benefit/cost ratio as the criterion for selecting road projects. It is even less likely that bureaucrats and planners in the NPRA should let the alleged cash availability interfere with their professional principles for setting priorities. Yet this would be an implication of the hypothesis that oil revenue makes Norwegian politicians indifferent to CBA-results, as it was established in the previous section that the list of road projects selected for the NTP deviates little from the collection of projects proposed by the road experts. A search for other political and procedural explanations is thus required to understand the virtual indifference to cost-benefit results in the Norwegian road sector.

## 5 Political signals as reason for low emphasis on CBA-results

Public agencies with political superiors have to listen to signals from above. This applies to the Directorate of Public Roads when it considers projects on classified roads for the National Transport Plan. Even though professional independence is a main aspect of the Directorate's administration, it receives signals from the Ministry, which is the secretariat of the political leadership. It is less obvious that political signals from *below* should be influential, even if this is the case in the prioritization process of Norwegian road projects. Bottom-up signals usually express a preference for particular projects, while signals from the MoT tend to be about issues that are currently important, and about the balancing of political goals.

*Bottom-up political signals*

Consider now the early phase of the priority setting process, in which local demands and ideas are conveyed to the offices of the NPRA at the county and regional levels. Classified road projects that are singled out for implementation in the first four-year period of a revised NTP, have usually been politically deliberated as part of a municipal sector plan and been recommended by the municipal council (city council). A wide range of actors with conflicting points of view are involved in the planning processes at this stage. Projects sanctioned by the representative bodies are most often

compromises between local interests, where economic gain to society at large seldom has a prominent place.

The regional offices of the NPRA are in touch with transport politics at the local level through the common road administration in each county. On matter pertaining to county roads, the Regi Director is subordinated the county legislature. This arrangement implies that the county branches of the regional offices of NPRA co-operate with the transport department of the county administration regarding county road issues. The NPRA is the expert agency of the counties on these matters. The strategic management in each regional office receives many opinions on how the classified roads in the district should be improved in order to provide better services in interaction with the county road network. The purpose of the suggestions is often removal of bottlenecks or achieving uniform road standard over longer sections to enhance safety and smooth traffic flow.

Road plans are worked out, treated politically, and decided on in line with the Planning and Building Act. This means that responsibility for the plans lies primarily with the municipal council, implying that local government has decision power even over infrastructure meant to satisfy national needs. The exact alignment of the road is shown in a municipal sector plan, or possibly a community plan or a regional plan. Projects on classified roads are funded wholly or partly over the national budget, placing few if any obligations on local authorities and interest groups, except toll-paying motorists. The municipalities have weak motives to let net benefits to society influence which national projects they go for. They are not responsible for the project and do not pay for it. The municipality will, however, have a strong motive for maximizing local benefits. In some cases, this can be achieved by constructing bridges to substitute for car ferries; in other cases it requires costly road design, such as tunnels to avoid noise. Projects that are with a sober design defendable in terms of net benefit to society, are in some cases inflated and oversized, because the extra quality comes at zero price to local advocates (Samset et al. 2014). The costs are carried by the state or by drivers through road tolls. To the extent that municipalities and local branches of political parties influence the selection of projects on classified roads, significant differences between CBA-results and political priorities are to be expected (ibid).

In general terms, the reasons why local initiatives and decision rights pull the selection of classified road projects away from CBA-criteria are the following (Ostrom et al. 2001, Samset et al. 2014):

- Political institutions have created a kind of gift relationship in the road sector, with the state as donor and municipalities as recipients.
- To the extent that the state does not evaluate all assumptions and calculations of traffic, costs and benefits, an information asymmetry arises and favours the local recipients.
- In cases of local/national conflict of interest, some key politicians and other stakeholders at the donor side either have their own agenda (such as campaigning), or their loyalty is with the recipient rather than the donor (society).

Elected members of both local and national political assemblies expect that the assessment of road projects considers effects for the district traversed by the relevant road section. Equally important, there seems to be political consensus on not applying any decisive criterion for rejecting a proposal, and on the need for regional balance in the prioritization of projects. Such balance has been observed over a number of years (Elvik 1995). It follows that a particular road project is very likely to be implemented sooner or later, even with a low benefit/cost ratio, provided that the local agreement to back up this project persists over a few four-year planning periods. The political will to regional fairness and thus geographical dispersion of investments leads to a selection process where the seniority of the project idea takes precedence and trumps the consideration of net economic benefit to society at large. This seniority principle plays an important role in the regional offices of the NPRA propose to the Directorate of Public Roads.

The required compliance with municipal plans in combination with the political desire to ensure progress in all regions gives local authorities a strong hand in the process of selecting road projects for

NTP. Some projects can even jump the queue if the local administrative unit offers to co-fund the road improvement by collecting user fees. This is increasingly common in Norway. In 2013, 47 per cent of the investment costs related to classified roads were covered by road tolls. From 2003 to 2013, the contribution from tolls to investments on national and county roads has increased fourfold (Samferdselsdepartementet 2013: 93). The rationale of user payment is most convincing where traffic is considerable. High traffic does in itself strengthen the utility side of the cost-benefit account, when the project gives motorists more attractive trips. Taken by itself, an increased share of toll-financed projects should therefore bring the selected portfolio of investments more in line with the CBA-results. On the other hand, toll-funded projects are often realized after massive local pressure. Experience from the five biggest urban areas in Norway shows that local funding comes with strong influence on the local package of transport projects (Norheim et al. 2013). This may lead to more expensive solutions.

*Top-down political signals*

Signals from the Ministry help the Directorate foresee the response to recommended road investments. The Directorate may find it less than useful to propose projects that are likely to be dismissed by the superior authority. Such anticipated reaction has, over an extended period, been analyzed several times in Norwegian civil service and is a useful aspect of how the Directorate perceives its role (Christensen 1991, Egeberg 1995, Jacobsen 1960). The Directorate may fear doing futile work and perhaps consume political goodwill if neglecting signals from the Ministry when working on the list of recommended projects. However, if the Directorate tends to regard ministerial signals as directives, the Government will not receive professional advice built on an independent expert basis. The Directorate might then furnish some political wishes concerning construction and improvement of classified roads with a veneer of undeserved technical-economic desirability.

When a political decision has been made by the Ministry, the Directorate must act loyally, whether or not the decision is in accordance with the agency s recommendation. The Norwegi Agenda reports that the MoT sees the Directorate of Public Roads as very loyal to the Ministry s decisions and signals. In light of the problem dealt with in this section, which is the infiltration of politics into technical-economic expert selection of projects on the classified road network, an extended quotation from Agenda s report is warranted:

> On one point, the Ministry expresses the wish that the NPRA takes a closer look at its own practice. The problem area is the relationship between expert recommendation and necessary compromise in political-administrative decision processes. Professional expert recommendations will often be adjusted and modified in the planning processes they are going through at the local, regional and national levels. It is the judgment of the Ministry, that the NPRA could, on some occasions, articulate a clearer expert position, and then leave it to the subsequent process to determine the final outcome of the deliberation on the case. The NPRA sometimes anticipates certain adjustments in the process to come, and incorporates these into the agency s own expert assessment and conclusion. (Agenda 2006: 103-104)

The anticipated reaction can thus be too strong, even as seen from the perspective of the superior actor. In the preparatory work for NTP 2018-2027, it seems like the rightwing government under Prime Minister Erna Solberg s leadership is pushing to make CBAs more influential. The Ministry instructs the four national transport administrations to develop a system for presenting variables, other than estimated economic effects to society, that are underscored in priority settin (Samferdselsdepartementet 2014: 12). The gradually stronger emphasis put on the obligation to explain departures from profitability, indicates that the Minis Directorate s possibly insufficient professional independence of political signals, may have increased.

Over several periods, a tendency in the NTP guidelines from the Ministry of Transport and Communications has been to more clearly underline the need for a profitability strategy. This tendency also involves demands for clear explanations from the national transport agencies why massive divergences from maximum benefit/cost ratios are the rule rather than the exception, as in the

guidelines for the NTP period 2014-2023: It is important that the proposed plan makes the setting transparent, and makes visible the criteria that really counts in the decision-making (Samferdselsdepartementet 2011: 17).

## 6 Process characteristics counteracting cost-effectiveness

Some planning tools, such as CBA, have the potential to affect both the process and the product of planning. CBA is product-oriented, but affects the information collected in the process, the deliberation of investment criteria, and the discussion of transparency and the role of experts. The influence goes both ways, though, as the organization of the planning process affects the attention directed to CBA and its possibility of bringing about projects with positive net benefit to society. The section first deals with some consequences of a multi-goal planning process, and then briefly mentions some other process features challenging cost-effectiveness.

*Economic results fall out of sight in broad expert assessment*
Similar to Agenda, the Agency for Public Management and eGovernment (DIFI) also analyzes the relationship between ministries and directorates in a report about the professional expert role of the directorates (DIFI 2008). Directorates must adapt to the fact that they are part of the political apparatus serving the minister. They therefore base recommendations on a somewhat broader perspec professional skill in their respective fields; for example, by incorporating their own expert viewpoints into a more comprehensive societal perspective (ib: 10). Some of the informants to Agenda (2006 131) also mentioned this, and opined that the Directorate of Public Roads should to a greater extent consider environmental effects, land use, and wider economic impacts to industry and commerce in the assessment of big road projects. Taking this advice would mean continuing a long-lasting trend towards expansion of the CBA, for example, by adding new entries concerning consequences to environment, climate, and health. More comprehensive CBAs contain an increased number of items with highly uncertain monetary estimates, and this does not necessarily improve the scientific quality of the analysis. Neither are there clear indications that higher comprehensiveness has made application of CBA results more attractive to the politicians, as discussed by Sager (2013).

The Norwegian Productivity Commission (Produktivitetskommisjonen 2015) follows up on the theme of comprehensive project assessment. The unranked political main goals of the NTP-period 2014-2023 concern traffic safety, climate and environment, universal design, and accessibility; competitiveness and reduced transport costs being part of the latter. The task of the national transport administrations is to transform Government policy to practical action. When desired economic gains do not have a prominent place in the main goals and thus in the politics of the Ministry of Transport and Communications, the priorities of the Directorate of Public Roads are likely to be less marked by cost-effectiveness as the overriding guiding principle (ib: 368).

Low correlation between final political priorities and economic net benefit to society does not necessarily mean that professional considerations are superseded by political judgment. It might equally well entail that purely economic criteria take a secondary position compared to other professional criteria neglected by the CBA. When selecting projects for the maximum profitability strategy of the transport administrations, the NTP secretariat notes that the project portfolio has to satisfy legal requirements, such as protection against pollution, and in addition has to further the goals of improved environment, safer transport system, and accessibility for all (Sekretariatet for Nasjonal transportplan 2012b: 2). A shift in the project selection process away from the criterion of maximum benefit/cost ratio and towards these other criteria can be partly professional and partly political. A broad basis for taking decisions, supplementing the benefit/cost ratio with a range of other quantitative and qualitative criteria for setting priorities, affects the balance between politics and professional considerations when composing the prioritized portfolio of road projects. Such a shift would not necessarily mean more influence for party politics, as there is a high degree of consensus in the Storting on the goals favouring environment, safety and general accessibility.

In other words, the broader the professional assessment, in the sense that more decision criteria have to be balanced against each other, the more difficult it becomes to determine what is a professional and what is a political ranking of the projects. When more professional criteria are taken into account, more political trade-offs between them must necessarily be made. In a comprehensive assessment of what best serves society, planners cannot have the one without the other. The application of a number of professional evaluation criteria makes a purely professional priority setting impossible. This is so because the criteria have to be balanced, which means setting social values off against each other, and such trade-offs are unavoidably political.

It might well be that the Ministry of Transport and Communications includes purely political considerations among its project assessment criteria, even if the political judgment criteria are never mentioned in planning reports or official documents. Priorities may be set in accordance with, for example, what was promised in the latest election campaign, the wishes of powerful local party organizations, the agitation of protest movements against certain road projects, or what central county politicians insist is necessary for the local production industry. It is rarely possible to determine whether a decision in line with one of these interests was made on the basis of politics or a broad set of professional criteria. Every political actor builds a collection of professional and matter-arguments indicating that it will serve society best to realize exactly the project alternative favoured by the political player in question. In order to move an old and difficult road to a new and costly tunnel farther from the town centre, the local party organization may invoke, for example, threatened natural habitats, protection of farmland, safety against avalanche and landslide, more room for future development of the centre, and better competitive situation for local, export-oriented businesses depending on faster transport of fresh food, such as salmon. The national Government can use the same arguments. It would be very difficult for potential critics to prove that these professional arguments are not what really motivate the Government s decision to move the worries about the voter support of the local branch of the party, and its chances of getting the mayor in the next municipal election. Political reasons can very often be hidden under a cover of professional arguments that gain higher acceptance among political adversaries and in the public opinion. CBA-results may thus be substituted by political considerations in the prioritization of road projects without giving the impression of leaving the professional sphere.

*Other process features challenging cost-effectiveness*

A partisan planning process, in which political decision-makers tend to allocate projects to the districts of their supporters, would clearly invite significant differences from CBA-ranking. Eliasson et al. (2014) found a positive relation between Government project allocation and voter support in Norway, but did not find such a relation in the Directorate s selection. In a precedi paper, it was shown that the road project portfolio recommended by the planners for NTP 2014-2023 did not deviate much from the set of projects selected by the Government. This means that a possible partisan bias in project allotment cannot be strong.

Some effects of toll roads are already mentioned. The point here is that national politicians may be affected by the fact that more new road per budget-million is achieved with user charging. They may tend to give higher priority to partly toll-financed projects than to projects fully funded over the national budget. The projects heavily backed by local politicians applying for toll-funding are not necessarily those providing the highest net benefits for the society at large.

The planning process can be designed as a search for optimal solutions taking cost-effectiveness into account, or be more rule-based or guided by heuristics. Prioritization according to rules sometimes follows from international agreements. A recent example is the EU Directive 2004/54/EC on minimum safety requirements for tunnels in the trans-European road network. This document has a bearing on the current and the next NTP, bringing tunnel projects higher on the agenda. A planning heuristic with some practical thrust says that one should invest to comply with official guidelines and standards for classified roads, starting with road sections lagging most behind.

The heuristic above is likely to give results correlated with the principle of first implementing the projects addressing the most serious problems (Eliasson et al. 2014: 15). However, recognizing an acute problem does not mean that the project under consideration is able to solve it, let alone solve it cost-effectively. The Norwegian front-end governance regime of major public projects tries to amend this by mandatory reports on the choice of a feasible problem-solving concept (Samset and Holst Volden 2015). With regard to island access, for example, bridge, tunnel, and car ferry can be alternative concepts. A rudimentary CBA is an element in the Norwegian quality-at-entry assurance system. For each problem-solving effort costing more than ¾ billion NOK, at least two promising concepts have to be assessed, in addition to the reference alternative (the do nothing option). This procedure has the effect that even if a severe problem is identified and has to be addressed, it is less likely that the decision-makers are led to accept an unnecessarily cost-ineffective project.

Communicative planning has occupied a central position in planning theory for three decades (Forester 1989), and its heavy emphasis on co-operation, dialogue and citizen participation is apparent in the Norwegian Planning and Building Act, which provides the legal framework for road planning. The Act states that the planning authority should arrange for active involvement of affected individuals and groups. Electronic presentation and dialogue should be facilitated in all phases of the planning process. Furthermore, public agencies have an obligation to co-operate, and regional planning forums should be established to coordinate the interests of municipalities and regions with those of the state.

The Norwegian Productivity Commission points to a little-discussed consequence of such communicative planning: Throughout the long-lasting and dialogue-oriented planning and fac finding process, high expectations are built regarding the subsequent implemen (Produktivitetskommisjonen 2015: 375). The more enthusiasm and positive engagement during citizen participation, the harder for politicians to say no to the realization of the project. Successful dialogue may lock the decision-makers to a cost-ineffective line of action. The start-up of land acquisition and other preparatory work prior to formal political decision even for projects that have been found to have a benefit/cost ratio less than one does not make things better. It raises local hopes further, and it complicates the task of making a collective decision serving national interests.

## 7 Weaknesses of CBA as seen from the Storting

Since the 1990s, the Storting s standing Committee on Transport and C (Samferdselskomitéen 1993: 33-34) and the MoT have repeatedly stated that CBA is to be an element in the assessment of road projects: Cost-benefit analyses and the calculation of effects on sele variables will be the fundament of the project assessments (Samferdselsdepartementet 2011: 17). Under the incumbent rightwing government with ambitions to present NTP 2018-2027, the Ministry even proclaims that economic analyses from the perspective of society should be given more in the evaluation of the use of resources in the transport sector (Samferdsels This is not self-evident, as many elected representatives express low confidence in the CBA as evaluation method. Researchers have established the existence of such distrust since the middle of the 1990s (Nyborg and Spangen 1996), and reasons for the scepticism are discussed by Sager and Ravlum (2005b). The negative attitude grew stronger on some occasions, when the debate among economists and planners about the estimated value of core parameters and about the comprehensiveness of the analysis revealed to the parliamentarians that CBA does not find its shape on the basis of purely objective considerations alone (Sager and Sørensen 2011: 227-230).

The completeness of the Norwegian version of CBA authorized by the state has been much debated since the millennium shift. One reason is the idea of wider economic impacts , wh can follow from new transport infrastructure and would like to see added to the utility estimated as the value of travel time savings. The assumed wider economic impacts are due to more flexible labour markets, productivity gains resulting from increased geographic density, and efficiency-enhancing interplay between transport supply and land use (Finansdepartementet 2012: 87). In the guidelines for NTP 2018-2027, the Ministry instructs the four national transport administrations to clarify whether

wider economic impacts should be analysed and possibly presented as a supplement to CBA (Samferdselsdepartementet 2014: 11-12). It is a drawback that economists are far from reaching consensus on how to estimate the wider impacts in real-world planning cases, so results still vary to a disquieting degree (Graham and van Dender 2011, Mackie et al. 2011, Wangsness et al. 2014). The risk is that calculations of wider economic impacts that give an arbitrary impression, will not corroborate the belief of the parliamentarians in economic analysis as a basis for political ranking of roads, but rather strengthen the suspicion that those ordering such analysis can get results to their own liking.

Many politicians in the Storting are of the opinion that wider economic impacts should be included, that the value of increased punctuality is insufficiently valued, and that the discount rate is still too high (Transport- og kommunikasjonskomitéen 2013: 54-56). The Progress Party wants to delete the item in CBAs of public projects that consists of 20 per cent extra costs due to inefficiencies from taxation (Stortinget 2010). The economic reason for this cost mark-up is that projects funded over the national budget require tax income of the same size as the appropriation, and taxes cause inefficiency in the Norwegian economy, which investors should be forced to take into account.

The requested changes all pull in the same direction, in that they will make a number of projects on classified roads appear more beneficial to society. Representatives both left and right on the political spectrum see a need for upgraded calculation of social benefits; that is, higher values and higher number of positive effects. It can then be less problematic for them to deviate strongly from CBA-suggested ranking, as a higher number of politically motivated projects will seem to be worth implementing with the revised economic calculations, even many projects that are not among the most profitable. Politically motivated project portfolios then become easier to defend. Decision-makers may be tempted to judge an analytic tool more from the method s ability to serve a poli from the method s knowledge-producing capacity.

The demands for methodological improvement of CBA can be observed in practice. The committee report on the first national transport plan NTP 2002-2011 shows that the majority of the members of the Committee on Transport and Communications did not accept that predictions of consequences documenting expected goal achievement, only existed in the road sector. The majority appealed to the Government that such impact models be made operative in all four transport sectors (Samferdselskomitéen 2001: 16). When preparing the Storting s debate of NTP 2006-20 Committee requested a better system for economic analysis, demanding more consistent design and use of CBA, making it a tool for meaningful comparison of infrastructure projects for different branches of transport in one and the same corridor (Samferdselskomitéen 2004: 25-26). Four years later, when discussing NTP 2010-2019, the Committee s majority (from the red-green coalition) of the opinion that the international models, with which the EU has some experie considered (Transport- og kommunikasjonskomitéen 2009: 6). This was a demand for closer study of how to deal with wider economic impacts. The Committee s comments to NTP 2014 that the main recommendations in the Official Norwegian Report no. 2012:16 on economic evaluation from the perspective of society, should be implemented (Transport- og kommunikasjonskomitéen 2013: 202). In addition to estimation of wider economic impacts, this concerns mainly (1) real price adjustment of certain goods with strongly deviating expected price changes, (2) forecasting periods that are so close to the expected economic lifetime of the projects as feasible, and (3) use of trajectories for the price development of emission of climate gasses (Finansdepartementet 2012).

Parliamentarians may be influenced by all the publicity on the omissions and defects of CBA, even if several studies have found cost-benefit analyses to be quite robust (Börjesson et al. 2014, Holz-Rau and Scheiner 2011). If so, they will be apt to look for alternative decision support. Not least the Progress Party houses the attitude that old-fashioned calculation methods lead to systematic downgrading of investment in infrastructure (Stortinget 2010). However, even old-fashioned algorithms, the number of projects on classified roads that is benefits to society, by far exceeds the number that can be accommodated within the budget limitations

of NTP (Sekretariatet for Nasjonal transportplan 2012b: 5). When investment in classified roads is not higher, it is predominantly for political reasons and not because calculations underrate benefits.

Consideration for traffic safety, climate, private business, and unique nature (wildlife reserves, national parks, special landscape areas) is actually a weak argument for deviation from the profitability strategy based on CBA. The reason is that project selection according to maximum benefit/cost ratio gives just as good or better results on all these accounts compared to the Gove project portfolio for the NTP period 2014-2023 (Sekretariatet for Nasjonal transportplan 2012b: 7-8). Even if the new roads in the profitability strategy occupy more agricultural land, the negative effect is hardly serious enough to provide a decisive professional reason to forego a net gain of around 40 billion NOK (2011-value), which is what the nation could gain by choosing the profitability strategy instead of the Government s planned strategy (ib: 5). Under the circumstances basis for so vast divergences from complying with the CBA-results is very likely to contain a significant political component.

## 8 Conclusion

The intention has not been to argue that the benefit/cost ratio should be decisive when setting priorities among projects on classified roads, but rather to highlight some circumstances that tend to push CBA-results into the background. The economic loss to society resulting from the current selection procedures in the road sector is too serious to leave the issue undebated. If the Directorate of Public Roads is too sensitive to signals from the Ministry and from local
political actors, the Government will not receive recommendations that are sufficiently professional. Some political initiatives concerning building and upgrading of classified roads can then adorn themselves with undeserved professional legitimacy.

The Ministry instructs the national transport administrations to improve their explanations of deviations from the CBA-based profitability strategy. It should be considered if this needs to be followed by an analysis of feasible institutional changes. One should aim for a system in which CBAs are not only carried out, but are also effectively taken into account by decision-makers. CBA should be used in a way that makes an imprint on the prioritization of the NTP and can be easily revealed when studying the portfolios of investment projects on classified roads. The Norwegian Productivity Commission requests a binding principle that requires each national transport administration to put more weight on net benefits to society (Produktivitetskommisjonen 2015: 362). The Commission also suggests that the NPRA should be instructed to discard more of the economically inefficient projects in an early planning phase (ib: 372). These changes and clearer priority-setting criteria can serve democracy through transparency, and serve people in economic terms through implementation of projects that road users have greater willingness to pay for.

The parliamentarians complain that incomplete cost-benefit accounts are used for assessing road projects. They have not yet perceived as problematic that complete CBAs, including every consequence that people care about, may outstrip their own political deliberation on the projects and make democratic treatment of NTP-investments less important. Surely, big projects on classified roads have significant economic impacts, and they engage people from government bodies and civil society at all levels, from neighbourhood to nation. Consequently, decisions about large-scale interventions and use of resources in the road sector should be made on a foundation of combined economic and political reasoning (Diesing 1962, Sager 1999).

Economic decisions are reached on the basis of a means-end analysis, where the goals reflect the economic interests of society, and the means are employed so as to achieve the goals with the least possible waste of resources. Economic problem solving abstracts from the multitude of groups with special interests and from the turmoil of intersecting conflicts. The rational procedure is to compute which planning alternative should be top-ranked, given the weighted goals and the available means, and then adopt the result without further ado. Compromise is irrational in economic problem solving.

Political authorities must look beyond the issue at hand to the maintenance and protection of the decision structure of society. Without a well-functioning system for making collective choices, neither plans for classified roads nor other projects serving society will be democratically enacted. A political decision is therefore not based primarily on the quality of the proposal in itself, but rather on who gains from its implementation, and who opposes the proposal. Communication between the decision-making authority and the affected parties is necessary. A political proposal is not passed just because it comes out as the best in a means-end analysis. Even economically good proposals are rather postponed, discussed, revised, substantiated in new ways, and re-launched sometimes in several rounds until the most intense opposition has calmed down. In contrast to economics, compromise is nearly always a rational line of action in politics. This also goes for compromises between road proposals that are good in economic terms that is, profitable according to CBA and proposals that are economically weak.

The white papers on NTP, and in particular the reasons offered by the Government for each unprofitable road project that is included, clearly demonstrate that the technical and professional arguments of road experts are in great demand. Apparently, not a single one of the many unprofitable projects is included because of local pressure, political obligation to distribute investments to all parts of the country, horse-trading between the governing parties, or need to satisfy the grass roots of the party organizations. Political explanations of this kind are much too vulnerable to attack by political rivals and critical voices in the general public. Hence, they are not found in the NTP, and obviously, neither are purely political considerations listed in the CBA-accounts. Conflict and loss of support and goodwill are nevertheless real political costs. This gives reason to hypothesize that the parliamentarians use of CBA, also in the future, will be quite limited when they are dealing with controversial prioritization.

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# AN OVERVIEW OF THE MAJOR CAUSES BEHIND THE LOW EFFICIENCY OF LIGHT RAIL SYSTEMS IN RUSSIAN CITIES: THE CASE STUDY OF THE PERM URBAN TRAIN PROJECT

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Abstract. *Light rail systems seem to present an optimum solution to the current mobility issues of Russian cities. Yet most cities are not ready to invest in development of such systems and the attempts to create them on the basis of existing infrastructure fall short soon after the projects' launch.*

*Like many other Russian cities, Perm - a city of slightly under one million inhabitants in the European part of Russia - suffers from sprawl, inadequate transportation system and consequent mobility problems. The population is scattered over the comparatively large area (Perm is the 6th largest Russian city in terms of area being only 13th in terms of population) and most of the remote areas of the city are not well integrated with the city centre.*

*Being aware of the problem and seeking to improve the connectivity between different areas of the city local authorities have launched the project Perm Urban Train in 2004. Th set up using the existing railway lines with an ambitious aspiration to become a skeleton of the city transport system . The goal, however, was not achieved so far. The paper years experience of Perm to develop its system of light rail trying to reveal the factor determined the project's modest performance and hampered its successful implementation. Based on the results of the analysis, optimisation steps and recommendations for further development of light rail system in Perm and other Russian cities are proposed.*

## 1. Introduction

Urban mobility is one of the most critical issues for all Russian cities. Current mess in urban mobility is the result of the lack of effective planning and short-sighted and uncoordinated policies on land use and transportation. Tracing the history of urban transformation in socialist and post-socialist eras provides an insight into the roots of today's mobility problems. Starting from the 1960s many socialist cities adopted the pattern of massive residential development at the periphery of cities resulted in longer commuting distances (Golubchikov, Phelps,2011; Becker et al, 2012). The problem was further exaggerated during the transition period characterized by suburbanization of housing, retail, and jobs.

At the same time, the system of public transport was completely devastated during the 1990s and was not longer able to cope with this growing demand (Engel, 2007). While the socialist cities generally possessed highly developed and efficient public transport network, the transition period was characterised by the heavy reliance on the private automobile and the fact that public transportation system was largely neglected and underfinanced. The current level of service in the field of public transport is far below that of the past.

The transition period was characterised by the heavy reliance on the private automobile. The majority of public policies of the last decades also have been aimed at accommodating the growing number of automobiles at the expense of undermining all other modes of transportation. Thus, most of the public financing for improvements in the transportation system has been directed to expanding the vehicle carrying capacity of streets by adding new traffic lanes and building multi-level intersections, with the main purpose of moving more cars faster. To date, it is generally known that this kind of policy is not able to solve the problem of traffic congestion instead creating a vicious circle of increasing automobile dependency. Such policies achieve little but induce more automobile use, thereby considerably aggravating the existing traffic and transport problems, and eroding the quality of public space (Stanilov, 2007).

In Russian cities these negative trends still persist today (Vuchic, 2011). Dispersed urban structure coupled with an ill-conceived approach to transport planning cause serious mobility problems. Post-socialist cities seem to repeat the mistakes made by Western European and North American cities after World War II when the West embarked on ambitious projects to reshape the urban environment in order to clear way for the automobile. In order to avoid repeating the mistakes made by Western cities, Russian cities should look for new ways to meet the growing transportation demands of the densely built periphery.

## 2. The Untapped Potential of Urban Railways in Russia

When it comes to improving the connectivity between different areas of the city, introduction of rail transport systems is one of the commonly used type of contemporary urban interventions. Starting from 1970s many cities around the world have introduced different rail transit systems and the most popular one is Light Rail Transit (Topp, 1999). LRT along with tramway and metro belongs to a rail transit family of transport modes providing fast and convenient service to large masses of people. Being a high capacity transport mode LRT at the same time requires much lower investment cost than underground metro (Vuchic, 2002). Depending on the city's structure and its transportation system LRT may function as a suburban feeder to metro or serve as the principal transport mode. In any case rail modes of transport are in most cases superior to motor transport in terms of stability, speed, comfort and environmental impact (Morozov, 2010).

In Russia there are no systems that fully comply with the concept of LRT in the conventional sense. To date seven Russian cities have underground metro systems, and most major cities have one or another kind of electric rail transport, be it a tram, commuter rail, or light metro (Table 1). There are also dozens of unrealised projects, some of which date back to the Soviet era.

Apart from underground systems the most successful example of urban railway is probably a light rail system operating in Volgograd. The Volgograd Metrotram was opened in 1984 and became a relief for the city which stretched for more than 80 kilometres along the Volga river. The line has a total length of 17.3 kilometres with 7.1 kilometres built underground and the rest is within a surface-level right of way rebuilt from the ordinary tram line. But the system of Volgograd remains unique for Russia, its efficacy is determined by the city's linear urban structure.

In most other cities without underground metro rail transit is far from being dominant transport mode. The transition period was marked by the gradual failure of tram systems in many major Russian cities (Merkushev, 2011). First, tram lines located in the street network were seen as an obstacle to the increase of road capacities. At the same time drop in manoeuvrability and speed of trams in the conditions of high traffic density (with cars often blocking the lines) led to a decrease in the number of passengers, which made city authorities abandon and dismantle the system. Tram

systems continue to operate efficiently and develop only when they are separated from the road traffic and put in the conditions of almost total exclusion of single-level crossings with other transport modes. However, isolation of the existing tram lines from the roadway is either not always possible at all in the current urban conditions or demands large capital investments.

Table 1. An overview of rail transport systems in Russian cities

| City | Population, million people | Underground metro | Light rail system | Tram |
|---|---|---|---|---|
| Yekaterinburg | 1,43 | + 1 line | - Medium-term plans | + Highly developed |
| Chelyabinsk | 1,18 | - Uncompleted | - No plans | + Highly developed |
| Kazan | 1,21 | + 1 line | + Segments of Big Kazan Ring | + Moderately developed, dismantled in the city core |
| Khabarovsk | 0,61 | - No plans | - No plans | - Moderately developed but mostly separated from road |
| Krasnoyarsk | 0,98 | - Uncompleted, frozen until 2020 | - No plans | + Moderately developed, partly dismantled |
| Nizhny Novgorod | 1,26 | + 2 lines | - No plans | + Moderately developed, partly dismantled |
| Novosibirsk | 1,57 | + 2 lines | - Long-term plans | + Moderately developed, partly dismantled |
| Omsk | 1,17 | - Uncompleted, frozen | - No plans | + Moderately developed, partly dismantled |
| Perm | 1,04 | - No plans | - No plans | + Moderately developed |
| Samara | 1,17 | + 1 line | - No plans | + Highly developed |
| Volgograd | | - No plans | + Metrotram | + Moderately developed |

In addition to the reviewed modes of rail transport most major cities have electrified intracity sections of railways used for commuter trains and long-distance trains. In cities where these lines pass through the city centre they present a ready-to-use solution to the problem of connecting the cities' cores and peripheries. In the last decades several cities including Perm made attempts to use these existing lines for developing Urban Train systems. Urban Train is a kind of electric rail intracity transport, usually using an existing rail infrastructure. Urban Train projects were to become Russian version of LRT resolving the mobility problems without much effort and investment on the part of the cities.

Urban Trains are very similar to commuter trains with only two differences: 1. smaller serviced area, allowing a smaller number of trains serve the entire area while maintaining small intervals.; 2. shorter trains consisting of six or less carriages. One relatively successful example of such project is Yekaterinburg, where the Urban Train is the fastest and cheapest way to get from the southern outskirts to the city centre (SPK, 2014). However, even there the number of urban train's passengers is far below than for other transport modes.

In some cities the projects are shut down (Ryazan) or close to it (Omsk), in others it remains an experiment (Tuymen). In Ryazan, the project was cancelled due to the lack of demand. The Ryazan Urban train system was introduced in a test mode using existing lines and passenger stations on April 30, 2009. The test period, which lasted until 17 June, showed the need to build additional stations and bypass lines for overtaking commuter trains (RZN.info, 2013). In Rostov-na-Don the Urban Train Project was launched in 2012 and lasted for only five days.

In Perm the Urban Train system was introduced in 2004. Although the number of trains decreased threefold the service is still in place. Thus Perm presents an opportunity to ana experience of developing the system of the Urban Train. Using the case study of Perm this paper will try to reveal the factors that determine the Urban Train projects' modest performance and hamper their successful implementation in Russian cities.

## 3. The Perm Urban Train: 2004-2014

Like many other Russian cities, Perm - a city of slightly under one million inhabitants in the European part of Russia - suffers from sprawl, inadequate transportation system and consequent mobility problems. The population is scattered over the comparatively large area (Perm is the 6th largest Russian city in terms of area being only 13th in terms of population) and most of the remote areas of the city are not well integrated with the city centre. Being one of the hubs of the Trans-Siberian railway Perm has more than 100 km of railway lines.

The idea of introducing some kind of rapid railway system in Perm also has a long-standing tradition. Soviet norms required that any city of 1 million people be equipped with metro. The first official project of Perm metro was published in 1982. However, construction has not begun due to the financial constraints. Since then Perm authorities have come back to this issue repeatedly. The in-depth analysis of the feasibility of the project was performed in the Integrated Transport Scheme of Perm (KTS, 2008) commissioned by the Department of Planning and Development of Perm. At that time the transportation planners have concluded that the efficiency of metro in Perm will be very low due to "the lack of sufficient volume of passenger traffic concentrated in one direction" (Petrovich, 2010). In the KTS (2008) it was proposed to make greater use of intracity sections of the Trans-Siberian railway and the further development of the existing tram network.

The project «Perm Urban Train» was launched in 2004 with an ambitious aspiratio «skeleton of the city transport city». The new route was set up using the existing ra including intracity sections of the Trans-Siberian railway. It had a total length of 51 km and included 8 stations and 14 stopping points on both sides of the Kama River. All other modes of transport, namely buses, trams and trolleybuses, were to be connected with this newly established route.

The Perm Urban Train project was the first attempt to develop LRT-like system in Perm. As stated in the project's official description (PPK, 2013) the project pursued the following goals:

- Provision of the higher level of service at the rates equal to the rates of alternative modes of public transport (mostly buses) within the city limits;
- Increase in the number of passengers transported by rail and subsequent road transport load reduction in the same direction;
- Improving the environmental situation by reducing the number of bus routes;
- Ensuring the timely delivery of workers to the industrial sites with introducing the train timetable linked to work shifts schedule;

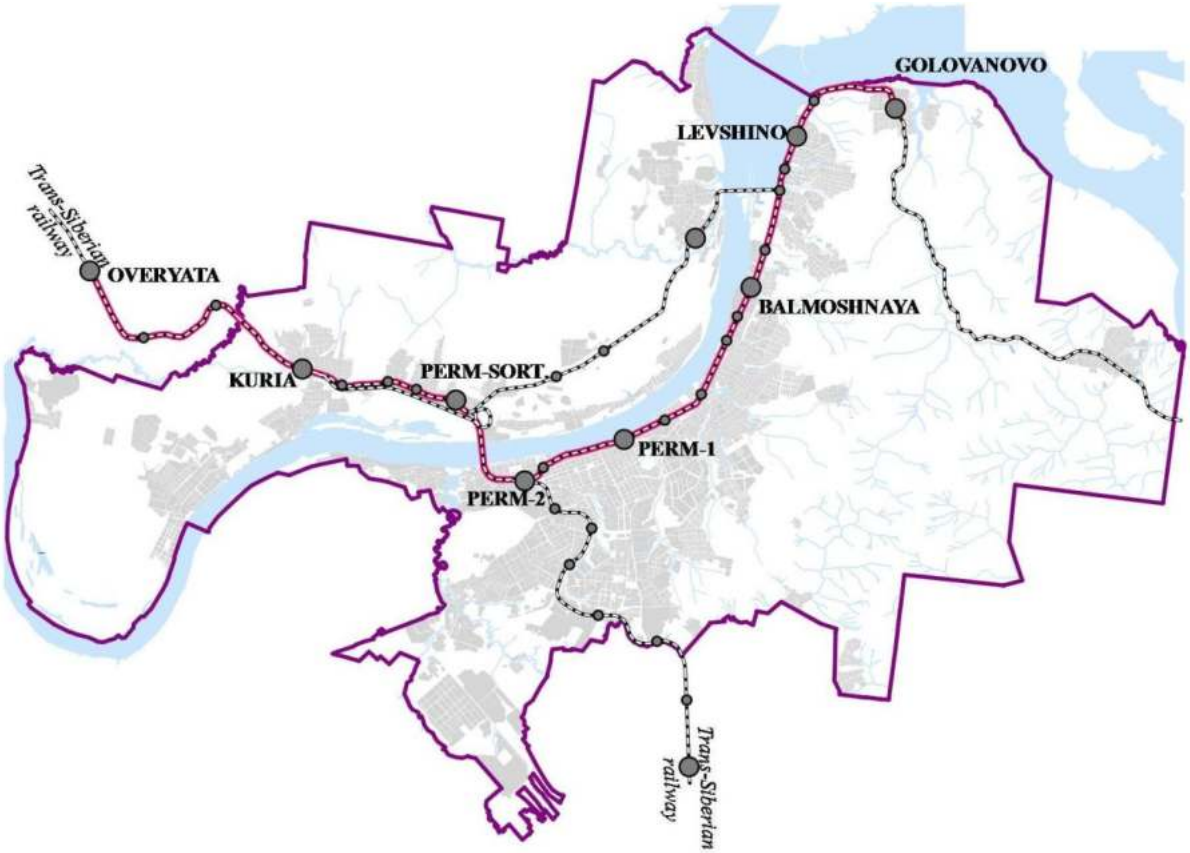


Figure 1. Railway network of Perm and the Perm Urban Train route

The city's form and the location of the existing railway in relation to the residential neighbourhoods and places of employment is a significant factor determining the success of the urban train project. For Perm with its linear urban form and the existing railway lines along its structural axis, the

project seemed like a perfect fit into the city's urban structure. If implemented properly it could potentially become the basic network for the city's new, more comfortable and efficient, transportation system.

A decade has passed since the project launch and it is possible to draw some conclusions. The total number of passengers of the Perm Urban Train from 2004 to 2013 amounted to more than 8 million passengers. In the years 2004-2008 the number of passengers was stable at around 1 million people annually but starting from 2009, when several trains were removed from the timetable, the number of passengers dropped significantly every year reaching around 0,6 million in 2013 (Figure 2).

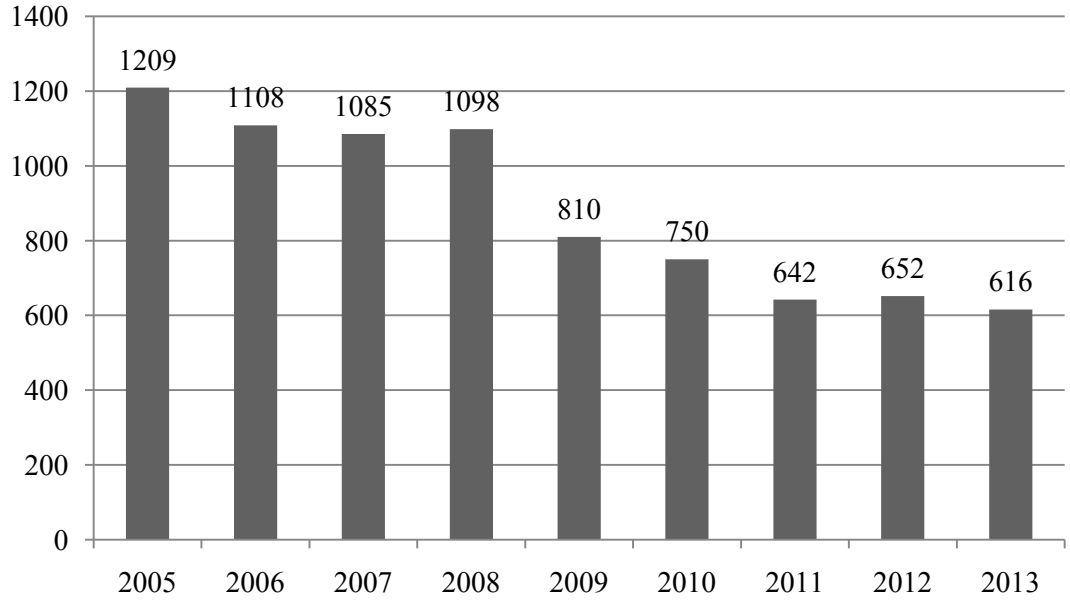


Figure 2. The number of passengers of the Perm Urban Train from 2004 to 2013, thousand people. Source: PPK, 2013

Despite the fact that the Urban Train has obviously failed to become city s pri provided several remote areas of the city with comparatively fast and convenient way to get to the city centre. Perm Urban Train is the fastest means of public transport to the city centre from many areas. For example, it takes 38 minutes to get to the terminal station Golovanovo by train while the same trip by bus may last between 60 and 120 minutes depending on the time of the day. The table of comparison between travel times to some other stations by train and by bus is presented below (Table 2).

Table 2 Comparison of travel times by bus and by train. Source: personal observations

| Points of departure and arrival | Travel time by bus, min | Travel time by train, min | Reduction |
|---|---|---|---|
| Perm I - Golovanovo | 90 | 38 | 58% |
| Perm II - Levshino | 60 | 39 | 35% |
| Kuria - Perm II | 90 | 23 | 74% |

So if this train does provide faster access to the city centre and backwards, what are the reasons for its low popularity and the constant decline in the passenger traffic?

## 4. Uncovering the reasons behind the Urban Train's low efficacy

The reduction in the number of passengers is due to the fact that a significant portion of them opt for alternative modes of public transport. The preferences of passengers were determined by the following factors:

- cancellation of a number of trains and simultaneous increase in the number of bus services, taxis, parallel to the route of the Perm Urban Train: there were 32 trains per day when the project was launched in 2004 and only 9 trains per day were running by the end of 2014 ;
- poor accessibility resulting in long travel times to the railway stations;
- high non-competitive price: by the end of 2014 the cost of the journey (regardless of the distance) was 21 roubles, while the trip by bus cost only 13 roubles;
- poor quality of station infrastructure.

According to passenger survey held in 2013 the factor having the greatest influence on the popularity of the Perm Urban Train is its irregular timetable(UralINSO, 2013). There is no regular interval timetable and there can be gaps up to 2-4 hours outside the rush hours. The inconvenience of the current schedule coupled with higher price outweigh all the advantages of the Urban Train over alternative means of transport.

Yet the need to increase the number of trains and to reduce the intervals of their movement is an issue that cannot be easily resolved. There are two main factors impeding this: 1. an insufficient capacity of rolling stock and 2. an insufficient capacity of railway lines in some sections. According to the General Plan of Perm (Generalnyi Plan Permi, 2010) the left bank section of the Perm Urban Train line (Perm II-Golovanovo) has an excess capacity and the main problem with the capacity of the railway network is related to the Trans-Siberian Railway. The latter is already running at its capacity while the two-track railway bridge over the Kama creates a real bottleneck.

One possible solution is to build a by-pass track to the south of the city (Perm Strategic Masterplan, 2010). The proposed track would remove the burden of immense freight traffic from the Trans-sib section going right through the city centre. However, the construction of the by-pass demands such amount of investment that is not currently available to the city. Increase in the number of trains will also require considerable investment.

It may be argued that using the same railway lines dedicated for fast trains and freight traffic generally creates a number of problems. In the Urban Train schedule there should be 'windows' left for passing long-distance trains. Moreover, deviations from the schedule of long-distance trains results in unexpected cancelations and delays of the Urban Trains. In Tyumen congestion on the Trans-Siberian section of the Urban Train route is also an obstacle to the realization of this project in full. After the launch of the project in 2009 finding timeslots for the Urban Trains turned out to be very difficult during peak hours (NashGorod, 2014).

However, implementation of these infrastructure developments may not guarantee the raise of the urban trains' popularity. Even when existing infrastructure is sufficient for launching an adequate number of trains, there still may be lack of interest on the part of passengers.

The root of the problem lies in the way public transport market is organized. In Russian cities there is a system of self-regulation of public transport services. Today regional and municipal carriers (running urban train, trams, trolleybuses) are put in conditions of uncontrolled competition with private carriers (running buses). Bus carriers offer services of low quality often delivered by obsolete fleets but at affordable rates.

The competition in the system of public transport in Russia leads to oversupply in some routes and irrational costs. In the last years private carriers almost completely replaced municipal carriers in the bus transport market. Private carriers become the main operator in this important sphere of municipal economy. They have entrepreneurial mindset and are not ready to carry the burden of social responsibility instead being focused on quick payback and revenue at any cost. Reducing tariffs without compensation make carriers reduce operating costs by saving on the repair and maintenance of the rolling stock.

Such a policy not only adversely affects the performance of the Urban Train and electric transport operated by the city but inevitably leads to the overall ridership losses and forces passengers to switch to private automobiles.

It the competition with other modes that became the main problem for the Urban train project in Omsk. Proliferation of routed taxis (a form of public transportation such as a share taxi using minibuses, often illegal) which is characteristic for most Russian cities make passengers opt for cheaper and ubiquitous mode. Although the company running the Urban Train in Omsk is looking for new ways of attracting passengers such as free Wi-Fi or a 'library on wheels', it does not make much difference (Top55, 2014).

The model of market self-regulation is regarded by most experts in the field as ineffective (Ganin, 2012). It does not properly work in most cases. State regulation is important to ensure compliance with public interest and protecting this area from undue commercialization. It is necessary to establish mechanisms for regulating public transport services in order to overcome chaotic patterns of today's public transport system, which 'steals' passengers from regular routes. Current legislation in the field of public transport in Russia does not imply centralized and coordinated transport planning and operational management but at the same time it does not prohibit it.

In order to facilitate integration of all modes of transport in one efficient system an intermodal transportation company may be established in cooperation with the Government of the Perm region. This will increase the level of coordination and co-operation between all public transport providers and allow to prioritize more sustainable modes such as urban railway.

The Perm Urban Train project is currently run by the Perm Suburban Company, which is a subsidiary of Russian Railways (51 percent owned by Russian Railways and 49 percent by Perm region). Around 58 percent of operating costs are covered by transportation fees, the rest is subsidised by the regional budget. In 2014 the regional government raised the question of the abolition of funding for the project since it was not ready to subsidy intra-urban public transport. The city budget also does not have the necessary funds. The service is still in place but the question of financing remains open.

Meanwhile, the problem is not unique for Perm. Many other Russian regions have similar Suburban companies operating commuter rail transportation. During their creation in the early 2000s the rolling stock was not included in their authorized capital. As a result the rental payment for the carriages and locomotives accounts for almost 70% of their operating costs. This rental

payment and the tariff for the use of railway infrastructure are charged in favour of Russian Railways. Many regions consider the pricing policy of Russian Railways as opaque and refuse to subsidy the Suburban companies (Terentyeva, 2015). This issue, however, lies beyond the scope of the current study.

## 5. Possible organisational and administrative reforms

In order to increase the effectiveness of the existing system of rail transit in Perm we propose several organizational improvements which do not require much capital investment but strong political will.

The following reforms are suggested in order to improve the service and to encourage rail transit ridership:

1. Reducing the intervals of the train, as already mentioned, is the most needed step towards attracting more passengers since the inconvenience of the current schedule for many passengers outweigh all the advantages of the Urban Train over alternative means of transport. This may achieved either by rearrangement of the existing fleet, e.g. splitting longer trains into two on the routes running with intervals, or by investment into new rolling stock, thus improving both the intervals and the level of comfort.

2. Improved coordination among modes and integration of the Urban Train into the city's public transport system is a foreground transformation that may be beneficial not only for rail transport system, but also for the city's public transport network as a whole.

This can be achieved in several ways. The first and most obvious step is to introduce a single (and simple-to-use/understand) ticketing system compatible with other modes of public transport. Such systems are in place in most cities with developed public transit since the mid 2000s.

Better modal integration on stations and stopping points is also a very important step towards attracting the new passengers. Possible developments in this field include turning at least the major stations into proper transportation hubs with exchange opportunities from train to buses, trams and other modes of transport with simultaneous harmonization of their schedules. Other ways of modal integration include:

- Arrangement of near-station parking lots allowing car users to leave their vehicles safely and change to train;
- Organisation of short bus routes between places of residence and train stations as a feeder service to the Urban Train;
- Improving pedestrian accessibility and approaches to the stations and stopping points.

One of the feasible perspectives of mode integration in Perm is the formation of the tram-train system. The basis for such system will be the left bank section of the railway and the well-developed tram network in the south part of the city.

3. Finally, it is important to make the use of the Urban Train clearer and easier. Improved availability of passenger information combined with various marketing programs aimed at popularisation of the Urban Train and rail public transit in general will make a significant contribution to the development of the project.

## 6. Conclusions

To sum up, it may be argued that at the time of its establishment the Perm Urban Train Project presented a promising solution to the Perm s issue of low connectivity raised fro fragmented urban fabric.

Unfortunately the Perm Urban Train has not received due attention from the regional authorities who initiated the project nor it has attracted enough support from the authorities of the city. Despite the initial plans it was not integrated into the city's network of public transport leading to the competition with other modes and the gradual loss of passenger volume.

Planning and developing of effective transport system requires an integrated approach. The fragmentation of urban administration, which is evident both in post-socialist and developing countries, hampers the success of policy planning and implementation. Many authors call for organisational change and for better co-ordination of structural units of administration having urban transport responsibility as a crucial element of efficient performance of city's transportation system (Cervero, 1998; Dimitriou, 1990; Stanilov, 2007). The creation of the intermodal transportation company or the local government body managing the whole transport system seems to be a most urgently needed reform in Perm and other Russian cities.

The development of the efficient transportation system with the rail transit as a backbone presupposes the abandonment of the current overreliance on private automobile transport and adopting a new systematic approach to transportation planning. Overcoming chaotic and inefficient traffic patterns characteristic of most Russian cities requires sufficient political will and civic drive to give the priority to more sustainable modes such as rail transit and to allocate needed resources. Subsidies in the system of public transport should be evaluated against the costs associated with road traffic: capital investment into road construction, the cost of road maintenance, road safety, organization and construction of parking spaces and so on. The investment into urban rail systems in the long term may be the most cost-effective solution improving mobility at a lower total cost, including costs to government, consumers losing time in traffic jams and the city's environment.

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# Vancouver, the transit-oriented city? The correspondence (or not) of public tran accessibility and urban intensification through the lens of accessibility tools

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Abstract

Vancouver, Canada s third largest city, has often been held up as a best-pra transport and land use planning in a New World context. Accordingly, in the a Network Analysis for Multimodal Urban Transport Systems (SNAMUTS) tool to Australasia and North America, Vancouver scored top results on the majority of a public transit. But how does a successful big-picture outcome translate int relate to historic factors that predate Vancouver s focus on sustainability-o during the past quarter century? This paper will contrast the SNAMUTS result wi measuring public transit accessibility based on a time line spanning three dec history and the assessment of recent spatial priorities in land use and transp that despite high recent growth and intensification rates, much of Vancouver oriented urban form can be traced back to the city s light rail and streetcar 20th century, and that the spatial correlation of public transit service intensification over the past 30 years has been anything but consistent. We assessing the contributions of both methodologies towards a comprehensive repres accessibility in Vancouver, and will evaluate the magnitude of the shortfalls policy and practice across other cities in the SNAMUTS sample across the New Wor

Key words: public transit, accessibility measures, land use-transport integratio planning.

## 1. Introduction

In the 1960s citizens of Vancouver protested against government plans for freewa downtown. They opposed the destructive impacts that freeway construction would city neighbourhoods, the modernist plans for post-freeway urban renewal, ar congestion and pollution of more cars in the metropolitan core (Lash, 1976; P organised opposition, together with a lack of government funding and mounting e associated with automobile dependence, led to cancellation of the plans. A c government authority then recommended an extensive rail rapid transit system t strong core and transit-oriented land development concentrated in regional t 1976). In 1986 metropolitan Vancouver s first SkyTrain line began operations, a land surrounding stations and an overall restructuring of urban form were well SkyTrain line was followed by an inter-city regional commuter rail line in 1995, in 2002, and a light metro line in 2009. The policy transition saw a new tra focussed on accommodating growth in urban movement on the existing road system alternatives to the automobile (Price, 2012). Despite some to-and-fro over both such policies between municipal and provincial governments, this compact pr resilient over a forty-year period (Filion and Kramer, 2012; Stone, 2013).

Today a wide range of scholars describe Vancouver as an exemplar of effective
strong sustainability overtones (Punter, 2003; Berelowitz, 2005; Schiller, Bruur
Legacy, 2012). These achievements relate to successes in metropolitan growth ma
on urban intensification, the integration of expanding public transport infras
fabric, people-friendly and environmentally adapted urban design outcomes, and
inclusive culture of decision making. The development of the public transport
consolidation in recent years, accompanied by an annual population growth rate
Vancouver region, has seen public transport become a more prominent element of
356 million passenger journeys in 2011, a rate of 154 per capita (Translink
considerably lower than in many European cities, but appears to have entered
Vancouver s larger Canadian counterparts Montreal and Toronto. It outperform
Australasian and US cities with the likely sole exception of New York City (
2013). The rate of increase of public transport usage has also outpaced populat
from 118 trips per capita in 1996 (Kenworthy and Laube, 2001) to 134 in 2006 (Sc

The remarkable transformation of transportation and land use in Vancouver
recognized both locally and globally, but there has been little quantificatior
paper is concerned with measuring two elements of the transformation. First, c
distribution and intensity of metropolitan Vancouver s overall transit suppl
during which rail rapid transit was expanded. We query whether changes to
corresponded with expected spatial effects of rail rapid transit: in particular
service immediately surrounding railway stations, coupled with declines in are
lines. Further, we examine to what extent the actual locations of transit serv
areas identified as regional town centres in metropolitan land use plans. Seco
urban form and transport network and its influence on the evolution of spatial
transport in the Vancouver region. Our interest is whether the city-region s u
transport integration can be regarded as a dominant factor in attracting ride
something exceptional about the configuration and service levels on the public
whether and to what extent both influences work in unison. To assist this exa
Vancouver to a sample of other New World cities experiencing urbanisation and t
decisions during the same era, consisting of the six largest Australasian
Vancouver s Pacific neighbours, Seattle and Portland.

## 2. Background: Vancouver s Transport Planning Legacy

In a comparison of Vancouver with his native Melbourne, Mees (2007) highlig
Vancouver bucked a nationwide trend of increasing urban travel times during the
2005. It was the only metropolitan area to record a three-minute drop in t
workplace commute against an average nine-minute increase across Canada. Fro
longest average commuting times among Canada s six largest metropolitan areas
fell into third place behind Toronto and Montreal by 2005 (Statistics Canada,
this position in the 2011 National Household Survey (NHS, Statistics Canada, 2
was accompanied by a growing public transport mode share (19.7% of all journey
(ibid)). It was achieved in the absence of major infrastructure projects to ex
these two reasons Mees (2007), and later Stone (2013), likened it to the hol
successful, simultaneous pursuit of greater self-containment and reduced car dep

Among the factors that, in Mees (2007) view, contributed to this great
Vancouver are the coordination of metropolitan-wide land use and transport pl
culture informed by genuine participatory elements and analytical rigour, the
zoning system to facilitate residential intensification in desired locations, a
and regional governments in the planning and operation of public transport.

planning and transport administration was consolidated at a metro-regional sc
planning agency Greater Vancouver Regional District (GVRD) established in 1967.
strong focus to inward growth, partially enforced by the city s constraine
mountain ranges and coastlines, partially by controls on outer suburban growth
and planning approval regimes to facilitate urban intensification. The focus
integration saw a rapid transit system (SkyTrain) reintroduced to Vancouver in
1980s. It was conceptualised to rely on feeder bus services and land use intens
in order to build its patronage, rather than on patronage drawn from park-and-r
comparable New World cities). The SkyTrain system is integrated with buses and
form a grid-shaped network across the core city of Vancouver, and to some exten
al, 2010).

Planning strategies developed a strong focus on land use-transport integrati
GVRD coordinated the release of a metropolitan strategy (Livable Region Strat
1999) and a transport strategy (Transport 2021, GVRD, 1993) designed to rein
Infrastructure priorities and transport management principles in the transport
the objectives of urban containment. Transit orientation was spelled out in the
the extent that the GVRD expressly rejected road projects proposed by the prov
incompatible with the strategies goals. Both strategies are based on the resu
There is detail on the roles and responsibilities of various stakeholders in t
plans proposals. There is an absence of attempts to avoid accountability by
planning objectives (which can be misinterpreted ) or by obfuscating the asso

An influx of one million additional residents during the three decades from 199
Housing these people was to be primarily through residential intensification. A
this was a discretionary zoning system in which local governments have the fina
and character of high-density development. The role of dispute resolution throug
minimised. Consequently municipalities successfully use this lever to dire
commercial intensification into transit-accessible precincts while enforcing g
outcomes, and prevent their leakage into locations with inadequate infrastru

Public transport in Greater Vancouver is the responsibility of a regional agenc
has responsibility for road infrastructure. Unlike the experience of Australia
2012) this is an exceptional and well-resourced multi-modal integration of tran
service planning that has made a critical contribution to enabling the public t
up with population growth as well as the transit-oriented objectives of the regi

## 3. Methods

### 3.1 Transit coverage over time

This study of Vancouver s public transit service coverage, measured in freque
unit, was undertaken in three main stages. The first stage involved the acquis
bus routes and timetables obtained in paper format for the years 1981, 19
downloaded from the transit operator s website for the year 2011. The challenge
allows for the comparison of change over time. If relatively large spatial unit
over time were used to quantify service change, expected small scale changes s
routes in favour of a larger and faster train, would be missed. While Vancouve
ferry stations, route and timetable information are all now available in elect
and schedules existed only on paper, in the timetables or the paper archives o
time line was commenced in 1981 because there was a full set of timetables, it

a few years before the first rail rapid transit line began operations. In additi
compiled, so that there were 10 year intervals.

Representations of the catchment areas of identified service levels were drawn
km) grid covering the metropolitan area. A grid cell was allocated with a part
whenever it came into contact with the 300-metre linear buffer of the associat
radius of the associated semi-rapid bus stop or 700-metre radius of the associa
ferry terminal. Buffers and station/stop radii are based on Euclidean distanc
average frequency values were calculated for the three steps between the years 1
and 2001-2011 using ArcView. These three figures were then added to produce a c
change over the 1981-2011 period.

### 3.2 Spatial accessibility

An accessibility instrument, Spatial Network Analysis for Multimodal Urban T
(SNAMUTS), was utilised to assess the interplay of land use patterns and publi
from a variety of angles. This instrument is used to measure a number of differ

- the operational input provided for public transport services relative to po
- the ease of movement these generate between centres of activity,
- the reliance of the network on transfers,
- the percentage of residents and jobs with walking-distance to public tr
  standard,
- the ability of users to access metropolitan activities within a fixed trave
- the potential spatial flow of travel opportunities across the components of
- the potential resilience of the network and its elements to absorb further
- the flexibility of users to navigate themselves through the city on publi
  friction losses from excessive waits or poor legibility.

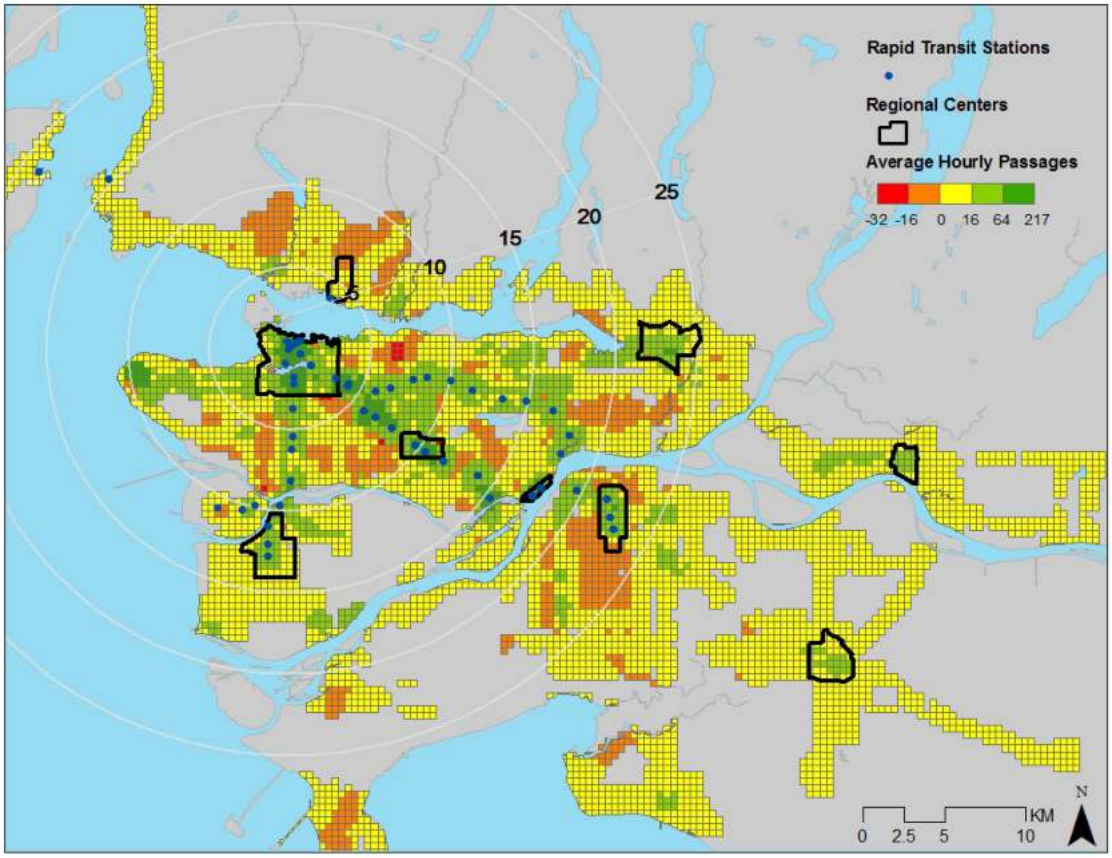
These factors are cast into a set of eight accessibility indicators. Space
preclude a full description of each index including the formulas used for their
find this in Curtis and Scheurer (2010), Curtis and Scheurer (forthcoming) and
www.snamuts.com
The analysis is applied to the public transport network as a whole and to a coh
centres across Greater Vancouver. The network and centres were developed by dra
public transport timetables and a field visit to confirm activity centres. The
to those gained from nine other New World cities in Quebec, the US, Australia ar

## 4. Results: Changes in Transit Supply over Time

At a regional scale, transit service frequency increased substantially between
distinct nodes of extremely high increases in transit frequency increase stand
metropolitan core is prominent in the regional plans as well as the transit fre
the eight designated regional town centres (Metrotown and New Westminster) appe
are an additional five nodes (UBC, Broadway-Commercial Drive station, Joyce S
Station, 22nd Street Station) that appear as significant nodes of transit frequenc
designated regional town centres do not appear. If the threshold for service
lowered, two additional regional town centres (Coquitlam and Surrey) appear a
lower level municipal town centres identified in regional plan also appear
they have barely an increase over that found along some transit-rich corrido
increases associated with rapid transit have not corresponded exactly with plans
nodes or centres/sub-centres, corridors are an important spatial descriptor.

Measured in terms of service intensity, there were areas with gains and areas w
year period. However, the magnitude of gains in intensity of service in a range
per hour (increases of between 1.9 and 3.6 passages per minute) were not matched
decrease in any part of the metropolitan area. In other words, some places rea
service that was higher than any corresponding decline.

Map 1: Cumulative change in transit frequency, 1981–2011




The distribution of losses was distributed proportionately equally throughout th
brackets based on CBD radii in multiples of 5 kilometres. The greatest gains we
core (defined as an area within a 5 km radius of a central point in the CBD).
decline were found adjacent to rail rapid transit in this metropolitan core:
transit service was restructured following the introduction of rail rapid transi

Transit service decreases occurred in some areas adjacent to areas of increase,
rail rapid transit leads to consolidation. The higher level of public transit i
transit, or in one case semi-rapid buses and in another case semi-rapid bus
However, this is not true for all station locations. What made the differenc
presence of connecting bus routes and urban density (residences and/or jobs) i
change. Interestingly, in such a scenario the pattern of sub-centre formatio
different from that planned. It suggests a positive correlation of service incre
CBD and with location relative to prior railway technology (trolleys and li
Vancouver s growth during the first century of the 20th those places, game-changing gai

transit service levels were made, while in outlying areas which were develo
relatively marginal increases are typical.

## 5. Results: Transit Accessibility in the Vancouver Region

### 5.1 Service intensity

The accessibility tool (SNAMUTS) sets a minimum standard for inclusion of public
It uses the weekday inter-peak public transport network and stipulates a
frequency on surface routes and a minimum 30-minute frequency on segregated rai
The rationale for this is that this comes closest to serving the daily acti
traveller who compares a public transport journey with one by car. The service
1) captures the number of public transport vehicles or train sets in simultaneou
minimum standard. The figures shown are in relation to metropolitan population.

Table 1: Public transport service intensity in Vancouver and nine other New World ci
number of vehicles/train sets in simultaneous revenue service during the weekday inter-
minimum service standard, and relative to metropolitan population.

| 2011 12 | Number service | Services 100,000 |
|---|---|---|
| Vanc | 448 | 19.3 |
| Adelaide | 223 | 18.1 |
| Sydney | 654 | 14.9 |
| Melbourne | 536 | 13.4 |
| Perth | 218 | 12.6 |
| Brisbane | 233 | 11.6 |
| Montreal | 399 | 10.4 |
| Portland | 168 | 10.2 |
| Seattle | 271 | 10.2 |
| Auckland | 135 | 9.2 |

The index is influenced by the propensity of public agencies to put resources
operation and offers a proxy for the priority with which public transport is t
funding with other public tasks. These figures also reflect an efficiency chara
a large number of small and/or slow-moving vehicles as part of the public tran
buses running in traffic in congested conditions), service intensity figures
significant number of services are offered through large and fast vehicles (such
alignments) service intensity figures are reduced.

In Vancouver, there is a more pronounced role for buses and trolley buses in th
example, in Montreal (which has only a handful of bus services entering the CBD
of the difference in service intensity results between the two Canadian
Vancouver s bus network expansion and average service frequencies are also su
every other city in the comparison, including Adelaide which is only marginally
the overall result, but suffers from a far greater degree of bus congestion in t

5.2 Ease of movement (closeness centrality) and transfer reliance (degree cen

The closeness centrality index (Table 2) comes closest to a traditional measu since it only depicts the accessibility of the transport network; it does not t (or land use). The index measures travel impediment as experienced by users mov transport network. In addition to measuring travel time, it includes service important to public transport travellers. Cumulative impediment scores per jou impediment value on each route segment traversed. The node-based figures in N average, non-weighted travel impediment (closeness centrality) between the ref other nodes in the network, selecting the route with the lowest cumulative imp case. Lower values indicate greater ease of movement.

The degree centrality index (Table 2) measures the reliance of the network on tr transport services on different routes to make journeys on the network. The fi refer to the average, non-weighted minimum number of transfers required between and all other nodes on the network. Lower values indicate lower transfer reliano

Table 2: Average, lowest (best) and highest (poorest) SNAMUTS closeness centrality and centrality results in Vancouver and nine other New World cities.

| 2011 12 | Closeness cent (average) | Closeness cent (lowest valu | Closeness cent (highest val | Degree centr (average) |
|---|---|---|---|---|
| Vancouver | 42.1 | 25.0 | 162.1 | 1.13 |
| Montreal | 47.1 | 28.1 | 130.1 | 1.38 |
| Portland | 57.4 | 34.6 | 171.5 | 0.79 |
| Auckland | 59.0 | 33.5 | 133.2 | 0.95 |
| Perth | 59.3 | 35.2 | 130.9 | 1.03 |
| Adelaide | 61.1 | 33.8 | 147.3 | 1.09 |
| Melbourne | 62.3 | 36.0 | 165.2 | 0.91 |
| Brisbane | 64.1 | 35.1 | 187.6 | 0.91 |
| Seattle | 64.3 | 36.4 | 149.6 | 1.07 |
| Sydney | 81.5 | 46.4 | 281.5 | 1.04 |

On the ease-of-movement index, Vancouver (alongside Montreal) significantly ou World peers. This measure is influenced by the spacing of the activity centre urban compactness as well as average speeds and service frequencies of the that link these centres. Missing links and a convoluted urban geography e away from desire lines, in contrast, will negatively impact closeness results.

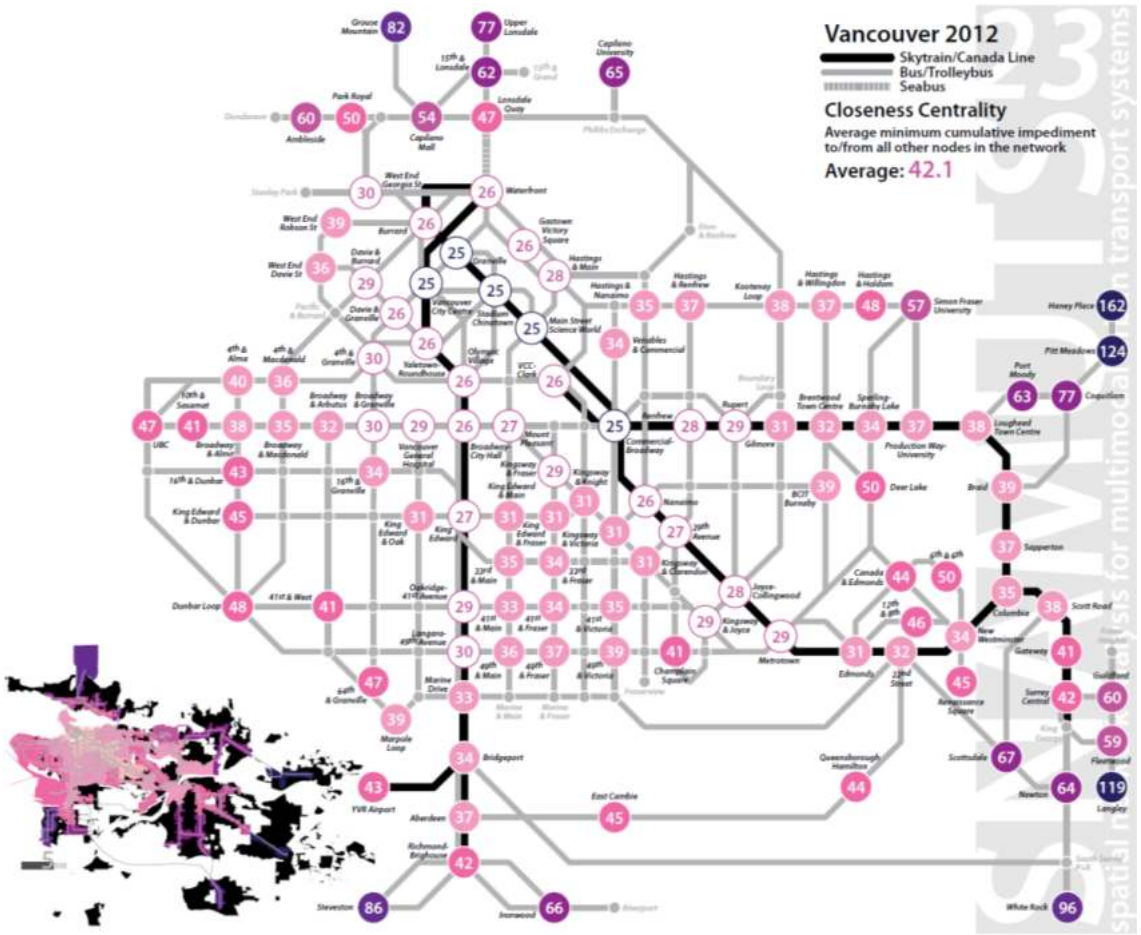
Vancouver s exceptional performance on this index can be associated with the the SkyTrain system as the network s backbone: its high commercial speeds separation) and high frequencies, generally of five minutes or better (facilit operation, which reduces the marginal cost of additional services), minimise tr its routes. Map 2 shows how the best closeness values in Vancouver follow th Montreal s metro system, though not driverless, shares similar characteristics In contrast, the heavy rail systems of the Australasian cities and Portland s have daytime service frequencies of fifteen minutes at best.

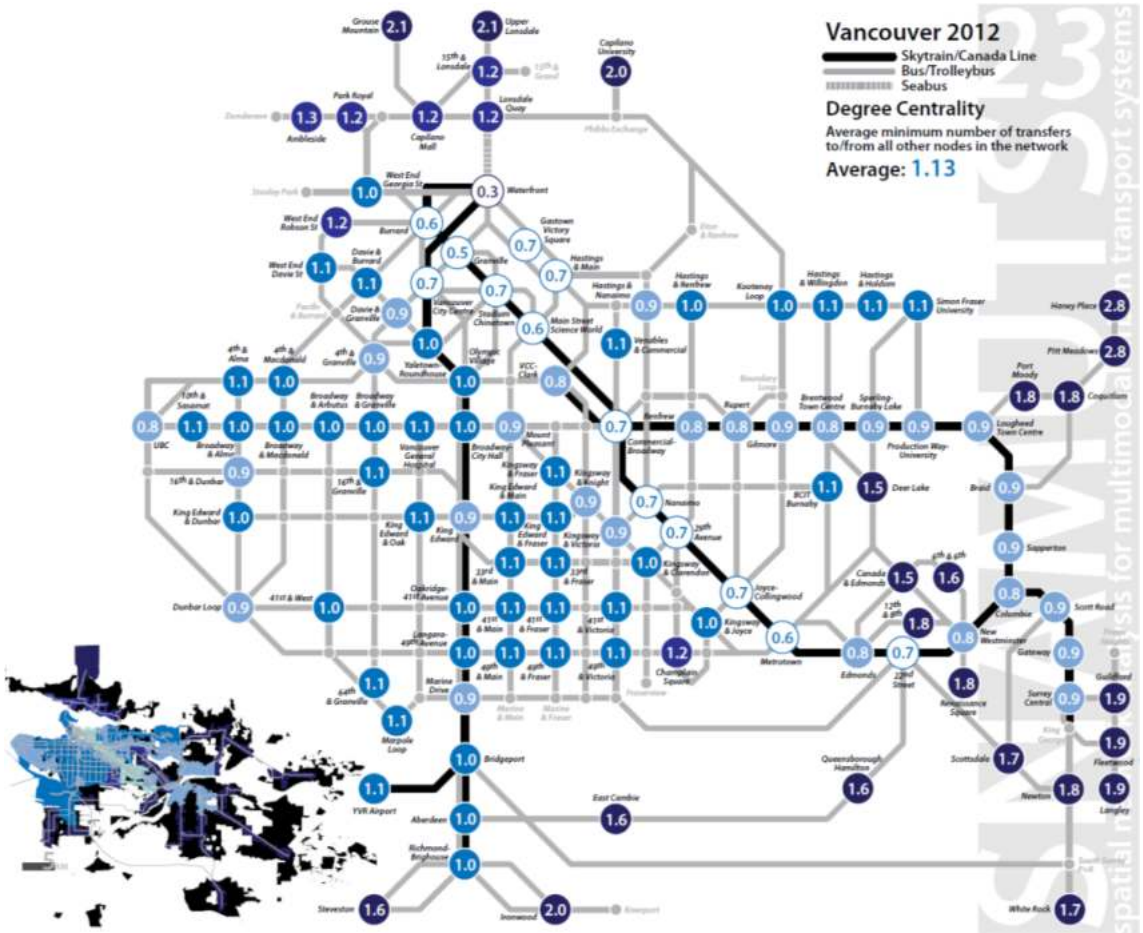
Another contributing factor for Vancouver s relative ease of movement on public grid-shaped surface network, made up of buses and trolley buses also operated than in most comparison cities. This can be seen in the relatively smooth deca across most of the Burrard peninsula where the density of the surface network is

Vancouver s constrained geography appears to assist, rather than obstruct, effectively containing a significant part of the urbanised area on a relatively in contrast to Sydney, Seattle and Auckland, where water bodies act as segregat of the metropolis which public transport, as well as the road system, struggle t

Vancouver and Montreal have the highest reliance on transfers in the New World both, there is a hierarchical network design which designates the (limited) ra backbone corridors and the (more widespread) bus networks as feeders and distr however, retains a greater role for surface modes in the city centre and thus number of transfer-free connections between CBD and suburban nodes than its Qu (see Map 3). The most transfer-dependent nodes in the Vancouver region ar municipalities to the north, east and south where bus routes act more as class than as connectors along corridors that extend across several local government a

Map 2: Closeness centrality in Vancouver s public transport network in 2012
Map 3: Degree centrality in Vancouver s public transport network in 2012






5.3 Network coverage and contour catchments

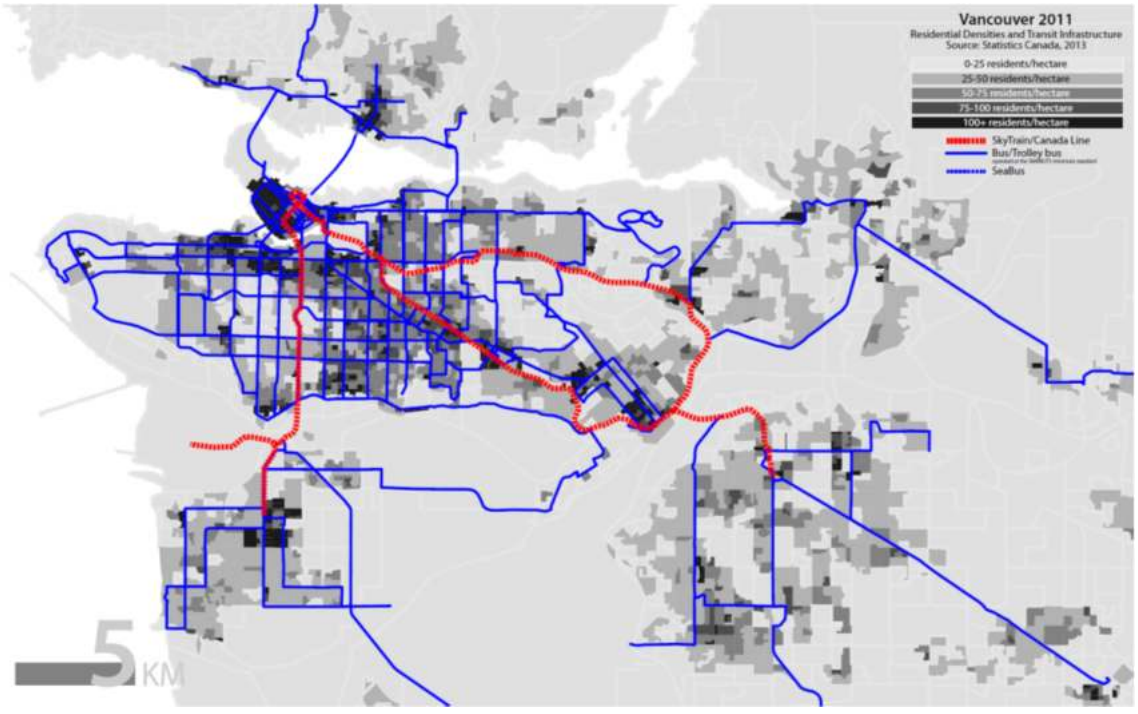
These two measures introduce a land use component to the transport assessmen
Network coverage (Table 3) measures the percentage of metropolitan residents
walking distance (roughly 800 metres around rail stations and ferry terminals,
bus and tram corridors) of public transport routes that meet the minimum ser
measure provides an answer to the question who gets access? It is an indicat
city as a whole is by public transport. The ideal result would be 100%. Conto
measures the percentage of metropolitan residents and jobs that can be reache
node by way of a 30-minute public transport journey with a maximum of one trans
indicate larger contours. This measure is more usefully considered for each cen
used diagnostically to explore how well served are activity centres that dra
population (such as a university or main hospital).

Table 3: Network coverage and average 30-minute contour catchments in Vancouver and nine World cities.

| 2011 12 | Network coverage (percentage of met residents and j | Average 30 min contour (percentage of metrop residents and jobs |
|---|---|---|
| Vancouver | 61.4% | 19.5% |
| Sydney | 54.6% | 8.3% |
| Montreal | 49.3% | 15.0% |
| Adelaide | 48.8% | 10.7% |
| Melbourne | 46.8% | 9.3% |
| Portland | 41.7% | 10.5% |
| Perth | 41.4% | 10.6% |
| Brisbane | 37.5% | 10.6% |
| Seattle | 35.2% | 8.4% |
| Auckland | 32.8% | 10.2% |

Network coverage can be read as a proxy indicator for the willingness of public bring a good level of service to as large a share of the population as possible in competition with the deployment of operational resources on those corrido potential for ridership growth (Walker, 2012). Hence, good results on this in compact urban form which makes it easier to allocate limited resources to a residential and employment areas.

Map 4: Relationship between residential density and movement lines of public transport i

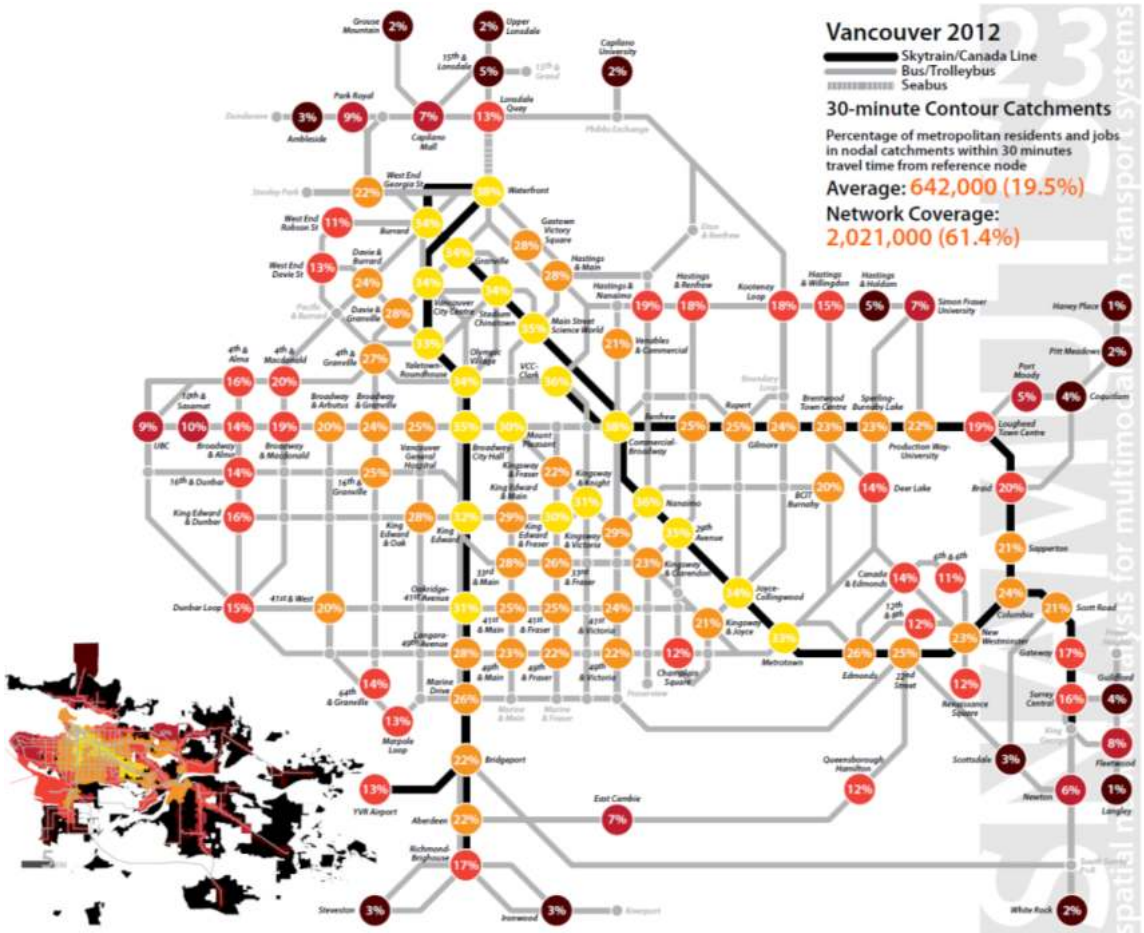


Vancouver s network coverage is greater than that of any other New World city an achievement associated with the core city s dense surface network that cove within walking distance at the minimum standard. In suburban areas, public trans corridor-based though, unlike in Montreal, these corridors serve all signific metropolitan area. While Greater Vancouver, like every other city in the New significant share of low-density, dispersed suburban development, the phys waterfronts, mountain ranges, an area of protected farmland and the Canadian-U limit the spread of this urban form to the foothills in North and West Vancou fringe of the metropolitan area.

Vancouver also leads the cohort of New World cities on the average 30-minute c result associated with several factors that work in favour of successful land The speed and frequency of the rail system in conjunction with the relativel expansion of the bus and trolleybus system continues to exert an influence her geographical size of contour lines. In addition, it is likely that Vancouv relatively effective policy to concentrate urban intensification programs into transit-oriented locations is succeeding by agglomerating urban growth around t public transport, thus also increasing the density of origins and destinatio contour line (Filion and Kramer, 2012; see also Map 4). Vancouver beats Montrea city which benefits from a larger heritage of older and traditionally denser ur Columbian counterpart, but arguably has a weaker policy to facilitate further around transit (Filion and Kramer, 2012).

Map 5 illustrates the importance of the SkyTrain corridors as well as the d connecting them especially in the south-east of the core city (Main Street, Fra corridors) to maximise the expansion of contour catchments for a broad range of

Map 5: 30-minute contour catchments in Vancouver s public transport network in 2012




5.4 Spatial distribution of travel opportunities (betweenness centrality)

This index visualises how potential preferred travel paths (those that offer while also considering transfers and service frequencies) between any pair of weighted by catchment size and travel impediment, are distributed across the ne which routes and nodes potentially attract the most through-put from travel opp the land use-transport system as a whole? Higher values indicate greater network

The concept of betweenness centrality has several sub-measures. Nodal betweenn betweenness describe the number of potential travel opportunities attracted t route segment (Map 6). Global betweenness (Table 4) is a measure adding the (number of activities connected divided by the travel impediment that separates nodes on the network, extracts the square root of this sum per node and then e proportion to the total number of metropolitan residents and jobs. It is used t level of presence of public transport movement opportunities for trip mak typical path length measure (Table 4) is a proxy for the percentage of metropol located alongside a public transport journey of average length; it is influence land use activities around public transport nodes on the one hand (with higher the figures), and by the configuration of the network to facilitate travel al journey path (with greater encouragement for passengers to take detours in order higher-frequency services also inflating the figures).

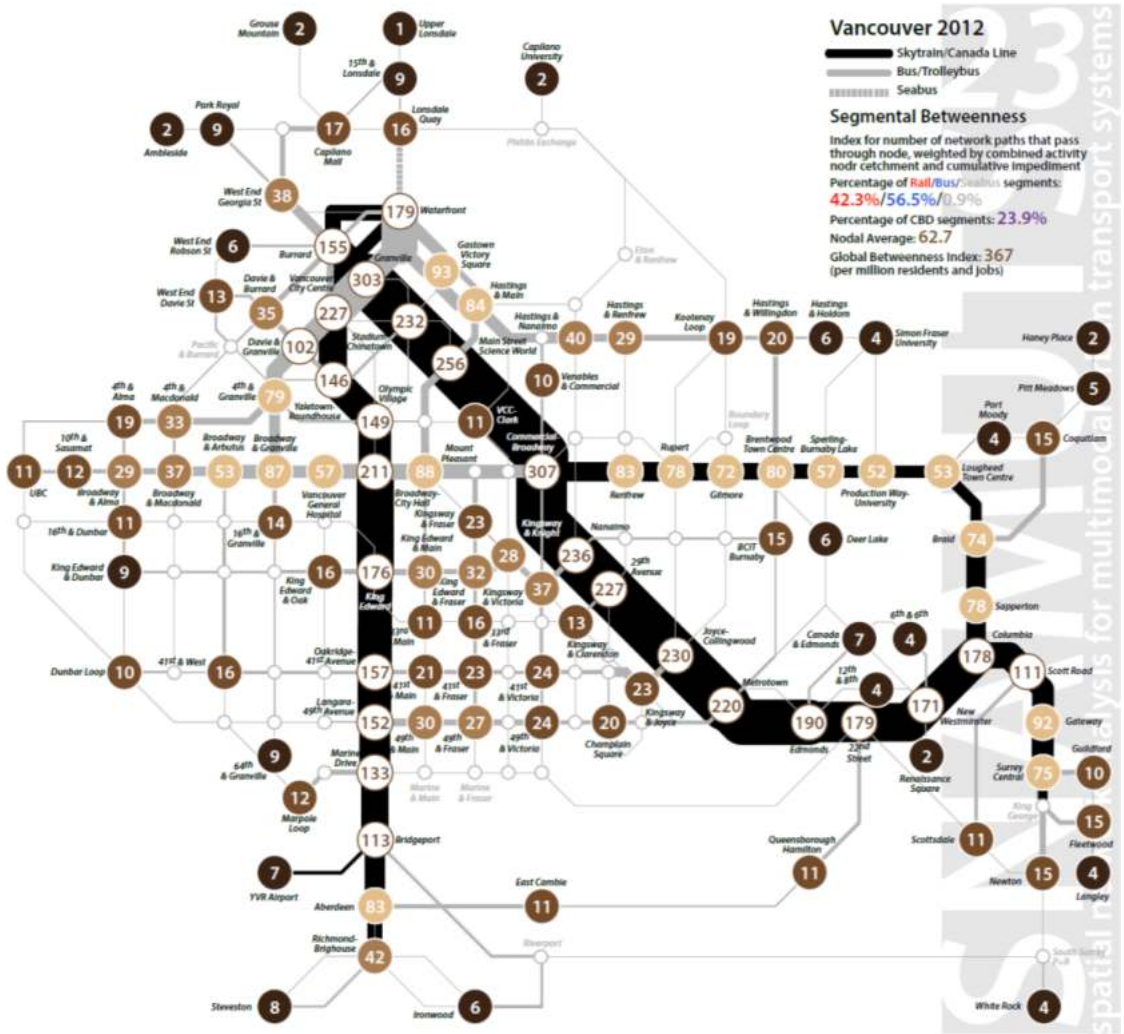
Table 4: Global and nodal betweenness centrality, and catchment of typical path length nine other New World cities.

| 2011 12 | Relative glo betweenness i | Average nodal between | Catchment o typical path |
|---|---|---|---|
| Vancouve | 367 | 62.7 | 3.22% |
| Adelaide | 289 | 24.4 | 2.36% |
| Montreal | 274 | 77.6 | 2.51% |
| Perth | 249 | 30.9 | 2.06% |
| Auckland | 239 | 30.5 | 2.17% |
| Portland | 230 | 35.3 | 2.67% |
| Brisbane | 227 | 33.6 | 1.93% |
| Seattle | 201 | 34.0 | 1.54% |
| Sydney | 198 | 40.5 | 1.80% |
| Melbourne | 175 | 33.1 | 1.55% |

On the relative global betweenness measure, Vancouver significantly outperforms the New World sample, indicating a public transport system richer in travel op ranked nodal betweenness figures, however, which place the British Columbian ci so Montreal) much higher compared to the relatively even field of the Australas point to some problems. They can primarily be attributed to the performance g dominant modes operating in both cities heavy rail and buses which is elsewhere due to the SkyTrain s (and Montreal s metro s) high service freq speeds. In combination with the easier legibility of both cities still quite characteristics have the potential effect of attracting passengers to ra geographically direct connections may be available on the bus network. Vancouve for example, includes a big loop enclosing the core city s south eastern subur neighbouring Burnaby. A number of bus routes cut through this area in relativel circuitous SkyTrain trip will get most passengers to their destination faster th travel opportunities are then counted at every rail station along their geogra and together drive up average nodal betweenness results. The same observation f average catchment of typical path length measure, on which Vancouver also lead considerable margin. It responds to common geographical detours making average and traversing a greater number of intermediate centres than strictly necess effects may be of great disbenefit to the user per se, the potential concentra limited number of high-performance corridors away from their desire lines congestion, as well as higher than necessary energy use per passenger. This is to the public transport planner wary of the system s overall efficiency.

Map 6 shows the extraordinary concentration of potential travel opportunities SkyTrain and Canada Line corridors, complemented by only a limited number of st chiefly along Broadway, Granville Street, Main Street and Hastings Street.

Map 6: Betweenness centrality in Vancouver s public transport network in 2012




The segmental betweenness index can also be queried in terms of the percentage travel opportunities attracted to congestion-prone areas such as the CBD, and peak performers in terms of passenger capacity and competitiveness to the speed and amenity. Table 5 shows the rankings of the New World cities – the h greater the share of travel opportunities captured by rail modes or within the C

Table 5: Percentage of metropolitan-wide segmental betweenness values on segrega modes, and in the CBD area, in Vancouver and nine other New World cities.

| 2011 12 | Segmental betwee (all rapid rai |
|---|---|
| Sydney | 57.9% |
| Melbourne | 52.2% |
| Montreal | 50.1% |
| Portland | 49.9% |
| Perth | 46.5% |

| 2011 12 | Segmental betwee (CBD area) |
|---|---|
| Vancouver | 23.9% |
| Portland | 27.9% |
| Montreal | 30.3% |
| Brisbane | 31.8% |
| Sydney | 32.2% |

| 2011 12 | Segmental between (all rapid rai |
|---|---|
| Vancouver | 42.5% |
| Brisbane | 35.7% |
| Adelaide | 21.3% |
| Auckland | 15.2% |
| Seattle | 8.8% |

| 2011 12 | Segmental between (CBD area) |
|---|---|
| Melbourne | 32.7% |
| Auckland | 35.4% |
| Perth | 40.0% |
| Seattle | 42.8% |
| Adelaide | 62.0% |

Despite the aforementioned potential sponge effect of high-performance rail of travel opportunities over the network, Vancouver s overall rail share on slightly below that of New World cities where heavy or light rail systems were the backbone of public transport in recent decades (Montreal, Portland and Vancouver s SkyTrain network arguably lacks the maturity of Montreal s metro 20 years earlier) or Perth s suburban rail system which, like Sydney s and Me lines that have been continuously operated as commuter rail services for a cer extensions currently under way, such as the Evergreen Line extension to Port M (under construction) and the proposed Broadway corridor along the spine of should lift Vancouver s share of travel opportunities on rail modes, and thus time-competitive public transport for choice travellers, towards (or even beyond

Of all the ten New World SNAMUTS cities, Vancouver has the lowest concentrati travel opportunities in the CBD area, despite the city centre s relatively hig transport routes. This measure, which one would usually expect to drop with gro regarded in the context of the relatively peripheral location of Vancouver geographical heart of the regional settlement area, a circumstance that also Moreover, it is indicative of a network configuration that succeeds in deflect away from the CBD area by offering an array of strong orbital connections, and developed in Vancouver than in any of the other cities in the sample. The advan is the ability of public transport to penetrate into markets other than classic and thus provide viable travel alternatives to a larger share of everyday transp

5.5 Network resilience

This index extracts a ratio between the betweenness index and the actual carryi each component of the network, determined by the service frequency and the m size). It is designed to assist in differentiating network elements by their increases in patronage derived from further urban growth or improvements in pu share. The index follows a scale from a positive value of 30 to open-ended negat figures indicating greater potential stress or lower resilience. Individual r invite closer scrutiny whether they constitute a cause for concern.

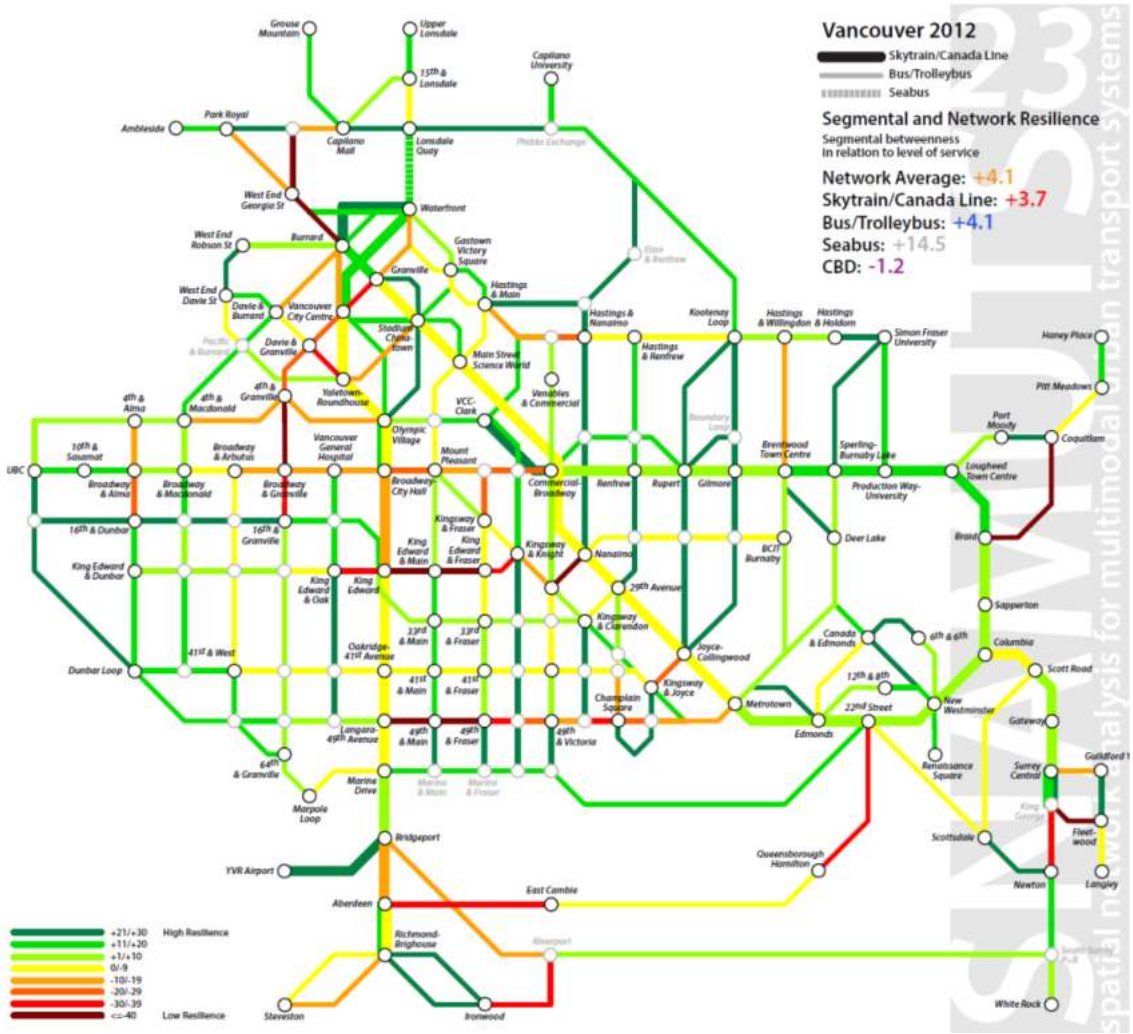
Table 6: Network resilience (segmental congestion index) in Vancouver and nin
World cities.

| 2011 12 | Average network resil |
|---|---|
| Perth | +11.4 |
| Adelaide | +9.1 |
| Melbourne | +7.6 |
| Auckland | +6.2 |
| Brisbane | +5.6 |
| Portland | +5.6 |
| Vancouver | +4.1 |
| Sydney | +2.4 |
| Seattle | +2.1 |
| Montreal | 0.9 |

Network resilience figures are influenced by the operational input provided (
concentration of land uses around public transport relative to levels of servi
network to offer several alternative routes for as many origin-destination pa
helps distribute the transport task). In the real world, low resilience can t
overcrowding of services or into a form of latent or suppressed demand for publi

Vancouver s average network resilience is lower than that of any Australasian
is also inferior to Portland; in turn, it is greater than that of Seattle an
performance of the Quebec and Washington metropolitan areas on this index can
to their comparatively low level of service intensity (see above), the same is
Rather, stress appears to be mounting in three key areas (Map 7). First, there a
corridors in outer suburbs such as Port Moody/Coquitlam and Surrey/Langley wher
(SkyTrain extensions or light rail) are under way or proposed. Second, there ar
trunk lines which experience pressures from the aforementioned sponge effect
as well as their design for relatively short train and platform lengths. Third
bus corridors in the core city that may not currently meet the potential for
movement opportunities that their position in the land use-transport system woul
Broadway corridor, this also seems to hold true for King Edward Avenue and 49th Avenue
parallel to Broadway but further south and at a greater distance from the CBD
these resilience gaps can manifest as an inability of the public transport
passenger growth of the magnitude experienced during the last decade, unless n
expansion continue at a rapid pace.

Map 7: Network resilience in Vancouver s public transport network in 2012




5.6 Flexibility of movement (nodal connectivity)

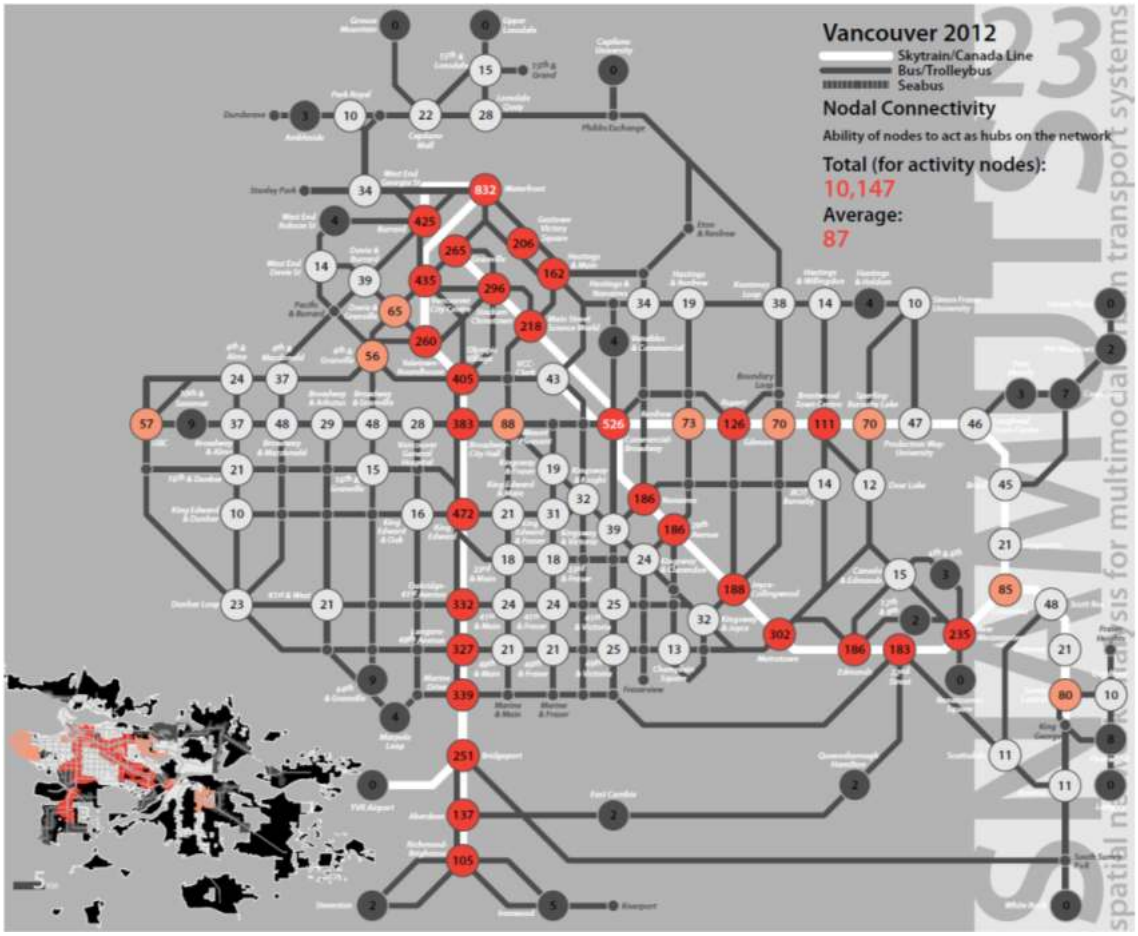
This measure captures the flexibility of users to incorporate particular locatio without having to rely excessively on timetable consultation or other forms of composed of the number of links converging in each node as well as the averag transport mode(s) provided on each link. It is thus designed to assess the suit to enable go anytime, anywhere mobility across the urban structure. It car indicator of the suitability of particular locations for land use intensificat better connectivity, and a node with a result in excess of 100 can generally be perceived as easy to reach on public transport by both trip makers and property

Table 7: Nodal connectivity in Vancouver and nine other New World cities.

| 2011 12 | Nodal connect (average) |
|---|---|
| Vancouve | 87 |
| Melbourne | 82 |
| Sydney | 77 |
| Montreal | 52 |
| Brisbane | 42 |
| Seattle | 26 |
| Portland | 26 |
| Perth | 19 |
| Auckland | 13 |
| Adelaide | 12 |

Nodal connectivity results are influenced by the frequency and utilisation of p as well as the configuration of the network: the more multi-modal transf opportunities to travel in a range of directions there are, the higher the nodal illustrates that all but two nodes with a count on this index higher than the are located along the SkyTrain network, highlighting the importance of this inf land use-transport integration in Vancouver. The very high scores along the Car are supportive of the proactive plan for land use intensification along the C Vancouver, 2011). Vancouver leads the sample on this index (Table 7), even th can be expected to drop with declining city size and hence, network comple underscores the relative success of transit-oriented development strategies in unplanned passenger movement between a many centres along Vancouver s key urb most other New World cities of Vancouver s population size or smaller, re scores (100 or above) are confined to the respective CBD areas.

Map 8: Nodal connectivity in Vancouver s public transport network in 2012




## 5.7 Composite accessibility index

The composite index is designed to provide a benchmark measure. It is derived several individual indicators (closeness centrality, degree centrality, aver catchment, nodal betweenness, nodal connectivity and resilience) weighed by a c of the absolute presence of travel opportunities (global betweenness) in rel population and employment, and network coverage in relation to network res geographical congruity of the network. A high score in the composite index indi integration of land use and public transport is strong, and a score in excess o node in the highest (dark green) colour bracket on Map 9.

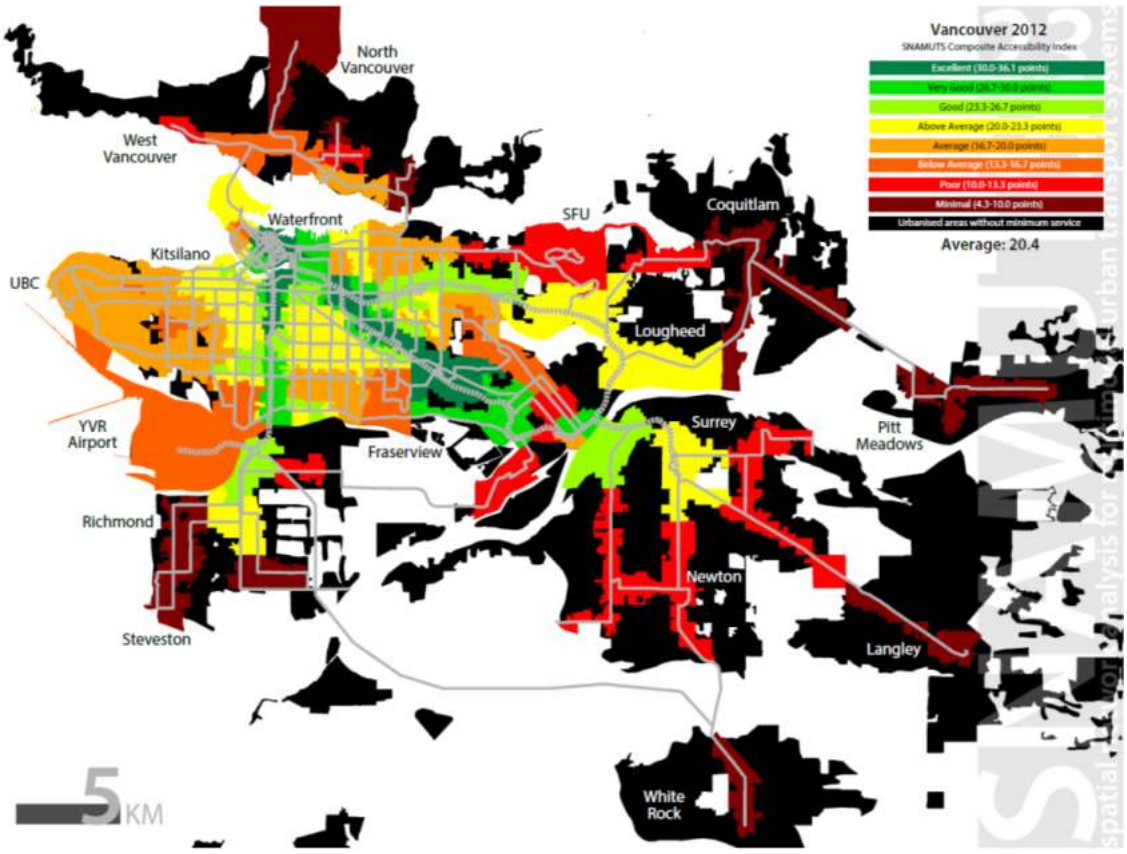
Table 8: SNAMUTS benchmark composite accessibility index in Vancouver and nine other N cities.

| 2011 12 | Benchmark compos (average) |
|---|---|
| Vancouver | 20.4 |
| Montreal | 17.1 |
| Melbourne | 14.9 |
| Portland | 14.5 |
| Brisbane | 13.7 |

| 2011 12 | Benchmark compos (average) |
|---|---|
| Perth | 13.5 |
| Sydney | 13.2 |
| Adelaide | 12.9 |
| Auckland | 12.4 |
| Seattle | 12.2 |

On the average result for this index, Vancouver leads its cohort of New World c considerable margin. This is primarily the outcome of a comparatively widespre network facilitating relatively fast and frequent movement over an urbanised compactness is achieved by both topographical factors and a long-standing intensification around public transport nodes. This is most visible along the almost all activity centres return composite scores above Vancouver s high a neighbourhoods of Kitsilano–West Broadway, Shaughnessy, Mount Pleasant–Riley Pa Cedar Cottage, South Hill–Sunset and Hastings–Sunrise are located away from th their above-average accessibility results to the multi-directional grid formed and trolleybus lines. In contrast, composite accessibility drops towards the including in the CBD fringe neighbourhood of the West End as well as in the UB and Marpole. North and West Vancouver suffer in accessibility terms from their core city by way of the Burrard Inlet, while the outlying suburbs of Richmond, Coquitlam, Langley and White Rock are characterised by a public transport acces familiar from other New World cities where corridors with reasonable bus servic accessibility in city-wide terms) alternate with sizeable patches of disperse where public transport services fail to meet the SNAMUTS minimum standard (if th

Map 9: SNAMUTS Benchmarking Composite Index in Vancouver s metropolitan area in 2012




## 6. Conclusion

The SNAMUTS analysis characterises Vancouver s public transport accessibility a a New World context, albeit with a mounting resilience problem that calls int ability to sustain its recent rate of growth in transit patronage without accelerating, the pace of network and service expansion. Of interest from a integration perspective, however, is the degree of consistency of these trends regional growth strategy. Did the infrastructure program of the past three dec transit supply in already transit-rich areas (see Walker s thesis above) while so, this would contradict the finding for Vancouver having the best network cov and Asia.

Furthermore, did transit supply increases favour the metropolitan strategy s The result of this appears mixed. Four categories are evident:

- designated centres that grew strongly in transit supply (central Vancouv Westminster)
- designated centres that grew moderately in transit supply and/or infrastruc Coquitlam)
- designated centres that grew weakly in transit supply (Langley, Pitt Meadow Vancouver)
- and centres without a strategic designation that still grew strongly in tr Broadway, 29th Avenue/Joyce-Collingwood, Edmonds-22nd Street, Marine Drive, UBC)

Are these outcomes primarily a result of market forces or of planning regimes? accessibility play in this? Other than UBC, all examples of the fourth type a

excellent categories of the SNAMUTS composite index. This brings us back to the has Vancouver s investment program since the 1980s divided the city more in transit-poor components? Or is the situation more aptly described as a case of corridors of transit-richness into what was previously a uniformly transit-poor not possible to improve the situation in every neighbourhood simultaneously w major infrastructure is involved, but what is evident is that most of the Sky historic regional light rail lines that likely had a considerable impact on sett 20th century and thus laid the groundwork for the urban intensification around r was also more continuity with the surface transit system (and possibly, associat Vancouver than elsewhere due to the survival of the fixed infrastructure trolle research endeavours, we hope to explore howthese transitionsfrom a 20th century orientation to 21st century transit orientation in the same locations can be character fit into evident transit supply and accessibility trends.

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# IMPROVING COHERENCE BETWEEN URBAN AND TRANSPORT PLANNING IN THE NETHERLANDS: TOWARDS IMPROVED ACCESSIBILITY

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Improving the coherence between urban and transport planning is an ofte
policy makers and planners. Coherent planning provides more and better c
participation and travel (better accessibility) and allows for more
spending.

However, this paper shows that improving coherence is far from straight
an empirical analysis of recent developments in both housing and employm
patterns in the Netherlands, and taking an institutional (policy-oriente
to analysing the current Dutch (national, regional and local) urban
policies, the paper shows how financial arrangements, (formal) regulati
habits prevent better co-operation.

After analysing the most relevant obstacles in the Dutch policy and plan
strategies for improving the coherence between urban and transport plann
and elaborated: increasing proximity; transit oriented development (TOD)
chains and smooth transfers. These strategies can be implemented in the
they can be valuable for urban and infrastructure policies abroad as well

## 1. INTRODUCTION

Improving coherence between urban and transport planning is an objectiv
policy makers and planners, in the Netherlands as well as abroad. Coherer
more and better choices for activity participation and travel (better acc
financially more efficient.

Increasing coherence is a shared responsibility of urban and tra
However, in the current Dutch practice, urban planners often disregard
their plans create and transport planners tend to focus on infrastructur
with accessibility problems. Their lack of co-operation is not ne
unwillingness. There are simply many habits, regulations and institutio
co-operation.

Lack of coherence can lead to undesired results. Extensive qualitati
studies carried out by PBL in 2013/14 (PBL 2014a, Snellen and Hilbers 2
example that newly developed Transit Oriented Development (TOD) locatio
flourish at the expense of older TOD locations. Investments in new locat

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of employment and amenities, but not to growth. Past investments will de
We also found that lack of coherence increases car dependence. Improved
enables scaling up of housing, jobs and amenities markets. People can t
also forced to travel further. Furthermore, we found reduced levels of ac
amenities as a result of a more dispersed urban pattern.

In a recent PBL study, the strengths, weaknesses, dilemmas and problem s
eight strategies for improving coherence between urban and transport
Netherlands were assessed. Furthermore, the decision making processes an
for projects in the fields or urban and transport planning were reviewed.
courses of action to achieve greater coherence were identified. The fi
happen. TOD cannot be realised without urban and transport planners wor
the moment, TOD is not very successful in the Netherlands, most likely du
operation. The second main course of action is increasing the proximity
amenities to enable people and companies to satisfy their needs while req
For this, urban planning is in the lead. However, co-ordination with t
necessary since this type of development sets different requirements for
The third course of action is improving transport chains by improving
modes. For this, co-production between urban and transport planning at
level is crucial.

None of these courses of action are easy and straightforward.
communication and co-ordination between urban and transport planners,
choices by policy makers and administrators and the willingness to act
clear allocation of responsibilities in administrative arrangements and f
support coherent planning.

## 2. FUNDING AND DECISION MAKING PROCESSES

The current financial and administrative arrangements for urban and trans
support coherent planning in the Netherlands. Part of the problem is the
transport planning and funding for urban planning differ fundamentall
Investments in transport infrastructure are made by government and highly
and regional authorities have to obtain national funding for larger infr
In contrast, urban development is funded almost entirely locally by var
local investors, housing corporations, municipalities and regional org
funding for urban planning has almost completely disappeared. The 'lo
funding is that of hierarchical planning, urban planning is much more dep
funding and market consideration.

The strict separation in funding between urban and transport plan
situation where smart coherent planning is difficult to fund, while su
supported. Examples can be found of local urban planning choices to
locations that result in large amounts of traffic on regional or national
that require large national transport investments in the road network t
Sometimes these locations are chosen over others because their urban dev

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lower, for example because of cheaper land acquisition, yet the total transport development may well be much higher.

The Dutch MIRT program (multiannual funding program for infrastructur transport planning) aims to provide more coherence between urban and tr This works relatively well in the strategic agenda setting phase, but pr successful when actual decisions have to be made to fund projects. In thi and benefits of national investments are balanced with national policy urban planning is decentralised to local and regional governments, th national urban planning aims, making it very difficult to justify investm projects. As a result, almost all of the MIRT funding goes to transport transport budgets to help implement urban planning projects that would investments in infrastructure or would improve opportunities for urban difficult: regional or local authorities have to bear the (extra) costs t

In the Netherlands, regional and local authorities only receive revenues. Most of their budget consists of grants from central government a funding program for infrastructure and transport that decentralises bu level. It is an important way to bring infrastructure funding closer to that also makes urban planning decisions. However, the BDU budgets are cover operational costs of public transport, leaving very little mone coherent transport and urban planning. Furthermore, the BDU is managed at of government, while urban planning decisions are made by local governmen

At the local level, the grondexploitatie (land account) is the mai projects. In the land account, municipalities can balance the profits developers against the costs of other elements of area development, such amenities[1]. Infrastructure expenditures can be financed from the benefits of The instrument therefore offers the opportunity for coherent urban and since the costs of both are balanced at the same time. However, the s accounts is limited to the location itself. Often, these developments transport infrastructure other than local roads and these costs are onl equation. Most of those costs are funded by the central government and partners. The profitability of land accounts have been an important driv decisions. However, since not all costs have been taken into account, t have not served as an adequate integration mechanism between transport a at a larger level of scale. For example, developments with high costs for low costs for additional infrastructure, such as developments within exi systematically underrated.

## 3. PROMISING COURSES OF ACTION FOR IMPROVING COHERENCE

Many strategies for improving coherence between urban and transport plan in academic literature, professional debates and policy documents. In identified the eight most prominent strategies and investigated their pitfalls. These eight strategies were:

- Transit Oriented Development

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- Transit corridor planning
- Creating a diverse palette of urban milieus (urban environment typ
- Increasing proximity
- Small-scale and/or incremental urban development
- Providing multimodal access
- Increasing travel speeds
- Improving transport chains

From the analyses of these strategies we derived three most promising c
order to improve the coherence in Dutch policy and practice between infra
developments. The following sections elaborate on each of these, espe
necessary to make them work.

### 3.1 Proximity: Making Better Use of Existing Infrastructure and Built E

Bringing activities closer together is a very effective way of improvi
example, research has shown that the number of jobs within reach for pe
dependent on the amount of jobs within close proximity than on differe
supply (PBL 2012, 2014a, 2014b, Snellen and Hilbers 2013). In additio
proximity facilitates making better use of existing infrastructure and
and therefore of earlier investments made. Furthermore, it supports e
amenities.

This sounds like a simple solution: just work on urban densificati
developments instead of ever increasing urban sprawl by developing new gr
close to motorways. However, there are some hurdles to jump. Often, ac
developers are under the impression that there is more demand for subu
business parks than for urban living and working. Furthermore, green fie
often easier and cheaper.

Policies aiming for more proximity in the built environment, for
urban densification, can only succeed if the planned supply fits with dem
offices et cetera in the property markets. Recent property market analyse
with urban qualities such as a central location, mixed land use and a re
urban functions close by are most vital (Jones Lang LaSalle and Tordoi
over the past decade, most additions to the property market have been ma
locations often close to motorways. For housing developments urban densi
policy for many years. However, developments have predominantly taken pla
locations. This does not mean that there is no future for urban densific
there are many locations still available in the existing urban areas to b
purposes. Furthermore, research has shown that in the years to come the
demand for housing in urban areas to justify approximately 40 percent of
developed within the boundaries of existing cities and towns. The dema
single-family housing (Bouwfonds 2011). Building this kind of housing w
city is certainly possible. There are many forms of building in higher
single-family housing in green neighbourhoods. When these are develope
proximity of transport facilities such as train stations and light rail

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connected for walking and cycling, coherence between urban and transport improved.

In spite of convincing evidence of demand for more urban living and wo proximity will not happen in the Netherlands without extra policy atten office developments will have to be critically evaluated and balanced ag before planning consent is granted. The same holds for new housing devel within the existing urban fabric should be prioritised over suburban or Provinces can play an important role in this process under Dutch pla regulations. Potentially, more small-scale, organic forms of (re)de increase proximity and better utilise existing urban facilities and in Urhahn Urban Design 2012).

Unfortunately, however, the rules and habits in Dutch infrastruc planning funding are not very supportive of urban developments within ex as discussed in section 2. Since 2008, the situation has only deterior balance out costs for infrastructure needs with benefits obtained from p have reduced. The economic crisis has had detrimental effects on the pr developers can hardly make a business case for new projects. It has bec infrastructure investments can be financed from land and property deve Local governments have hardly any funding available to pay for infrast sources. As we have discussed in section 2, budgets for infrastructure a the central and regional level of government and municipalities have opportunities to secure income from local taxes.

Reconsidering the planning and funding processes in order to support inte urban planning is necessary. The current crisis might just be the perf What better time to change direction than when driving ever so slowly. national planning department is rethinking the MIRT procedures. It w investigate how the program could be geared more towards investing in a instead of mainly in infrastructure line developments, and how the progr options for incremental developments.

Furthermore, the departments  policy for beter benutten (improving existing infrastructure could be broadened to the urban planning domain, thinking about better use of transport infrastructure and the existing bu time. New developments at well-chosen locations, incremental development demand and risen opportunities, can make optimal use of existing c infrastructure networks and at the same time support the amenities in u enable better returns on previous investments. However, the system of recovery act is constructed for large-scale developments and in some ca development it constraints balancing costs and benefits between transport (Sorel et al 2014).

The fact that local and smaller-scale developments are not the respo government is not a valid argument against national investments in these The national government has a  system responsibility  for planning: it well-functioning planning system. This means that central government has preconditions for urban development, including a workable set of rule

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funding of these plans. Furthermore, if developments take place within e
utilising existing infrastructure, this may well reduce the traffic load
roads, which would fit national ambitions with regard to the performance

A different strategy would be to make regional and local actors, who infl
decisions most, less dependent on national government for funding. One o
decentralise a larger part of the budgets. An important question when co
is what would be the right level of government to decentralise to. The
Dutch situation between the local and provincial level) is generally cons
level for this type of decision making. On this level, funding for both
infrastructure planning could be used for integrated planning decisions.
regional governments would have to be granted planning authority in this
the case at this moment. Moreover, regional bodies will probably soon be

A second option would be to grant provincial and local gover
opportunities to acquire income, for example through provincial and loca
has in the past been suggested by many researchers and advisory groups
2010; Marlet and Poort 2003; Rli 2013; OECD 2014; Rob/Rfv 2005). Althou
mean a drastic change in how government finances work in the Netherlands
an option that deserves serious consideration when aiming for better
infrastructure and urban planning.

## 3.2 Improving Implementation of Transit Oriented Development (TOD)

TOD is probably the most commonly propagated strategy for improving cohe
urban and transport planning, both in the Netherlands as well as in ma
TOD is a generic term used for different ways of concentrating urban d
public transport stops and nodes. Many policy documents of national, r
governments in different countries show TOD aspirations and expectations
high (Bertolini, Curtis and Renne 2009; Calthorpe 1993; Cervero 1998, 200
Tan et al 2013 and numerous policy documents from national, regio
governments).

However, implementation of TOD proves difficult (Bertolini 2013; Ko
Rutten 2011; Tan et al 2013). The authority for decision making on and t
funding opportunities of different elements of TOD plans lie on di
government or are in the hands of other actors. This hinders coherent dev
it is important to create planning arrangements that enable integrated de

Grosso modo there are three options to bring decision making with re
and transport planning aspects of TOD closer together. The first option
tier of government responsible for both: for instance by making reg
responsible for urban planning decisions in stead of local government. Th
introduce (mandatory or voluntary) co-operation between local/regional
regard to TOD-related decision making. The third option is to create a fr

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regulations that places both the transport and built environment inter
market actors.

These options were derived from best practices in different parts
Dutch urban region of Arnhem Nijmegen attempts to implement TOD through
operation between municipalities and the regional body (Stadsregio). I
Danish central government plays an important role, while in Tokyo co
develop both transit and the urban development around the public transpo
the rest of this section the Dutch case of Arnhem Nijmegen is discussed
the end of the section we look at some lessons from the Copenhagen and To

Despite the variation in which party directs the coordination process
similarities between the cases. In all cases, coordination of planning a
the regional level. This is consistent with research into critical succes
shows that this is the most appropriate level of scale for coordinatio
where coordination of planning efforts is most lacking in the Netherlan
Thomas and Bertolini 2014).

The regional body of Arnhem–Nijmegen chose to work on more coheren
transport planning through co-operation within the region (Stadsregio
2007). Its role was to develop a strategy for public transport, roads a
invest in transit and, by working as a broker, bringing actors togeth
planning in the region was mainly geared towards transit provision, part
locations that were already being developed and partly to develop new
aiming for new developments.

This process took place in a complex administrative and financia
regional body operated on a limited budget and with limited authority
making, the latter especially with regard to urban planning issues. Neve
body attempted to take the lead in several ways, an attitude that is cert
come to successful TOD. The regional body stimulated integrated plann
possible by investing in transit, temporarily compensating for losses
transit until urban development generated the necessary amount of patron
administrative agreements to link urban development to transport investme

Most innovative was the attempt to connect transit development, urb
rights near transit stops and the operation of public transport in one
almost succeeded. Market actors were interested and new coalitions were
the differences in planning horizons and timing in implementation be
transport planning sectors and an emerging economic crisis put a spoke
innovative plan (Matthijsse 2013; Mulder et al 2013).

The economic crisis forced the regional body to lower ambitions a
different actors involved to share the burden of sharply declining dema
and offices. However, it struggled with the choices that had to be made.
investments, choices were relatively easy: the number of new stations p
and a planned light rail link was converted into a bus line. However,
planning the regional body had to take the interests of municipalitie
Municipalities had already invested in land preparation and amenitie
locations and they depended (partly) on urban development gains to balanc
result it was very difficult to coordinate limitation of urban de

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municipalities and in this case it created enormous pressure to continue areas, whereas locations elsewhere would better fit TOD ambitions.

In the years to come, the abolition of the regional bodies in the N subsequent reshuffling of BDU grants (see section 2) can provide the oppo responsibilities in such a way that transport and urban planning decisio together. Again, this is not straightforward. With the loss of a regio decision making on BDU funding of transport will have to taken either provinces or a level down to the local level. The latter comes with q municipal competition and resulting oversupply of developments and appear option.

Bringing the BDU responsibilities to the provincial level would me will have to become much more actively involved in urban planning policy al 2013; OECD 2014). This would be a major change in the mutual rela provinces and the larger cities.

When rethinking the new rules and regulations for the BDU funds i worth considering to increase the opportunities to use BDU money in a manner, for instance making it possible to use funding for public transpo developments if that increases the cost-effectiveness of public transport

In Copenhagen and Tokyo other options for coordination of urban planning efforts are used and we can learn from these experiences. Due t in the administrative, legal and cultural circumstances foreign best prac transferred to the Netherlands. However, certain elements of the Dan approaches can be translated to the Dutch context.

In Copenhagen the urban and transport policy of the Fingerplan has history. Continuity and clarity of policy are important factors in it adaptations have been made, yet the basic principles of the policy have sixty years now. An important element in this policy is the fact that stimulation of development near transit stops but also includes planning distances. These restrictions are established in national regulations. S are used to obtain the desired results (Hartoft Nielsen 2013a, 2013b).

Despite the enormous difference in density and size comparing Toky cities, we can even learn from their approach to TOD planning (Chorus rules and regulations in Tokyo are such that development at a distan restricted. At the same time the metropolitan government gives market freedom to develop property close to transit stops and even more when the public policy goals. Instead of investing itself, the public secto development, while the private sector submits plans and builds. The same develop and own transport infrastructure and operate public transport ser from urban development. Since public funding for urban and transport pl being reduced in the Netherlands, the Tokyo approach may be an inter investigate. It is not just useful in periods of economic growth. I arrangements promoting transformation and redevelopment. Again, the gove invest, it only facilitates. The framework of rules and regulations en public interests.

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### 3.3 Improving Transport Chains

Transport chains, especially those including public transport, play a
transport yet receive relatively little attention from planners. Transp
locations and in urban areas in general often require multiple transpo
public transport. Smooth transfers between these modes improve accessib
attractiveness of public transport and therefore the return on public
(Henry and Marsh 2008). They increase the number of transport options
quality of transport chains  the whole chain of trips leading from ori
only rarely the subject of travel planners policies. Although they claim
as is stated in the national transport policy  the focus is mainly o
stretches of infrastructure or transit or on individual nodes and not
chain.

The quality of these transport chains is crucial, since their trave
of time, money and bother for travelling  is almost always larger than
People dislike changing travel modes. Time spent waiting and changing m
longer than time spent travelling (Van Hagen and Van Oort 2011; Litm
competing with unimodal trips is therefore very hard. If people can cho
choose multimodal (chained) trips if their destination has limited c
instance due to infrastructure limitations or parking restrictions. For
urban areas, this is relatively often the case. For trips to locations
accessibility, public transport cannot compete with the car.

Since public transport is not equally important in all locations,
selectively in improvement of transport chains. On locations with excell
investments in public transport are less likely to flourish, as are in
transport chains to these locations. However, there may be other legitim
in public transport and transport chains, for instance serving social
transport equity.

Reducing the travel impedance of trip chains requires careful design of t
chain and there is room for cost effective improvements (Brons and Rietve
Klinkenberg 2014). This is not just a transport challenge, since the expe
trip chain also strongly depends on the quality of the (urban) enviro
transfers take place. On a very local level, this requires coherence
transport design. Especially around nodes that are both interchange as we
most TOD nodes are  this is a challenging task. Swift and fluent tran
modes in general require different design characteristics than an invitin
in and interact with other people. Designers will need to find quality
these quite different requirements. Especially transfers between car and
between bicycle and public transport set some interesting challenges.

Improving travel chains is not just a design challenge but also requ
planning process. The whole process of planning and decision making in t
design in the Netherlands is currently not geared towards focussing on
chain is nobody s responsibility. A quality interlinking of transport

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operation between many actors. This can be challenging since they all
interests an ambitions.

A complicating factor is that in current policy a culture of it s y
developed, which means that actors tend to work independently of each oth
on their own element of the chain instead of working together towards a
culture is most unproductive for obtaining low impedance travel chains a
overcome.

There is a need to formalise the responsibility for the quality of
chains. Simply relying on good links making a strong chain and on the go
work together will not yield the desired quality. Which actor must be mad
whole chain will depend on the situation.

## 4. CONCLUSIONS

Coherence between Dutch urban and transport planning can be improved in m
of which are neither straightforward nor easy yet worth the effort. Both
planners have a role to play. This research project has led to the conclu
main courses of action. These three differ in the way they focus on
planning, yet they have the intention to strengthen the link between both

Improving proximity of destinations can improve accessibility and ma
of existing urban and transport infrastructures. It requires concentrati
the existing built-up area. This is currently safeguarded insufficient
urban developments in a more dispersed direction. Examples are the way i
are attributed to building plans, the fact that many municipalities and p
invested in land for development outside the current built-up area, and t
the consequences of urban planning choices for transport demand and acce
in cost attribution, selectiveness in where to develop, and a shared resp
transport planning for accessibility are necessary.

Transit Oriented Development (TOD) can play an important role in
coherence between urban and transport planning. However, the large nu
involved and their conflicting interests make it difficult to succesf
Current financial arrangements are obstructing pro-TOD choices and auto
well as intermunicipal competition work in an opposite direction. Furthe
lack of demand for housing, office space et cetera means new TOD locatio
on existing ones. In general, selectiveness and scarcity are important
should keep in mind that every TOD location is different: there is no o
strategy for TOD. With regard to funding, joining budgets previously earm
or urban plans into an intergrated budget for accessibility could be usef

For the success of TOD as well as for offering multimodal access
transport chains and smooth transfers are important. Currently, the trans
no one , making improvements difficult to implement. Also, connecting tr
developing attractive urban environments in station areas not always go t
forward are making choices on what is most important where (combini
developing a high-density urban area is very difficult) and attributing
transport chain to the most appropriate actor.

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NOTES

1 Contrary to regulations in many other countries, Dutch municipalities a profit from buying land, preparing it for development and selling it t period before the financial crisis municipalities generated substantia process.

# UNRAVELLING THE FLEMISH MOBILITY ORGWARE
## Analysing the role and relations of governmental institutions from the view of actor-networks in the transition to a sustainable mobility

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## Abstract

*Mobility policy in Flanders faces major challenges regarding the liveability and sustainability. The Flemish government therefore wants to update the mobility system to the present needs and to launch the sustainable mobility transition. In this respect most mobility transition research focuses on (socio-) technical innovations (software) or infrastructural innovations (hardware), managing the demand side of mobility. However, the role and innovations of the organisational struct remained unclear. This research addresses this hiatus, by analysing the actors and factors of importance and their interconnections within the Flemish mobility system, and secondly by proposing possible orgware improvements. Hitherto there is no clear idea of how different mobility (related) organisations, e.g. companies, lobbies, governments, institutions and projects, are associated with each other. Moreover various innovations of the socio-technical nature challenge the present governance. Because the existing institutions and formal rules are regularly not (yet) harmonized with these innovations. To overcome these challenges and to accomplish the sustainable objectives, one needs to discover the underlying mechanisms and potentials of the mobility systems with regard to the travel, transport and traffic mobility markets. For that purpose, the analysis draws upon the literature of actor-network theory combined with institutional theory insights, both applied on conceptual mobility frameworks. Accordingly, we finally propose a conceptual framework for the analysis of the Flemish orgware, in order to come up with possible improvements regarding sustainability objectives.*

## 1. Introduction

Mobility policy in Flanders faces major challenges in setting out the policy objectives for 2020 and beyond, in making or maintaining Flemish cities attractive, liveable and also sustainable. First transport emissions are to be reduced and the factual footprint of transport (infrastructure) has to decrease over the next decades as well, to make a real transition towards sustainable mobility. But while most mobility transition research focuses on (socio-) technical innovations (software), or infrastructural innovations (hardware), the role and innovations of the organisational structure (orgware), has remained unclear. This is hiatus is also addressed by Jessop (2001, p. 1221), an authority in the field of institutional theory:

*Further steps on a research agenda might include questions about institutional embeddedness or about institutional governance, i.e., the governing of institutions and inter-institutional relations and their systemic environments* (Jessop, 2001, p. 1221). This research wants to address this hiatus, by setting out a framework for the analysis of the actors and factors of importance and their interconnections in the Flemish mobility system. Further research will include the factual state of affairs of the Flemish orgware and the proposal of possible orgware improvements.

Hitherto there is no clear image of how different mobility (related) institutions (organisations, companies, lobbies, governments, projects, funds, ) interact with each other. Moreover various inn of the socio-technical nature make the present governing strategies more difficult to manage. In order to make important decisions, e.g. selecting niche-innovations to be implemented, and in order to launch the sustainable mobility transition, one has to know the leading mechanisms and potentials of the mobility system. The decision-making levels are to be questioned as well. For instance, decision-making powers could have to be reallocated to other policy levels or other arenas to increase efficiency.

Consequently the research question here is how the orgware could be adapted in order to make the Flemish mobility system as an actor-network assemblage more sustainable. Therefore the mobility system itself has to be unravelled first. How does the Flemish mobility system looks like? Which underlying arenas are to be defined? Which actors or institutions hold key positions in these arenas? These questions are addressed in the research. Based on the literature of actor-network theory combined with institutional theory, a literature framework is set out and applied for the conceptualisation of the Flemish mobility system.

The paper is structured as follows. The second chapter elaborates on the conception and definitions of the term 'governance'. In a third chapter some insights of institutional theories are adopted. The *what?* and *how?* of institutions is theorized and the conditions for an institutional chapter four, a framework for the mobility system is then to be considered, next to the already conceptualized context of institutions. In chapter five the actor network theory (ANT) is discussed. This theory proves useful in the conceptualization of how actors organize themselves and form actor-networks in order to survive. In a sixth chapter, the institutional theory insights, the mobility framework and the ANT are then combined in a conceptual research framework for the unravelling of the Flemish mobility orgware. Finally, outlines for possible new governance systems and further research are discussed.

## 2. Governance

The term Governance is used in many ways and covers many aspects. Hence, befo literature for the theoretic framework, we need to clarify our perception of the term governance . This paragraph tries to overcome the vagueness of governance by giving an short overview of important literature on governance.

Jessop (1997) describes governance as *the complex art of steering multiple agencies, institutions and systems that are both operationally autonomous from one another and structurally coupled through various forms of reciprocal interdependence* (Jessop, 1997, p. 1221). Or in other words, as the complex of mechanisms behind (or resulting in) the network. The word governance is in the litera advocated for as the more de-centred and horizontally organized counterpart of a strongly top-down and vertically oriented government (Boelens, 2010; Scharpf, 1997). Governance is gaining importance i todays world, where public-private partnerships are no longer an exception, and where small decentralized initiatives are gaining ground (Jessop, 1997). Sharpf describes governance by advocating for another way of governing since *the advantages of a hierarchical coordination are lost in a world that is characterized by increasingly dense, extended and rapidly changing patterns of reciprocal interdependence, and by increasingly frequent, but ephemeral interactions across all types of pre-established boundaries, intra- and inter-organizational, intra- and inter-sectorial, intra- and international* (Scharpf, 1997, p. 37). Stoker (1998) also discusses the duality between government and governance, but argues that it is not a harsh one. According to Stoker governance is rather a change in meaning or interpretation of the existing term government , implying a new p (Rhodes, 1996, pp. 652-653). Governance is about creating the conditions for ordered collective action , also referring to the bottom-up approach instead of the top-down approach government used to have. But governance is used in many different ways. The baseline however is that governance, as Stoker (1998) says, has to do with the *governing styles in which boundaries between and within public and private sectors have become blurred* (Stoker, 1998). In some cases, though we will not elaborate on this, Governance is also used to provide covering for Consequently governance is in this manner used as a *code for less government* (Stoker, 1998, p. 18).

Jessop formulates three levels of embedded social organization, or thus governance levels. Going from rather simple to more complex, first there is the social embeddedness of interpersonal relations (Granovetter, 1985), second and more complex, there is institutional embeddedness of inter-organizational relations (Keohane & Nye, 1977), and the third and most complex form of governance exists in societal embeddedness of functionally differentiated subsystems (P Pearson, 1957). However from Jessop s work probably the most important thing to acknow

*Successful governance is always provisional, localized, and partial and always has unintended consequences which operate to the detriment of other subjects, interest, and projects and may eventually prove counterproductive even for those who instituted the governance mechanisms and projects in question* (Jessop, 1997). Jessop provides also outlines for further research in the context of the embeddedness of institutions and institutional governance, the latter seen as the governing capacity of institutions and the inter-institutional relations and their environments (Jessop, 2001, p. 6).

## 3. Institutionalism

According to ANT and institutionalism the key players or actors, the variables and the context in the field of mobility and the tangent policy fields are to be analysed in order to gain insights in the Flemish mobility system (Boelens, 2010; Giddens, 1984) . The context or structure determines possible outcomes and is in itself determined and changed by the players within this structure, in order to enable their objectives. Hence the focus can not only be on the actors, while neglecting the broader context of institutions. For Law denotes that actors, thus people, entities, resources that are connected, only have meaning within and through their network (Borgatti, Everett, & Johnson, 2013; Law, 1986) and Jessop states that *institutions never exist outside of specific action contexts* (Jessop, 1997, p. 8). Thus, before examining and listing all important actors and factors within the mobility field, we need to indulge in the institutional theories. Next, the focus is on the institutional turn, since the objective of making the mobility system more sustainable needs such an institutional turn. Therefore the conditions for this change are discussed in order to identify or see possibilities in making it possible.

### *3.1 Why Institutions?*

Why do we have arrangements called institutions? North states that *the major role of institutions in a society is to reduce uncertainty by establishing a stable (but not necessarily efficient) structure to human interaction* (North, 1990, p. 6). Also DiMaggio already mentions in 1988 the uncertainty-reducing capacity of institutions, and Giddens (1984) denotes the institutions as solidity-giving features across time and space. He calls them *the more enduring features of social life* (Giddens, 1984, p. 24). Lock-in, then, is the result of the uncertainty reducing activities of actors-networks (assemblages). According to Greener (2002, p. 616) *Lock-in is not the exception, it is the rule, in fact it is required by markets in order to allow actors to order the complexity which would otherwise dominate. Once the market is organised, and the actor-network stabilised, it is possible for agents to make decisions within it* . Here Greener makes the connection between institutional theories and actor-network theory, which proves useful in the conceptualization of a framework for the Flemish mobility system as well.

#### 3.1.1 Path-dependency & Lock-in

Ideas of path dependency and lock-in are important to understand the context and the need for institutional change. A few quotes grasp the meaning of path-dependency well: *In the path-dependent model, actors are hemmed in by existing institutions and structures that channel them along established policy paths. Therefore, in any system, big (non-incremental) change is unlikely, however not impossible.* (Wilsford, 1994, p. 251). Or as Machiavelli ones acknowledged: *There is nothing more difficult to manage, more dubious to accomplish, nor more doubtful of success t order of things. The reformer has enemies in all those who profit from the old order and only lukewarm defenders in all those who would profit from the new order* (Machiavelli: as in Wilsford, 1994, p. 251).

A path-dependent sequence of (political/economical) changes is one that is tied to previous decisions and limited by existing institutions. For in path-dependent models a choice made in the past, albeit random or not, and by individuals or not, has consequences and can limit options and choices in the future. Hence, one can speak of a depended path . Very early in the evolution of th can be equally suitable. But once a given path is chosen, it becomes increasingly likely to continue along this path. Because, over time little adaptions along this path will have the lowest transaction costs, which leads onto incremental changes all within the margins of this chosen path (Greener, 2002). Moreover

these choices in the past, initiate a certain course, that is already trodden. In essence there is nothing wrong with this kind of path dependency; it will save energy and support added value. But also lead to lock-in situations, in which possibilities are limited just because of those (small) decisions from the past (Greener, 2002; Wilsford, 1994). However, change is still possible, following Wilsford (1994) *it is the combination of path-dependent limits along with occasional windows of exceptional opportunity, or conjunctures, that determine the ways small or big that a political system responds to policy imperatives* (Wilsford, 1994, p. 252). This view has some things in common with the ideas on institutional change of Burch et al. (2003) and Kingdon (1995) namely, the critical moments and windows of opportunity . Path-dependency differs from historical determinism, in the way that one can choose to reshape the path incrementally or to create another path, because history matters, but history doesn t determine everything. Path-dependency theories thus allow for deviations from the trodden path (Greener, 2002; Wilsford, 1994). Path dependency theory looks upon institutional change as follows: *It is the combination of path-dependent limits along with occasional windows of exceptional opportunity, or conjunctures, that determine the ways small or big that a political system responds to policy imperatives* (Wilsford, 1994, p. 253).

In institutional theories, the path dependency perspective brings us the notion of history matters . In this respect, North states that the structure for human interaction possesses already future developments and thus future institutional changes in itself. Thus one can speak of an institutional path, (partially) determined by events, made choices, in the past (North, 1990, p. 6). Also Giddens struct theory follows in a certain way the path-dependency perspective, because both structure and recursively make changes upon each other and in this way change through time, along a path shaped by the structuration process. Giddens provides with his structuration theory an ontology of time-space as constitutive of social practices, which begins from temporality and thus, in one sense history (Giddens, 1984, p. 3). Furthermore, Giddens proposes with his structuration theory that *rules and resources drawn upon in the production and reproduction of social action are at the same time the means of system reproduction* (Giddens, 1984, p. 19). In institutional path-dependency approaches the focus is predominantly on rules and routines, and their importance within organisations (Olsen & March, 1989).

3.1.2 Sociological institutionalism

But critiques to all of the above mentioned institutional perspectives are that, in spite of the bounded rationality (Simon, 1986) of actors taking into account the uncertainty in the world, not all institutional changes bring forth an increasing efficiency. Therefore the sociological perspective on institutions draws attention to the more symbolic and cognitive dimensions of institutions and institutional change (Olsen & March, 1989). The main finding here is that institutions have cultural significance. They start from the idea that not technical rationality but social rationality, which is value-based, guides institutional change. Furthermore, institutional change is assumed to be initiated internally in this approach, while it in the path dependent perspective the incentives for change are perceived to be caused externally. Here, in the sociological perspective, the process of institutionalisation is defined as *a process in which fluid behaviour gradually solidifies into structures, which subsequently structure the behaviour of actors* (Arts & Leroy, 2003, p. 31). Although Giddens structuration theory adopted predominantly the pa dependency perspective, his view refers to the sociological perspective; *structure* is not external to *individuals: as memory traces, and as instantiated in social practises, it is in a certain sense more* internal than exterior to their activities ( ) Structure is not to be equated wi *both constraining and enabling* (Giddens, 1984, p. 25). Following Weimer (1995) institutions result from a gradual evolution that is punctuated by acts of purposeful design (Weimer, 1995). Buitelaar *et al.* (2004) add that institutionalisation is *accompanied by the development of particular discourses, power and resource relations* . (Buitelaar, Jacobs, & Lagendijk, 2004). Furthermore, specifically in the context of policy-making, Linder & Peters (1995) recognize institutions *as both socially embedded practices and frames and historically contingent responses to collective action* (Linder & Peters, 1995, pp. 133-158).

According to these ideas, institutions are often seen as *social practices that are regularly and continuously repeated, that are sanctioned and maintained by social norms, and that have a major*

*significance in the social structure* (Jessop, 2001, p. 6). But on the other hand, institutions are popularly seen *as organizations or social bodies that have major significance for the wider society and act in a quasi-corporate manner* (e.g. the branches of government, thus institutions as part bodies) (Jessop, 2001, p. 6).

*3.2 Conditions favouring Institutional Change*

3.2.1 Institutional insights for institutional change

Following Giddens (1984); Jessop (2001) institutions are both constraining and enabling. They refer to the reciprocal relation between agents and institutions (or structure); institutions are the resources and simultaneously also the means for institutional change. Consequently structure and institutions change predominantly incrementally. On the how and why of this institutional change, the perspective of Buitelaar et al. (2004) seems useful, because their research focus is about *why, under seemingly comparable conditions, some cases show substantive institutional transformations while others do not* (Buitelaar et al., 2004, p. 4).

DiMaggio (1988) already suggested the necessity to bring interest and agency more centrally into the institutional debate to gain progress in defining the conditions for institutional change. He stressed that actors always (but not always explicitly) strive certain objectives, and for this they have always some interest in acting in certain ways. Moreover, some researchers acknowledge the tendency of (key) actors to use institutionalized rules for their own objectives, which typically refers to the regime theory (Jacobs, 2004; Stoker & Mossberger, 1994). The conceptual institutional theory of Buitelaar et al. (2004) elaborates the alignment of the interests of three streams: the societal stream, the policy at hand, and the political endorsement and support base (see later). For arriving at an institutional change, they underline the importance of alignment in time of these streams, and the availability of a viable alternative that has to be accepted by institutional regimes to change (Buitelaar et al., 2004). But while focussing on the actors of the system, resulting in the three streams, also the different degrees of power or the acting of the actors within the framework have to be taken into account in order to identify conditions of institutional change (DiMaggio, 1988, p. 12). The latter will be addressed in the chapter on actor network theory, with the concept of translation .

Burch et al (2003) theorized the critical moment for institutional change as *sufficient pressure, whether internally or externally driven* [ ] (Buitelaar et al., 2004; Burch et al., 2003). In this moment, leading and existing institutional frames or hierarchies are questioned and there are alternative discourses rising. The critical moment can then further evolve into a criti opportunities are actually grasped and changes are effectuated (Burch et al., 2003). But to recognize these critical moments, linked to certain conditions, one has to look at Kingdon s ela stream approach, which is specified for policy agenda setting. In his conceptual model three streams of development are simultaneously aligned, the first stream being the societal problems that are conceived important , the second one the policy solutions at hand and the third stream is formed by the political endorsement and support (Kingdon, 1995). The critical moment in Kingdon s conceptualizatio formed by the matching of these three streams and is named the window of oppor point in the latter theory is based on the existing institutional organizations and frameworks. As in Burch et al. (2003) also in Kingdon s conceptual model, there has to be sufficient pressure, caused int by alternative ideas (or solutions) and actions affecting the present situation and/or externally by societal trends. At the same time acceptable other logics and discourses[1] need to be present to lead onto the

[1] The definition of discourse as provided by the Oxford dictionary of Geography is suit specific assembly of categorizations, concepts, and ideas that is produced, reproduced, *performed*, and transformed in a particular set of practices . This dictionary refers to the definition of Schott (2007) *Tijdschrift* **98** defines discourse as a social process which can be called inclination of sense or, in a manner, genesis of meaning Mayhew (2009) also proposes to take a look at the sense o proposed by Foucault (1980) in which a discourse is like a system of exclusion. *Discourses create their own*

possible opening of a window of opportunity. Following Buitelaar et al. (2004) after the first window of opportunity, a moment follows where alternative discourses can compete with each other for support base and where they can enforce their positions within the disturbed institutional hierarchy. Buitelaar et al. (2004) contribute to the conceptual model by adding a second window of opportunity after this in-between moment, where problem and solution ideas have to be matched. Or thus, when one can speak of a consolidation of a particular problem-solution combination, which is followed by a critical juncture leading onto institutional transformation (Buitelaar et al., 2004, p. 14).

3.2.2 Transition management approach

In the research field of transition management, the multi-level perspective (MLP) is widely accepted (see figure 1). This approach starts from the assumption that transitions are non-linear[2] processes resulting from the concurrence of various developments considered at three levels (ranked from the least stable to the most stable): the first level is the niche (or the locus for radical action or cha second level is that of the socio-technical regimes. At this level the established practices and rules are situated. The third level consists of the exogenous socio-technical landscape (Frank W Geels, 2002; Frank W. Geels, 2012). These different levels, as Frank W Geels (2002) calls them, have their own rhythm or inertia and will react upon changes during another moment or even period. Although on an overall scale the general transition coarse of innovations is well represented by the MLP, we want to express a few remarks here. The first one is about the level in multilevel perspective. Acco ideas, these levels should not be named levels , since this suggests a kind of barrier or threshold wi the evolution or transition process to attain the label of the next level. Secondly, and related to the first critique, we want to underline that this gradual evolution can be subject of discussion. Not every innovation is equally successful after all. Some innovations never leave the niche sphere, or some will never become institutionalised in the regime. Thus, not every innovation will have trodden the same path or will have followed the same stages in the proposed order. We conceive these levels of actors as contingent and coevolving over the various levels. Consequently, we would preferably speak of arenas , and accordingly of a multi-arena perspective instead of a multilevel perspective.

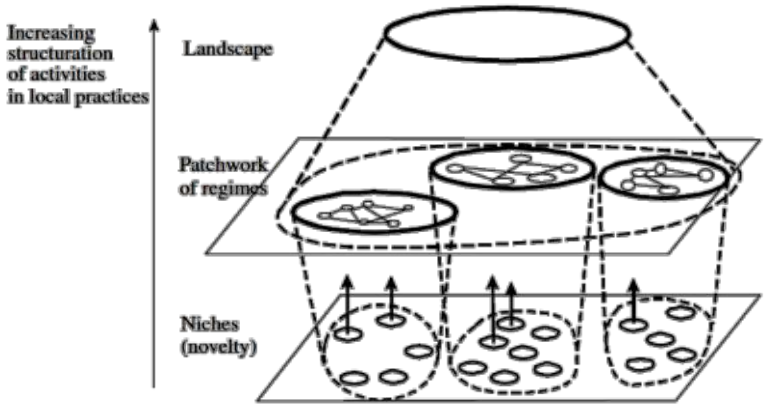


Figure 1: Multiple levels as a nested hierarchy (Frank W Geels, 2002, p. 1261)

However from this framework the distinction between the levels provided by the multilevel perspective proves useful. Representing these levels, e.g. whether or not an actor s initiative or a institutionalized or not, can be interesting in order to define or estimate the capacity to change and the accessibility to resources as a means for change. However to capture what these levels or this transition approach means for mobility, we have to elaborate on mobility frameworks first, in order to merge these transition arenas with a conceptual framework for mobility.

regimes of truth *the acceptable formulation of problems, and solutions to those problems* (M. Foucault, 1980 as in Mayhew, 2009).

[2] Non-linear processes, here conceived as following an s-curve. In general, typically with very low impact in the beginning, then after a longer period suddenly the innovation really takes off with a more than linear impact or growth. In the end a growth rate reduces again.

## 4. Conceptual mobility framework

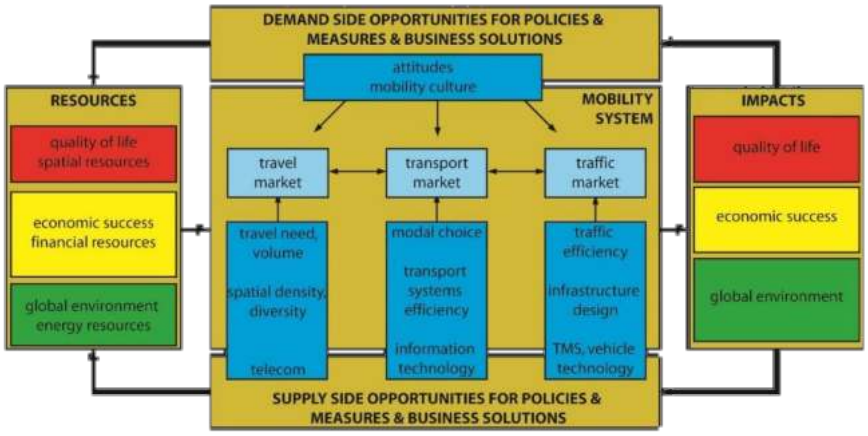


Figure 2: Mobility system approach (Lauwers & Allaert, 2013: based on Egeter and van de Riet, 1998)

In their search for an heuristic framework for transitions of mobility systems, Switzer, Bertolini, and Grin (2013) combine the transport land-use feedback cycle model with the multilevel perspective transition approach. However, we would rather propose the framework of Egeter and van de Riet (1998) since their model is a more elaborated equivalent of the transport land-use feedback cycle. Later, also (Lauwers & Allaert, 2013) further refined this model, by embedding the mobility system in a broader context of inputs and outputs and by indicating feedback loops between the components (see figure 2). The conceptual model divides the mobility system in three connected arenas instead of two; not only land use versus transport is considered, but instead a travel market, a transport market and a traffic market are identified, each time with a supply and demand side. The travel market consists of the demand and supply side of functions and concerns activities that lead to the need for transportation. In this arena people can choose to participate in activities and decide if the trip is necessary/worthwhile. The spatially distributed functions or activities they want to engage in determine the space and time of the displacement. If one decides to make the trip, one comes automatically in the demand side of the transport arena. Here one has to choose the transport modality of the trip: bike, car, public transport, etc The supply side in this arena consists of various transport mode suppliers, e.g. public transport companies, private parties. Then, when the transportation mode is finally chosen, the space (travel route) and chosen travel time slot are decided upon in the traffic market. The actual trips are undertaken and defined in space and time. The outcomes of the generated trips could have impacts: e.g. congestion along the chosen route, negative health impact, environmental impact Thus these arenas are embedded in a broader context of attitudes and culture. All mobility system arenas are connected with each other, direct or indirect via feedback loops. The order of the arenas, as described above, does not imply that the travel market and the traffic market are not connected. The spatial developments or even road construction works have a direct influence on the chosen route, while they have also to do with the travel market and the spatial context.

From transition theory the multilevel perspective is useful. When applying this scheme of arenas, i.e. Travel Transport Traffic Environment (inputs and outputs), from the proposed mobility framework to the multilevel perspective, with the niche regime landscape distinction, we end up with identifying for each of the first arenas the three different types of actors. So that in fact per mobility arena different niche actors, regime actors and landscape actors can be distinguished. However the positive transition curve towards institutionalisation is not necessarily the only way (or may be not the most desirable way) of becoming . Not every innovation is equally successful, or generally app innovations will never leave the niche sphere, and for this will never become institutionalized. For the setup of an analysis framework for the Flemish mobility system we encounter some conceptual challenges here. First, the framework we are looking for should be able to explain the success stories of some actors, while some others fail under the same conditions. Secondly we have to incorporate both actors and structure in the framework, because they have a reciprocal relationship. Actors are influenced by present institutions but at the same time arrange and influence themselves this structure. To overcome

these challenges, we draw upon the contributions of the actor network theory literature for the conceptualization of the becoming of actors. *How do actors organise themselves and their envir Who do they (temporarily) act with?* These are questions that cannot sufficiently be addressed by the institutional (change) theories. This challenge is already addressed by Greener(2002), he proposed to theoretically fine-tune the accounting for behaviour of path-dependent structures in order to gain insights in the means by which structure becomes limiting and to gain insights in overcoming these lock-in situations and break free of them. For this fine-tuning he proposed to take a closer look at the actor network theory contributions (Greener, 2002).

## 5 Actor Networks

### *5.1 Actors or agents with agency? Some definitions*

Actor network theories typically do not differentiate between human and non-human actors; all entities belong to the sole actor category. Actors that have a leading role are called **actants** Latour, 1996). An actor becomes an actant when he acts or when he is granted power or permission to act by others (Latour, 1996, p. 7). However, following Boelens (2010) and later also acknowledged by Latour, non-living (and non-human) entities are not able to negotiate or even communicate themselves. Consequently, they are better served by so-called **intermediaries**, things or actors who speak for those non-human entities, without changing their identity. Non-living things can speak for themselves by their presence for instance. On the other hand they can be represented or impersonated by **mediators,** thus, when another human entity advocates for the non-human one. Giddens (1984, p. 9) distinguishes between agency and action . ***Agency*** *refers not to the intentions people have in doing things but to their capability of doing those thing in the first place (which is why agency implies power)* (Giddens, 1984, p. 9). ***Action*** depends upon the capability of the individual t make a difference *state of a*ffairs or course of events. An agent ceases to be such if he or she loses a difference , that is , to exercise some sort of power (Giddens, 1984, pp. 14-15). The **A duality** is to be seen as an inseparable whole. The actor is then the concrete outcome or crystallization of the actor-network at a specific time and place, while the network is the abstract structure in which the actors are connected on various levels. By this the duality between the individual (actor) and collective (network) has been eliminated (Callon & Law, 1997; Latour, 1996). According to Latour it is not possible to trace where the individual elements stop and from where the collective (network) takes over. Note that following Latour (1996) there is nothing but networks, everything is network (Latour, 1996, pp. 5-10).

### *5.2 Actor-Network Theory*

Callon & Law have been conceptualizing an actor-network theory based on four principles. First, they see the social as heterogeneous in nature. Secondly, they state that all entities are networks of heterogeneous elements. Those networks act unpredictable and are not fixed in form, space or time. Their identity changes while interacting in the network, it is only within and through (re)actions within this network that entities have a meaning. And finally, every stable social arrangement is simultaneously a point (individual) and a network (a collective). By these four rules they overcome the individual/collective and the agent/structure dualism, by stating that this dualism does not really exist, but is only a matter of perspective (Callon & Law, 1997).

> *There is no difference between the person and the network of entities on which it acts. Or (the real point) between the person and the network of entities which acts through the person. Network and person: they are co-extensive (Callon & Law, 1997, p. 169).*

ANT is based on actors and their relations (also called networks), these relations are not only between actors themselves, but also between the human and non-human actors, which could be the more local conditions or the legal framework. ANT stresses that such networks are not necessarily stable or fixed between all heterogeneous actors. In fact, ANT assumes that all actors are continuously reassembling

and organizing their network in a certain way to become more innovative and vigorously (Boelens, 2010, p. 36).

Callon elaborates four phases of translation . Quoting Callon (1999) translation is the process *during which the identity of actors, the possibility of interaction and the margins of manoeuvre are negotiated and delimited* (Callon, 1999, p. 59). Equally translation is in ANT-terms *the possibility equivalence, the possibility that one thing (for example an actor) may stand for another (for example a network)* (Law, 1992, p. 386). Consequently, translation demonstrates how ideas or visions are introduced, framed and taken up in the collective agenda. The translation of ANT similar to the path of the path-dependence theory, only in actor network theory the focus is on the role of (each of the) entities in shaping the path, while in the path-dependency approach there is only the resulting path. Or in Kingdon s case the ANT-translations refer to the three acting streams, as a wh or a resultant force, with no specifics for the shaping (f)actors. Additionally, this translation concept is related to the centrality within social network analysis. We elaborate on the because this enables ANT to incorporate interest and agency into the conceptualisation of actor-network behaviour. And because this allows us to understand why, under the same conditions, some actors or actants are successful while others are failing. The four translation phases in ANT are: 1) problematization; 2) interessement; 3) enrolment; and 4) mobilization of allies. The first phase contains the highlighting of a problem, resulting in a common problem definition. The relevant actors can be identified or representatives can be chosen in order to include all relevant stakeholders into the debate. In a second phase, there is the built up of interest. In this phase one looks first, for ways in which all those actors can become actually interested and engaged in the search for solutions, and secondly, for the terms of commitment in which these actors want to become engaged. A third phase has to align all the interests of the various actors, and rearrange and convert these in order to create potential associations in these interests. Enrolment is about the registration and the li (also with regard to access to resources) on the basis of which their possible role in the whole story can be defined. The last phase contains the mobilization of allies. In this phase one is predominantly looking for support for the chosen actions and solutions. The embedding of the solutions in the wider setting, or the institutionalization is also situated in this fourth phase (Callon, 1999). With the focus on these translation phases within the actor network approach, we have brought interest and agency into our framework.

*5.3 ANT critiques: ARA*

Boelens (2010) criticizes the broad Actor-Network Theory (ANT) discourse of Callon, Law and Latour. In his work he focuses on the useful aspects of ANT, but he also points out the imperfections of ANT. A main objection following Boelens (2010) is that ANT does only say something about how things have become this way, but ANT does not say how or under which conditions the situation can be improved. The translation phases, by which the actor-networks take shape, gain interest and form assemblages and coalitions, stop where planning ought to start (Boelens, 2010, p. 38). Another important shortcoming of ANT can be found in the equalization of humans and non-humans in the actor networks. Boelens divides the non-humans in intermediaries versus mediators, respectively when they adopt a passive role in the first case or are represented by another actor in the latter case. Furthermore, it is important to differentiate between actors and actants , with actants being the more dominant actors defining and/or organizing the network, and with actors as all other associations and acting bodies (Boelens, 2010, p. 37; Latour, 1996). The last objection in respect to spatial planning is that, in the creation of a support base in the last translation phase (Callon, 1999), one has to take into account the effects for actors (entities, people, resources) of future generations, that are not yet but will become part of the network, especially in the context of taking sustainable measures (Boelens, 2010, p. 39).

Therefore he suggests going beyond the ANT onto a more outside-in, instead of inside-out approach, an actor relational approach (ARA) is suggested. Thus not only the actors are important, but also the actions and reactions they provoke (resulting in a network). Boelens sees a role for planners to re-orientate their perspectives profoundly, starting from the outside, from the aims of key stakeholders in civic society and business society. The public society becomes just one of the three types of players, next to the civic

and the business type (Boelens, 2010). The connections actors make, albeit between or within the types, give meaning to the actor-network assemblage. For according to Law (1986) every (social) action is fundamentally relational, it can only occur as a consequence of the specific connection between the heterogeneous material forming the network. It is only within this network that people, entities and resources have meaning (Boelens, 2010, p. 36; Law, 1986). But also the opposite is through it is only within specific action contexts institutions do exist. Indeed because the actors are not only engaging in action within a given institutional framework, but also recursively making and reconstituting the institutional matrix (Jessop, 2001, p. 8).

> *The approach is not about actors as such, in the broad sense of interactive planning (i.e. all affected parties), but about leading actors, who are primarily encountered* in the world of human action. ( ) Here we distinguish between leadir the business society ( ), within the public society ( ) and within ( ) (Boelens, 2010, p. 41).

What we attempt with our analysis, namely the unravelling of the Flemish mobility system, fits within the framework of the ARA-approach. Especially the first and second phase of ARA contain the focus of our research: 1) Interpreting the problem by determining the focal actors and unique core values and 2) Actor identification and actor analysis (Boelens, 2010, p. 43). The key actors and institutions in the broad field of mobility are to be mapped in order to identify possible connections and common aspirations for the transition towards a more sustainable mobility.

## 6. Towards a conceptual framework for the Flemish Mobility System

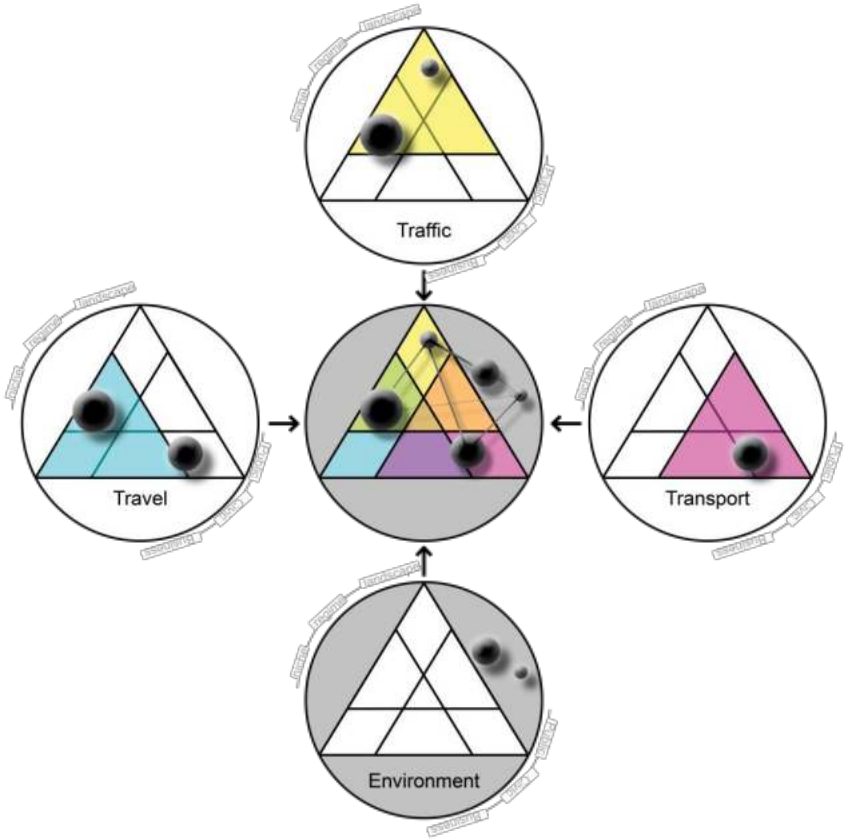


Figure 3: Proposed conceptual framework for analysis (own elaboration)

Figure 3 gives an idea of the conceptual framework we propose for the analysis of the Flemish mobility system s orgware. From actor-network theory and actor relational approach we retain the notion of actors forming actor-networks and becoming assemblages, with actants being the key actors, that have agency. According to the ARA approach we distinguish between civic, business and public types of

actors, typically represented by a triangle scheme (which we retain here). Within the actors, we can also distinguish between niche/regime/landscape, which we retained from the multilevel perspective. For the context or the conditions, in which the shaping of the actor-networks take place at a certain time with certain intentions, we built on the institutionalisation theories of path-dependency. The conceptual model of Egeter and van de Riet (1998) as elaborated by Lauwers and Allaert (2013) provides us three interconnected mobility arena s within a greater system (the interconnection is graphic by overlap of the arenas). This conceptual framework also fulfils the preconditions of a stronger integration or collaboration between land use planning and mobility planning as is strongly put forward by amongst others (Banister, 2008; Bertolini, 2012). The idea of a fourth arena, covering the rest of the indirect influencing actors and factors comes from the institutional theories and the ideas of structuration as well as from the landscape as mentioned in the MLP, to avoid misunderstandings, we called the fourth arena environment . This conceptual scheme enables further research with the actual mapping of the mobility-related actors. By considering the translation phases of ANT, Interest and agency are corrected for. After the mapping, possible windows of opportunity can be identified then, based on Buitelaar et al. (2004); Kingdon (1995).

## 7. Conclusions

To get an idea of how to make the Flemish mobility system more sustainable one has to know the system. In order to reach the sustainability objectives, insights in the governance or orgware of the system are to be attained. Hitherto the focus in the field of mobility was predominantly on (socio-)technical innovations and knowledge (software) and on the infrastructure (hardware). However, the governance component has remained under the radar so far. We believe that the governance of the system can no longer be ignored. Challenging initiatives, like Uber or driverless cars, will threaten present governing strategies and institutions, while they could be considered as innovations with a lot of possibilities. Leaving them out of consideration will expose the system. Therefore we built a research framework that would enabled us to conceptualize the Flemish mobility network. Starting from the institutional theories and perspectives of path dependency, we retained the notion that history matters, but still allows for change. The existence and representation of actors is based on the actor-network theories and the actor relational approach. Business, civic and public actors form dynamic assemblages arrange the context, and are simultaneously influenced themselves by the institutional context. The mobility framework divides the broad field of actors in three (non-exclusive) arenas: the travel market, the transport market and the traffic market. Further, all of these are embedded in a fourth environment arena, hereby representing the reciprocal relation of the mobility arenas with the context (the structure, institutions). With this framework the unravelling of the Flemish mobility system can start. The analysis of the actors and factors of importance and their interconnections in the Flemish mobility system can be carried out after which possible orgware improvements and conditions for change can be identified.

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# TRACK 14

# Responsible Economics, Economic Policies and Public Finance of Urban and Regional Interest

## Track description

Co-chairs: **Michael Getzner**, **Francesco Musco**

The globalizing economy and increasing capital flows makes local and regional economic development volatile, with significant social consequences. The economic power of local and regional governments often cannot compete with big private companies. In addition, regions and cities are in a competitive situation with respect to the location of enterprises and (international) institutions. Can the big companies accept their own part of responsibility related to place and space? Is there a different cooperative model among cities and regions to avoid unnecessary and distorting competition, and a race to the bottom regarding social and envi standards? What is the limit for inter-governmental competition for private investments? What are the planning approaches addressing the above issues? How is the public sector, especially planning, limited to or locked-in in existing budgetary policies and what can for a stable, sustainable, and more resilient economic and social development? How do sustainable and resilient local and regional economic and public finance policies look like? Both theoretical and empirical papers are welcome to explore these issues.

# Valuing the appearance of an Alpine landscape: the costs and benefits of underground cabling of high-voltage power lines

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## Abstract

High-voltage power lines are crucial for the security of electricity supply, and also necessary for regional renewable electricity production. However, power lines cause damage especially to human health (electric smog, noise), and to sensitive ecosystems.

The fragmentation and impaired appearance of Alpine landscapes has raised major opposition towards the planning of new power lines in Austria. An alternative, though very costly, to the erection of new lines is underground cabling. The current study presents the costs and benefits of underground cabling in a major Austrian tourist resort in the Tyrolean Alps; tourists were asked to value improvements of the appearance of the landscape with two approaches. The first presented respondents with manipulated pictures of the landscape with the existing and without power lines, and asked for the potential change of the frequency of trips to the area. The second ascertained the respondents' willingness-to-pay for a nature conservation fund financing underground cabling.

While 60% of respondents would positively change their travel behavior with an improved appearance of the landscape, and also stated a positive willingness-to-pay for underground cabling (on average about EUR 9 to 13), the additional costs of underground cabling would not be outweighed by the tourists' willingness-to-pay. For the purpose of planning new power lines, it is thus important to explore the full range of benefits of underground cabling including the willingness-to-pay of Austrian residents which might be much higher than that of tourists alone, and not only concentrate on the significance of a pristine Alpine landscape for tourism.

**Keywords:** Alpine Landscape, transformation of landscapes, high-voltage power lines, economic valuation, underground cabling.

## 1. Introduction and background

The Alpine landscape in Austria has been transformed into a cultural landscape over the past centuries. Even the remaining natural areas such as national parks or Natura 2000 areas are affected by human use. For the Austrian Alps, tourism is, of course, one of the major and large-scale land uses. Especially in areas of ski resorts, all kinds of infrastructure (e.g., ski lifts, cable cars, hotels) may impair the typical appearance of the landscape. Besides such infrastructure, high-voltage power lines (transmission lines) are considered to lead to major negative effects on the landscape not only in terms of visual disamenities but also owing to their manifold negative effects on human and ecosystem health. A range of spatial planning instruments (e.g., land use and zoning plans prescribing a certain distance from power lines to residential areas) have thus been

implemented to reduce direct land use conflicts (Kirschner et al., 2007). For instance, high-voltage power lines are subject to a comprehensive environmental impact assessment.

While the negative environmental effects of high-voltage transmission lines are well documented (e.g., Battaglini and Bätjer, 2015; Jorge and Hertwich, 2013), such power lines are also essential for transporting energy from the sites of production to the sites of consumption. Even more so, the current development of producing larger amounts of renewable energy sources (e.g., by means of wind turbines) has led to planning efforts of new transmission lines and energy storage infrastructure in order to connect the locations of production and consumption across Europe (Kishore and Singal, 2014).

An alternative to overhead high-voltage transmission lines is underground cabling. While many negative effects on human or ecosystem health are substantially reduced by underground cabling, this technological option is very costly. Costs of underground cabling depend on the concrete technology and on the necessities given the topography of the landscape and are up to 12 times higher than the costs of overhead cabling (Lang, 2014).

However, public (citizens') opposition to overhead high-voltage power lines is significant in current planning efforts for new transmission lines in Austria (e.g., Österreichisches Parlament, 2012). Often, the demand for underground cabling is reasoned by the negative effects of overhead transmission lines on the appearance of the landscape, and consequently, on (eco-) tourism since tourists expect an unobstructed view on the alpine landscape when visiting Austria.

Against this background, the aim of this paper is to shed more light on the effects of overhead transmission lines on tourists' perception of the landscape, and to ascertain tourists' willingness-to-pay for underground cabling to secure an unobstructed view of the alpine landscape. In particular, the purpose of this paper is to find answers to the following questions:

- How do tourists in the case-study area of the prominent ski resort of St. Anton am Arlberg (Tyrol) perceive overhead transmission lines?
- Were tourists aware of transmission lines crossing the landscape when booking their holidays?
- How would tourists change their travel behavior if overhead transmission lines were removed?
- Do tourists have a willingness-to-pay to fund underground cabling?

To find answers to these questions, an empirical survey was undertaken in the internationally well-known alpine resort of St. Anton am Arlberg (Tyrol). Tourists during the 2014 winter season were surveyed with respect to their preferences for pristine landscapes and their willingness-to-pay for underground cabling of power lines which currently have significant negative effects on the appearance of the landscape. In addition, tourists' potential changes of trip frequency were elicited depending on the hypothetical changes of the landscape if the power lines were put underground.

The structure of the paper is as follows: In Section 2 there is a brief overview of literature on valuing landscape changes, and of studies on the costs and benefits of underground cabling of power lines. In Section 3 the experimental setting and the survey is presented. In Section 4.1 the descriptive results of the study are discussed, while Section 4.2 includes the econometric results of the survey. Section 4.3 presents the costs and benefits of underground cabling in light of the survey results. Finally, in Section 5, the results are summarized, and conclusions are drawn.

## 2. Costs and benefits of high-voltage power lines: a short review

Environmental economics offers a wide range of methods for valuing changes of a natural landscape. Direct valuation approaches such as contingent valuation or choice experiments present respondents (residents, visitors, tourists, general public) different scenarios which may include

management options for developing an area. Presenting such scenarios to respondents is often done by means of pictures that show the original landscape, and are then manipulated to emphasize possible changes, e.g., by inserting new infrastructure or a higher number of visitors. Usually, two measures of benefits are ascertained. One the one hand, respondents may be asked to state their frequency of trips (visits) to an area based on the current and potential future appearance of the landscape, thus combining revealed and stated preferences. The difference between these may then be assessed by differences in consumer surplus based on travel demand models (e.g., Whitehead et al., 2000; Hoyos and Riera, 2013). This approach can value the recreation benefits of different scenarios. On the other hand, non-use values can be ascertained by comparing willingness-to-pay bids of respondents given different development scenarios (e.g., Lienhoop and Ansmann, 2011; Getzner and Svajda, 2015).

Such techniques of presenting respondents development scenarios are, of course, also used in urban and regional planning in order to highlight potential changes of the appearance not only of natural but also residential (urban) environments (cf. Zech, 2013; Tisma et al., 2012).

One of the earlier valuation studies on visual disamenities owing to overhead transmission lines was done by Harrison (2002). He compared costs of overhead and underground power lines; while the costs of the latter were about twice the cost of the first, politicians decided on burying the power line due to the significant impacts on the environment valued, among others, by losses in ecotourism, and residential property values.

With respect to the valuation of power lines, changes to the landscape, and underground cabling, Tempesta et al. (2014) have recently published a study on costs and benefits of underground cables. While there is a majority of respondents who would be in favor of underground cables, willingness-to-pay is only larger than the costs associated with underground cabling in certain specific areas, especially in natural mountainous areas and nature parks. This results points to an important aspect also for this paper since high-voltage power lines might be generally accepted in flat landscapes or intensively used areas, but less in the natural environment.

Another study in Finland by Soini et al. (2011) ascertained preferences of respondents for different types of infrastructure such as high-voltage power lines in comparison to other infrastructure that might impair the visual appearance of the landscape. Respondents in their study stated a diverse spectrum of preferences and perceptions especially emphasizing preference heterogeneity.

Devine-Wright and Batel (2013) tested whether the appearance of the pylons carrying the transmission wires would gain a differentiated acceptance by respondents in their UK study. The authors find that several forms of pylons in fact are preferred to others, but that even the most ‘appealing’ pylon would not be preferred to underground cabling of power lines (cf. for different energy infrastructures also Cohen et al., 2014).

## 3. The study site, and testable hypotheses

In order to answer the basic research questions of the current study, 140 tourists were surveyed during the Easter holidays in 2014. The case-study area chosen for this survey was the surroundings of the village of St. Anton am Arlberg, a prominent and internationally visited prime tourism resort. Especially during the winter season, the resort is fully booked. The village is connected to the Austrian highway network, and the Austrian railway company has a stop of international trains at St. Anton. However, since the village is geographically located along the major East-West corridor of inner-Austrian infrastructure, major high-voltage power lines cross the area. Some of the power lines are very near the village, and also stretch over several ski slopes.

For the purpose of the current study, data was collected on the perception and preferences of tourists in St. Anton am Arlberg with respect to overhead power lines, and the tourists’ trip frequency both in the status quo and in the case one of the scenarios were to become reality. In addition, respondents stated their willingness-to-pay for the improvement of the appearance of the

landscape by means of two scenarios of underground cabling. *Figure 1* presents the status quo (current appearance of the landscape), and two potential scenarios of underground cabling differing in the extent (partial vs. complete underground cabling).

Figure 1: Status quo and potential changes of the appearance of the landscape at the St. Anton ski resort in the Austrian Alps

*Status quo: current appearance of the landscape at St. Anton am Arlberg*

*Scenario 1: Partial underground cabling of one of the high-voltage power lines crossing the area*

*Scenario 2: Complete underground cabling of both high-voltage power lines crossing the area*

Source: Authors' pictures (original and manipulated).

*Table 1* presents an overview and description of all variables used in the empirical estimations of both trip frequency, and willingness-to-pay of respondents for the two scenarios of underground cabling.

Table 1: Variables of the empirical estimation

| *Variable name* | *Description* |
|---|---|
| *Dependent variables* | |
| Travelfrequency | Frequency of travels to the St. Anton skiing area |
| WTP | Willingness-to-pay of respondents for scenario 1 or scenario 2 (EUR, ln) |
| *Explanatory variables* | |
| $T_i$ | |
| Travelcost | Travel costs of respondents for their visits to an alpine pasture landscape (EUR) |
| $G_i$ | |
| Scenario1 | =1 for scenario 1 |
| Scenario2 | =1 for scenario 2 |
| $S_i$ | |
| Income | Income of respondent (net monthly income, per household, EUR, ln) |
| $P_i$ | |
| Disturb | =1 for respondents who perceived overhead high-voltage transmission lines as disturbing |
| Aware | =1 for respondents who were aware that transmission lines would cross the area |
| View | =1 for an unobstructed view of an alpine landscape to be a major motive of repondents to visit the area |
| Alpine | =1 for respondents who came to the area to enjoy a high-alpine landscape |
| Lift | =1 for respondent stating that their major motive to visit the area is a dense lift network |

Our main hypotheses to be tested are:

$H_1$: $Tripfrequency_{i,Status\ quo} < Tripfrequency_{i,Scenario\ 1} < Tripfrequency_{i,Scenario\ 2}$

$H_2$: $WTP_{i,Scenario\ 1} < WTP_{i,Scenario\ 2}$

The two hypotheses are developed based on the research questions of the current paper. First, we hypothesize that tourist in fact have a preference for underground cabling owing to a reduction of visual disamenities given the rather prominently located high-voltage power lines which crosses the ski slopes. Second, we test whether tourists in fact will be willing to pay a higher contribution for a hypothetical landscape conservation fund to finance underground cabling near the tourism resort.

## 4. Empirical results[1]

### 4.1 Descriptive survey results[2]

In order to ascertain preferences of respondents (tourists) for the different scenarios presented above, *Table 2* sums up some details of the descriptive survey results. One important aspect of the choice of the holiday resort is – besides the prices of accommodation, transport, offers for sports and leisure activities – the variety of landscape amenities and attributes of the tourism offers in the region. The upper part of the table shows that one major advantage of the ski resort lies in the extensive lift network and the length of ski slopes. Other landscape amenities such as high-alpine landscapes, or open landscapes with long-distance view, are of minor importance.

As the ski resort is not only a nationally prominent resort but is also visited by international tourists, the duration of transport, as well as the means of transport, are certainly specific to the area. About one fourth of respondents came by plane, and about one fifth of respondents used the intercity railway connection directly to the St. Anton train stop.

Overhead transmission lines do not seem a major disturbance of tourists: While about 13% of respondents already have power lines close to their home, and information levels are not high with respect to potential effects of overhead high-voltage transmission lines, 55% of all respondents were well aware that there would be overhead power lines close to the ski resort. Most respondents knew from the existence of these power lines because of past visits, but some also said that they expected power lines crossing the area based on pictures from the resort prior to their journey.

[1] The entire questionnaire and further descriptions of the experiment, all the data and empirical assessments, including econometric estimations, can be obtained from the authors on request.

[2] Owing to limits of space, only the most important results will be presented. Some more descriptive analysis can be found in Lang (2014).

Table 2: Descriptive survey results: attractiveness of the ski resort, modes of transport, and perception of existing power lines

| *The ski resort of St. Anton am Arlberg (Tyrol) is attractive because of… (mean points on a 5 point Likert scale, 1=most important)* | |
|---|---|
| Number of lifts and extension of the ski slopes networks | 1.36 |
| High-alpine landscapes | 1.44 |
| Appearance of the landscape | 1.60 |
| Transport connections | 1.85 |
| Open landscape with long-distance views | 1.92 |
| Activities and events | 2.13 |
| Local urban center | 2.15 |
| Solitude | 2.79 |

| | *Mean* | *Std. Deviation* |
|---|---|---|
| Duration of traveling to the area (hrs.) | 6.30 | 32.20 |
| Distance to the area (km) | 768.00 | 402.45 |
| Length of stay in the area (days) | 6.58 | 2.69 |

| *Mode of transport (multiple answers, % of respondents)* | |
|---|---|
| Car | 74.30% |
| Air | 25.00% |
| Train | 22.10% |
| Bus | 10.00% |

| | |
|---|---|
| *Transmission lines near the home of the respondent (% of respondents)* | 12.90% |
| *Information level about high-voltage transmission lines (mean on a 5 point Likert scale, 1=very well informed)* | 3.96 |
| *Respondents were aware, that transmission lines are crossing the area (% of respondents)* | 55.00% |
| *… owing to the experience during the last visit (% of respondents)* | 50.00% |

| *Transmission lines are disturbing because of the …* | |
|---|---|
| … pylons | 54.30% |
| … transmission cables | 27.10% |
| … noise | 22.90% |

*Table 3* presents the descriptive survey results with respect to the different scenarios (cf. *Figure 1*). The upper part of the table includes the respondents' perception of the status quo and the two scenarios; in most cases, the scenario 1 with its partial underground cabling does not seem to add much improvement to landscape amenities. For instance, the scenario 1 is not perceived differently in comparison to the status quo with respect to the diversity of the landscape. However, scenario 2 (complete underground cabling) improves the landscape significantly, for instance, with respect to natural landscapes, unimpaired views, or the uniqueness of the view. 93.6% of respondents preferred scenario 2 to the status quo and to scenario 1.

Table 3: Descriptive survey results: Preferences for scenarios, change of travel frequency, and willingness-to-pay

| *Perception and valuation of scenarios (mean on a 5-point Likert scale, 1=best value)* | *Status quo* | *Scenario 1* | *Scenario 2* |
|---|---|---|---|
| Natural landscape | 3.50 | 3.36 | 2.64 |
| Diversity of the landscape | 3.14 | 3.13 | 2.75 |
| Area used | 2.39 | 2.90 | 3.67 |
| Unimpaired view | 3.52 | 3.15 | 2.40 |
| Uniqueness of the view | 3.19 | 3.03 | 2.55 |

| *Will ski lifts still be disturbing after underground cabling?* | |
|---|---|
| Very disturbing | 17.90% |
| Somewhat disturbing | 20.70% |
| Not disturbing | 34.30% |

| *Frequency of vacations in the area during the last five years or in the next five years if scenario 1 (2) were to be realized* | *Mean* | *Std. Deviation* |
|---|---|---|
| Status quo | 5.56 | 6.31 |
| Scenario 1 | 5.42 | 5,22 |
| Scenario 2 | 6.23 | 5,28 |

| *WTP for…* | *Mean* | *Std. Deviation* |
|---|---|---|
| … scenario 1 | 3.54 | 9.34 |
| … scenario 2 | 7,81 | 13,66 |

It is, however, interesting to consider that the pylons of the ski lifts which are still very visible in the pictures (both status quo and scenarios) are not perceived as disturbing by the majority of respondents. Only about 18% of respondents still perceived lift pylons as very disturbing.

*Table 3* also includes the respondents' assessments of the status quo and the scenarios. While travel frequency would not change if scenario 1 were to be realized, there is a significant, though somewhat small, stated increase of trip frequency in scenario 2 (complete underground cabling). This result indicates that respondents do not perceive a partial improvement of the landscape view in scenario 1 to be sufficient to increase trip frequency. However, even in the case of complete underground cabling, trip frequency would not change dramatically.

Finally, the table also presents mean willingness-to-pay figures. Respondents were willing to pay EUR 3.54 per person per stay for the realization of scenario 1 (corresponding to about EUR 0.54 per person per day). For scenario 2, willingness-to-pay is much higher, with about EUR 7.81 per person per day (EUR 1.52 per person per day). These rather low figures suggest that respondents do not hold strong preferences for the removal of transmission lines; in order to explore preferences further, the next section provides econometric evidence regarding recreation benefits and willingness-to-pay.

### 4.2 Travel frequency and willingness-to-pay for removing power lines

In order to answer the hypothesis $H_1$ presented in section 3, travel frequency of visitors (tourists) is estimated econometrically by means of a count data model. Such estimation procedure hypothesizes that trip frequency foremost depends on travel costs associated with travelling to (visiting) an area. In addition, we test whether trip frequency would change in the case if a

scenario were to become reality. Furthermore, additional variables are included in the empirical estimation in order to ascertain potential additional explanatory variables of trip frequency. *Table 4* presents an econometric estimation of the frequency of travels to the area.

Table 4: Determinants of the respondents' travel frequency depending on potential scenarios of landscape changes

| *Variable* | *Coefficient* | *z-Stat* | *Sign.* |
|---|---|---|---|
| Constant | 0.3368 | 1.0584 | |
| Travelcost | -0.0104 | -6.9339 | *** |
| Scenario1 | -0.0524 | -0.9768 | |
| Scenario2 | 0.0972 | 1.8822 | ** |
| Income | 0.0909 | 2.3331 | ** |
| Disturb | 0.1894 | 3.3925 | *** |
| Aware | 0.7928 | 15.598 | *** |
| View | -0.1049 | -2.1915 | * |
| Alpine | 0.4378 | 8.8753 | ** |
| Lift | 0.0592 | 1.1796 | *** |
| Adj. $R^2$ | 0.2415 | | |
| S.E. of regression | 4.9930 | | |
| Log likelihood | -1,163.742 | | |
| n | 383 | | |

Dependent variable: Travelfrequency
*** p<0.01, ** p<0.05, * p<0.1
Count data model (Poisson).

First, our basic hypothesis that trip frequency depends on travel costs is highly supported with a significantly negative coefficient for the variable 'Travelcost'. Based on the estimation and the coefficient for travel costs (-0.0104), the consumer surplus per trip amounts to over EUR 129 per stay; given the average length of stay in the area (about 6.6 days), consumer surplus measured by travel costs amounts to about EUR 19.5 per person per day.

The coefficient of the variable 'Scenario1' is not significantly different from Zero. This means that respondents would not change their travel frequency if this scenario would be realized. This result can be expected since the change of the landscape is marginal, and there still would remain the other high-voltage power line. However, the coefficient for the variable 'Scenario 2' is highly significant indicating that respondents would in fact be sensitive to major improvements of the visual appearance of the landscape, and would increase the number of trips to the area slightly. Given the coefficient of 0.0972, consumer surplus of the realization of scenario 2 amounts to EUR 138 per person per trip; given the difference between the status quo and the scenario 2, consumer surplus would increase by EUR 9.35 per person per trip. Assuming the average length of stay, respondents value the reduction of visual disamenities of the high-voltage power lines by at least EUR 1.42 per person per day.

While the estimation so far has only included travel costs and the appearance of the landscape as explanatory variables, we also included several other factors influencing trip frequency. As a central socio-economic variable, we assume that trip frequency is directly connected with the income (net of taxes) of the respondent's household. The estimation clearly indicates that trip frequency depends positively on income.

Furthermore, there are a number of variables that additionally determine trip frequency. On the one hand, the variable 'Disturb', denoting the respondents' perception of transmission lines as disturbing, adds to the explanatory power of the model. This variable is closely connected to the variable 'Aware' denoting the awareness of respondents prior to the journey that power lines are

close to the ski resort. Both variables taken together implicitly acknowledge that respondents who were aware of transmission lines exhibit a higher trip frequency than other respondents; they might thus be regular visitors of the area who "got used" to the appearance of the landscape.

Respondents who primarily prefer unobstructed views of the landscape (variable 'View') are less likely to visit the area while respondents seeking a high-alpine mountainous landscape (variable 'Alpine') exhibit a higher trip frequency as especially St. Anton offers such landscapes above the valleys and the potentially disturbing infrastructures. Finally, respondents who enjoy a dense lift infrastructure (variable 'Lift') state a higher trip frequency.

All in all, the model exhibits a rather high explanatory power given the limited number of respondents even if the observations for each respondent [n=140] are pooled resulting in a total number of observations of 383.

Table 5: Determinants of the respondents' willingness to pay to prevent landscape changes considered to be unfavorable

| *Variable* | *Coefficient* | *z-Stat* | *Sign.* |
|---|---|---|---|
| Constant | -2.6617 | -2.6632 | *** |
| Scenario2 | 0.6016 | 3.8281 | *** |
| Income | 0.271 | 2.1738 | ** |
| Disturb | 0.3487 | 1.6008 | * |
| Aware | -0.0474 | -0.2936 | |
| View | 0.3769 | 2.1358 | ** |
| Alpine | -0.2012 | -1.2097 | |
| Lift | -0.3398 | -1.8962 | * |
| Adj. $R^2$ | 0.1954 | | |
| S.E. of regression | 0.5414 | | |
| Log likelihood | -421.8708 | | |
| n | 256 | | |

Dependent variable: WTP
*** p<0.01, ** p<0.05, * p<0.1
Baseline is the WTP for preventing scenario 1.
GLM (maximum likelihood) estimation (Poisson distribution assumed, log link).

*Table 5* presents the econometric estimation of the determinants of willingness-to-pay of respondents for the realization of scenario 1 or 2. As discussed above, mean willingness-to-pay amounted to EUR 3.54 per person per stay to promote scenario 1 (partial underground cabling) while scenario 2 attracted a mean willingness-to-pay of EUR 9.34 per person per stay; given the average length of stay, daily willingness-to-pay amounts to EUR 0.54 per person (scenario 1) to EUR 1.52 per person (scenario 2). Interestingly, the latter figure is quite close to the gain of consumer surplus computed above by means of the travel demand model.

The WTP estimation broadly includes – for the purpose of comparability – the same variables as the estimation presented in *Table 4*. Given the WTP for scenario 1 as the baseline, the estimation clearly indicates that willingness-to-pay of respondents is significantly higher for scenario 2. In addition, the income variable is significantly positive indicating that willingness-to-pay of respondents for the improvement of the landscape appearance is positively correlated with income as suggested by economic theory.

Furthermore, we find that willingness-to-pay of respondents who feel disturbed by high-voltage transmission lines is above-average. Moreover, respondents who prefer an unobstructed view of the landscape – as a measure for the strength and intensity of preferences – state a higher willingness-to-pay for underground cabling. Finally, respondents who positively value the density

of ski lifts at the St. Anton ski resort state a lower willingness-to-pay, presumably because they are more used to the impaired view of the landscape.

### 4.3 Costs and benefits of underground power lines

The last section has provided some econometric evidence towards recreation benefits of underground cabling, and the respondents' (tourists') willingness-to-pay for the removal of overhead transmission lines. In order to test whether the benefits of tourists with respect to the removal of power lines is sufficiently high to at least match the costs of underground cabling, a cost-benefit analysis on a (hypothetical) removal project for underground cabling in the village of St. Anton am Arlberg is presented in the following.

For this project, we assume that over a certain stretch, the existing transmission lines are removed from the surface; as there are three major power lines crossing the area with different voltages (110 and 380 kV), we assume that our hypothetical project includes a tunnel for the underground cables. For this purpose, the tunnel to remove the overhead cables is 13,972 meters long; given the costs of removal of about EUR 15,700 per meter, total investment costs sum up to EUR 176 million (for all underlying data and details, see Lang, 2014). Under the assumption that the existing overhead power lines have to be renewed anyway, and that the cost ratio between overhead and underground cabling is 12.4, we arrive at differential costs for the underground cabling of around EUR 161 million.

On the benefit side, we present two options for valuation which are very close to each other. *Table 6* presents the present value of both the valuation of recreation benefits by means of the consumer surplus, as well as willingness-to-pay of respondents for the removal of overhead power lines. Given the average annual number of tourists in the region (in total about 1.2 million overnight stays), and the average consumer surplus and WTP, respectively, we arrive at additional recreation benefits of about EUR 53 million (present value over 40 years, d=1%). As the table shows, the value of recreation benefits is highly sensitive to the discount rate varied from 0% to 5% over a planning period of 40 years which is the usual technical lifespan of high-voltage power lines.

Table 6: Consumer surplus based on trip frequency, and willingness-to-pay for realizing underground cabling

| | | |
|---|---|---|
| Average number of tourists (overnight stays) during the winter season 2012/2013 at St. Anton am Arlberg | 1,013,187 | |
| Average number of tourists (overnight stays) during the summer season 2013 at St. Anton am Arlberg | 123,202 | |
| | *Scenario 1* | *Scenario 2* |
| Consumer surplus per person per stay (difference to the status quo if scenario 2 would be realized)* (EUR) | | 9.350 |
| Consumer surplus per person per day (difference to the status quo if scenario 2 would be realized)* (EUR) | | 1.417 |
| Aggreated annual consumer surplus for visitors (scenario 2) (EUR) | | 1,609,884 |
| Average WTP for the realization of scenario 1 (2) (EUR) | 3.540 | 9.340 |
| Average WTP per person per day (EUR) | 0.536 | 1.415 |
| Aggregated annual WTP of respondents based on total overnight stays (EUR) | 609,518 | 1,608,163 |
| *Discounted benefits of underground cabling* | | |
| Discounted total consumer surplus (d=0%, 40 years) (EUR) | | 64,395,377 |
| Discounted total WTP (d=0%, 40 years) (EUR) | 24,380,709 | 64,326,505 |
| Discounted total consumer surplus (d=1%, 40 years) (EUR) | | 53,388,650 |
| Discounted total WTP (d=1%, 40 years) (EUR) | 20,213,457 | 53,331,550 |
| Discounted total consumer surplus (d=3%, 40 years) (EUR) | | 38,328,475 |
| Discounted total WTP (d=3%, 40 years) (EUR) | 14,511,529 | 38,287,482 |
| Discounted total consumer surplus (d=5%, 40 years) (EUR) | | 29,005,353 |
| Discounted total WTP (d=5%, 40 years) (EUR) | 10,981,706 | 28,974,331 |

* As there is no significant difference between scenario 1 and the status quo in terms of trip frequency, additional consumer surplus is Zero (cf. Table 4).

In addition to recreation benefits (or WTP) of tourists at the ski resort, underground cables avoid some of the external effects of overhead power lines such as noise, electromagnetic fields, and fragmentation of ecosystems owing to the transmission route. Furthermore, underground cables are connected with a reduced loss of voltage (line losses) compared to overhead transmission lines. Valuing the reduced losses of underground cables with reasonable input data (loss per kilometer, valued at electricity costs), we arrive at benefits of underground cables (compared to overhead power lines) of around EUR 11.7 to 27.2 million over the lifespan of the power lines (depending again on the discount rate over the whole period). *Table 7* presents the comparison between costs and benefits of underground cabling.

Table 7: Costs and benefits of underground cabling: results for scenario 2 (complete removal of overhead power lines, construction of underground cabling)

| | *Discount rate* | | | |
|---|---|---|---|---|
| | 0% | 1% | 3% | 5% |
| Additional cost (one-off investment) for underground cabling (EUR) including marginal maintenance costs | 161,810,000 | | | |
| Additonal benefits owing to the reduction of transmission losses (EUR, present value) | 27,165,312 | 22,299,113 | 15,698,000 | 11,653,299 |
| Recreation benefits (consumer surplus) for scenario 2 (present value) (EUR) | 64,326,505 | 53,331,550 | 38,287,482 | 28,974,331 |
| Benefit-cost ratio (consumer surplus) | 0.340 | 0.290 | 0.216 | 0.167 |
| WTP for scenario 2 (present value) (EUR) | 64,395,377 | 53,388,650 | 38,328,475 | 29,005,353 |
| Benefit-cost ratio (WTP) | 0.341 | 0.291 | 0.217 | 0.168 |

The results of the cost-benefit analysis suggest that the costs involved for underground cabling in the case-study region are not offset by the benefits of reduced losses, and by the tourists' willingness-to-pay for removing overhead power lines since the benefit-cost ration is clearly below 1 for all assumptions.

## 5. Discussion, summary and conclusions

The current paper has taken up the discussion on the importance of an unobstructed view on the Alpine landscape for tourism resorts. In order to test whether tourists indeed have a sufficient willingness-to-pay for the removal of overhead high-voltage power lines usually associated with negative effects both on the appearance of the landscape, and on human and ecosystem health, we conducted a survey of tourists visiting the prominent and internationally visited St. Anton holiday resort in the Tyrolean Alps.

In order to value the benefits of removing the overhead transmission lines, we employed two approaches; one approach asked tourists to state the current (status quo) and hypothetical frequency of trips to the holiday resort (for scenarios 1 and 2). If scenario 2 would be realized, about 60% of respondents stated that they would stay slightly longer or visit the region more often. Based on a recreation demand model (travel costs), additional consumer surplus amounts to about EUR 1.417 per person per day if scenario 2 (complete underground cabling) were to be realized. This amount is about the same size as the usual daily tourism tax charged for every overnight stay. Of course, the recreation benefits measured by the consumer surplus crucially depends on assumptions about travel costs (transportation and costs of travel time). The other approach measured benefits of an undisturbed landscape by means of the respondents' willingness-to-pay to finance underground cabling. It turned out that WTP per person per day of EUR 1.415 is almost equal to recreation benefits measured by the travel cost model. This result is interesting since economic theory would suggest that recreation benefits owing to the realization of a certain scenario measured by different methodological approaches should lead to the same order of magnitude which actually took place in this study.

Given the huge cost of underground cabling, however, the willingness-to-pay of visitors for such scenario as a measurement of benefits (either recreation benefits based on the travel cost method or benefits measured by the respondents' willingness-to-pay) does not outweigh these costs over the whole lifespan of transmission lines (40 years). Even if we assume that the discount rate of benefits would be Zero, the benefit-cost ratio is far from unity. The cost-benefit analysis of the overhead transmission lines removal project only includes the substantial reduction of transmission losses as a benefit of underground cabling as a proxy for potentially important other external effects of overhead power lines. These external effects may include noise and ecosystem fragmentation.

The results so far suggest that respondents were well aware that the area around the village of St. Anton am Arlberg is an intensively used area with tourism infrastructure, but that overhead high-voltage power lines are also close to the area. The majority of respondents stated that they knew that there were transmissions crossing the area, and that the disturbance is – on average – not very far-reaching. In addition, respondents thought that even after the removal of the transmission lines, the remaining lift pylons would also not be impairing their view on the landscape.

Of course, underground cabling may have a number of additional benefits; however, if (eco-) tourism is used as an argument in the debate on high-voltage power lines, one has to be aware that the results of this study indicate that the willingness-to-pay of visitors (respondents in a survey) is not sufficient to outweigh these costs. Thus, projects of underground cabling will need more specific argumentation besides (eco-) tourism. Some of these arguments may be:

- Residents and the general public may hold strong preferences for underground cabling in sensitive natural areas. As earlier studies show (see Section 2), however, preferences and willingness-to-pay could be regionally different, and may only be substantial in natural areas. In areas and regions that are already affected by numerous infrastructures (e.g., highways, railroads), underground cabling might not be economically efficient.
- Tourists hold differentiated preferences as well. As the current study shows, many respondents in our survey were well aware of the existence of power lines crossing the area. However, the removal of transmission lines in natural areas might attract new groups of visitors who might have spent their holidays in other resorts.
- If the tourism tax would indeed be increased to at least partially fund a project for underground cabling, demand for holidays in this Alpine region might be reduced as a reaction to higher prices of overnight stays. While this argument is well founded in demand modelling, it may also be assumed that the reduction of demand might not be significant since the additional costs in the form of increases of the tourism tax is only marginal compared to the average spending of tourists in the region (the St. Anton resort is certainly one of the most expensive resorts in the Austrian Alps).

All in all, for the purpose of planning new power lines, it is thus important to explore the full range of benefits of underground cabling including the willingness-to-pay of Austrian residents which might be much higher than that of tourists alone, and not only concentrate on the significance of a pristine Alpine landscape for tourism.

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# IDENTITIES OF A PERI-URBAN HABITAT
## The potential for agricultural cluster development in Tirana

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*As often the case with the newly formed peri-urban areas in the outskirts of expanding cities, the territories that surround Tirana face the pressure of converting agricultural fields into urbanized land, resulting in identity loss, environmental deterioration, and high unemployment companioned by poverty and ultimately a low quality of life. Besides the challenges, the proximity to the capital city provides also advantages, such as economies of scale and scope deriving from the agglomeration of the activities, good access to labor force, market, infrastructure, as well as educational and research facilities, constituting therefore the basics for cluster development. This paper explores the evolution and present state of one of the first environments, in sequence, encountered by the visitors approaching the capital of Albania, Tirana. Once a carefully planned agricultural landscape, today it s a hybrid urban-rural spatial continuum, a peri-urban habitat searching for a proper identity. We will try to elaborate on the potential of the area to host cluster development, with a specific attention paid to agricultural clusters that would have an important effect not only to its economic performance but also on the preservation of the territory and landscape.*
**Keywords:** Peri-urban identities, agricultural clusters, Tirana

## 1. Introduction

The Tirana valley gives the impression of a natural amphitheater crossed by the homonym river and shaped by the Dajti mountain (east), the hills systems (south and southwest), and the Ishmi (northwest). The main road approaching the capital are Tirana-Durrës axis (with more than 250 businesses and around 15,000-20,000 daily commuters, and a number of Universities adding up to the cluster-formation potential[1]) and the North axis crossing the spontaneous urban settlement of international Airport is found at the edge, in the northwest. The area is also trespassed by the old railroad, heading towards Durrës and the North, and practically no more in use. (Fig1) (Toto, Gjika, Karafili, Shutina, & Ymeri, 2015).

## 2. Methodology

The data presented in this paper was gathered through qualitative methods: desk research on the policies applied thus far and semi-structured interviews with specialists, local farmers and inhabitants.
The desk research focused on literature overview as well as published reports and policy documents on the past and current policies in national and local scale.
The interviewed specialists are experts in agriculture and were asked on the potential of the area to re-activate this activity, the fertility of the soil, the most suitable plants for this kind of soil, etc.
The local farmers and inhabitants were asked on their current economic activities, their needs, the future plans, and their relationship with other farmers and industries in the area, as well as public actors such as governmental agencies and the agricultural university.
The field visit served to map the eventual cluster actors and gather empirical evidence on the current conditions of the area and the activities that take place there.
Porter s clusters map model served as a theoretical framework to introduce the co cluster in the area.

[1] This data are estimated through field surveys (social- economic and visual) carried out by POLIS University in the framework of master workshops and research studies.

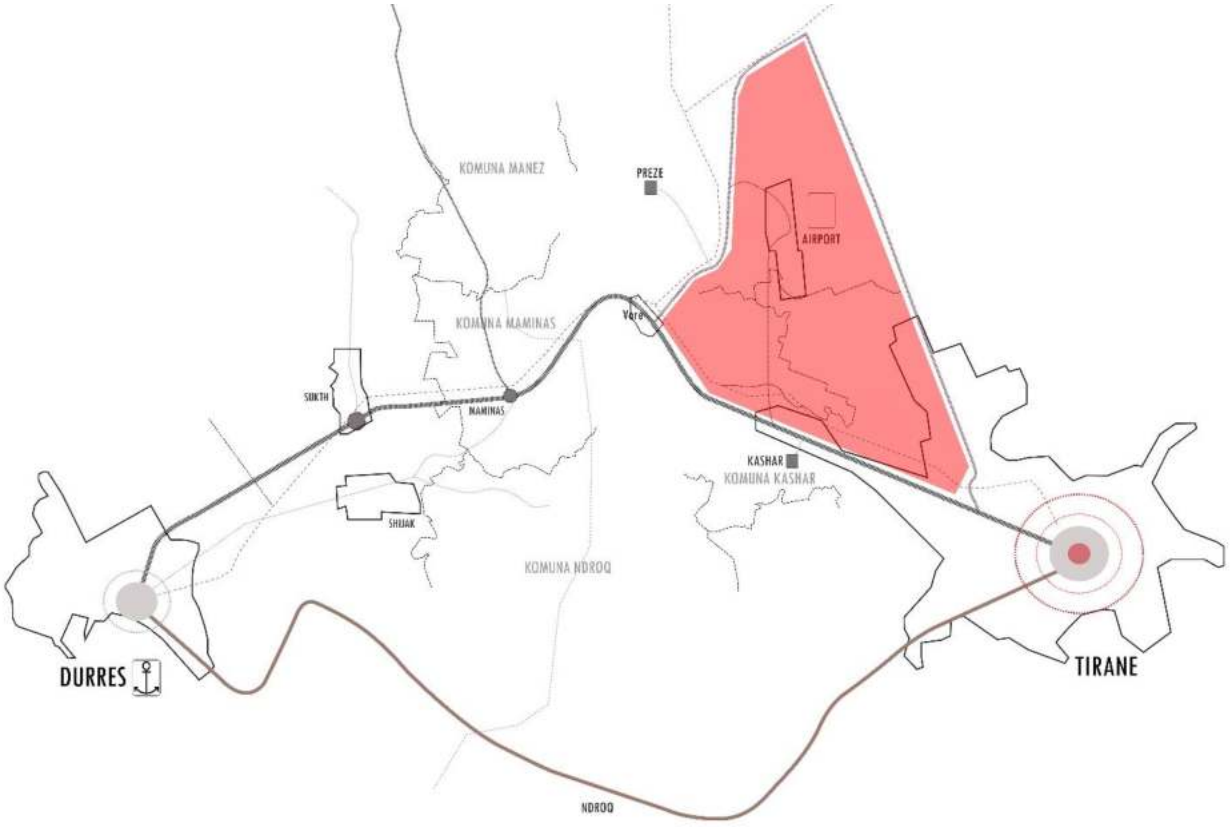


Figure 1: The study area in the regional context
Source: (Metro_POLIS, 2013)

## 3. The evolution of the area s identity

Two decades ago, rail convoys were a usual presence in the Albanian landscape. Travelers were mostly using this mean of communication, making the railway itineraries and the train stations, the windows and gates from where the acquaintance with environments, cities and places in general started. The entrance to Tirana, as well, was happening mainly along rails, over passing settings differing a lot from those encountered by the asphalted perspective.

The presence and image of subjectively' gigantic silo s, large industrial compounds and that of the A hospital surrounded only by space, while approaching Tirana, are still a part of the Albanians collective memory. The same can be said for the character of this space made of wide cultivated fields, populated by the frequent presence of large groups of farmers, less frequent Albanian homemade red painted tractors and vineyard or olive grove covered hillsides. That is more or less what was awaiting and accompanying the visitor approaching or leaving the capital, a relatively readable spatial layout with man-made and natural, settings distinctly placed in the landscape

Although heavily mutated under the thick Albanian transition, a lot of evidences have survived in situ , in hand for a watchful eye to discover. The train isn t there anymore, but there s sti more large plantations but the poplar rows in between them still exist; The seasonal noises of the combat jets, now just scrap leftovers, have been replaced by the daily clatter of the passenger planes; Either the former industrial and agricultural ruins, the Tirana river, the place names now melted under the same built

continuum , the indigenous inhabitants along the multitude of new settlers remain today a structural part of this peri-urban triangle.

Soon after the regime swap, buses, light vans and the first private owned automobiles begun to overtake the train service. Time became more precious than some few money spared by the inexpensive ticket. Though, despite the relentless decline, rail convoys resisted as a prime choice for some more years at the beginnings of the Albanian transition. So did the longitudinal section through the railway path that remained the habitual experience for most of the travelers. Transiting, at 40km/h, from the window seat you could notice in a relatively short lapse of time the rapid-changing of the surrounding landscape, itself transiting from an agricultural habitat to an expanding slum.

The definitive fade of the Albanian rail transport interrupted the experiencing from within of this suburban part of the capital. This itinerary, that was penetrating this area, starting at the international airport, has been forgotten gradually, together with the perspectives it was offering from within. The above mentioned set of imagery are now recorded history replaced by the superficial perspectives of the two tangential road transport corridors connecting Tirana to the Adriatic and the Northern regions. The triangle of land on the Tirana s river margins kept developing unnoticed by the many under the general ca area , diverting entirely from the past socialist *climax of ideological anti-urbanism* . (Davis

Action has not been lacking in the last two decades, and even before. This action has changed actors and intensity. At the beginnings it was done by centralized structures, today instead by individual interventions, and the last ones have a more visible impact. Today we see an environment filled by a multitude of spaces, buildings and functions. The Tirana-Durres highway, the first road in the country counting more than two lanes turned in the main place were the change was visible, a transitory space *that loses its architectures as a reptile loses* its skin (Koolhaas & Foster, 2013), a showroom for the Albanian fresh capitalism

Among the new functions hosted by this important infrastructural connection and one of the very first signals that placed Albania within the edges of the global economy, was the transfer of the Coca Cola facilities along the Tirana-Durres corridors. It was 1994 and the factory was located on a strip of land in between the railway and the driveway, with the front marked by a giant coke bottle fac passage from the public transportation, represented by the railway, to the private transportation, associated to the driveways, went in parallel with the ongoing mutation of the Albanian society, from a collective-socialist to consumerist-capitalist stage. It is not by chance that one of the symbols excellence chose the highway, at the time just a narrow strip of asphalt, as the orientation fo headquarters, a farsighted symptom forecasting the times to come.

Eleven years later, another function appears, the first Albanian shopping mall located in the very same area. It was 2005 and the query railway vs highway was meaningless at that point. Any Albanian could experience in first place without having to travel abroad a typical space of the western lifestyle, linked together by the *conditioned air system*. (Koolhaas & Foster, 2013)

The rising profiles of the large structures hosting the principal showrooms of the Albanian capitalism are enclosing any visual vector toward the inner part of this area Beside the agricu many bunkers are still here to remind us of another former character of the area, recalling an era of strong militarization. There are less than before, for the most part just concrete piles disfigured form their steel skeleton. The former rows are still today, visually easy to connect, assembling the spatial fortification wall once there to protect Tirana from any western hazard. It can remind us of what Tirana is in spatial terms, *A Ring City* (Muntoni, 1997). After the 1858, another ring city, Vienna, built its rings, parks, grandiose public buildings and squares by upgrading their urban fabric in a space of similar valence. In its own way Tirana is building here its capitalist inspirations blurred by informality and poor governance. Represented by the large economic agglomerations, on the borderlines, the inner informal sprawls and the barren agricultural land, deserted railway and polluted river.

As for many aspects of the Albanian society, the character of today s built form continuity with the area s past. Among the reasons for this fracture were: the massive migrations from the different parts of the country; the further migrations in the western country and its relative cultural influences; the spineless architectonic heritage leftover from the past decades.

Architecture has its patterns and arrangements, in different compositions as c (Unwin, 2009), and so it is the Tirana s suburban built environment, filled with el can be traced to the regional influences of either the Albanian origin places of the settlers or their later west European emigration destinations. The reasons behind the appearances of the these buildings apparently go beyond simple functional needs and have more ornamental character turning in proper status symb controlled by none other than the economic health of the owner.

The present typologies originated from the first provisional and all alike shelters that later became permanent and customized, passing form one floor structures built with inexpensive concrete blocks to gaudy villas displaying more than sheltering needs. The unfinished basic flat ceilings framed only by the protuberant steel filaments of the underlying columns, turned in richly shaped slopping roofs. Buildings elevated on slender pilotis, inhabited only in the upper floors still populate the flat landscape exposing ambitious objectives juxtaposed to the incapability to achieve them.

The first contact with the local people occurs along the Tirana river banks, after crossing a narrow corridor in between newly build houses that apparently had a granted public passage. The large ridge that dominates any map or satellite photo and that would normally remain unnoticed if you are not searching for it, opens up surprisingly. Going so close to private domains that are usually frequented by familiar faces attracted the attention of the inhabitants allowing unplanned short interviews, often in form of spontaneous chats that would later help in having new clues about this habitat from an inner perspective. Two decades of unnoticed development from the outside was there waiting to be rediscovered in the memories and in the everyday experiencing of the area by its inhabitants.

A man in his forty-s approaches, after noticing us walking close to his house garden along the Tirana River Banks. His home looks at the river and the blurry skyline of Kamza, toward something that must have been quite a picturesque view. Only a thin extruded line, a wooden curtain, separates his carefully planted garden with his fertilized soil and apparently healthy vineyard, from a stretch of the manmade landscape made of construction leftovers, smashed bricks, concrete pieces and plastic waste. You could probably count the years of the Albanian transition by observing the juxtaposition of the layers along the water banks.

Soon the group gets larger and the discussion more animated, revealing more about the way this seemingly continous and homogenous peri-urban area functions. They frequently refer to oblivious concepts as the center of the town, the agricultural establishment, the former factory, etc. Physically they are still there, but whislt once the centralities of the area, at least during the working hours, today they are hardly distinguishable.

The local inhabitants stress their connection to Tirana albeit the closer proximity to another municipality: Kamza (one of the largest in the country). They proclaim themselves citizens of Tirana but the presence of the capital city is nowhere to be found. This makes you think about the high fragmentation of the area and the lack of continuity not only in physical terms about also in terms of a missing identity and sense of belonging.

The industrial identity building elements of the past seem impotent to provide a future projection for these people, whist the only continuity element whom they remain close to, is the land. Agriculture has been and although in a totally different setting, remains the primary activity of the area, now more present in the form of private gardens and self-employing small farms.

Based on this analysis, the revival of agriculture might turn into a mean of collective efforts and a community building instrument, providing not only economic benefits but also a way to preserve the territory and the landscape.

## 4. Theoretical background

Influenced by Porter s work on competitiveness and clusters, but also by the increa and knowledge economy, many countries are developing cluster policies or introducing the concept of cluster promotion in their regional or economic and business development policies. Besides the measures taken in national level, the European Union has played an important role to encourage and foster cluster policies. However, cluster policy remains a new phenomenon, varying noticeably among the different countries within EU, and recently also emerging in other Eastern European countries.

The development of cluster policy is still at an early stage in most countries. There a differences among the countries of Eastern and Western Europe. Among those countries that have adopted the policy of the cluster after 2000, are mostly small countries in terms of population and/or geographical size of countries in Eastern Europe. (Obadic, 2013)

Albania is still new to the concept of clusters, and albeit the increasing and explicit use of the term in the objectives of several agencies, an articulated cluster policy is lacking. It is also impossible to find any official figures on cluster activity in Albania, neither in national/regional data, nor in the European level. The European Cluster Observatory (2014) also provides no reports on clusters in Albania. Nevertheless clusters constitute a real potential. In order to face competition, Albanian firms are becoming more and more aware that cost-efficiency is not enough. There is a need for qualitative products, which require the adequate technology, human capital and knowledge. Achieving such factors individually is very hard if not impossible. Positive externalities deriving from economies of scale and scope provide better chances to lay the ground for joining forces in otherwise too costly investments, especially in technology and R&D.

Some of the early clusters that already started to emerge are in the meat processing industry, medicinal and aromatic herbs industry, leather good production industry and tourism industry. Not surprisingly the major part of the actors pertaining to these tentative clusters are located in Tirana constitutes the pulsing heart of the Albanian economy, as well as the concentration of the labor force and with a population of nearly 1/3 of the national one, it also represents the largest market in the country.

However, Tirana Durres region constitute an entity that comprises more than just the two cities and the highway that connects them, which is also the business corridor that hosts many industries operating in the country. Both cities, especially Tirana are surrounded by a peri-urban fringe that has been under constant development pressure, resulting in the rapid conversion of agricultural fields into urban land.

The area laying between Tirana and the Rinas airport, has been transformed from a vast land dedicated entirely to agriculture, especially fertile for crops and orchards, into an urbanizing territory facing the typical challenges of the peri-urban areas: identity loss, environmental deterioration, high unemployment companioned by poverty and ultimately low quality of life.

Nevertheless, after 2 decades of massive immigration fluxes settled in the region t surface and tripled its population, there is a certain saturation that has decreased significantly the pace of this growth. Moreover, the construction sector is no longer thriving under high housing demand, but with a considerable vacant housing stock, the development pressure in these peri-urban areas is no longer as strong as it used to be.

The actual condition is a highly fragmented area, with developed plots spread throughout the territory, but also a considerable amount of vacant land that still possesses a strong potential to be exploited for

agricultural purposes. Such potential is currently underestimated and the promotion of an agricultural cluster would provide a vital instrument for the local economic development and reduction of poverty.

The current agricultural situation of the area is shown at Figure 2.

Figure 2: Synthesis of the Agricultural System in the Area
Source: (Toto, Gjika, Karafili, Shutina, & Ymeri, 2015)

The current businesses present in the perimeter of the area employ primarily people from outside the area, failing to have an impact in the economic reality of the inhabitants. (Metro_POLIS, 2013)

In the past the main employers of these people were industry (the coal mine of Valias and the brick factory) and agriculture. In the current conditions none of the above is active, but whist the reactivation of the industry requires major investments that must be initiated by the government being a public property, agriculture constitutes the highest potential of the area for its future development.

In many developing countries, the greatest potential for sustainable growth lies Yet ironically, it is this sector where poverty is most widespread and found in its worst forms. Small-scale farmers, and the rural communities in which they live, are imprisoned within a c low margins, resulting in low risk-taking ability and low investment, which leads to low productivity, low market orientation and low value addition which, in turn, nets low margins (GÆlvez-Noga

Indeed the eventual impact of agricultural clusters in developing countries has been little discussed in the current body of literature, but is recently receiving increasing attention.

Eastern Europe is, in comparison with Western Europe, less developed, there is a l
cost (agricultural) labor, there is a high geographical proximity of clients and the amount of land and natural resources are also present as their comparative advantages. (Looijen&Heijman, 2013)

## 5. The Agricultural Cluster Concept

Building on Porter s (1998) definition of clusters as geographically proximate g
companies and associated institutions in a particular field, linked by commonalities and complementarities, Gálvez-Nogales ( 2010) defines the agricultural clusters as simply a concentration of produ
institutions that are engaged in the food and agricultural sector and that inter-connect and build value networks, either formally or informally, when addressing common challenges and pursing common opportunities.

In the selected area many of the prerequisites for initiating a cluster are met.
There is vacant land especially qualitative for crops and orchards. Specialists say that land suitability analysis indicate that the area is appropriate to cultivate vegetables, fruits, vineyards as well as flowers. In 1990 the peri-urban areas covered 16% of the agricultural land and were responsible for 28% of the overall domestic agricultural products. (Lushaj, 2014)

There is a tradition in agriculture, but more importantly considering the previous agricultural use of the area, the eventual new farmers can make use of the existing irrigation channels and through joint action mobilize the investments to upgrade the former farming facilities, invest in new technologies and in research aiming at an increased productivity.

The contact with the research is facilitated by the presence of governmental bodies, universities and research institutes such as the Ministry of Agriculture, Rural Development and Water Management; The Rural Agricultural Development Agency, The National Food Authority; The Center for Agricultural Technology Transfer; the Agricultural University of Tirana, but also private institutions with expertise in territorial and environmental issues such as POLIS University, Co-PLAN institute.

Indeed the lacking communication among the business and academia is a missed opportunity for both parties as well as for the country in general. Industry-university collaboration in Albania lowest in the world. In 2012, Albania ranked 139 out of 144 countries. This constrains opportunities for growth and represents an untapped knowledge potential for innovation. (World Bank,

There is a new logistic park and multimodal station being built in the area that together with the Tirana Durres corridor ensure good accessibility and lower the transportation costs.
Many of the businesses in the food processing industry are located in close proximity and so are the labor force and the market.

There is an increasing interest in agriculture and greenhouses highlighted by the willingness to invest by the government and the private investors alike. A number of NGO-s supported by international donors (i.e GIZ; Partners Albania and Rockefeller Brothers) has been quite active lately to promote agricultural and green start-ups.

Moreover the agricultural cluster may positively influence the performance of other industries such as the food industry, wine industry, but also agri-tourism. In the center of this area, there is a family business Uka
Farm that is currently functioning as a farm but also as a winery as well as a re
from farm to fork concept. Such complementary activities and others as food festi
tasting tours can mitigate joint action among the players of the eventual cluster.

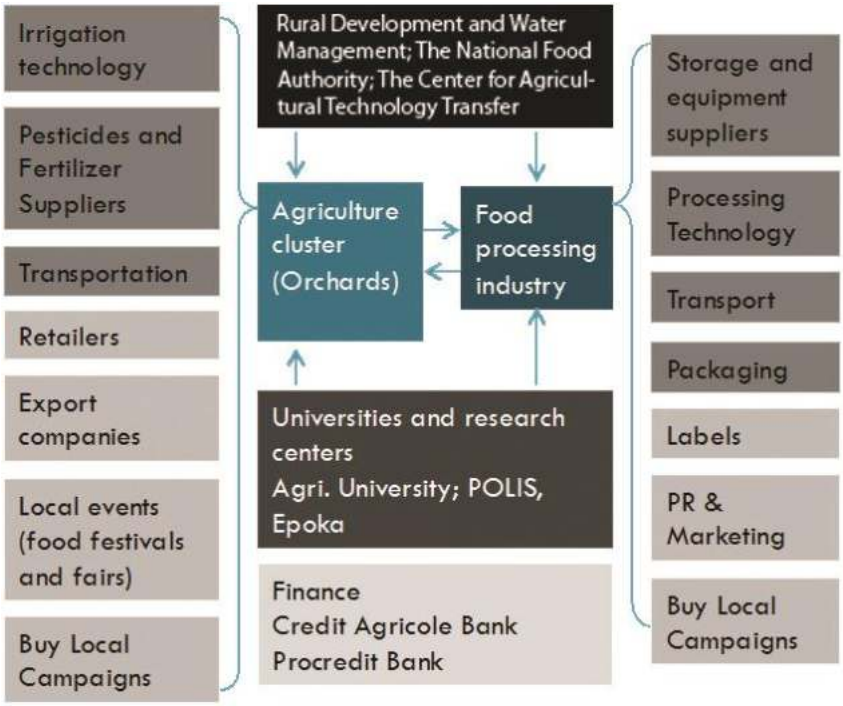


Figure 3: The agricultural cluster model

However, albeit the potential, there are several constrains that prevent the development of an agricultural cluster in the area.

Albania can be categorized in countries that lack a conducive enabling environme agricultural lending. Although climate and soils are excellent for farming, in combination with the fragmentation of farm land into plots of little more than 1 ha, it is clear that Albania is not well prepared to compete on international markets. That said, it is exporting particularly vegetables and fruits to some of its neighboring countries and herbs/aromatic plants to the EU and the US. Low labor costs and aforementioned excellent natural conditions are key drivers behind these exports. (Rabo Developm

The territory is highly fragmented and sometimes for specific plots there is no clear ownership of the land or overlapping property rights. Even though the development pressure on the area has decreased, the alternative use as urban land is still retained more profitable by the land owners, who prefer to keep it vacant or sell with the market value as urban land.

The peri-urban model has allowed agricultural land use to remain sufficiently profitable vis-à-vis urban land use and is due to the existence of a mono-cultural society which has prevailed despite immigration. A second important aspect is the predominance of small properties rather than the large areas of cultivation characteristic of the conventional rural sector. This is associated with the potential use of the land for urbanization and with the preoccupation of individual producer activity over the communal activities of the past (H. Losada, 1998)

Additionally there is a high mistrust among the actors that might eventually engage in the potential agricultural cluster. As recent studies show, the level of mistrust is even higher in the Albanian context.

The barriers faced by small- and medium-sized firms in transition economies are different from the barriers identified in other developing and developed countries. Cultural issues, especially, national culture plays

an important role in knowledge sharing in firms. Transition economies have unique social and cultural conditions, partly influenced by decades of harsh a repressive communism. Some of the transition economies with the harshest and repressive regimes face issues such as lack of trust that have significantly influenced the cultural fabric of the society in these transition economies. (Vajjhala

Moreover they face the typical communication bottleneck present in almost every cluster initiative.
In real clusters, communication between different kinds of agents is massively flawed. S
believe they have something new exciting to offer, have a hard time even to be allowed to meet with the right people at a large enterprise. Large enterprises searching for a new supplier are more likely to look for an established international supplier than to go searching among innovative SMEs located right under their nose. Policy makers have only vague ideas about what business really needs. Researchers are more interested in academic publishing than commercializing their new findings or talking to business people. Schools formulate their curricula oblivious to what skills the industry is calling for. Entrepreneurs find it difficult to persuade banks to invest in new innovative businesses. It is not difficult to understand that these connections will not just happen spontaneously. (Ketels, Lindqvist, &S lvell, 201

Indeed considering the stage of the Albanian economy and the general and specific challenges faced by an eventual agricultural cluster initiative, it is important that the public authorities (in national or regional level) adopt and implement cluster policies able to understand and address the particular needs of the industry.

Sometimes the development of such policies is challenging itself as the cluster c
and therefore does not offer a practical guide for policy-makers in their efforts to design and implement policies. A key limitation is a lack of clear cluster boundaries. The majority of the countries have not developed a strategic approach on cluster-form organizations . (Obadic, 2013)

According to IRE Subgroup, the following is needed: (IRE, 2003)
- plan to carry out mapping studies on clusters, identify regions, sectors of activity, technologies that would benefit from cluster-form organizations and integrate them in their overall strategy on economic and social growth;
- identify barriers and limiting factors to cluster development and organize regular revision of their existing policy measures;
- obtain their governments long-term commitment; and
- raise awareness on the potential benefits of clusters among the players concerned

Some examples of government support to agro-based clusters are provided by Gálvez-Nogales (2010):
- Information collection and diffusion
- Promotion of associations and networks and development of PPPs
- Support to export activities and collective marketing initiatives
- Provision of training and technical assistance to cluster stakeholders
- Improvement of access to finance
- Policy support and regulatory function
- Creation of an enabling environment, including public investment in infrastructure
- Research and development

However besides the top-down approach, there are other forms of cluster organizations that might apply to the Albanian conditions.

Cluster initiatives typically are organized through small and nimble organizat
entrepreneurial spirit driving the organization, walking across the gaps between actors inside clusters, and

receiving financial support from a range of both public and private sources. Half of the organizations have 3 or fewer employees (Ketels, Lindqvist, &S lvell, 2012)

If applied in cluster scale the policies that intend to promote local production can be much more effective than the current flat policies such as exemption from the petroleum tax of all farmers regardless of their sector or productivity. This is basically subsidizing the inefficiency, while on the other hand cluster support together with campaigns that rise awareness on the consumption of Made in Albania products woul increase the chances of local products to sustain competitiveness.

The new territorial and administrative division of the country foresees that the peri-urban areas surrounding Tirana will be part and under the jurisdiction of the Municipality of Tirana, therefore local policies can play a role, besides the national one.

Such policies must aim the land consolidation and put a greater focus on the organic products, as well as products with potential for exports. Encouraging the local production to obtain quality certificates will improve their competitiveness and trigger their exportation.

## 6. Conclusions

Albania is still new to the concept of clusters, but there is a potential for cluster development in the current Albanian economy and some early initiatives are emerging, especially in the Tirana-Durres region.

Both cities, especially Tirana are surrounded by a peri-urban fringe that has been under constant development pressure, resulting in the rapid conversion of agricultural fields into urban land, resulting in an identity loss, environmental deterioration, and high unemployment companioned by poverty and ultimately low quality of life.

This paper explored the idea of an agricultural cluster that would be instrumental for the local economic development and reduction of poverty. Besides the crop and orchard production, the agricultural cluster may positively influence the performance of other industries such as the food industry, wine industry, but also agro-tourism. The development of an agricultural cluster would also help preserve the territory, environment and landscape of the area from ulterior deterioration.

There are however constrains that prevent these initiatives, among which the most important the high mistrust among the actors and lack of communication among the stakeholders.

One of the findings is that the local inhabitants remain close to the land and see agricultural a natural activity and a way of living. Clusters can turn these activities from family-scaled to market players.

Such bottlenecks can be overcome through tailor made strategies that engage both the public and the private sector. Small and operational cluster organizations can be effective in facilitating the communication and mitigate joint action among the players in a cluster.

The role of the government however is much needed in providing basic infrastructure, easing the access to finance and executing its regulatory function.

The policies aiming to promote the economic development of these areas and the consumption of local products can be much more effective if designed and applied in cluster level.

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# STRUCTURAL TRANSFORMATION AND SPATIAL INEQUALITY BETWEEN NORTH AND SOUTH CORRIDORS OF CENTRAL JAVA AND YOGYAKARTA

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Keywords : transformation, inequality, spatial.

***Abstract:*** This study is the preliminary research of spatial inequality in Central Java and Yogyakarta. Inequality within the same country occurred because of the differences in structural transformation at the same time in different regions. Java has two centers of growth, Jakarta and Surabaya. This two centers create an axis from west to east. This axis was started in 1808-1811 when the Dutch build the `Grote post weg´ connecting west Java (Anyer) to east Java (Panarukan) in the north coastal region of Java, later it was built until Banyuwangi. Among this two centers, Central Java plays as the `transit´ region.

This study analyzes structural transformation using Location Quotient, to identify the shift away from agriculture to non-agriculture over the time intervals 1990 until 2000, 10 years before the decentralization policy was implemented and 10 years after it. Williamson Index is used to show the inequality trend between north and south corridors of Central Java and Yogyakarta provinces.

This study shows that the transformation from agriculture to non-agriculture in north corridor implies a decline in the inequality trends. Many regions in south corridor are in primary sectors especially in agriculture and at the same time, the inequality goes up.

## 1. Introduction

### *1.1 Indonesian Issues*

Thus far, Java has always been the most important island in Indonesia. It is the center of political, economic and cultural in Indonesia. Based on national census, the population shares 64 % (1970), 62% (1980), 60% (1995), 59% (2000), 58% (2010) of the national population (Statistics Indonesia, 2014b). From 1990-2010, Java has contributed 59,03 % of total Indonesia GDP[1] with DKI Jakarta (15,98%) as highest contribution and shared around 60 % of total employee in Indonesia with the highest absorption in East Java.

The major issues of economic dispersion in Indonesia is always concerning about Java and outside Java. Java hosts more than 83% of medium and large manufacture industries in Indonesia (Statistics Indonesia, 2014a). The major non-oil industries are mostly concentrated in the capital of provinces due to the infrastructure accessibility. Those are Greater Jakarta (Jabotabek[2]), Bandung (west Java), Greater Surabaya (East Java) (Hill, 1990; Resosudarmo et al., 2002). This spatial concentration has induced the agglomeration in west part (greater Jakarta) and east part of Java (greater Surabaya) (Kuncoro, 2002). Both provinces has been recorded as the most dense population in Java (Statistics Indonesia, 2014b). Some of manufacturing are also found in Semarang and few regions in Central Java (Henderson, J. Vernon and Ari Kuncoro, 1996). The rapid economic growth of Java has always attracted people from outside Java to migrate and overcrowd Java.

[1] GDP (Gross Domestic Product) refers to national and province level.
[2] Jabotabek is abbreviation from Jakarta, Bogor, Tangerang, and Bekasi. (Jakarta and the adjacent regencies as the hinterland). Nowadays Depok Regency has been included in Greater Jakarta known as Jabodetabek.

*1.2 Central Java Issues*

Jakarta, West Java and East Java provinces have been contributing approximately 65 % of total employment and 71 % of total production in Java. Those regions are an evident as a substantial industrial spill over. The differences in the employment share of manufacturing industries can mainly cause spatial disparities within regions (Kuncoro, 2002)

As main cities, Jakarta and Surabaya has created an axis from west to east Java in north coastal region. It is a bipolar pattern of urban growth. It can be said that this pattern has been found as the manifestation of De Grote Post Weg[3] (known also as PANTURA[4] road) built by Daendels in north Java. This road takes a significant part in distribution of goods and services from West to East Java (Nas and Pratiwo, 2002). From East Java, the goods later will be distributed to East Indonesia. By the goods and services distribution flows from west to east, Central Java is only a traversed region.

The area of this study consists of two provinces, Central Java and Yogyakarta Provinces[5]. The land slope in both provinces is identified as flat land in coastal region and mountainous region with many active volcanoes in interior region. Based on the natural characteristic as one of the influence factors in spatial development strategies, the spatial as the geographical unit in this study refers to the north, mid and south region[6]. North and South regions development are clearly explained as the priority in national and regional spatial plan development strategy especially in infrastructure development (Central Java Province, 2011; Coordinating Ministry for Economic Affairs, 2011). The regions that crossed by De Grote Post Weg and adjacent to Java Sea are known as the north regions. The south regions are the regions that adjacent to the Indian Ocean. Yogyakarta province lies in mid corridor and south corridor of Java.

In this study, the location quotient (LQ) analysis identifies the structural transformation. Then the transformation is compared to the Williamson Index as an inequality trend index. At the end, the inequality index will be equated to the inverted U-shaped curve from Kuznets.

**2. Economic Dualism and Structural Transformation**

*2.1. Economic Dualism*

The economic growth focuses on only three key sectors: agriculture, industry, and services (Kuznets, 1973). The economic dualism theory divides the economic sector into two sectors: the agriculture sector as the traditional sector and the industrial sector as representing of the modern sectors (Boeke, 1978). Economic development implies the agriculture s share of gross economic product decr industry s share increased. The structural transformation later will cause the shift of employment structure and of the education degree required of the occupation. Also, it will enlarge a new employment opportunity and increase the population in urban areas.

Most of the regions in Central Java and Yogyakarta are still on the first stage of development that refer to agriculture, mining and quarrying which are the primary sector. The secondary sectors are manufacturing industry; electricity, gas and water supply and construction. From 1990-2010, the contribution of the primary sectors to GDP and employment in Central Java and Yogyakarta provinces tend to decline. Figure 1 indicates that since early 1990s, the position of the primary sectors in Central Java and Yogyakarta have been gradually replaced by the secondary sectors as the main contribution of GDP. Though the growth and the transformation is not as aggressive as in Central Java, the secondary sector has been growing continuously in Yogyakarta.

[3] Grote Post Weg come from the Dutch language which means the great post road.
[4] PANTURA is abbreviation from Pantai Utara Jawa (the north coast of Java, Indonesian, red)
[5] Central Java Province consists of 29 regencies and 6 cities. Yogyakarta Province consists of 4 regencies and 1 cities.
[6] North, mid and south regions lie as the corridors.

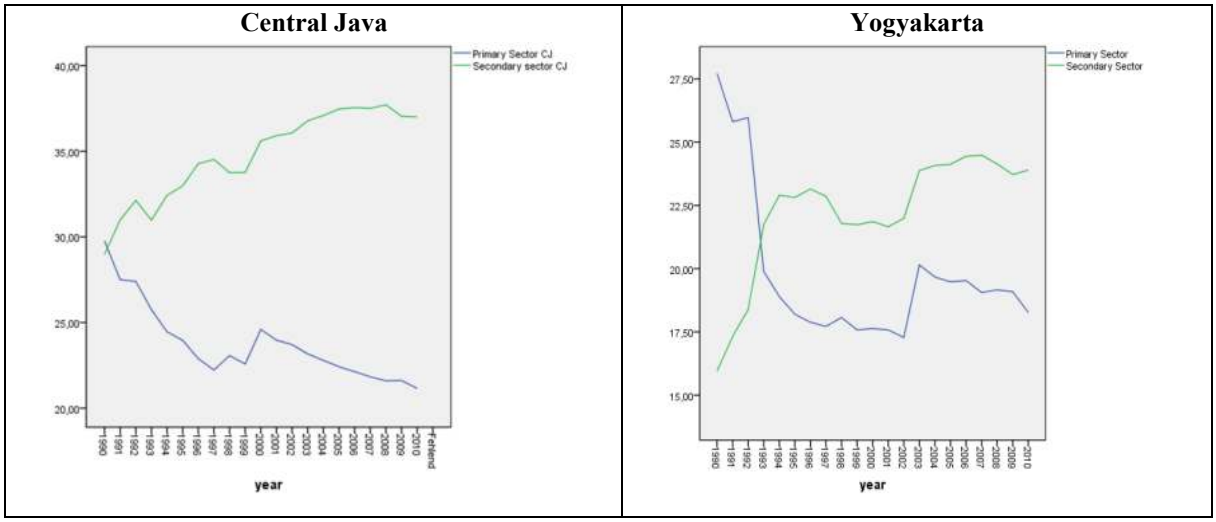



Figure 1. The Primary sectors and the secondary sectors in Central Java and Yogyakarta provinces from 1990-2010.

*2.2. Structural Transformation and Regional Specialization*

The structural transformation will be measured by the simple Location Question ( ) indicator. is used to rate the regional specialization in certain economic sector and in particular time[7]. This formula will identify the shift of the employment[8] structure in each region and corridor. The specialization index is defined as follows,

$$\frac{}{}^{1} \quad \text{or} \quad \frac{}{}$$

Where is the employment in sector in given city/ regency is the employment in industry in the region; is the total employment in state *J* and is the total employment of region. The result from this formula if > , it means that the ratio of certain employment in particular industry in given state at year is bigger than the ratio of region in the same item comparison. The city/ regency is more concentrated in that certain sector compared to the region. And if < , it means that the ratio of the certain sector in GDP and employment in particular industry in given city/ regency at year smaller than the ratio of the reference region.

Figure 2 indicates that the agriculture is concentrated and specialized in south corridor. The trend line in fact fluctuated but it tends to decrease ( $_{995}$ = 1,29; $_{2000}$ = 1,23; $_{2005}$ = 1,35; $_{20\ 0}$ = 1,29). The south corridor, precisely in Cilacap[9], has natural endowment especially in oil and gas. Thereby at early 1990 s, the manufacture industry (non-oil and oil industry) contribution[10] to GDRP corridor could surpass the manufacture industry contribution to GDRP in north corridor. But after 2005, it has slightly decreased due to the fluctuation world oil-gas price and productivity.

[7] Concept ( Bendavid-Val, 1991; Isard, 1998) in general is a comparison of two levels relationships between certain region in selected variable and the reference variable in reference area in higher level (national level) during in particular time.

[8] The data is not included the informal sector

[9] The Refinery Unit (RU) IV Cilacap is the major Refinery Unit in Java. It supplies 34 percent of the national fuel or 60 percent of the fuel needs in Java. Currently Cilacap refinery capacity has reached 348 thousand barrels per day (BPSD). In 2015 the capacity processing will increases 17,8 % barrels per day. It is the largest among the five other oil refinery run by PERTAMINA as RU II Dumai, RU III Plaju, RU V Balikpapan, RU VI and RU VII Balongan, Sorong.

[10] GDRP (Gross Domestic Regional Product) refers to cities and regencies level

The non-oil gas industries have been progressed in north corridor. The industry in north corridor is the highest among other corridors. Although some regions in north corridor remain as agriculture but the agriculture is the lowest level among other corridors.

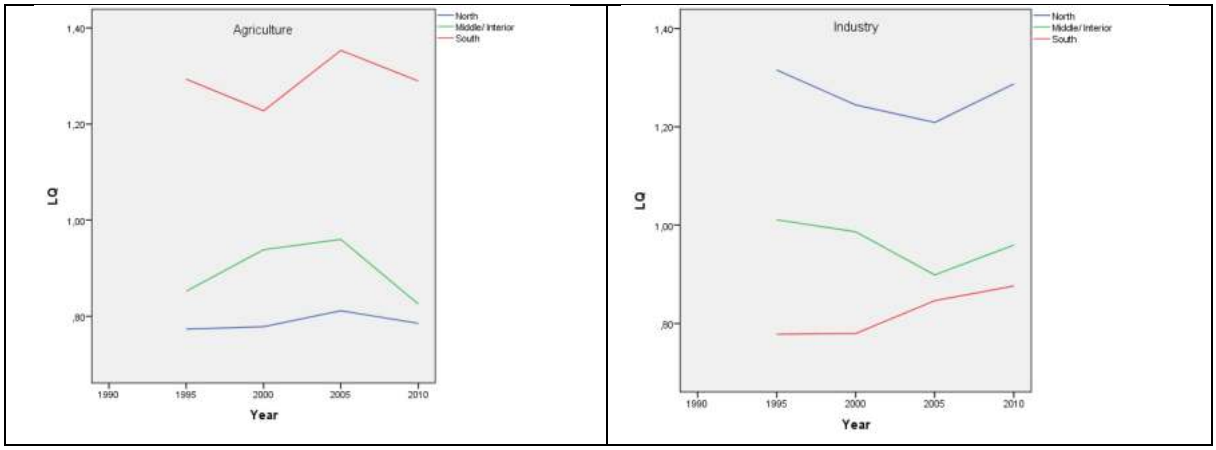



Figure 2. LQ Agriculture and non-oil Industry by employment[11] in north, mid and south corridors.

In 1995, the industry gap between mid and south corridors was relatively wide but later the south corridor ( $_{995}$ = 0,78; $_{2000}$ = 0,78; $_{2005}$ = 0,85 and $_{20\ 0}$ = 0,88) could catch up the mid corridor ( $_{995}$ = 1,01; $_{2000}$ = 0,97; $_{2005}$ = 0,90 and $_{20\ 0}$ = 0,96). These numbers are an evidence that the government policy to build up the manufacturing industry encourages the growth of manufacture in south corridor.

### 3. Patterns of Structural Transformation and Spatial Inequality

The major aspect of structural transformation will include the transformation from agriculture to non-agriculture and later from industry to service that also corresponding to labor occupation change (Kuznets, 1973). In early stage of development, the inequality will increase but later decrease, as the transformation of economic based occurred ( Lewis, 1954; Kuznets, 1955). The inverted U-shaped curve from Kuznets shows that in the early stage of economic growth, all the regions were equal then become increasingly unequal but it will improve in the final stage of economic growth.

Spatial inequality refers to the level differences on some particularly variable (usually income) at the different spatial or geographical units (Lall and Chakravorty, 2005). It also describes that history, natural resources, human capital, local political economy, and cultural are the contributory factors of the spatial inequality within regions.

The inequality index will be measured by the Williamson Index. There are two ways to measure the Williamson Inequality Index (Hassan, 2004): a weighted coefficient of variation by region share of the population ( ) and unweighted coefficient of variation ( ) by region share of the population but weighted by number of regions. The Williamson Index is defines as follows:

$$= \{ \overline{[ \quad ( \quad ^2 ) / \ ]} \} /$$

$$= \{ \overline{[ \quad ( \quad ^2 / ) \ ]} \} /$$

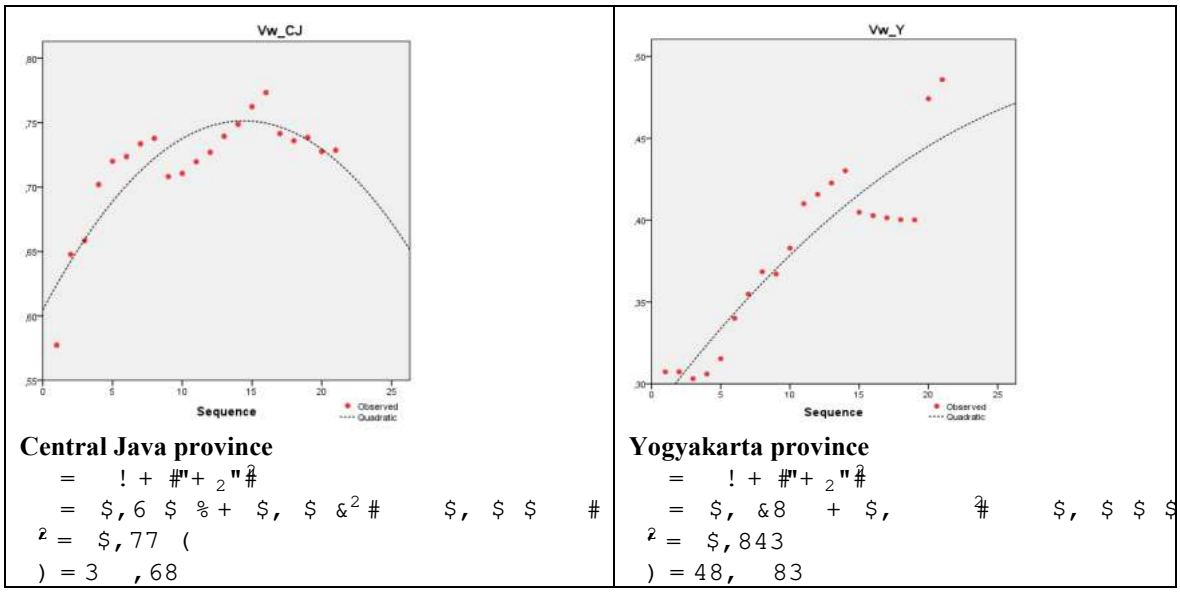
Where is weighted coefficient of variation and is unweighted coefficient of variation; is income per capita of region and is national per capita income; is population in region and is

[11] The data for the employment structure is available since 1993 in all regencies and cities in Indonesia, but in 2000, the employment structure data in Yogyakarta provinces is not available.

national population; is number of region. In this study, will be used. Kuznets has explained that population has the significant role in economic growth. The high rate of growth of per capita product and of population is one of six characteristic of Modern Economic Growth. Therefore weighted coefficient by population share is more realistic. Based on the R square, the polynomial (quadratic) is a better model to assess the trend of the Williamson Index. The equation will be used:

$$= \; ! + \#" + {}_2"\#$$

Where is the year and # is the Williamson Index.




**Central Java province**

= ! + #" + 2"#

= $,6 $ % + $, $ &2 # $, $ $ #

2 = $,77 (

) = 3 ,68

**Yogyakarta province**

= ! + #" + 2"#

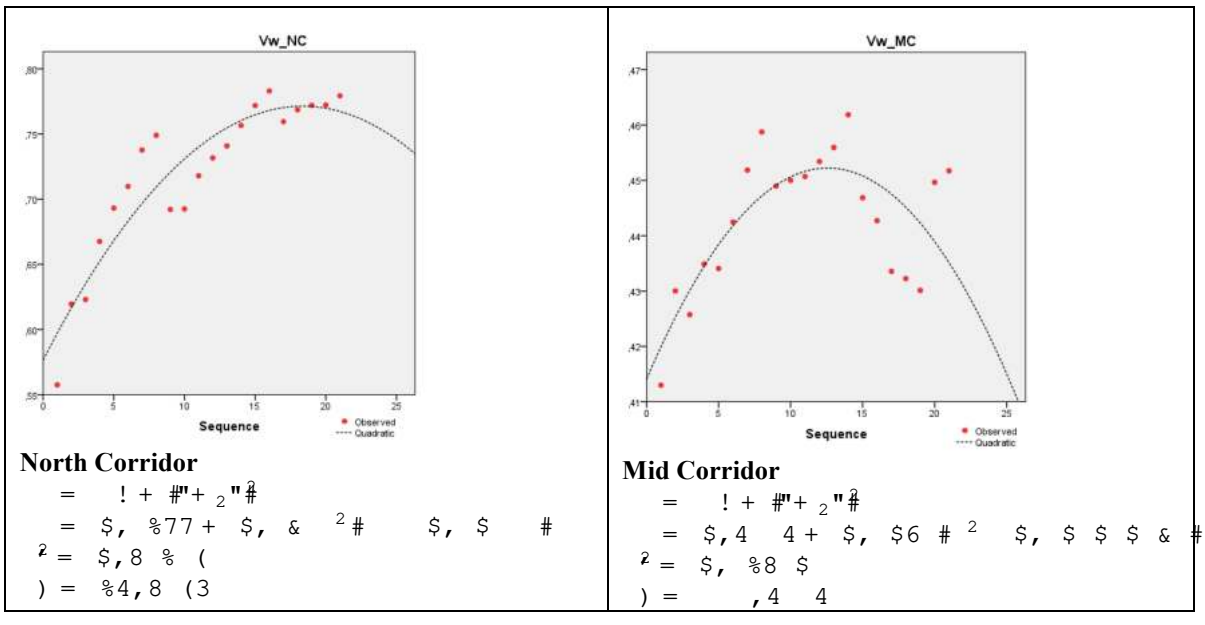
= $, &8 + $, 2# $, $ $ $ & #

2 = $,843

) = 48, 83

Figure 3. Williamson Index Estimate and Observed Curve for Central Java and Yogyakarta Provinces

Based on the inverted U-shaped curve, the inequality trend in Central Java has reached the critical point in 2005 later it tends to decrease. By contrast, Yogyakarta has not yet reached the critical point. It signifies that the inequality trends in Yogyakarta continue to increase (Figure 3). The highest index so far in Central Java 0,77 reached in 2005 and in Yogyakarta 0,49 reached in 2010.




**North Corridor**

= ! + #" + 2"#

= $, %77 + $, & 2# $, $ #

2 = $,8 % (

) = %4,8 (3

**Mid Corridor**

= ! + #" + 2"#

= $,4 4 + $, $6 # 2 $, $ $ $ & #

2 = $, %8 $

) = ,4 4

Figure 4. Williamson Index Estimate and Observed Curve for North and Mid Corridors.

Although the inequality trends in north and mid corridors fluctuated, figure 4 shows that both corridors have already experienced the inverted U-shaped curve and reached the critical point in 2005-2006. In south corridor (figure 5), the inequality index increases and it has not yet reached the critical point. So far, the highest inequality index ( ) in north corridor was 0,76 in 2006 and in south corridor was 0,85 in 2008.

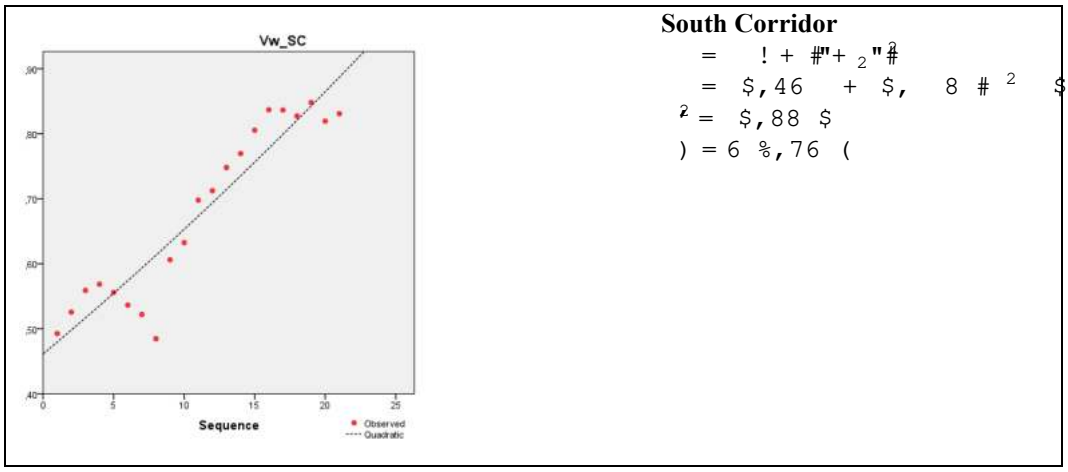



Figure 5. Williamson Index Estimate and Observed Curve for South Corridor.

The pattern of the structural transformation and the spatial inequality can be defined as an inverse relationship. The industry trend line in regional specialization (figure 2) has the opposite direction to the inequality trend line (figure 4). In north and mid corridors, the $_{2005}$ in industry significantly decreased that implied an increase of inequality trend. After 2005, the industry in both corridors have consistently increased and contrary, the inequality trends have gradually declined. In south corridor, the industry has been unspecialized ( <1) and the inequality trend slightly goes up.

## 4. Conclusions

Structural transformation from agriculture to non-agriculture as the creation of the modern economy and of employment opportunity has led to the rapid growth of Central Java and Yogyakarta province. Although most of the regions in both provinces are agriculture but the contribution of agriculture to GDRP and employment tend to decrease. The secondary sectors have replaced the primary sectors as the contribution to GDP in Central Java and Yogyakarta provinces.

The spatial differences between north, mid and south corridors have carried the divergence of spatial development. The north and mid corridors, where cities and manufactures are located, have been generating higher economic growth than south corridors. The spread effect from the cities to the surrounding regencies were not as massive as the government expected especially during the centralized system before 2000. The economic dualism and the regional specialization between agriculture in south and manufacturing as the modern capitalist in north are consistently occurred. Consequently, the inequality between north and south corridors increases. The manufacture location has affected the spatial inequality

Kuznets curve shows that in early stage of development, the inequality will increase but later will decrease, as the growth and development occurred. Manufacture industry is applied as the engine of economic growth. The transformation from agriculture to manufacture industry has provoked a decline in spatial inequality.

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# ACTUALLY VARYING NEOLIBERALISM IN A GLOBAL ZONE: DEVELOPMENT PHASES IN SYDNEY S DARLING HARBOUR

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Key words: neoliberal urbanisation; neoliberal policy path dependence; neolibera

## Abstract

This paper traces the successive phases of the redevelopment of the Darling Harb as a central focus of the city s transformation into a global city since the 198 the paper is to identify the different versions of neoliberalism employed in eac the institutional and politico-economic factors that have generated varying vers in the same zone. The paper takes the premise of Peck, Theodore and Brenner (200 neoliberalism in practice is an imperfect vehicle that has to accommodate existi institutions and political structures as a starting point. The distinctive contr demonstrate how neoliberal outcomes in a given area draw selectively on such con consequentially to show how the place-specific practices of neoliberalism can va time as different factors are drawn on at different times according to micro-pol changing development objectives. The paper analyses four stages of redevelopment Harbour area, using primary and secondary sources, to develop its argument: the Authority scheme of the 1980s; the City West Development Corporation redevelopme area in the 1990s; the post-2000 redevelopment of remaining old port land by the Delivery Authority; and the current redevelopment of convention and entertainmen private Lend Lease Corporation.

## 1. Introduction

This paper traces the successive phases of the redevelopment of the Darling Harbo a central focus of the city s transformation into a global city since the 1980s. paper is to identify the different versions of neoliberalism employed in each ph institutional and politico-economic factors that have generated varying versions same zone. As part of this objective, the paper uses this analysis to assess the evolution of neoliberal policies in Darling Harbour indicates some of the basic al (2009) about the nature of neoliberal urbanisation including the role of loca the potentially contradictory notion of policy congruence.

The paper analyses four stages of redevelopment of the Darling Harbour area, usi secondary sources, to develop its argument: the Darling Harbour Authority scheme City West Development Corporation redevelopment of the western area in the 1990s redevelopment of remaining old port land by the Barangaroo Delivery Authority; a redevelopment of convention and entertainment centre land by the private Lend Le

## 2. Neoliberalism and urban development

Neoliberal policies underlying contemporary urban development took root in the 1 entrepreneurialism became the leitmotif of urban governance (Harvey, 1989). Nev urban policies cannot be seen as a hegemonic, unvarying entity applied unvarying

cities (Connell and Dados, 2014). Instead, Brenner and Theodore (2002) have argu
policies are contextually embedded through their production within legacies of i
frameworks, policy regimes, regulatory practices, and political struggles. They
resulting process and outcomes as actually existing neoliberalism . This means
narratives have a disconnect with micro-level accounts of local urban policies a
al, 2014). Paradoxically, as Jessop (2002) notes, there might be an increase in
neoliberalism. Thus there is a combination of rollback neoliberalism of opposi
forms and rollout neoliberalism of new modes of regulation and new forms of st
(Peck and Tickell, 2002). Peck et al (2009, p.52) see these processes as operati
error experimentation, more often than not under a situation of crisis that can
dysfunctional consequences.

Given the locally and transiently embedded nature of urban neoliberal policies,
whether it is possible to discern underlying influences and communalities in suc
which we can make connections between neoliberalist policies in one city and pol
or indeed between policies over time in a given city, and thus gain deeper under
(2009, p.61) have produced a table that summarizes key features of mechanisms of
urbanism. The key outcomes of rollout mechanisms they list are a checklist that h
comparative analysis, and that describes significant aspects of the case study i
outcomes include:

- Creation of mega projects to attract corporate investment (in Darling Harb
phases 1,3 and 4)
- Creation of privatised spaces of elite/corporate consumption (casinos in p
convention and exhibition centres in phases 1 and 4)
- Rolling forward of the gentrification frontier and the intensification o
polarization (high income apartments in phases 2, 3 and 4)
- Adoption of principles of highest and best use as the basis for major la
decisions (phases 2, 3 and 4)
- Imposition of decontextualized best practice models derived from extra-j
(phase 1)

However, the re-organisation of regulations and institutional structures that pr
not have a similar checklist. Such re-organisation must be contextually generate
and will thus be the product of that context and less amenable to comparative an
(2014) argues that the current urban governance environment of starved resources
returns is producing policy imitation rather than innovation. Peck et al (2009)
similar view, that neoliberalism was producing heightened congruence and increas
of reforms. Jones and Ward (2002) reach a similar conclusion drawing on Offe s (
conceptualisation that there has been a crisis of rationality, an objective inab
the socio-economic system, and that this has generated unintended consequences t
contradictions of accumulation producing a crisis of crisis management (Jones an
133). Jones and Ward (2002, p.134) suggest that one implication of this schema
repertories become exhausted, with old policies being recycled and new ones borr
elsewhere via speeded up policy transfer. But the notion of policy congruence rem
in contradiction of Peck et al s emphasis on the path-dependent nature of neolib
which locally contextual paths are surely dominant. The importance of the latter
changes responding to crises is emphasised by Jessop (1990), with changes select
effectiveness, which in turn depends on path-dependent specific structures of op
1990; Gualini 2006, pp.886-887).

A central purpose of this paper is to take up this issue of emerging policy cong
the extent to which the four phases of neoliberal policies in Darling Harbour ha
more congruent over time between themselves and/or with wider neoliberal tendenc
is to explore the micro-politics of policy in each phase to help understand the
neoliberal policies over time in Darling Harbour. The following sections describ
phases of Darling Harbour s redevelopment, and are followed by an overview of th
they help to answer the paper s central questions.

## 3. Phase 1: Darling Harbour Authority (1984)

Darling Harbour has been a port area since the early days of the city. The cons
to the south at Botany Bay in the late 1970s, to relieve congestion in port acti
generally, caused an extensive area of land at the southern end of Darling Harbo
for redevelopment. By 1983 a government study had identified preferred developm
educational-entertainment park, Chinese garden, major residential complex, fores
maritime museum (Young 1988, p.193). In 1984 the New South Wales (NSW) state Pr
announced that Darling Harbour would be developed as the state s major contribut
Australian bicentennial program for 1988. This came as NSW was emerging from it
in fifty years. The project would be part of a Keynesian program of major works
motorways and rail lines to stimulate the economy. The Darling Harbour developm
firmly oriented at capturing more of the already expanding global tourism number
one of three economic development foci of the Premier. The project would have m
convention buildings, a harbourside market and a hotel along the foreshore, as w
garden and maritime museum. A casino would be developed, with the state licence
recoup much of the project s development costs.

With a deadline of only three and a half years to demolish and rebuild over 50 h
land, a strongly pro-development institutional framework was established. In Se
Darling Harbour Authority (DHA) was set up by an Act of state parliament (Table
Authority s board contained appointees of the government, including several from
The Authority itself had sweeping powers, able to make its own planning controls
state planning act (the Environmental Planning and Assessment Act) and outside t
proceeded to produce its own development strategy by the end of 1984. The desig
responsibilities of the Authority were given to private companies which reported
executive. A Quality Review Committee was appointed to monitor the quality of t
process (Young 1988, p.195).

Table 1. Institutional arrangements in each phase of Darling Harbour redev

| | |
|---|---|
| Phase 1: Darling Harbour Authority | New development corporation under new legislation with full planning powers |
| Phase 2: Pyrmont-Ultimo | New development corporation under existing legislation with limited development control powers<br>State government development controls<br>Owners/lessees of large sites with right to make own master plans<br>Federal government infrastructure funding |
| Phase 3: Barangaroo | State-sponsored masterplan guides development |

| | |
|---|---|
| | New state delivery authority<br>Development bidding process with winner paying state for right to build offices & other uses under concept pl parameters |
| Phase 4: South Darling Harbour | Redevelopment managed by Infrastructure NSW<br>Development bidding process for construction of new convention and exhibition centre in PPP with government<br>Winner of bid to pay for right to other development under urban design guidelines set by government<br>No public master plan |

The DHA was an example of UK-inspired path dependency. Its inspiration was the Docklands Development Corporation, recently established. The LDDC had similar p planning and development, and had a similar goal of revalorising obsolete public end, Darling Harbour was not the electoral success that the government had hoped design was criticised by leading commentators such as Deyan Sujic (1992): the te Rouse-led redevelopment of Baltimore s waterfront, and Rouse himself was employe in early planning stages by the DHA. The promised people mover became a priva that required special state legislation because of major public and city council destructive visual impact at the city end. The first licence for the casino was operators were suspected of mob connections in the US, and a casino was not buil Searle and Bounds 1999).

## 4. Phase 2: Pyrmont-Ultimo (1992)

The redevelopment of the Pyrmont-Ultimo peninsula to the west of Darling Harbour under the City West Development Corporation which was established for that purpo Byrne 2002; Searle 2005). This had its genesis in 1988, when the Central Sydney the peninsula s development potential. The new Liberal-National State governmen potential for several reasons. Pyrmont contained a number of major government s soon were to) become surplus, and redevelopment of these sites could generate fu state debt which soon emerged as a major ideological concern for the government. surplus government sites (especially port areas after the construction of Port B increasingly obsolete industrial sites on the peninsula such as the wool stores, help the government s main urban policy, urban consolidation, promulgated princi infrastructure costs arising from a welfare state fiscal crisis. It would also boom-time pressure on central city office accommodation.

Accordingly the government prepared a City West regional strategy for the penins west areas with large surplus government land holdings. A draft City West Regio Plan (REP) to provide for a large increase in population and jobs was exhibited adopted (gazetted) in 1992 (Table 1). The population would increase to 16 500 ( in 1986), and employment would increase from 14 000 to 54 000, complementing CBD The strategy became financially feasible when the Commonwealth government signed agreement with the State government to provide it with $117m of Building Better funds for redevelopment. An Urban Development Plan (UDP) containing development Pyrmont and Ultimo was produced by the government in 1993.

To fast track development in Pyrmont-Ultimo, the REP contained several key mea
the area for redevelopment, bypassing local council powers to do this under the
Planning and Assessment Act (EPA Act). In addition, it laid down the development
council or the Minister for Planning was required to consider before allowing dev
under the REP, the UDP would replace the standard local government development c
EPA Act. Finally, the REP contained a new planning instrument, Master Plans.
applicable to key sites in Pyrmont-Ultimo mainly located on the waterfront, and
preferred type of development. The Minister for Planning would approve developm
areas, thus eliminating developer concerns about local government approval. The
Master Plans to be prepared by site owners or lessees, which delivered a high de
control to owners and developers. The largest master plan site was an old sugar
bought by major developer Lend Lease prior to promulgation of the REP. With the
Lease produced a master plan that allowed development well above the limits set
area it increased allowable development from a single 21storey tower to four tow
that was 30 storeys, to maximise profits from providing harbour views (Searle an
These and other apartment blocks would be sold to incoming professionals, drivin
population out as rents rose.

Accompanying the new plans and planning procedures for Pyrmont-Ultimo was a new
City West Development Corporation. This did not require new legislation that mi
difficult for the government to pass in a now hung parliament: instead, the corp
set up under the provisions of the 1970s Growth Centres Act that was intended to
cities beyond the metropolitan area. The Corporation became the development agen
peninsula. It would administer development of the government sites and the coord
major infrastructure, as well as be responsible for the general implementation o
plans. This included responsibility for public participation programs, which we
perfunctory and increasingly biased over time.

Community opposition to the government s plans for the peninsula steadily grew.
continued apace, with few concessions to local concerns. In sum, the Developmen
the central agency in achieving fast track development on the peninsula, making
by-passed normal planning processes, and paying scant regard to the community s
existing distinctive working class character of the area.

## 5. Phase 3: Barangaroo 2005

The Barangaroo project has involved the redevelopment of the last shipping wharf
dockside land in Darling Harbour, totalling 22 ha, located north-east of the Dar
Authority s area. Value capture from development of the southern part of the sit
necessary infrastructure and construction of a large harbourside park across the
site. The initiative responded to a crisis in the form of a downturn in the loca
stagnant construction sector, in the years immediately following the 2000 Olympi
2013). The state government saw redevelopment of the site as a major office prec
construction in the short term and enhancing longer term economic development by
Sydney s role as a global financial services hub in the Asia Pacific region (Ba
Authority 2010a). Following the success of the Olympic Games delivery authority
projects of the Olympics delivered to a tight time schedule, another version, the
Authority, was set up to ensure timely and efficient development of the site.

An international design competition for the site was held in 2005. The governmen
space levels and a condition for half the site to be public parkland ( Headland
consortium won the competition. The winning entry generated a concept plan that
the government in early 2007, using new Part 3A powers under the Environmental P
Assessment Act whereby the Minister could approve major projects and bypass the
(Table 1). The land was rezoned by the government in late 2007. The maximum fl
would be approved was set at 388,000sm. Development rights and a 99 year lease w
Lend Lease, in return for providing waterfront plaza infrastructure and funding
Headland Park, building a pedestrian tunnel from the nearest rail station, and r
cruise terminal, at a total cost of $A521m (Barangaroo Delivery Authority 2010b)

Almost immediately the concept plan became deeply contested. Land Lease lobbied
extra 120,000sm of floor space. The state s planning system allowed developers t
after approval of initial project parameters at the Master Plan stage, and the P
was being played out again by the same developer. Then the design excellence rev
by former Prime Minister Paul Keating, altered the concept plan to reinstate t
more natural physical form that would be more akin to the landscape as it was
in the early eighteenth century. The extra costs of $A150m required to construct
elements (Lenaghan, 2010) were traded off against increased maximum heights for
Accordingly, Lend Lease applied in 2010 to increase office space by another 60,0
the height of the towers to a maximum of 209m which would create valuable new co
views.

Much of the extra floor space was allocated to a new high rise hotel that would
jutting out into the harbour. There was intense opposition from at least three c
saw the iconic status of the harbour as being under threat (Searle, 2013). In re
approved a reduction in the office towers from four to three but keeping the tot
and reduced the hotel height to a still considerable 170m, and reduced the lengt
the revised prompted a community petition to Parliament against it with 11,000 s
Liberal–National state government, elected in March 2011, bowed to this oppositi
hotel and pier proposal. Nevertheless, the demands by Lend Lease after 2007 to e
had led by early 2015 to a total approved floor space that was 70 per cent greate
concept plan (Ruehl, 2015).

Following this, an unsolicited proposal for a casino for international players,
accommodation, was put to the government by Sydney mogul James Packer. It would h
site designated for foreshore parkland in the concept plan. This would require a
be awarded after the expiration of the competition-free period that went with th
licence in the 1990s for the Star City casino on the other side of Darling Harbo
was invited to submit an alternative casino expansion plan, but was unsuccessful
company winning the right to the new licence. The Packer bid came with a full de
involving an iconic building prepared by a leading UK architect that would be
(except for an observation tower). Most of the upper floors would be luxury apar
higher ones being able to see over the ridge at Observatory Hill to the panorama
the harbour, including the Opera House. The proposal is now with the government
is doubtful that the state will require significant reductions given that it has
principle, despite the City Council s opinion that the increase in public benefi

## 6. Phase 4: South Darling Harbour

The fourth and latest phase in Darling Harbour s redevelopment has involved the building of the 1980s Sydney Convention and Exhibition Centre (SCEC). To this ha redevelopment of remaining government land south of the original 1980s Darling H construction area, including rebuilding of the state government s 10,000 seat En that opened in 1983.

. The initial stimulus was provided by private sector lobby groups, the Property and the Tourism and Transport Forum, which commissioned a study of deficiencies convention and exhibition industry capacity. The study, published in early 2007 2007), concluded that SCEC capacity constraints were causing 40 events a year to $A218m p.a.), and that expanded capacity would increase exhibit use by 16 to 32 government then commissioned its own review, the O Neill Report by the head of i agency, published in early 2008. It supported the PCA–TTF report, finding that a and exhibition space was costing Sydney s economy $A477m a year (Hall, 2010), bu expansion of facilities at Olympic Park in addition to expansion of the SCEC (Ci The latter component was challenged by the Exhibition Organiser s Coalition, who relegated far from the city centre at Olympic Park (City of Sydney, 2013a). From government requested the Sydney Harbour Foreshore Authority, the successor to th Authority, to develop design proposals to rework and upgrade the existing SCEC f entertainment centre. Master plan proposals were developed centering on expansio government commitment to expansion stalled.

. However, Sydney s slowing economic growth, especially relative to its great riv significant state political issue. Expansion of SCEC facilities was seen by the right–wing Liberal–National Coalition opposition, Barry O Farrell, as an opportun initiative here. In March 2010, a year before the next election, he promised to private partnership development of a new convention and exhibition centre if the elected (Hall, 2010). The infrastructure lobby group Infrastructure Partnerships a pre–feasibility consultant study of a new centre that was presented to O Farre (Infrastructure Partnerships Australia, 2010). The consultant s report concluded was the best location for either new or expanded facilities due to the generatio revenues from higher levels of established foot traffic, and ability to integrate surrounding Darling Harbour including the CBD, major hotels and transport networ entertainment facility should be included for up to 10,000 people. The cost of re convention and exhibition facilities was estimated to be $A630m. The Coalition w with proposals that were largely consistent with the IPA recommendations.

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. The Liberal–National Coalition won the state election in March 2011, and almost announced that the size of the project would be increased by two–thirds, includin (containing a car park and the existing Entertainment Centre) in the monorail co the SCEC where redevelopment potential would increase when the monorail was shor This southern area the Haymarket precinct – would be redeveloped for mixed use SCEC developer via a direct project agreement with the government involving a fee develop, and not as a PPP (Table 1). This arrangement would also apply for a new at the northern end. It is unclear why the winning developer of the SCEC was all blanche for the southern redevelopment. But it is probably significant that the Infrastructure NSW agency, set up by the new government to recommend infrastruct given responsibility for managing the redevelopment, was headed by Nick Greiner in a neo–liberal government ideology to the state when he became state Premier i

The SCEC requirements for redevelopment set out by Infrastructure NSW for biddin specific in terms of size  principally an exhibition centre of 40,000sm, a conv accommodate 10,000 people, a meeting room space of 8,000sm between the two centr premium entertainment centre holding up to 8,000 people. Urban design guidelines were also set out. These covered  reorientation , connectivity, activity, and op realm (Sydney Harbour Foreshore Authority and Infrastructure NSW, c2012). These general, such as  Building a place that invites tourists, visitors and locals to were a little more specific such as requiring new east–west and north–south conn reduction of open space. These requirements allowed bid consortia considerable f planning and design, especially in the Haymarket precinct where building size an very much developer-determined. This resulted in a virtually privatised planning successful bid was selected mainly on financial criteria and to some extent the the new convention and exhibition facilities.

The winning consortium was headed by Lend Lease, who thus had carriage of anothe Darling Harbour redevelopment stage. The consortium s proposed development was a professionals and the City Council (which was excluded from the planning process designated as a state significant project). The demolition of the existing exhib won a Sulman Medal, the highest award in Australian architecture, was criticized and relocation to serve unmet state needs was proposed as a priority (City of Sy 2013). ICOMOS considered that the scale of the redeveloped SCEC would  overwhelm century historic buildings  and significantly compromise and reduce the harbour setting  (ICOMOS International Scientific Committee on 20th Century Heritage, 2013). The consortium s proposals for Haymarket found some support from the City Council, i of new connections as per the urban design brief, but were criticized for over-d of critiques of previous Lend Lease developments in Darling Harbour:

 There is one too many residential towers that block views and generate overshad and cores have no setbacks from the street alignment to ameliorate wind downdraf housing is too high in its context and overshadows the Powerhouse Museum forecou Sydney, 2013b)

More generally, professionals were critical of the covert non-public planning pr Sydney University architecture professor said that a separate master plan should taking public opinion into account. Instead, the government had  wrapp[ed] the m tender process  (Hasham and McKenny, 2012).

## 7. Overview and conclusion

The Darling Harbour case studies support several key contentions made by leading commentators about the nature of contemporary neoliberal processes in city devel rationale for a new round of neoliberal projects usually has a context of crisis cases above, these include the perceived need for major projects/redevelopment i growth (phases 1 and 3), a state fiscal crisis (phase 2), and a competitive cris sector (phase 4). The contention that neoliberal responses are path dependent on finds support. The development corporation structure used in phase 2 derived fro enacted for a very different kind of development, which was required because of situation of the time. The delivery authority used in phase 3 probably owes much similar authority used for the Olympic Games. There is probably an element of pa

involvement of Lend Lease as the major developer in phases 2, 3 and 4, although
knowledge about linkages between its successes.

On the other hand, there is also ample evidence of using approaches and solution
common internationally. The use of a UK-style development corporation to produce
development in phase 1 is the standout here. The output mix of convention and ex
casinos and up-market high rise apartments is a standard one in global terms. But
neoliberal processes and outcomes in Darling Harbour does not point to policy co
first phase was the most derivative of international policy practice and, arguab
its framing of development behind the deeply contextualised Headland Park is the
fourth phase essentially revisits outcomes from the first phase and updates them
locally path dependent. Finally, the way in which Lend Lease is paying for the r
and apartments in the last two phases and was or has been given the power to mak
plans in phases 2 and 4 (with fewer constraints in the latter) suggests that the
policies are becoming less harshly pro-market (Peck et al, 2009) is dubious in t
context.

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# A Study on the Optimized Evaluation Criteria for a Disaster-Prevention Ur Area in Yongkang District, Tainan City

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## 1. Introduction

Since the 921 earthquake struck Taiwan in 1999, Disaster-Prevention Urba (DPUR) become one of the major considerations in disaster-prevention policy. T DPUR projects by the Ministry of the Interior in 2013 aims to introduce an inte for urban areas with higher disaster risks. However, the need for clear and it criteria for DPUR area selection is crucial. Controversial debates regardi designating the renewal area might result in high-risk area being undervalue low-risk area could be overvalued and stigmatized. Therefore, this research is proper evaluation criteria for DPUR areas in order to balance the possible nega on the renewal area.

This research will be based on the second phase of the DPUR Research Project District, Tainan City, which was brought up by the Ministry of the Interior. buildings risk map, blocks with higher ratio of high-risk buildings per block the potential DPUR areas. Secondly, cost-benefit analysis will be contacted fo different ratio of the high-risk buildings. If benefit exceeds cost then it ma further invest in reducing the risk of disasters. Renewal cost will consider buildings, construction cost and land expropriation cost, etc. Renewal benefit potential disaster loss. This research is expecting to establish a better ev facilitate the designation of DPUR area that could consider both the moral conc feasibility.

### 1.1 Delivering Concept of Disaster-Prevention Urban Renewal

Taiwan is located at the Circum-Pacific Seismic Zone, which has earthquakes a more than 200 times per year. The earthquake in Chiayi in 1906 caused 1,258 deaths, an buildings were completely destroyed; the earthquake in Hsinchu in 1935 caused 3 17,907 buildings were completely destroyed; the earthquake in Tainan in 1964 ca and 10,924 buildings were completely destroyed. On 21, September 1999, the earthquake on record in Taiwan in the 20th century struck Taiwan and took 2,415 buildings were completely destroyed, which also impacted the industry and econom of Taiwan. This fatal earthquake awakened the consciousness of urban disaster forced the government to face the necessity and exigency to review the urban st disaster impact.

In 2013, the Ministry of Interior of Taiwan proposed a new idea Disaster-p Renewal (DPUR), which is an attempt to review the existing urban renewal area consideration of criteria related to the impact of seismic disasters in order to

and increase the resilience these areas via building renovation or reconstructi
the Interior of Taiwan, 2013) Therefore, the primary concern of DPUR is to po
where there are high seismic disaster risks that urgently need to be evalu
However, the existing designation criteria for urban renewal areas in Taiwan ar
enough to clearly identify the DPUR areas.

## 1.2 Urban Renewal Designation Criteria in Taiwan

The urban renewal designation criteria in Taiwan are according to Articles 6 a
Renewal Act. According to Article 6, the areas with buildings that are deterior
to public safety are prioritized to be designated as urban renewal areas. Arti
that the areas with high possibility of being impacted by serious disasters sho
be designated as urban renewal areas. However, the completeness and specificati
mentioned above have recently been widely discussed.

First, the designation criteria for urban renewal areas in the Urban Renew
fundamental and indistinct to give specific and equal handling (Shih, 2008; Sun
The existing designation criteria also fail to deliver a comprehensive consid
prevention for the DPUR area (Cheng, 2011). Second, the designation criteria put
the deterioration of the physical environment but ignore the other local is
development potential. Therefore, although urban renewal improves the condition
environment, it doesn t help the local economic development or the disaster resi
so the public benefit of urban renewal cannot be wide spread (Sun, 2013; Lin,
existing urban renewal area designation lacks a consideration of an area-base
publicly-driven urban renewal areas in Taiwan are determined by an evaluation of
environment and the operability of the plan, and the privately-driven urban re
determined by the market value potential, which therefore tends to be more like
plan. The consequences of both of these approaches for urban renewal lead to dif
improving the disaster resilience and stimulating the economic development of
2008; Sun, 2013).

Therefore, lacking specific designation criteria and a consideration of an area
designated urban renewal areas will not only fail to improve disaster resili
undervalue or overvalue the risk of the areas under consideration. Once high-ris
undervalued, it is possible to misestimate the building tolerances for seismic
will be impossible to lower earthquake casualties when the next earthquake
contrary, once the low-risk areas are overvalued, it is possible to stigmatize
the local development. Hence, this research is an attempt to explore proper eva
DPUR areas in order to balance the possible negative consequences on renewal are

## 2. Literature Review

### 2.1 Urban Renewal vs. Disaster Prevention

In areas with a compact urban fabric, the high-density of old buildings and t
roads threaten the residents life and property safety. Urban renewal seems to
by which to change the urban fabric and improve living quality and safety by
buildings structure, relocating the living infrastructure and redevelopment tar
resilience.

Urban disaster prevention can be gradually created and improved by urban reconstruction, renovation and community planning for disaster resilience, the can be strengthened, and urban renewal areas can be built as the disaster preve surrounding areas. The urban renewal area together with the surrounding blocks, villages can be an urban living circle used to plan for disaster prevention and earthquake (Chou, 2010; Cheng, 2011).

Therefore, in order to reach the goals mentioned above and to maximize the pu urban renewal, we have to clearly evaluate the building conditions and disaster-prevention ability in the process of urban renewal area designation. worse building conditions and disaster-prevention ability should be prioritized DPUR areas in order to decrease the social and economic impacts of earthquakes However, determining the designation criteria that should be used to avoid overvaluing errors that may result in unnecessary impact to these areas require on optimizing evaluation criteria for DPUR areas.

## 2.2 From Renewal to Disaster Resilient: A Case Study of Japan

The concept of urban planning in Taiwan was originated during the Japanese occ had a great influence on the urban development of Taiwan. As a result, these tw similar urban fabric and also have acquired similar urban issues as time has high-density of deteriorated houses in urban centers, narrow and winding a subdivisions. Moreover, Taiwan and Japan are both located in the Circum-Pacifi and are bothered by frequent earthquakes. As the two countries have a similar issues and similar urban disasters, Japan will be used as a case study to compare its designation criteria with that of Taiwan.

The origin of urban renewal in Japan has a close relationship with disaster p Japan, the compact wooden houses frequently caught fire. The great Kanto eart World War II (1937-1945) and the Osaka-Kobe Earthquake (1995) not only serious city but also triggered disastrous city fires that increased the already huge d disasters accelerated the development of urban renewal in Japan and even brought urban disaster prevention. The earliest legislation of urban renewal in Japan c 1924 with the Agriculture Land Consolidation Act, which regulated the mechanism o readjustment. After WW II, the Special City Planning Act was enacted, and in Readjustment Act was revised. It was revised again in 1961 and became the U Remodelling Law.

In 1969, the Urban Renewal Act integrated the Urban District Remodelling L Disaster Countermeasures Basic Act which were attempts to try to combine the re of land with buildings. In the 1990 s, the government enacted the Urban Renaissan Measure Law, which was expected to improve living quality and the urban functi solve the vacancy problems caused by the economic crisis in Japan. In additi focused on the renewal priority of the Urban Renaissance Urgent Development encouragement of private investment initiatives. Lu, 2007;
Regeneration Cases in Japan, 2006

Compared to Japan, the earliest urban renewal plan in Taiwan can be traced back occupation period (1895-1945) when the city fabric was remodelled by the Japanes order to improve sanitation and consolidate the city landscape. In 1964, as the

moved to Taiwan from China, lots of immigrants living together in messy tempo
forced the government to promulgate a new chapter triggering "the reform of the
and development of the new city district" in the Urban Planning Act, which was
1973 to promulgate a new chapter of the urban renewal of the old city district
renewal legislation in Taiwan.

In 1976, as the Public Housing Act was enacted, the government began to colla
military to rebuild the military villages into public housing in order to impro
the city and the urban living quality. In this period, Taipei City experi
development than other cities in Taiwan, so it met the need of urban renewal
cities. In 1983, Taipei initially enacted the local act for urban renewal, but
government enact the Urban Renewal Act for the nation as a whole. The following
921 earthquake struck Taiwan and caused huge casualties. The Urban Renewal Act g
be reviewed and revised in the post-disaster recovery and rebuilding process and
completed after this disaster (Urban Regeneration R&D Foundation, 2011; Zeng, 20

When comparing the urban renewal development history of Japan with Taiwan s, i
that they had different motivations to get involved in urban renewal that led
The motivation of urban renewal in Japan was a result of the post-disaster and p
With economic and social development, urban renewal gradually transformed to la
that took the local economic and social development into consideration. Urban d
also became an important issue in urban renewal. Compared to Taiwan, which was m
on the consolidation of city appearances and the retrofitting of old buildings,
renewal in Japan was transferred from site development to urban redevelopment pl
attention was placed on the integration of urban functions. The Urban Developmen
is taken as another case study.

## 2.3 The Urban Development Plan in Tokyo, Japan

Except for the city downtown areas and commercial centers, Tokyo has a high-
wooden housing communities, most of which are deteriorated and have complex la
Most of these areas lack open spaces and always have narrow and winding alleys,
disaster-prevention issues. As a result, determining how to renew these high-d
communities to strengthen local disaster-prevention seems to be a big challenge
government of Tokyo.

In Tokyo s Urban Development Plan, the urban renaissance areas are classified ac
level, and the areas with higher hazard risks are given priority to be desig
renaissance areas. The Urban Renaissance Urgent Development Areas (URUDAs) are
that are more hazardous in the city that are targeted for urgent renewal. T
Renaissance Urgent Development Areas (SURUDAs) are the areas that are designat
URUDAs. These locations can widely spread the benefits of disaster prevention to
areas and prioritize the building of basic infrastructures.

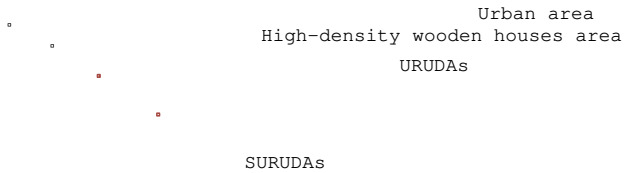


Figure 1 The classification of urgent urban renewal areas in Japan (Chen & Chang, 2005)

The URUDAs and SURUDAs both have time frame limitations related to reaching th the urban renaissance project as shown in the following table. The evaluation cr are made according to the Seismic-risk Area Hazard Investigation Report (the 5th version) by the Bureau of Urban Development in Tokyo. This investigation considers seismic-ris the number of wooden buildings and inflammable areas to create the evaluation cr Chang, 2005

Table 1 A comparison between renewal area and advanced renewal area in Ja Chang, 2005)

| | URUDAs | SURUDAs |
|---|---|---|
| Time frame | 2025 | 2015 |
| Goal | 70% inflammable buildings | 70% inflammable buildings |
| Purpose | Besides renovation, reconstruction and land redevelopment is also encouraged to be promoted by the residents in order to improve disaster-prevention ability in communities. | Besides encouraging renovation, an infrastructure development plan is also promoted in order to improve disaster-prevention abilty. |
| Assessment standards | 1. Evaluate the possible number of the buildings that will be destroyed by an earthquake. The index refers to the Seismic-risk Area Hazard Investigation Report (the 5th version) by the Bureau of Urban Development in Tokyo for which the data is more than 5 points.<br>2. Evaluate the fire hazard index and fire-spread hazard index. The index refers to the Seismic-risk Area Hazard Investigation Report (the 5th version) by the Bureau of Urban Development in Tokyo for which the data is more than 5 points.<br>3. The area which can reach the index below, $\frac{!"\#\ !"!!"\ !"\#\$\%\&\ !"\ !""\#\$\%\ !"\#\$\%\#\&'!}{!"\#!"!\$!"\#!} > 30$ buildings /per ha | SURUDAs are designated from URUDAs suggesting that Hazard area should be specifically mentioned for infrastructure rebuilding. The SURUDAs have to be redeveloped as soon as possible in order to spread the benefit of disaster prevention to the surrounding areas. |

| | | |
|---|---|---|
| | 4. The area which can reach the index below,<br>+ (1 ) 100% 100%<br>osr = open space ratio (%) | |

When comparing Taiwan s and Japan s urban renewal area designation criteri designation criteria has more principle criteria such as deteriorated , la structure and threat public safety, which provides a big framework but lacks follow. In contrast, Japan s designation criteria have more specific indexes such proportion of the household (Shih, 2008). The disaster-prevention criteria and t of Japan are both a good case for Taiwan to learn.

## 2.4 Area-based Urban Regeneration

The case study mentioned above obviously shows that the main purpose of urban re was urban inflammability, which is used as a tool to solve the problem of wooden houses in the city center of Tokyo. With the transformation of the con renewal to urban renaissance, Japan s government raised the level of the urban a higher level, regarding it as a special area of focus with an expectat multidisciplinary collaboration including urban planning, industry and disa Although Taiwan has a similar urban development history and urban fabric with Taiwan does not have high-density wooden houses in its city centers, nor do flammability issues. As a consequence, the urban renewal of Taiwan should be m the issue of comprehensive urban disaster prevention. Learning from the concept urban regeneration, renewal areas should have the ability to improve the condit environment while simultaneously reviewing the condition of the basic local infr degree of disaster preparedness. The purpose of DPUR is not only to strength structures through renovation or reconstruction, but also to improve disaster- entire area using urban renewal as a tool.

The original concept of the area-based approach is from the UK. It was used in policy in the 1970 s, but it was not until the 1990 s that this concept bec popular and was used as a policy by which to improve urban spaces. The ur experiences of Europe in the past 20 years taught that the combination of techni physical environmental with social and legal factors is essential. Although urb can clearly and successfully improve the physical environment, social and econom as unemployment, crime rates and poor education continue in some areas. Area regeneration will not only consider the retrofitting of buildings and the commu also solve the fundamental issues of these local areas, such as crime, unemployment basic infrastructure (Edwards, 2009).

In the process of area-based urban regeneration tries to break the geographic involve not only stakeholders but also other interest groups, as well as tho involvement of future stakeholders. Expecting to together discover local is development potential while improving the physical environment also includes the social and economic development, and even education, housing and transportation Plessis, 2013). Compared to the concept of area-based regeneration, which redevelopment and tends to be small in scale and pays more attention to the im physical environment and increases in market value while contributing very surrounding area, area-based regeneration considers more factors, such as biolog

social contributions. A comparison between these two concepts is shown in the
(Sag, 2010; Sun, 2013):

Table 2 Objectives, methods and evaluation criteria for site-specific and area
efforts (Meyer, 1998; Sun, 2013)

| | Site-specific redevelopment | Area-based regeneration |
|---|---|---|
| Objectives | | |
| Environmental objectives | Reduced human health risks and liabilities | Better regional environmental condition |
| Economic objectives | Tax base increase; job creation on-site | Reduced community drawbacks and specific economic improvements |
| Actual consultation on local community obectives | Minimal; as required by law with respect to community notice and consultation | Potentially extensive; (although development agencies may listen but not act on local concerns) |
| Evaluation criteria | | |
| Time horizon | Short-term completion of onsite development | Long time allowed for expected spill over effects |
| Policy efficacy | Sales for clean up and reuse generated, impact on site values and tax revenues. | New capital flows into area; increase in area economic activity, incomes and property values |
| Public efficiency | Minimum public sector expenditure | Maximum leverage on public funds |
| Public effectiveness | Rate at which private landowners successfully market contaminated sites for reuse | Increase in area economic activity, household incomes; reduction in area drawbacks |

The existing urban renewal in Taiwan is site-specific redevelopment, which emp
physical environmental improvements and increases in market values but ignores
and the development of the entire area under consideration. Lacking a considera
regeneration results in the urban renewal in Taiwan being generally limited t
improvements and a failure to use urban renewal as a tool by which to solve
stimulate economic development. The concept of area-based urban regeneration
more appropriate strategy to respond to local poverty and social-cohesion issue
regeneration will not only emphasize n the renewal of the physical environme
regeneration of the economy. Determining a method by which to attract the inter
and the private sector in investing into these areas has been widely discusse
2009).

Unlike general urban renewal areas, DPUR areas exhibit more investment uncerta
the high-disaster risk and the deterioration in these areas. Although the public
the private sector the successes of the project and provide subsidy assistance, inves
the market profit is still the dominant consideration of the private sector. Th
private sector investment is to show them that this project will be profita
research considers in addition to evaluation of disaster risk and area develop
necessary to add a cost/benefit evaluation of urban renewal. Adding the conside

renewal cost and benefits may increase investment interest and the confidence of
and also raise the proportion of stakeholders, which has the benefit of avoidi
urban renewal area development. The issues mentioned above all reveal the signi
of a cost and benefit analysis in urban renewal designation criteria.

## 3. Methodology

### 3.1 Conceptual framework

This research gives a suggestion of the DPUR area designation criteria for Tai
Besides the physical environment, which has already been considered in the exis
research increases the consideration of a market-driven factor that evaluates t
benefits in order to increase the proportion of the resident involvement a
investment interest. In addition, renewal efficiency in urban renewal areas can b
the visible benefits of DPUR can be seen, such as decreases in disaster losses.

This research is expected to build comprehensive designation criteria for a DPU
of physical environment factors refers to the urban renewal area designation cr
the Urban Renewal Act in Taiwan. In addition, this research refers to the conc
regeneration to take the economic index into consideration. Besides visible
increases in market value, other benefit brought about by the DPUR should also
such as improvements in property safety and decreases in disaster-risk and loss
research follows these two factors to review the existing urban renewal area in Taina
find the optimal evaluation criteria suggestions for the DPUR area. The concept
this research is as follows:

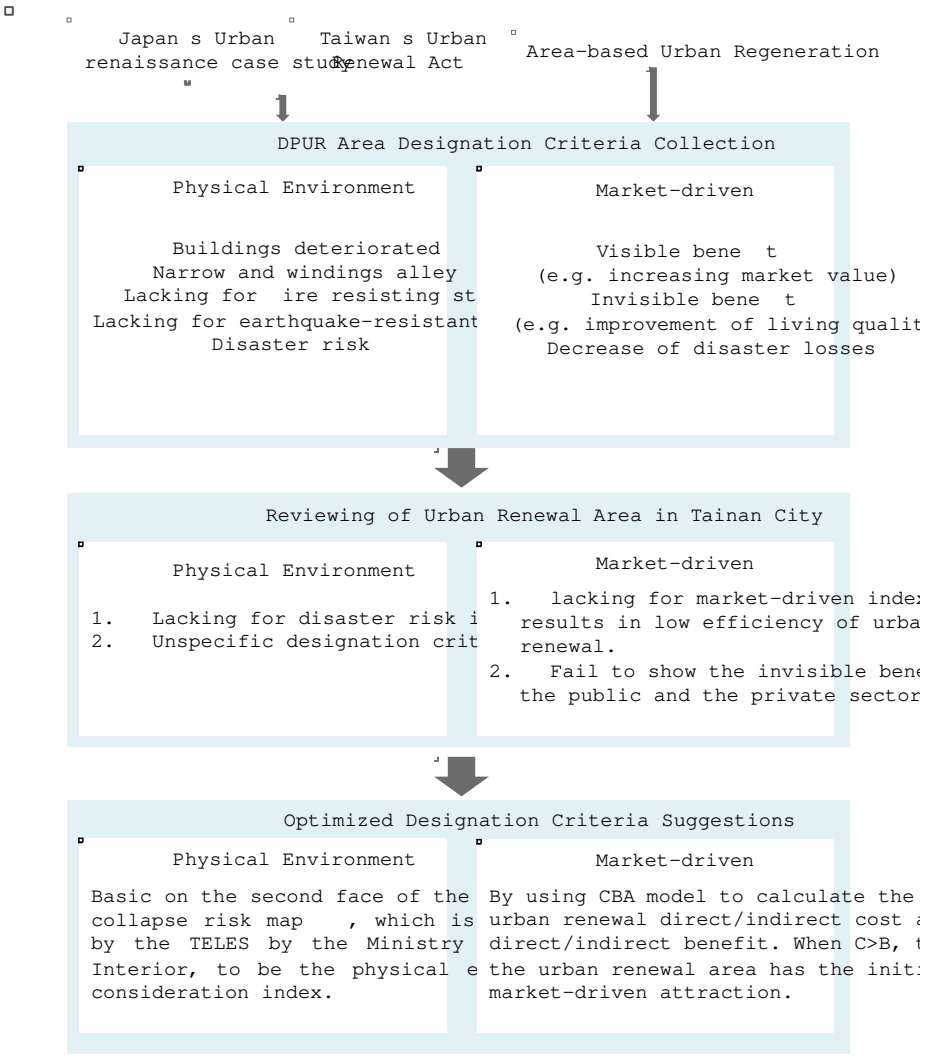


Figure 2 Conceptual framework

## 3.2 Study Area: Yongkang District, Tainan City

Yongkang District and Huweiliao in the East District in Tainan City were chos
areas. There are a total of six faults passing through Tainan City, but only
passes through the urban center and the compact development area in such as way
serious casualties when it triggers an earthquake. Consequently, the area that
passes through was selected as the study area for this research.
Yongkang District is located in the southwest part of Tainan City, which
developmental history that caused there to be a large number of deteriorated bu
the quick development of its transportation, industry and its rapid business
population and urban scale are quickly growing, so the Houchiali Fault may have
this district.

Tainan does not have the local legislation for urban renewal area designation
central legislation spelled out in the Urban Renewal Act. According to Articl
Urban Renewal Act, the areas with buildings that are deteriorated and hazardous

or the areas with high possibility of being impacted by a serious disaster shoul
designated as urban renewal areas. However, the designation criteria in the
principle guidance that not only lacks specific and objective guidance but also
of area-based urban regeneration that emphasizes physical improvements but
economic, social and disaster-prevention issues.

Moreover, the execution of the existing Taiwan urban renewal policies mostly
sectors investment and resident self-renewal, where the purposes of urban ren
misunderstood as market-driven development. This market-driven force becomes th
to whether an area appropriate for urban renewal can be renewed or not. In or
private sector-driven urban renewal projects, lots of incentives, such as tax re
ratio preference have been considered. However, these incentives encourage priv
urban renewal project investments that are mostly located in areas that have
potential. The areas that are deteriorated and hazardous don t tend to attract
resident-driven renewal projects. The renewal project are more focused on actual
on public benefits. Benefits that are not readily apparent, such as decreases i
renewal and increases of property safety and living quality, are ignored.

The following table showing urban renewal area execution obviously illustrates
urban renewal projects have mostly been outside of the statutory urban renewal
representative counties in Taiwan. Especially in Taipei City, New Taipei City a
where the market value in the city is gradually rising, the number of urban ren
the statutory urban renewal area is much greater than the urban renewal projec
urban renewal area. This research s study area is in Tainan City, which has 18 u
but as of 2014, there are only 8 places where urban renewal is actually being
efficiency of the urban renewal is quite low.

Table 3 Urban renewal project statistics for five representative counties in
2014)( Ministry of The Interior, 2014)

| County | The statutory urban renewal area | Urban renewal project in the statutory urban renewal area | Urban renewal project out of the statutory urban renewal area |
|---|---|---|---|
| Taipei City | 235 | 11 | 820 |
| Xinbei City | 67 | 11 | 225 |
| Taichung City | 54 | 1 | 75 |
| Tainan City | 18 | 8 | 0 |
| Kaohsiung City | 12 | 5 | 4 |

This research is based on the second phase of the analysis of the building co
Yongkang District, which was delivered by the Ministry of the Interior in 201
divided into four levels as evaluated by the Taiwan Earthquake Loss Estimation
and the structure, story and the ages of the buildings were comprehensively eva
the building collapse risk map with the existing primary urban renewal area in
shows that the area includes the Feyang military village, the surrounding area
supply depot and the area surrounding the Yongkang Veteran General Hospital.

After overlaying the two maps, the results indicated that the buildings in these areas mostly are low-collapse-risk; the urban renewal area surrounding the sou depot is vacant, and the buildings in the other two urban renewal areas are extremely low-collapse-risk buildings. The following figure also shows that t high-collapse-risk are mostly not in the primary urban renewal area. Consequen primary urban renewal designation criteria in Tainan cannot efficiently respon disaster risk, and the physical environment deterioration for the designation areas in the future need to be carefully evaluated.

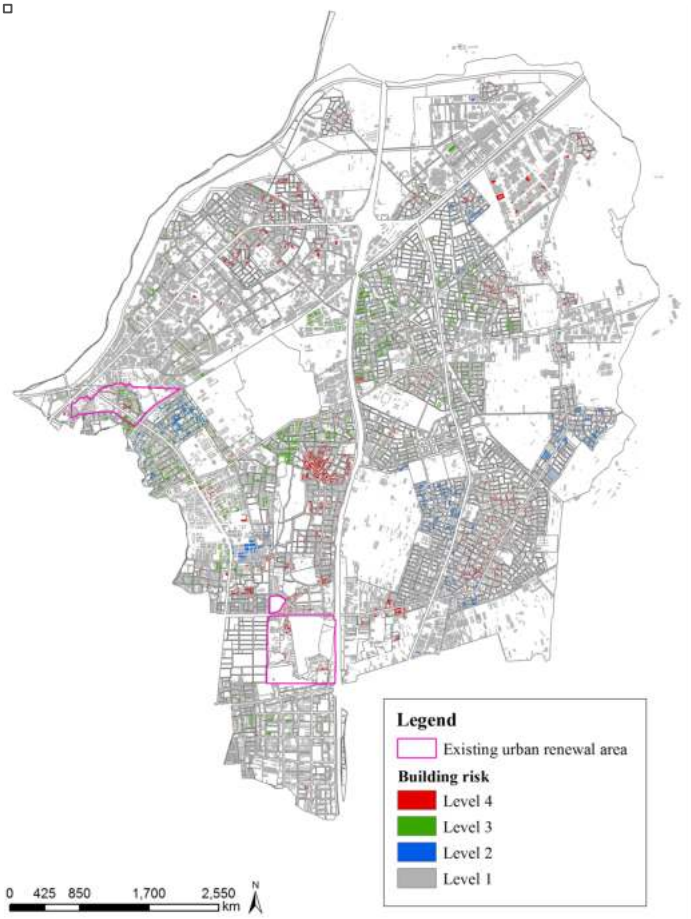


Figure 4 Overlay of existing primary urban renewal area and the building coll Yongkang District
(Ministry of The Interior, 2013)

Table 4 The proportions of building collapse risk in the existing primary urba Yongkang District, Tainan City

| Primary Urban Renewal Area | The Feyang military vi | Surroundin area of sou military su depot | Surroundin area of Yongkang Veteran General Hospital. |
|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Total buildings | | 3,028 | 0 | 1,950 |
| High-collapse-risk | Buildings | 73 | 0 | 96 |
| | Proportion of the total buildings | 2.41% | 0.00% | 4.92% |
| Medium-collapse-risk | Buildings | 251 | 0 | 1 |
| | Proportion of the total buildings | 8.29% | 0.00% | 0.05% |
| Low-collapse-risk | Buildings | 0 | 0 | 0 |
| | Proportion of the total buildings | 0.00% | 0.00% | 0.00% |
| Extremely low-collapse-risk | Buildings | 2,704 | 0 | 1,853 |
| | Proportion of the total buildings | 89.30% | 0.00% | 95.03% |

The initial designation for the existing primary urban renewal area in Yongkang comprehensively consider the deterioration and hazards in the area and ignored factor for the residents and private sector, which caused low efficiency in reg that is an obstacle to lowering disaster risk, improving quality of life and dis opinion of this researcher, the designation criteria for the physical enviro specific as Japan s urban renewal designation criteria and should involve consi risk. Besides the criteria related to the physical environment and disaster r criteria also should consider the benefits spreading to the surrounding areas, the ability the entire area to prevent disasters and the stimulation of economi can be based on the area-based approach. This research adds the economic evalu consideration, which examines the potential of market-driven approaches by renewal costs and benefits. It is believed that the intent of DPUR can be a designation criteria of the DPUR area take into account a consideration of b environment and the market, so that resident and the private sector alike wi helping DPUR area renewal efforts.

## 3.3 Quantity Framework for Creating Evaluation Criteria of DPUR Area

This research re-designates the primary urban renewal area by adding new desi from the perspective of the DPUR by evaluating the area s deteriorated buildings other physical environment factors in addition to adding the potential economic ben consideration of the DPUR area designation.

This research is based on the second phase of the analysis of the building co Yongkang District, which was delivered by the Ministry of the Interior in 2014 by the Taiwan Earthquake Loss Estimation System to simulate earthquake losses collapse risk can be divided into four levels after overlaying the PGA and bu which are high-collapse-risk (A), medium-collapse-risk (B), low-collapse-risk low-collapse-risk. In the criteria for physical environment, the research bas high-collapse-risk and medium-collapse-risk buildings in the map, but the medi buildings still have to overlay with the other disaster indexes, such as flood, of road blockages and soil liquefaction. If the medium-collapse-risk buildings the other high-risk disaster indexes (B4), then they may belong to the high-col (A).

The evaluation process is in accordance with the Urban Renewal Act to use a bloc
unit. Each hazardous block is evaluated by calculating the percentage of dan
(A+B4) in relationship to the total number of buildings on a block. Therefore
defines the block will result in designation as a DPUR area, which is the m
research.

The research uses the CBA model to evaluate the optimization of the percent
mentioned above. The cost is defined as the the direct/ indirect cost in the ur
and the benefit is defined as the the direct/indirect cost if not doing the u
After listing the cost and the benefit in the process, the total cost and benef
compared by additionally considering the earthquake probability, risk premium
interest rate. As a result, when the benefit exceeds the cost, it means that
hazard percentage has market-driven potential and also a physical environmenta
renewed. In short, this research is an attempt to use the CBA model to find most
percentage of a block to be designated as a DPUR area.

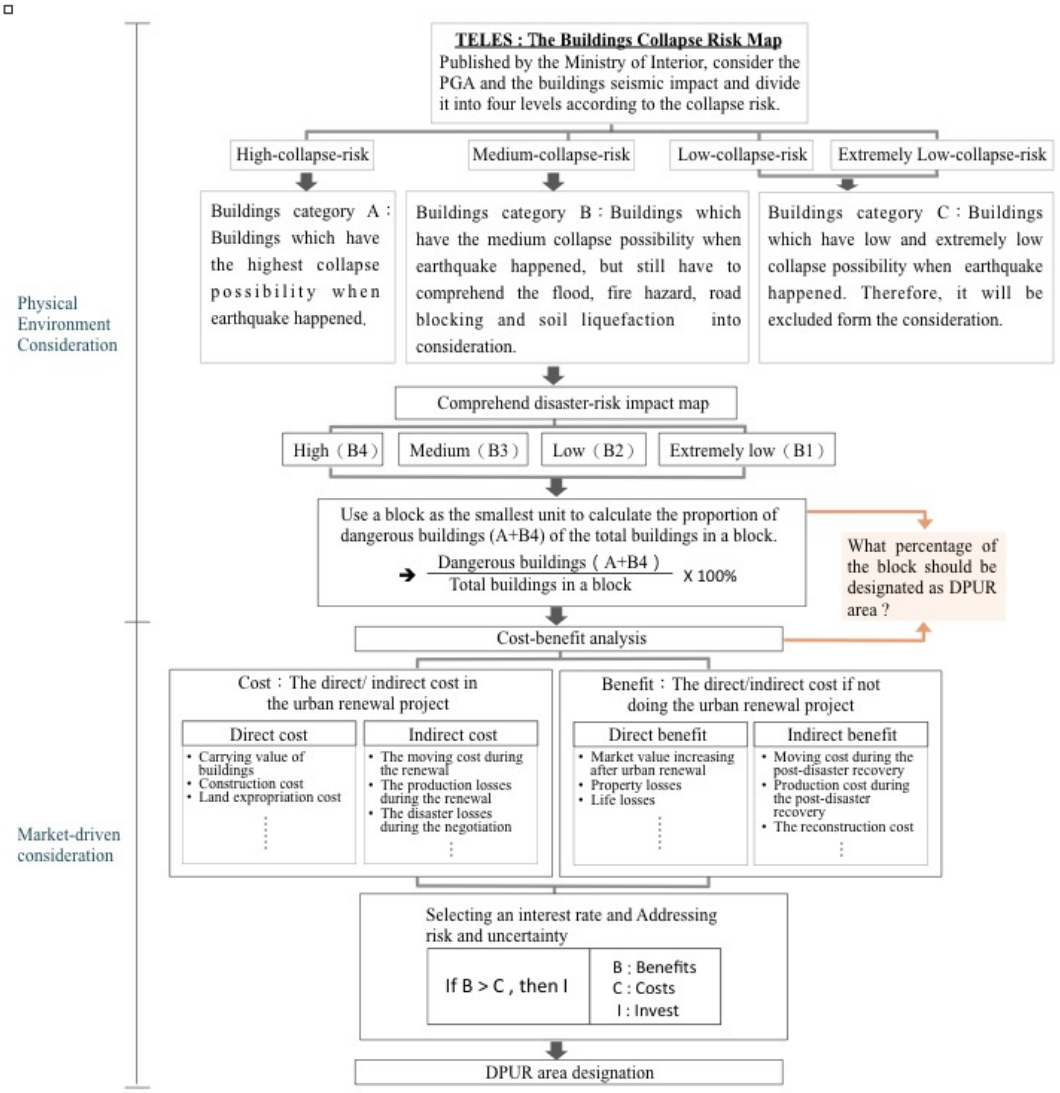

Figure 5 Future research process

## 4. Conclusions

Taiwan is located at the Circum-Pacific Seismic Zone, which is seriously impac
earthquakes. The huge casualties and losses in the 921 earthquake created
disaster-prevention in the Taiwanese government. As a result, the Ministry of
brought up the idea of Disaster-prevention Urban Renewal in 2013, which is in
the existing urban renewal areas by adding a consideration criteria for seismi
order to decrease vulnerability and increase the resilience of such areas via b
reconstruction. Nevertheless, the DPUR area designations still face lots of ch
existing urban renewal area designated criteria according to the Urban Renewal
and fail to consider market-driven factors related to renewal areas where the f
urban renewal is low. By reviewing the existing urban renewal area in the Yo
Tainan City study area, it was found that the prioritized urban renewal areas
seismic disaster risk but rather focused on market-driven factors for the purp
which may have resulted in failing to reach the goal of DPUR and may be the rea
efficiency of the renewal project.

Under the threats of unpredictable earthquakes, it is urgent that the DPUR are
that the disaster resilience of the area is improved. However, the existing de
Taiwan are more focused on improvements to the physical environment and lack a
consideration, which makes it hard to relocate the disaster prevention facili
attract the private sector to join in the project. Most of the private sectors,
stakeholders and enterprises that are interested in the renewal project, decid
project or not according to the investment risk and the market value. However,
benefits that are not immediately apparent such as quality of life, safety and
The complete benefits of disaster-prevention urban renewal may be underval
considering the visible benefits such as the appreciation market value of buildi

Therefore, this research is an attempt to explore proper evaluation criteria for
case study of urban renewal area designation in Japan and the area-based appro
takes the physical environment into account and also economic factors including both
invisible benefits. The main purpose of this research is to make an attempt
efficiency renewal problem, to arouse consciousness related to community disast
also to compare the benefits and cost of DPUR for the government and private se
the costs and the benefits in the CBA, which is also expected to give suggestio
renewal designations Taiwan.

## 5. Acknowledgment

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# Inter-urban Competition and Urban Entrepreneurialism ——A Perspective of China s Urban and Rural Space Rescaling Process since 1978

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**Abstract:**
Since the Reform and Opening-up of China in 1978 the comprehensive effect of marketization, globalization, decentralization has created an economic miracle and unique urban and rural spatial phenomenon. In this process, the growing extensive Inter-city Competition environment has become the institutional foundation of local development. The behavior of Urban Entrepreneurialism has been played a principle role as well. To some extent, the growth machine formed by local government and enterprise dominated the urban and rural space rescaling process.

Specifically, this process can be summarized into four phases: (1)1978~1980 township government in cooperation with the TVEs which lead to the thrive of small towns. (2)1980~2000, urban government work with State-owned Enterprises and few private enterprises which promoted the urban development gradually. (3)2000~2008, local government deeply cooperated with diverse enterprises both for profit and cause the savage growth of urban area.(4)Since 2008, local government turned to smart growth because of the economic crisis and lack of resources.

From the perspective of institutional change, and growing factors mobility, we constructed the basic analysis frame of institutional system and elements of change the formation of Inter-city Competition Urban Entrepreneurialism space changes , trying to explain the mechanism of China's urban and rural space evolution since the Reform and Opening-up policy from a historical-geographical-social view.

**Keywords:** Inter-urban Competition, Urban Entrepreneurialism, Rescaling of China's Urban and Rural Space

## 1. Introduction

Born in the west, the conception of Urban Entrepreneurialism has its specific historical, political, and economic background. Urban development more or less takes on some manifestations of Urban Entrepreneurialism in the process of china s urban development since the implement of the policy o the Reform and Opening-up. However, numerous difference among China and the western in specific background, goal, content, and behavior and so on, can also been easily seen (Yin *et al.*, 2006). To some extents, changes from macroscopic institutional systems, are the inductive factors that leading China s Urban Entrepreneurialism . During the process, local governments not only display strong

profit-driven, but also track out some diversified innovational institution system and practical path, which radically transforms the dynamic Chinese urban development and enormously contributes to the reconstruction process of urban space (Wu *et al.*, 2002; Zhang *et al.*, 2006, 2008). Any participants in competition in the market are Entrepreneur Talent[1], and the key to the success of reform, to a large extent, lies in how to take advantage of these entrepreneur talents and regulate their behaviors (Zhang *et al.*, 2010). At this point, logically speaking, there are no fundamental differences between China and the western in terms of Urban Entrepreneurialism , based on which, this dissertation, regarding the changes of macroscopic institutional system and urban space interaction as the logic start, is going to attempt to build a basic analytical framework: institutional system and elements of change the formation of Inter-city Competition Urban Entrepreneurialism space changes, and also is devoted to the overall interpretation of the dynamic mechanism of urban development and spatial evolution since the Reform and Opening-up, and the dialectical cognition of Urban Entrepreneurialism under the New Normal in the context of the current economic development.

## 2. Urban Entrepreneurialism s origin and the Practice of Western experience

### *2.1 The Macro-Political and Economic Background: the Failure of Keynesian and the Restart of Neo-Liberalism*

In the early 1970s, the impacts of Oil Crisis on the western, gave rise to the interruption of the rhythm of economic development, and then set back the entire economy in the west as a whole: deindustrialization, the collapse of the financial system, the structural unemployment and fiscal austerity. To some extent, this recession contributed to western capitalist economy a long period of time Stagflation (economic growth accompanied by stagnation and inflation). In the face of this unprecedented crisis, the Keynesianism, regarding the inflation as the main stimulus of the growth, fell into mal-function. In that case, western countries began to turn to the free market mechanism, and gradually from the Keynesian intrusive expansion and tightening policy shift toward the Neo-Liberalism type. Besides, they also relaxed restrictions on market, cultivated market free competition mechanism, and enhanced the mobility of factor resources. Free market mechanisms, privatization, the dispersion of national centralization as well as the flattening (Neo-conservatism) tend to make similar response countermeasure among different city government: by fierce competition, making cities as much attractive as possible so as to anchor mobile factors. Such a Inter-city Competition phenomenon is defined as Urban Entrepreneurialism (Gentler, 1988; Harvey, 1989), whose emergence manifestation of crucial transformation, that is, from Keynesian mode of circulation of capital accumulation to the Neo-Liberalism of elasticity of capital accumulation paradigm (Sayer, 1989; Schoenberger, 1988; Harvey, 1990).

[1] Entrepreneurial Talents (Zhang *et al.*, 2010 ) ) is one of the most important basic factors in the development of economy. Specifically, refers to the individual who owns relatively higher ability of the foresight and judgment to the unknown world (similar to hayek's tacit knowledge ). And have a strong innovation and enterprising spirit.

### *2.2 The Exploration of Governing Mode: From Urban Managerialism to Urban Entrepreneurialism*

There are mainly three types about the participants of market: one is authority, such as national and local administrative jurisdiction at all levels of administrative department; The second is the main body, private entrepreneurs, such as company earnings organization; Three is the various types of social organizations, such as non-profit organizations, social groups, and the official association and so on. The three main players form a Growth Coalition (or Growth Machine), and become the Urban Entrepreneurialism subject (Molotch, 1976).

Though the interactive process is different among cities, its specific behavior patterns can be abstracted for three characteristics: Firstly, the core of Urban Entrepreneurialism lies in the fact that the local government is in charge, under the leadership of the public-private partnership (PPP) mode, with the intention of drawing external mobile factors, direct investment or new labor resources. Secondly, the Urban Entrepreneurialism s turning toward has the characteristics of speculation and profit-driven, therefore is often accompanied by risks, but in most cases the digestion of these risks can be borne by local government. Again, Urban Entrepreneurialism , relying on the model of PPP mode, is engaged in a specific political objectives and economic performance of place construction (Harvey, 1989).

### *2.3 The Space Practice of Western Urban Entrepreneurialism*

With lower transportation costs, the development of information technology, market segmentation and spatial barriers gradually decline, the Inter-city Competition surfaces, and is more strengthened by Urban Entrepreneurialism . To some extent, more and more cities are involve Competition , with the intention of scrambling for the mobile elements, an practices of place construction anchoring mobile factors Then what are th manifestations of place to construct which Urban Entrepreneurialism focuses Harvey s research (1989) on some success stories, summed up the five types of Urban Entrepreneurialism in general practice space path selection (Table 1). These five are not mutually exclusive path. The results often depend on the selected city endowment factors, fluctuations in market supply and demand and the Growth Coalition s manner and timing.

Table 1. The Type of Space Practice

| The type of spatial practice | Offer the support of policy and infrastructure, and strengthen the comparative advantage including the geographical and resource superiority and public and private sector in alliance | Actively construct the various consumption space in order to prompt the consumption of | Build the center-city within the global city network | Actively support the traditional competitive industries and | The big event marketing of city, Actively strengthen the urban |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| | invest in the construction of fine Infrastructure environment. | the city people and the development of the service sectors | | win the different superiority. | cultural soft power. |
| Specific information | The government directly invest in the new technologies, products and industries and through the offering of the policy support including the cutting down the tax, low interest loan, and fiscal subsidy, to attract the investment of private companies.<br>Improve the qualities of the labor and optimize the structure of the labors and hold down the cost of labors.<br>Make good use of the overflow effect of the agglomeration effect of economy , and foster diversified industries and service system | The building of tourist attraction, business center, sports stadium, entertainment venues, and coastal areas | Through the fostering of the concentration of advanced service industry, in order to promote the competiveness of the city in the global flow of space. | Seek the central government s policy support by virtue of the traditional competitive industries and maintain its property. | The big event marketing and the advertisement of the city culture and the holding of urban festivals. |
| Cases | The industrial upgrading and rejuvenation of the Rhein-Ruhr region.<br>The Industrial recovery in the region of Randstad.<br>The construction of new town in Grand Paris. | The recovery of coastal areas in Baltimore.<br>The recovery of Manchester<br>the Casino development in Las Vegas | New York, Paris, London | Due to the cooperation with the department of defense, Long Beach of Santiago and Bristol. | The jazz festival culture of Chicago<br>Atlanta Olympic Games |

*2.4 The Dialectical Cognition*

Urban Entrepreneurialism has contributed a lot to the resolution of the problem of the decline among western cities. However, the inclination of profit-oriented growth should be taken into consideration for its side effects: a seemingly successful place construction is often accompanied by social polarization and impoverishment phenomena, such as the center of the city gentrification movement further curing of class stratification and spatial segregation; in addition, the intense Inter-city Competition will intensify the expansion of the uneven development of the region as well as the gap between rich and poor citizens. Faced with these problems exposed, since the 1990s, the British Communist Party leader Tony Blair has proposed a Third Way policy to seek compromise and balance between left and right consciousness. In a way of Fuzzing the Neo-Liberalism and the Keynesian position boundaries, beyond the value conscious opposition, concern equity and efficiency, balance power and responsibility, in order to adapt to changes in the class structure of the UK and the various aspects of global economic, technological and political changes.

## 3. The Paradigm of the Urban Entrepreneurialism of China

The process of institutional changes with China s characteristics is referre
Paradigm , in which the marketization, decentralization and globalization is the
reform (Wu *et al.*, 2002; Yin *et al.*, 2006). In the course of dramatic transformation, Chinese local government shows an evident inclination for Urban Entrepreneurialism , in a sense, which inevitable outcome and important impetus of the Reform and Opening-up. In the face of a more complex macro-economic context, the Chinese paradigm of Urban Entrepreneurialism has its own uniqueness.

*3.1The Transformation of Local Government: From All-round Contract System to TVEs*

**(1)The Start of Entrepreneurialism among Township and Village Government**

In the late 1970s, the establishment of All-round Contract System[2] in rural area, is the historical starting point of China's comprehensive reform, laid a separation of rights (proprietorship right, management right, contract right) to land on the basis of a series of system innovation to promote the development of small cities and towns (Zou, 2000). With rural All-round Contract System success and promotion practices, coupled with the central and local s vertical decentralization, rural economic development gained autonomy. Established on the basis of ambiguous property rights of rural industrialization, Township and Village Enterprises (TVEs) have become the fundamental driving force of urban spatial development. In this process, the villages and towns thirst for fiscal revenues, the pressure of the community development and traditional geographical-kinship concept makes their behavior consistent with the local TVEs. The strong sense of traditional collective attributes in the villages and towns government become the actual controller of the TVEs, and to a great extent, bear the risks of the externalities of market which is not perfectly regulated. The Entrepreneurialism is referred to as the local state corporatism under this circumstance (Oi, 1989). TVEs under the auspices of the local government achieve a low-cost resource allocation, which helps to create favorable conditions for the prosperity and development of TVEs (Figure 1).

[2] All-round Contract System is the main form of China's rural household contract responsibility system. Before 1970s, under the communist collective management, which lack of effective incentive mechanism due to the land property rights legally belong to the collective party, the economic development of rural area was in stagnation, farmers life quality were in a very low level. In Anhui province, some farmers began to secretly undertake the All-round Contract System within their own community by dividing the collective land to each household. By this way, this community achieved huge productive success. Strictly speaking, according to the socialism ideology, it was illegal. However, since it can strongly stimulate the farmers initiative, the All-round Contract System then legalized across the nation. Theoretically, the vague property right of the collective land can be divided into three different rights: proprietorship right, management right and contract right.

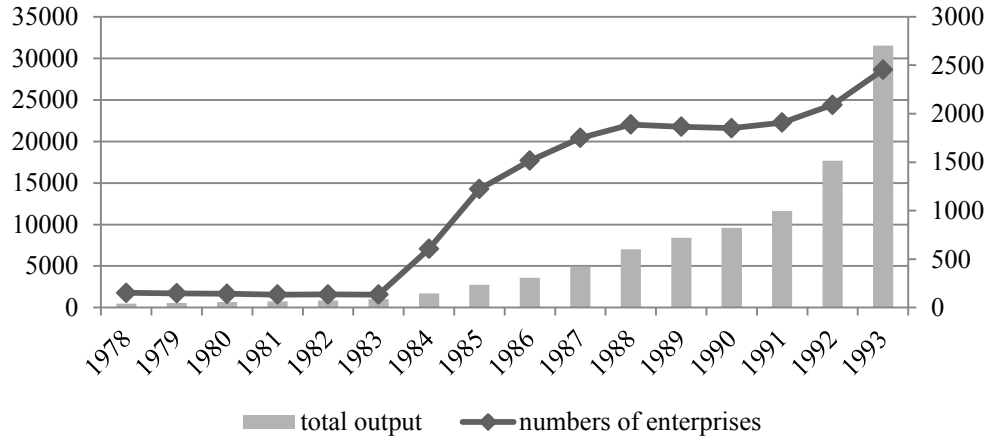


Figure 1. The Total Output Value and Number of TVEs (1978 - 1992)
Data Source: Chinese Year Book

**(2)The Spatial Shift under the Domination of the Alliance of Government and Enterprise**

In the early1980s, in case of the finite element resources, the township Government-Enterprise Alliance went to great length to squeeze the industrialization costs as much as possible, with the characteristics, in terms of space, of small, scattered, chaotic and poor (Zou, 2000). In the early stage of the development of TVEs, villagers not only do farming but also do industrial work in TVEs. These hybrid activities embedded in the villages and towns community, thus it shows the characteristics of blossoming scattered layout. Under the guidelines of encouraged farmers jumping into the local factory instead of going to big cities [3], TVEs shows the characteristic of undertaking industrial production in the rural township, in the village, household do at home . It was disorderly inefficient, diversified, fragmented.

By the end of 1996, China's economy succeeded to achieve a soft landing[4], but the main contradiction of social and economic development turned from the constraint of supply to that of demand. In addition, the Asian financial crisis led to the reduction of international investment, and the shrinking of export market. For this reason, the acceleration of urbanization has become an important means of stimulating economic growth and further development of small towns has become a way to restart consumer market (Zou, 2000). Thus there appeared two kinds of spatial evolution path: one is the villages and towns economy of Sunan area (Southern Jiangsu province), relying on high-tech park

[3] In early stage of China s industrialization process, urban development depends on the price gap between industrial products and agricultural products. In that case, the price of industrial products was much higher due to the high cost of urban industrialization. So at that time, the migration from rural to cities was strictly limited. (Hukou system was invented then )

[4] During 1990s, China s economy suffered from a high inflation. With continuous policy implemented in a relatively long period, the inflation rate came down gradually.

construction and supporting policies, to attract international capital; the other is the villages and towns in Zhejiang area around local key enterprises, small and medium-sized enterprises to build characteristic economy (Tang *et al.*, 2013). Along with the intensifying of the globalization process, the continuous perfection of domestic market economy system and the advance of standardization of TVEs, township government gradually withdrew from direct intervention in these enterprises and turned to mainly focus on the park construction and preferential policies. What s more, with a clearer property rights, the limit of boundary constraint to the township enterprise greatly abated, which was in favor of creating conditions for enterprises concentrate to industrial park .

Although the implementation of the enterprises concentrate to industrial park policy, to some extent, improved the situation, the traditional pattern of township enterprises, namely, the situation of greatly scattered, little centered did not radically improve. Because of the serious administrative division, the development of TVEs crumbled in homogeneous competition. Since the beginning of 2000, by the institutional innovation of merging townships and small villages, TVEs has been in the transformation into large-scale, intensification, and modernization.

### *3.2 The Spatial Expansion of Local Government under the Driven-profit: From the Enterprise Finance to Land Finance*

TVEs have sprung up everywhere and detonated the development of small towns. Besides, the era of the planned economy of urban and rural balance is broken. The countryside through the integration of land and capital has not only achieved the rapid development of industrialization and urbanization, but also set an example for the future growth of a massive expansion of urban areas (Wu *et al.*, 2014). Rural industrialization and urbanization has fully demonstrated the strategic value of the land as an fundamental element of space. In addition, the experience of development of small towns began to be consciously adopted by urban area since 1984. Among these, institutional system of Compensated Use of Land , the Commodification of Housing[5] and other innovative systems, greatly promoted the rapid reconstruction process of urban space. At the same time, the local government turning from Enterprise Finance to Land Finance showed obvious characteristics of Urban Entrepreneurialism .

**(1) From Enterprise Finance to Land Finance**

Since the 1980s and the early 1990s, with the implementation of Fiscal responsibility system[6], State-owned Enterprises were in the control of local government, which played a dual role of economic and politic incentives to local government (Tao, 2011). At this point, the state-owned

[5] Before these policy enacted, the State-owned land can only distributed by government and exchange behavior was strictly limited.

[6] Local government manage the local State-owned Enterprises due to the over concentrated management system turned to be inefficient.

enterprises are still the absolute dominant national economy, and local government revenue depends on the state-owned enterprises rather than profits tax, which is the Enterprise Finance .

Since the mid1990s, under the pressure of the tax reform, the stimulus of housing commercialization and the increasing mobility of global factors, there were two means for the local government to participate in the Inter-city Competition , including reducing the production elements' price and expanding the expenditures. And then Land Finance emerged at the historic moment: the government firstly purchased the collective agricultural land in a very low price, then by the rolling development mode of land mortgage - access to commercial loan - construction of a complete infrastructure - attracting investment - getting tax , in order to attract industrial enterprise to invest on construction; On the other hand, through the mode of land reservation- auction - ready land for sale - get high transfer pay , to advance the residential and commercial construction. Additionally, the special land binary institutional system, caused the differential land price gap between urban and rural areas. This part of interests in public sphere becomes the direct stimulus to the local government s Urban Entrepreneurialism[7]. Furthermore, the lag of unified land market construction and the tacit approval of the monopoly of land in legal system, make the Land Finance become the shortcut for the urban development, even become the main part of the local government s revenue (Figure 2).

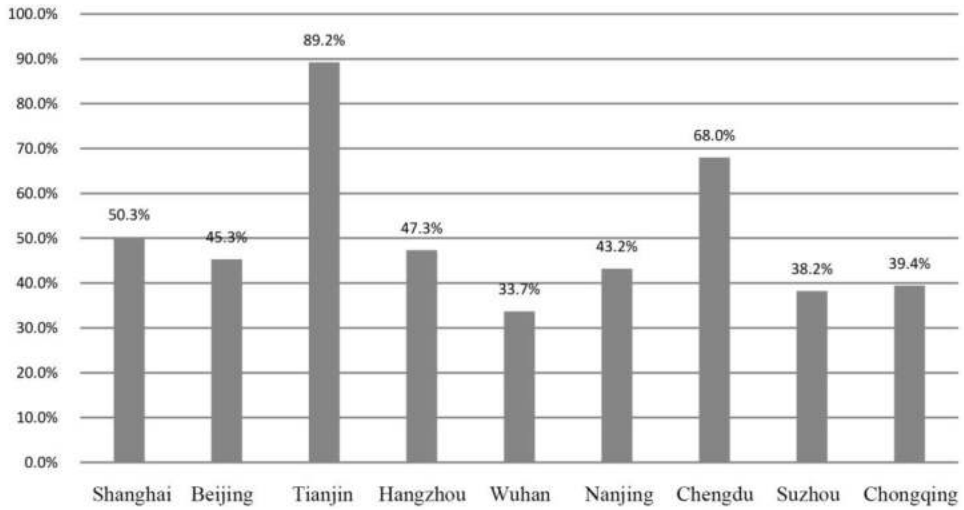


Figure 2. 2013 top ten cities accounts for payment of land revenue rati
Data source: Citic construction of research and development department

**(2)The Spatial Shift of China in the Logic of Land Finance**

In the logic of Land Finance , the initial establishment of the institutional system of Compensated Use of Land , incorporate the supply of industrial space into the circulation of capital market. The

[7] Urban government can always purchase the suburb collective land with very low price, and the collective community has no chance to bargain. In another word, the government has absolute monopoly in controlling land.

System of Land Reserve and Bid, Auction and Listing will further transform residential and commercial space into tradable goods , the gradual transformation of space as a real estate into chattel, and the deeply nesting of space production and capital circulation, create the unique changes of urban space in China.

**a.** New Towns Space of Development by Leaps and Bounds

China new towns spawned with the construction of Development Zone in 1984, in the past 30 years, the number of large, widely distributed, different spatial scale, and different strategic target of Development Zone has become a focus of local government competition. The approval of the project Development zone not only means getting enough space for development and the spill over effect of industrial agglomeration, but also means getting a series of the central financial support and preferential policies (Wu *et al.*, 2011). Because of the excess supply of Development Zone , the central government began to halt Development Zone fever at the beginning of this century. Then, as the pilot experiment of the Reform and Opening-up, Development zone has evolved into a vari politically correct and profit-oriented variants: university town, science and technology town, high-tech industrial park, new city, eco-city, bonded area, etc., which are out of the framework of the construction of original city and shows a tendency of transition of development. (Figure 3).

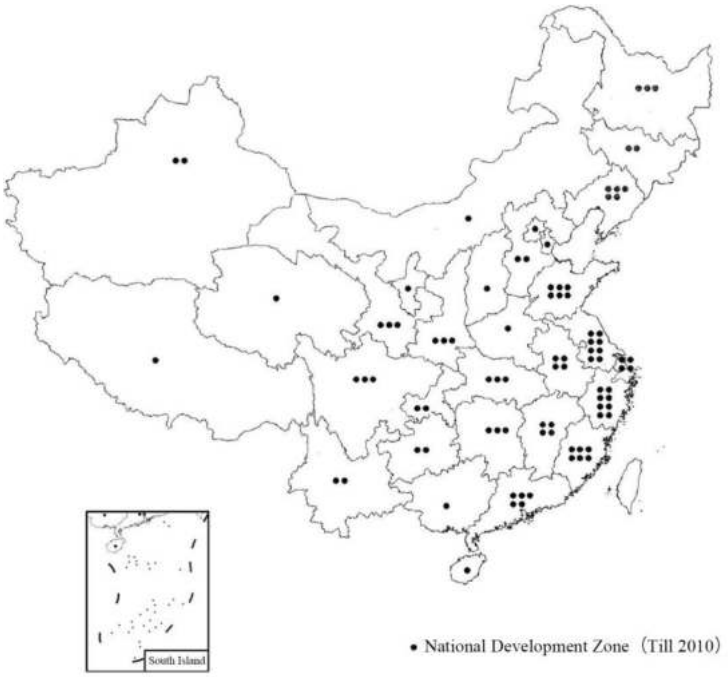


Figure 3. 2012 The Distribution of The National Economic and Technological Development Zone

**b. The Construction of Gated Community Space**

With the implementation of the reform of the commercialization of urban housing in 1998[8], the newly increased demand of the urban housing was introduced into commercial housing market, and then the explosive development in the real estate industry appeared (Figure 4). Of these, more than 80 percent of urban residential communities have adopted a new type of gated community (Yang, 2011). After the implementation of the Bid Auction and Listing[9], and in the face of huge profits, local governments and property developers as well as financial institutions form an alliance for the mutual profit. A large number of gated communities sprang up. Besides due to the genetic transmission of culture of unit compound[10], because of the complete and clear land property right, overall planned gated communities has the advantage of making good use of the land and providing better security management, and offering a better living environment (Zhu, 2011). On the other hand, under the background of rapid urbanization of Chinese cities, the public infrastructure and the supply and management of public space is lagging behind, the gated community to some extent, realize the compensation in private sphere. For example, Beijing's Wangjing area is made up of numerous gated communities, covering an area of 16,000km², and the resident population of 600,000, including schools, hospitals, public transportation. Additionally, the residents are mostly middle-class. Although gated communities have effectively curbed the loss of land rent and the degradation of the environment, and provided a large amount of living space, but also have strengthened the segregation of social class.

[8] Before 1998, the urban housing was distributed free by government or State-owned Enterprises because of the ideology of the socialism. However the housing quality is mismatched.

[9] Bid Auction and Listing is a creative land exchange system, which regulate the land market in an effective way and avoid rant-seeking or free-rider behavior.

[10] Before 1998, the urban fabrication was consisted of Units, which was an unique social-space form. The residents, which often were colleagues or co-workers, dwelled next to the State-owned Enterprises, and the housing with clear wall-type boundary was supplied by the enterprises. It s a social-space form of concentrated power system.

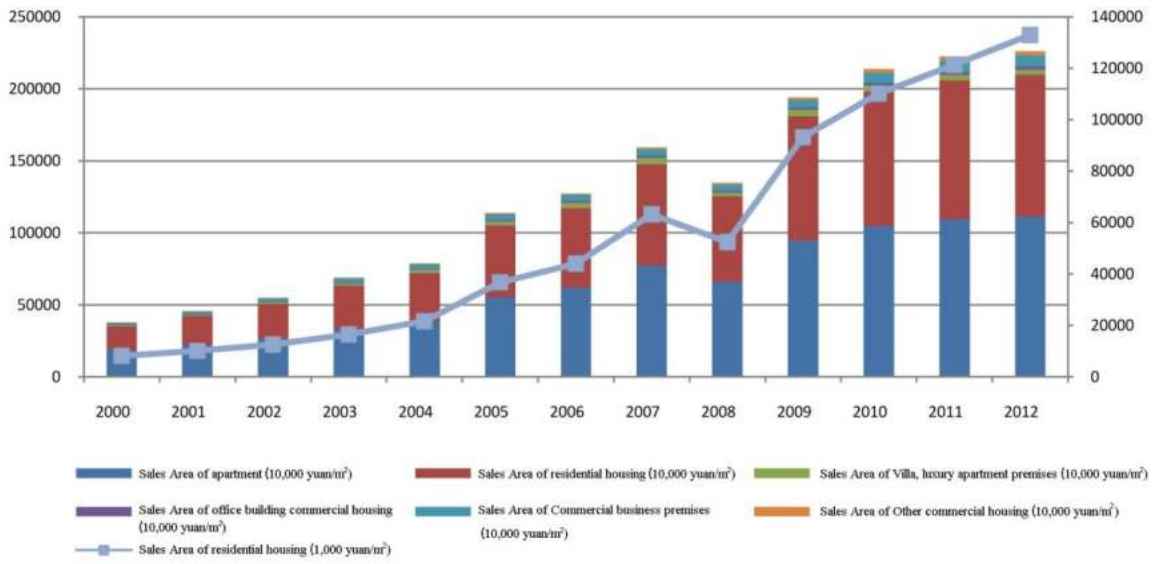


Figure 4. National Commercial Housing Sales Area and Sales 2000-2012

Data Source: Chinese Year Book

**c. The Jigsaw-like Redevelopment Consumption Space**

The redevelopment of the old city area is carried out with the construction of the peripheral new town in China. The center of the city, has great economic potential and cultural value, but because of the rise of land price, depreciation of building, functional aging, and is in great need of renewal. However, the redevelopment of China s old city, deviates from that of Western countries, with the core values of public benefit maximization as the basic goal, and demonstrated a strong tendency to pursue profit, which is also the behavior of Urban Entrepreneurialism the threshold of huge investment, and the high costs of transaction, made the local government introduce the market-oriented mode of operation into the practice and cooperate with the property developers and they were always profit-oriented, which formed the compounding consumption space like jigsaws in the center of cities. The profit-oriented commercial led to the fracture of the traditional culture, and its unbalanced benefit tendency has increased the unstable factors of society.

**d. The Grand Space of Big Event Marketing**

In the competition of globalization, big event marketing becomes a kind of typical behavior of Urban Entrepreneurialism of local government. Big event marketing as the engine of leapfrog develop of the new district and the renewal of old city is attached great importance by local government. Especially the big event marketing with great attraction, the support of central government, the high exposure in short time, and promoting the image of the city, becomes the plundered object of local government (Yu *et al.*, 2011). Such as the integrated marketing and site construction of the Beijing 2008 Olympic Games, the site construction of 2010 Shanghai World Expo, sports new town of Nanjing 2014 youth Olympic Games Olympic and so on. These projects of urban spatial development

and the improvement of urban competitiveness have tremendous impetus to the development of urban space and advance of competition. But because this kind of project, with obvious external political tendency, often ignores the social, economic, and space effect in the process of planning and construction of the urban and many of the reasonable natural evolution of urban space gave way to the project of big event. At the same time, the excess supply of the space and economic investment tend to be inefficient, and the plunging deeper into indebt as well.

**e. The Restricted Property Housing and Urban Villages**

The Restricted Property Housing[11] and Urban Village , existing extensively, has no direct relation to the Urban Entrepreneurialism and is the consequence of the rational bottom rural to the Urban Entrepreneurialism . Because of the existence of land binary institutional system, farmers can't share land benefit from existing one-sided system. In the face of the local government s monopoly on land market and radical Land Finance behavior, rural villagers can game against city for the rights and interests of collective land. To some extent, the Urban Village and Restricted Property Housing , under the mismatch of the market economy system, is a rational strategy of the rural to fight against Urban Entrepreneurialism .

*3.3The Transformation into Elaborating Management of Local Government: From the Urban and Rural integration to the Stock Land Optimization*

The first decade of the new century, the incremental expansion of the city, under the maintenance of the Land Finance mode, strongly promote the urbanization process in China. By the end of 2011, the rate of national urbanization surpass 50% to 51.27% for the very first time, which means China has entered the internationally recognized curve of urbanization turning interval, and the rate of many big cities even surpasses 80%. On the one hand, because of the constraint from the red line of the national 1.8 billion mu of arable land, the supply of massive new construction land has become the past, and the growth of the urban construction land meets its bottleneck. On the other hand, a lot of extensive stock land, with disorderly and low economic efficiency in the rural and urban areas is in desperate need of promotion. Both inside and outside pressure forced local government to improve the paradigm of elaborating management

[11] Restricted Property Housing refers to the housing construction in the rural collective land, did not pay the land grant fee and other fees, its property right card is not issued by the national housing agency, but by the township or village government. The reasons of the widespread of can be summarized in three aspects: (1) Commercialized urban housing price is much higher than Restricted Property Housing . (2)Farmers can build their own house and operate it on their collective land according the current Land Management Law. (3)Building a Restricted Property Housing is need not to pay for any property transfer fee. Also the profit of operating or selling the Restricted Property Housing is much higher than the compensation fee by the urban government who always willing to purchase rural land at very low price.

**(1)The Practice of Urban and Rural Integration**

In the process of urbanization in China, the floating population, especially the rural migrant workers are the main force of population growth of the urbanization, and it is true that the growth of towns is accompanied with rural shrinking. Because a large number of migrant workers go to the cities for jobs, the phenomenon of hollow village become increasingly serious (Long *et al.*, 2009). However, the barriers of current land institutional system to strictly restricting the circulation of rural collective land, the constraint of collective construction land into land market, land-lost farmers getting no expected earnings, the high exchange cost of land circulation, lead to the shortage of land use for urban construction and the contradiction of collective construction land inefficient idle situation. In 2007, Chongqing and Chengdu is known as Urban and Rural Integration Experimental Reform , actively explored the innovational circulation system of collective land. Chongqing's experiment of urban and rural integration, that is, farmers with land at a discount buy a share of the enterprise, and jointly establish company to enjoy share out of bonus; The suburban rural homestead are transformed into urban housing and social security; Under the local government s leading, towns a unified, standardized market of rural land circulation (Land-Stock Experiment[12]), to promote the circulation of the idle collective land (Xie *et al.*, 2010). Through this way, by the end of 2013, Chongqing has realized the circulation of 131500 acres of collective land with the volume of 26.726 billion Yuan, clinching a deal on the average by the price 202,000 Yuan/acre, which greatly activate the resources of rural land, and realize the smart growth of the city and the smart shrinking of the countryside.

**(2) Planning Practice of the Stock Land**

In the process of the spread of the rapid growth of China s big cities, there are a large number of inefficient extensive stock lands. Under the constraint of the land supply, Reining the Increment Land and at the same time Revitalizing the Stock Land has become the only way for the development of big cities which is in need of transformation. In 2005, Shenzhen began to recognize the dilemma of urban development, that is, the limited land space, the shortage of water and energy, the overburdened population, the serious overdraft of environmental bearing capacity. In the new round of master plan, the local government formulated the guideline of Balance Increment and Stock land, Focus on Optimize Inventory . A lot of innovational exploration from planning techniques to the top institutional arrangement had done. They also put forward the concept of the Increment and Stock Land as A Whole . In terms of spatial strategies, they put forward optimization guidelines of spatial structure, that is, outsourcing and inter-linking, pre-control restructuring, creating sub-center and

[12] Land-Stock Experiment means rebalance the volume of urban land and rural land. The quantity of the reclamation rural construction land, including rural homestead and affiliated facilities land, township enterprises land, rural public facilities land, can be exchanged in land market to turn into urban construction land. The increase volume of urban construction must be equal with the rural reclamation land.

density (Zou, 2013). At the same time, along with the Code of Shenzhen Redevelopment in 2008, Shenzhen will take the redevelopment as countermeasures to crack resource bottleneck, promote the stock land optimization, including comprehensive improvement, functional change, demolishing and rebuilding. Also the PPP mode is introduced to these special practices. Shenzhen Land Finance in 2013, was less than ten percent of the total revenue, and the success of Shenzhen s mode is a demonstration which shows the possibility of an alternative way of urban development without Land Finance . Besides Shenzhen, Guangzhou-Foshan metropolitan area of the Three Old Reform and Countryside Unit Planning in Shanghai are the transformation into the elaborating management, in the case of the crunch of resource to deal with[13].

*3.4 Conclusion*

From the above analysis, we can see the change of the external system, including the leading to the deepening of China's Reform and Opening-up by the common role of marketization, decentralization, globalization, in the process of which, the mobility of capital factors constantly enhanced. In order to anchor capital factors to realize the economic growth, the Inter-city Competition also intensifies. The spatial development of small town, starting with TVEs, is a testing ground for the Urban Entrepreneurialism , whose strategic value of space elements becomes important and extends to the urban areas. As the rational choice of the local government involved in Inter-city Competition , Land Finance with strong growth impulse, has created a radical reconstruction of the urban space, also has brought many serious problems. With the end of the radical growth, Urban Entrepreneurialism began to undergo the shift to the paradigm of elaborating refinement. Space optimization, stock land optimization, has become a new trend of development mode within China s urban and rural space. The basic logic framework, that is, institutional system and elements of change the formation of Inter-city Competition Urban Entrepreneurialism space changes , to some extent, can explain the unique phenomena of China since the Reform and Opening-up (Figure 5, Figure 6).

[13] These different kinds of land management method are logically the same, which all aim to realize the smart growth: expanding the efficient high density urban functional land while reducing the inefficient rural land.

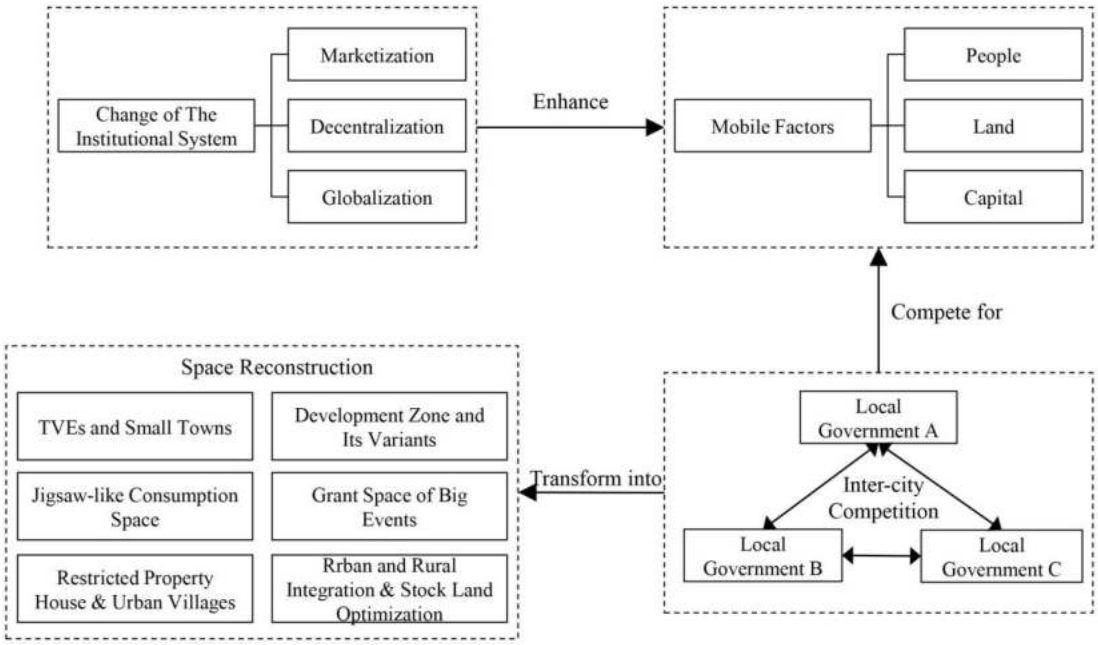


Figure 5. The Logical Frame of Urban and Rural Spatial Transition of Urban Entrepreneurialism

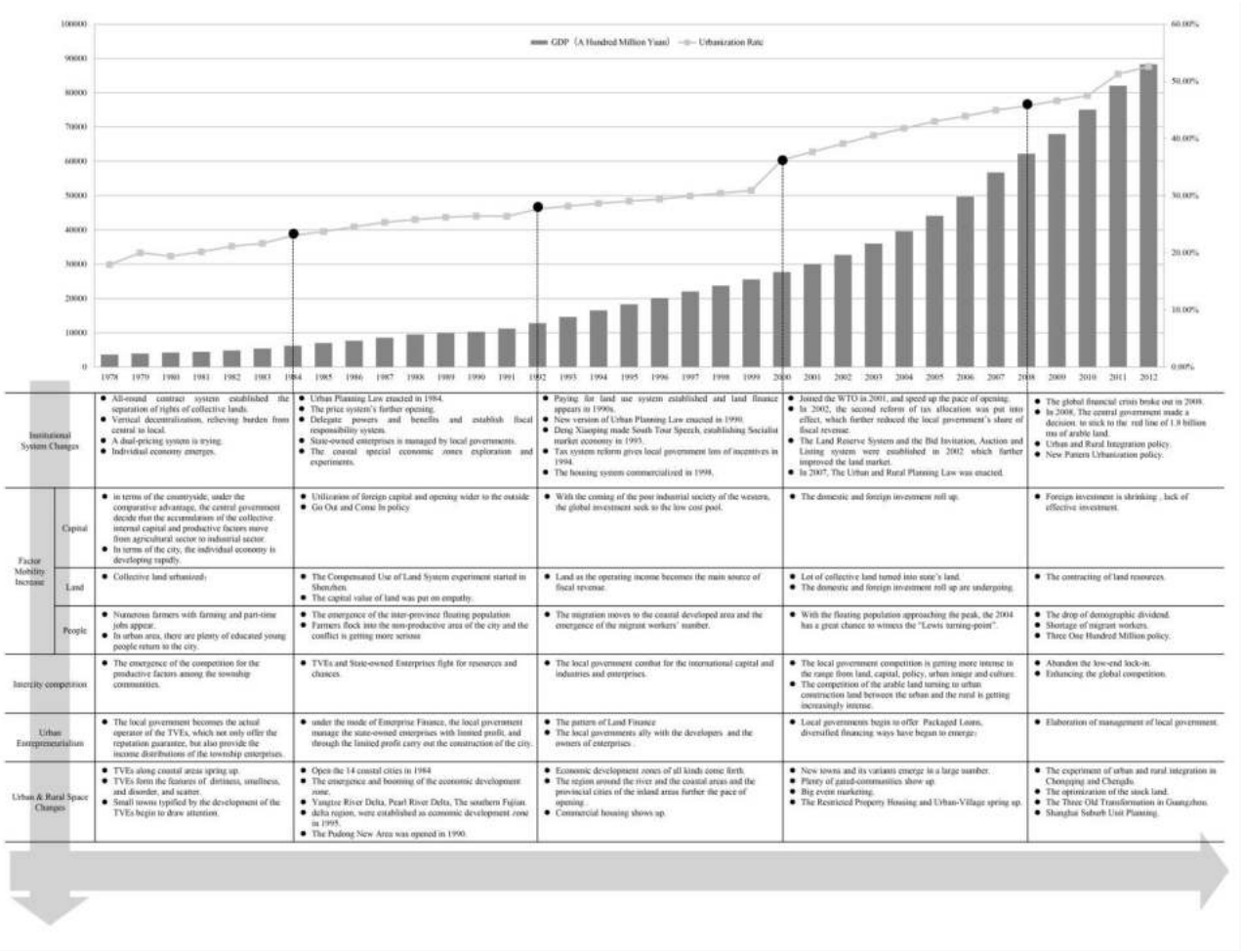


Figure 6. The Logical Process and Timeline of Urban and Rural Spatial Transition of Urban Entrepreneurialism

## 4. Rethinking of the Urban Entrepreneurialism Under the New Normal

### *4.1 Abandoning or Improving?*

The Urban Entrepreneurialism of the local government in China is the product of institutional change in transition, historically and rationally speaking. While from the perspective of the analysis of the Urban Entrepreneurialism we can partly explain the universal phenomenon of the urban and rural space in China, but urban development is a complex accumulation of the action of multiple factors. The only analysis of the Urban Entrepreneurialism has many limitations. A phenomenon of the rapid process of the urbanization process under the growth-oriented context for over 30 years, is worth our reflection. With the approaching of pressure caused by many of internal and external constraints, such as the global financial crisis, the constraint of resources, environmental degradation, the sharp social contradictions, the widening gap between the rich and poor, the phenomenon of rant-seeking government, the growth-oriented concept comes to an end (Zhang *et al.*,

2013). Urban Entrepreneurialism turns from the power of growth in the past into the disorder o re-increase, but that doesn't mean the failure of the Urban Entrepreneurialism . Considered the economic development in the New Normal context at present, the market as the dominant role of factor resources will be more prominent, Inter-city Competition will be increasingly fierce. Under this background, the local government still needs to play the enterprising spirit of entrepreneurs. We thinks that, the abandonment or the maintenance of Urban Entrepreneurialism should adjust measures to local conditions: in the eastern developed regions, local government shall make the economy grow from extensive management into intensive management, and replace the quantity expansion with quality improvement of urbanization, control city stock land, promote economic development and at the same time pay attention to fairness and justice, narrow the gap between the urban and rural, promote rural hematopoiesis mechanism, etc.; In less developed areas in the Middle and West, local governments need to follow and expand the regional preferential policy on the one hand, on the other hand discover and strengthen their own endowment advantages, and vigorously develop differentiated competitive advantage, protect the ecological environment, improve the infrastructure, refine the living conditions in order to promote local urbanization and the backflow of urbanization of the population

*4.2 How Urban Planning as A Technical Tool Deal with the Urban Development*

The development of China s urban planning is accompanied by the mainline of deepening of the Reform and Opening-up (Yang, 2010). Under the framework of the Urban Entrepreneurialism , urban planning and its planners are given a new role, to some extent, marketization is unavoidable and which seeks to maximize the benefit of the client (the local government) in holding certain principles (Zhao, 2013). Over the 30 years of the Reform and Opening-up in China, urban planning, as a technical tool, to a large extent, has become the blueprint of the implement of the space of the Urban Entrepreneurialism . and be bound in the space of Land Finance as the clue to production logically, various types of planning product has obvious growth brand and ambitious political agenda , moreover, became line manufactured products, gradually deviated from its value essence as a coordinator for interests and justice. In the New normal context, rigid constraints, such as resource crunch will force the shift of the mode of urban space development the to the intensive and efficient paradigm, which means that the city planning, in terms of content, methods, management and implementation, is necessary to undergo the shift of intensive and elaborative paradigm. On the other hand, the increase of the market dominance will largely inhibit the discretion of the local government, and the top-down type planning then will be gradually replaced by bottom-up type planning. The demands of the public for the justice also be a bigger challenge to the technical tool of urban planning in the future.

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# TRACK 15

# Culture, Entertainment, Tourism and Planning: Panacea or Threat?

## Track description

Co-chairs: **Jan Schreurs**, **Piotr Lorens**

Global entertainment and tourism industry brought many undisputable economic benefits to many regions. In some cases, this is the only opportunity how to increase the living standard of their inhabitants. Conflicts of values, cultures, life styles of local communities, departure from their authentic evolution process and number of related ethical issues may be the dark side of an orientation on commercialisation of culture, and entertainment and related tourism as an engine for economy. The environmental and cultural resources that were used for establishing the entertainment and tourist industry may be consumed by the same industry, without sustainable positive effects on local population. If this could be the case, what should be the role and responsibility of planners?

# THE COMMERCIAL PRESERVATION OF CHINESE HERITAGE: A POISONED PANACEA FOR CITY MODERNISATION

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Keywords: heritage preservation in China, demolitions in China, urban planning in China

**Abstract**

*In China the entertainment and tourism industry, united to heritage preservation, offers today an unmissable opportunity to increase the living standard of cities. To this end a systematic use of the demolition and reconstruction of vast historical areas became both the keystone of a development policy and the paradigm of a rudimentary culture of conservation at political and technical level. This paper proposes a reflection on the multiple causes of this phenomenon, from the most obvious (the strength of the housing market, the collusion between private and public interests) to the less evident: the opaqueness of land market, the subordination to political power, the conceptualization of heritage in the Chinese tradition.*

*To properly focus on the operational context of the demolition and reconstruction works in historic districts, the text compares some relevant aspects of the political system, the existing legislative framework and the technical tools adopted. Also, with reference to some significant operations the paper highlights how the demolition remains totally controlled by the real estate market and needs to be rethought as a political tool in order to target effective strategies of rehabilitation. In conclusion, the text highlights as in the process of preservation the field of action of the planners is extremely reduced, as operating within public boards strongly affected by a marked oriented policy and scarcely interacting with stakeholders external to the institutional power.*

## 1. To be or to seem, a difficult identity

Nowadays we are used to the everyday chronicle offering a vision of China as a place of great contradictions. A place where the huge scale of urban phenomena shows expressive codes that appear among the banality of the images that we think we understand and the complexity of their content. When observing the new developments we are bewildered as we are unable to understand the different meanings and values of the unvarying architecture marked by a played down post-modern style, which replaces a never achieved modern style. In fact it is not post-modern, but what the Chinese generically call the European style (*oulu feng*). We find it on the advertising towers of the headquarters of large companies where it attains its main expression as well as in the singular hybridizations with the local style and in the endless construction of 'modern houses with Chinese roofs', where the vernacular poetic is often reduced to being a faded crown that clashes with the rest of the building.

In historic areas, equally disconcerting are the vast *hutong* which appear perfectly refurbished with all the figurative stock of historical architecture. In fact, in almost all cases, it is not simply a matter of restoring or recovering historical buildings in various forms, but of new buildings reconstructed ‘in style', which produce urban fabrics that do not constitute evolutionary stages of previous types but just their replacement with 'other' urban organisms.

Evidently in the two contexts of intervention, new and historic cities, various policies are implemented, corresponding to two different systems of intervention (in terms of legal framework, technical and managerial tools, actors involved). However, there are strong similarities of important aspects concerning the planning, management and implementation in the two systems (Abramson, 1997; Zhang and Fang, 2004). This is so evident that it seems that the same political and productive machine

is mastering the two processes of city transformation so that they are mainly distinguishable for their figurative outcomes rather than for their specific social and spatial contexts: in the first case the buildings are made in global style and in the second they are in Chinese style. On one hand the buildings are competing at the level of international poetics, while on the other hand they perform the figurative repertoire of historical identity which is seldom truthful. Paradoxically, the use of identity takes place according to a procedure that is similar to the construction of the Florentia Village in Wuqing, Pudong-Shanghai and Foshan-Guangzhou, the largest village-malls of China, where the historic city, stripped of all pretense of identity, assumes brazen connotations.
The condemnation of the destructive fury that wiped out most of the witnesses of a millennial history in less than half a century, by replacing it with a simplified interpretation in many cases, is now widespread at global level. Yet how can such a deep manipulation of the reality of ancient cities be possible, despite the complaints of such a large number of Chinese and foreign professionals and intellectuals?[1] Are only politics responsible for it or are there other reasons? It is hard to find an answer to such a complex question. Certainly a better understanding of the phenomenon could help to correct its distortions. To this end, I think it is useful, with reference to the historic city, to carry out an indepth analysis of a crucial aspect which better understanding could help us to address preservation policies more effectively: the practice of demolition.
Once carried out on a large scale and with surgical rigor, demolition allowed for the systematic deletion of vast historic areas paving the way to the epic of the forced modernization of last decades. It is obvious that its meaning goes beyond mere instrumental function. As observed in countless cases of major urban transformation, from the Pruitt–Igoe housing in St. Louis (mid 1970s) to the Bijlmermeer district of Amsterdam (1990s), demolition is at the heart of the most complex urban strategies where destruction and demolition can be considered as a 'natural process', as something creative" that contributes to urban construction (Thomsen, Schultmann, Kohler, 2011, p.328). Therefore it is worth asking oneself, even in the case of the historical city of China: How can public policies (financial and legislative) be designed to support the practices of deconstruction and recycling as a public 'good' without negatively impacting on the loss of building stock (Thomsen, Schultmann, Kohler, 2011, p. 329) and its cultural value?.

## 2. Marketing the past

The practice of demolition with reconstruction can be considered the paradigm of the immature conservative practice now present in China at political, cultural and technical level.
As a matter of fact demolitions have never been a shocking problem. Only in Beijing, in the second half of the last century, 22.5 km of city walls, 22 towers, dozens of residences and imperial parks were demolished. More than 2,000 temples, which were used as public spaces other than religious sanctuaries, were used for other purposes or demolished (China Heritage Project, 2005). In the same period the *hutong*, an outstanding embodiment of the road network defined during the Yuan Dynasty (XIII-XIV sec.), passed from 3,250 in 1949 to 1,400 in 2004 (Urban Planning Society of Beijing, 2005, p. 80), with many others condemned to demolition; in the two-year period from 2000 to 2002 more than 4.4 million square meters of historic homes were demolished (Cui, 2004). Yet again in 2002, 40% of the urban area included in the second belt of the historical walls (62.5 sq km) was demolished (China Heritage Project, 2005). This relentless process originated in the early years of the People's Republic foundation, when private property was confiscated and the related ownership regime was lost within an indefinite regulatory framework, which has remained the same in many cases.

[1] One of the many battles against the demolition had as protagonists 24,000 homeholders joined under the leadership of the architect Fang Ke and the lawyer Wu Jianzhong. The latter was not afraid to tell to political leaders of his city: "Not even the Japanese invaders ravaged Beijing as you did" (Rampini, 2005, p. 61).

Demolitions are legal. They are empowered by the Constitution and ruled by several legislative acts[2]. In terms of planning tools, since the1990s the most threatening legal mechanism which helps to justify large-scale looting for the historic city is the *Weigai*, i.e. the *Old and Dilapidated Housing Redevelopment Plans*.

These plans focus on interventions of urban regeneration that are not particularly related to historic centers but are suitable for the purposes of preservation. Indeed, thanks to their character of urgency it is easy to bypass the laws and the protection regulations.

As a consequence, the total area of traditional houses in the old Beijng decreased from 1,160 hectares in 1949 to approximately 500 hectares in 2005 (Whitehand and Gu, 2007, p. 650). It is estimated that in Beijing 221 *Weigai* plans involving nearly 1 million inhabitants were approved from 1993 to 2000 , and that between 1990 and 1998 more than 4.2 million square meters of residences in the historic areas were demolished and reconstructed (Zhang and Fang 2004, p. 289).

The inhabitants are usually warned only a month before the arrival of the bulldozers by the inscription 'demolition' (*chai*) painted on the walls of the *hutong.* Theoretically, a part of the residents, established in the plans, are given the opportunity to return to the rehabilitated houses; but since displacements are mainly due to real estate development whose implementation is not subject to specific checks, people have to settle for meager compensation and seek alternative accommodation which is even more precarious than where they lived before (Cui, 2005; Sui, 2006).

In the case of Shanghai the side-effects of *Weigai* are even more relevant. It is estimated that from 1991 to 1997 22.5 million square meters of housing were demolished and over 1.5 million residents were transferred (Zhang, 2002).

These projects led to the replacement of entire neighborhoods, which affected both buildings deemed to be of little historic interest and buildings with considerable historic interest which are carefully reconstructed in order to reproduce their historic characteristics (Figure 1, 2). The few projects that attempt to implement a gradual redevelopment on demarcated areas succumb to the prevalence of major interventions supported by institutions. Basically, among the four building categories identified by Lv Zhou (2005, pp. 170-171) in the *hutong* of Beijing – i.e. (i) buildings under protection, (ii) buildings restored by private owners, (iii) traditional multifamily buildings, and (iv) new residential buildings - only to the third, which is the most widespread, conservation policies do not acknowledge any value.

Among the most negative cases it is important to mention the major commercial areas of Liulichang (1980-85) and Wangfujing (1993-99), whose 'conservation' led to the widening of historic axes and the destruction and redesign of most of the building fabric. However the worst example of the last decade is the demolition and reconstruction of the Qianmen area south of Tiananmen Square (one of the 25 historical and cultural conservation areas identified in the master plan of 1991), which occurred during the preparation of the 2008 Olympic Games (Zhang and Zhao, 2009). This example demonstrates how at the top of the official recognition of the value of the historic city corresponds the greatest degree of destruction, even more than the anti-historical fury of the Cultural Revolution (Layton, 2007).

[2] Rules on the right to land use, expropriation, compensation and demolitions are contained in the following acts: Law on soil Management, amended in 1998, Art. 58: "... the right to use land owned by the State can be revoked if one of the following circumstances is occurring: for public interest and to rebuild old neighborhoods in order to implement plans of urban construction ....."; Fourth Amendment to the Constitution of the PRC, in 2004: "For reasons of public interest, the government can expropriate (revoke) the right to the use of urban land and offer the right compensation according to the current laws and regulations"; Property Act, 2007, art. 42: "... the government can expropriate collectively owned land, the houses owned by entities or individuals on state-owned land and other immovable property"; Regulations on expropriation and compensation of housing on land owned by the State, three versions issued from 2010 to 2011.

In all cases demolition is considered to be an almost inescapable way of establishing a building site[3]. Consequently, 'urban demolition' (*cheng shi chai qian*) becomes a way of increase the stock of urban land, which is not available for development policies as long as it is occupied by dwellings for which people pay only a nominal rent.
The following 'conservative reconstruction' combines all possible images and styles of historic architecture, subjecting it to the purposes of the real estate market rather than to the issues of the true physical and social context. The result is a largely false housing, in which even in the rare cases where all the existing fabric is not demolished, you can not distinguish the original from imitation; furthermore, thanks to aggressive accreditation campaigns, this result is presented as a compensation in terms of public welfare compared to past conditions of backwardness. Therefore it is not by chance that the unfortunate affair of the *hutong* and *siheyuan*[4] (Figure 3, 4, 5) is one of the most popular themes in Chinese conservation literature (Geffroy, 2004).
In fact, here we are faced with the *invention of the memory* and the construction of a past that the country has never come to terms with after the trauma of the Cultural Revolution. It was not possible for China because it passed from that original trauma to the other triggered by the reforms of Deng in 1978. , Therefore one of China's biggest problems today is not having yet embarked on a path of reconciliation with its memory, the same path which once enabled Germany and South Africa to emerge from a tunnel of torn identity.

**3. Demolition: many reasons, any project**

At this point it is worth considering the genesis and forms that produce such an abnormal mystification of the concept and practice of conservation. There are many reasons behind this phenomenon of uncontrollable aggression but not all of them are referable to the most obvious such as the current political economic system, the strength of the real estate market and the collusion between private and public interests. Other reasons are associated to them which can be summarized as follows: (i) the need of local authorities to 'make money' by means of land value; (ii) the subordination of people to political power; (iii) the weak attachment of the inhabitants of the city centres to the place; (iv) the peculiar conceptualization of heritage in Chinese tradition.
The first reason depends on the chronic lack of resources from the State coffers and local authorities due to the huge amount of public works carried out since the advent of the People's Republic in 1949. In those years, the demolition of the historic walls, as well as a distorted political vision, was accelerated by the shortage of building materials: the walls were actually a mine of building materials (Lu, 2011). With the reforms of Deng and the introduction of the dual land regime – relating to the ownership (of State or rural communities) and use (private, public or mixed) - the value of land increased enormously and land marketing became one of the most lucrative segments of the economic cycle of the present socialist market (Shin, 2009)[5]. Today the sale of land, made possible by the forced

[3] The same method concerned modern housing districts to a greater extent as they became quickly obsolete and free from the restrictions for historic areas. Rehabilitation hardly ever matters but demolition and reconstruction are now in the third generation (1950s, 1980s, 2010s).
[4] A *hutong* is a road or alleyway mostly present in Bejing and northern Chinese cities,that gives the name to the urban district it serves. A *siheyuan* is a traditional courtyard house with one or two-elevations which opens onto a *hutong*.
[5] The Constitution of the Republic of China states (art. 10): «The urban land belongs to the State. The rural and suburban land belongs to the rural communities, except the parts of national interest belonging to the State. The houses and agricultural land relating to private use belong to the rural communities. The State can expropriate land for public interest according the laws, giving a compensation to the owners. To any institution or person is forbidden to occupy, sell, buy or transfer

expulsion of the inhabitants, has become the main source of revenue of local authorities. Its high income potential and the fact that the managers of local authorities can earn money in both a legitimate (by benefits linked to productive operations) or an illegal (by collusion) way, results in a land market that does not meet obstacles even in historic areas, where entrepreneurs can demolish everything except for a limited number of listed monuments.

The second reason is due to the relationship between people and power and the civic culture that corresponds to it. The inhabitants put up with the the decisions of the policy makers with resigned acceptance and do not have the strength to oppose such a threatening and unimpeachable power. Some regulations require that plans are subject to publication and public consultations before approval, such as the Law concerning urban and rural planning (arts. 26 and 46, 2007) and the Ordinance for the preservation of historic cities and towns (2008), yet they have no real cogency (Li, 2013).

However, the conflict over the right of residents to stay in their own home is the issue that mostly affects the inhabitants and power[6]. Although this topic is under a specific legislation, reported by the media and the subject of a number of studies (Davis, 2004; Li, 2013), it always ends up in the same way: in front of a solid cross-alliance between local authorities and real estate developers for managing and implementing new developments, the inhabitants are isolated and without bargaining power (Wu, 2012).

Even the 'Community of the inhabitants', an administrative body working at the level of individual municipal districts helps to bridge this gap. Instead of representing the civil society or social groups involved in a bottom-up process, it is indeed limited to functions that are fully dependent on local government and plays an administrative role of social control (Bray, 2006).

There are some proposals to put an end to this situation as to increase the compensation rate for the evicted inhabitants and to promote citizen participation through an effective application of laws. Meanwhile there are more and more protests and some people, like John Friedman, even see a significant growth of civil society (Walcott, 2007). Nevertheless, the silence of the inhabitants finally prevails, unable to stem the disruptive mercantilism of urban policies (Cui, 2005).

The third reason is related to the phenomenon of the weak social roots of the inhabitants. If urban growth has not fully spread out into the endless suburbs and since the advent of the People's Republic has been overflowing in the heart of the city, it is due to the fact that the city had to act as a clearing house in order to cope with the large migrations from and to the countryside caused by the traumatic development policies of the last fifty years. This has meant that different and unstable populations have significantly changed the cities without maturing a strong sense of belonging. Two other factors are responsible for this incomplete maturation: the inhabitants' uncertainty regarding the workplace and the future of work itself. Moreover, the fact that the most of the housing is still owned by the State, which permits people to inhabit the houses but may want them back (for example for the implementation of a *Weigai*), has discouraged people from investing in them both materially and emotionally.

In this vacuum of stakeholders and identities the nouveau riche have an easy game to play in occupying the valuable areas of the center, flanked by disinformation campaigns that convey a narrative of the protection in a purely commercial way.

Apart from the three well recognizable reasons above mentioned, and as such subject to quite strong social conflicts, there is a fourth less evident but not less important: the reason linked to the particular conceptualization of heritage buildings according to Chinese tradition. In order to discuss this point it is important to note that the idea of cultural property established in the World Heritage Convention

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illegally the possession of the land. The land right of use may be transferred according to the laws. Any institution or person is required to use the land in a rational way».

[6] Forced evictions are common in rural areas and are a great source of conflict and public protest. According to some projections, up to 65 percent of the 180,000 annual 'mass incidents' in China derive from the opposition to forced evictions (*Forced evictions in China*, Wikipedia).

(WHC, insofar) (UNESCO, 1972) cannot have a universal consensus. In fact the concepts of historical heritage and identity that are stated in the WHL, are differently conceived in the various cultural basins and this leads to significant consequences.
Europeans, as Augustin Berque (2007) underlines, are in favour of protecting historical assets in their materiality, while China prefers the conservation of witnessing aspects: in fact, it is argued that these latter are able to objectify the contents of a historical asset rather than the historical asset in its original physicality. In this sense, paradoxically from a western point of view, a painting of the Qing Dynasty has more value if it is endowed with a comment by a famous intellectual or important politician written on it.
In particular, in China «… the preservation of material forms is not important. It is for that reason that the Chinese can destroy so easily those built forms which, in Europe, would be preciously preserved, or, by the same token, can build new ones with no consideration for what the Europeans would call authenticity», i.e. that of the original matter (Berque, 2007, p. 7).
Having said that, we do not want to affirm that the different conceptualization of cultural heritage in China explains and justifies the current destructive tendencies, but just that a certain habit to the ordinariness of the demolition and reconstruction of historic buildings, associated with traditional practices and rituals, it might have made it less reprehensible. Demolition cannot have appeared to be in sharp contradiction with the culture of conservation especially in the case of small-scale interventions and ordinary urban fabric,.
Moreover, it is worth noting that in China the cultural value of a historic asset is recognised primarily at institutional level. In China the process of application for admitting a cultural heritage to the WHL is certainly not managed by local players, as recently occurred for the Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato (Italy), but originates from a central government policy which is strongly related to turistic development. Therefore when the inhabitants of the historic town demand a best quality of life in the *hutong* and the functional improvement of the courtyard houses, instead of their reconstruction, they make a request concerning a cultural value without official recognition and succumb to the market forces: an example of this is represented by the case of the Plan of Conservation and Development of Nanluoguxiang in Beijing (2006-2020) (Shin, 2010).

## 4. Aporias and practices of reconstruction

At this point, if the lens of cultural relativism acknowledges some kind of historical foundation to the practice of demolition and reconstruction, under what conditions is it still admissible? In order to approach this question let us start by referring to two temporal levels, the past and the present: in other words, before and after the official designation of the buildings and properties of cultural value as heritage to be protected.
In the past, when referring to buildings of recognized cultural value and public interest, whether they were civil or religious, with a stable typology and function over time, demolition-reconstruction was ensuring the transmission of the property (or asset) and its meanings at two levels: by fully restoring it returning to its physical constitution (as a no longer original building yet identical to the original) and by the permanence of its function. The operation was meaningful for the intimate coexistence of form and function, of a stable form over time associated to an immanent and historical function which is considered as the primary content legitimizing the meaning and value of the property (or asset). The buildings affected by these practices were not identified according to selective criteria but simply inherited by tradition. What today appears to be an ambiguous form of conservation / modification was then justified by a common feeling entirely coherent with the maintenance of that tradition.
If we come to the present, with the advent of legislation on this matter, we can schematically distinguish two levels: formally recognized assets of historical and cultural value and assets with less or no official recognition.

With the exception of few cases, the first level includes buildings whose modes and objectives of conservation assume that the physical constitution of the buildings is restored or reproduced by imitating the original (but with typology, materials and technologies that may differ from the original) and that the existing functions can be changed.
This is the case of the buildings in the Forbidden City in Beijing. There the process of reconstruction loses any ritual/traditional meaning since the function, the primary expression of the continuity of their value over time, is now a touristic function: in fact, a profound and objective transformation took place. Once the functions of the buildings 'recovered' by reconstruction changed, their testimonial character was merely allusive. Moreover, reconstruction is often no longer philological but falsified – by new materials and techniques – and is oriented towards reproducing a vision of national identity subject to tourism interests.
Another problematic case was the reconstruction of the gate (and tower) of Yongdingmen in Beijing in 2004, situated to the south of the historical axis of the Ming dynasty. The gate, which was the largest gate in ancient Beijing, was erected in 1553 and then demolished in 1957 under Maoist urban modernization. Its recent reconstruction is supposed to follow the principle of the replica of the original, by using the same materials and techniques. Yet, with the aim of reviving the 7.8 km of the long city axis, which has been freed of the structures that were interrupting its perspective, the gate was not rebuilt in its original place!
An even more striking and common example is the Yellow Crane Tower in Wuhan. The building is one of the four Great Towers of China, built in 223 (Three Kingdoms period), and has been restored or rebuilt 10 times. The last time it was rebuilt using modern materials and with the addition of a lift in 1985, but on a hill situated in the city center one kilometer from its original site. Today it is 15 meters wider, it has 2 floors more than the original 3 and offers visitors an amazing view of the city and the Yangtze River. Nevertheless, regardless of its authenticity, it is considered the same tower which was sung in the poems written by the poet Cui Hao in the eighth century.
Did its reconstruction follow the principles of tradition or not? I think we can answer yes up to the penultimate reconstruction, while concerning the last reconstruction (1985), which was unacceptable from a western point of view, I think that the case is more complex even from a Chinese point of view. In order to evaluate the matter we should better understand many aspects of cultural context which is not an easy task for a foreigner. In fact identity is an issue that affects not only the property (or asset) in itself but also the ways in which it is identified and recognized by various social bodies, by the various representatives and groups with political and institutional power; but unfortunately little is known about this aspect.
However, it is reasonable to state that in order to be deemed conservative or not, an intervention must comply with at least two criteria: that it does not modify the cultural and historical values of the property, and that the economic management of the operation is carried out firstly according to public interest. In the past the traditional practices of reconstruction were controlled by those who were entitled to ensure the continuity of functions, whether they were monks or government officials; and the same techniques and materials of construction were adopted. On the contrary today's practices lead to the erection of buildings which are dissimilar in their physical components and functions, therefore how can they be considered as being conservative?
There is much debate on this issue and the Principles for the Conservation of Heritage Sites in China (China ICOMOS, 2002) could represent a basic reference for it. Yet there is a problem, the ICOMOS China is managed by the State Administration of Cultural Heritage (*guojia wenwu ju*), which reports to the Ministry of Culture. Consequently, unlike the Burra Charter (on which these Principles are based), which was developed by a NGO and is open to the debate among individual or associated experts, in this case the principles are defined by an institutional body and experts who are not

employed by the administration are not allowed to participate: it turns out the dominant role of the State in the decision-making procedures of conservation (Qian, 2007)[7].
It follows that a reflection on this matter is lacking (few people know of the existence of the Principles of ICOMOS China) and that the debate on conservation prefers to deal with other issues as those cultural tourism (Leah et al., 2008; Li and Hou, 2011; Wang and Bramwell, 2012).
On observing the second level, that is the buildings whose value is approximately or not at all recognized (the most prevalent category in historic areas), we find that interventions that affect them are not defined according to their objective attributes of quality, which are actually overlooked, but on the economic return that they can provide. This attitude leads to the modification of those parts, whether they are big or small, built or un-built, that contrast with this goal. The traditional market streets belong to this category, as they are usually widened to build more attractive shopping malls and private residences.
The transformation of the latter is facilitated by a particular condition: the interventions required to provide a functional updating of the dwellings according to new living standards has become the Trojan horse of reconstruction.
This fact goes against the *siheyuan*, i.e. that architectural unit that straddles between noble and ordinary architecture, thus marking out the building fabric of the Chinese city. In its buildings as in its gardens calligraphic compositions, decorations, floral elements and furniture are distributed, through which the owners passed down family anecdotes and traditional Chinese stories. They are narratives and metaphors whose meanings can only be fully understood by an increasingly smaller number of people. These narratives should be preserved together with the built asset but unfortunately they are deleted in the context of fast reconstruction. Therefore in this case, despite the maintenance of the residential function, the delicate complexity of signs and meanings of memory disappear. (Lev, 2005).
However, there are significant experiences that have attempted to reverse this approach, by assigning a key role to the maintenance of existing historic fabric within the cultural and social sustainability of preservation: they all refer to projects and actions supported at international level. Among these the intervention for the rehabilitation of the sector of Wenhuali in the historic center of Yangzhou can be cited as an exemplary case, which was implemented by GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit). The project, funded by GTZ and based on a participatory implementation which overcame significant initial resistance, proved to be very successful, thus establishing itself as a widely repeatable process and method (GTZ, YMG, 2007). Regrettably, the same administration of Yangzhou, which continued the work on the area of Dongguan, betrayed this approach by using renewal measures based on tourism and real estate development, resulting in a commercial, completely rebuilt building fabric and in the displacement of the original inhabitants and traders: once again a top-down process planned and managed by the government and implemented by a real estate company owned by the same government (Li, 2013).

## 5. Conclusions

The reflection presented in this study was carried out in respect to certain aspects that appear relevant in relation to the political context, the regulatory system and the technical tools as well as to certain operations implemented in the historic city. The main issues observed can be summarized as follows:
• In China, the policy of conservation is based on the initiatives of only institutional bodies. It is established on a rigid yet adaptable legal framework, in which it is difficult to distinguish between declarations of principles, objectives, permissions and prohibitions. As such, it does not unequivocally

[7] These limits are worsened by a conservation conceived only in relation to monuments and monumental sites, nonetheless moveable if required by important national developments: "... when a major development project of National importance is undertaken and relocation is the sun of means of-saving elements of a site may they be moved in their historic condition " (Principles ..., art. 18).

address the various components of the protection system (i.e. political, administrative, social, real estate-oriented and so on), and it paves the way to error and manipulation legitimating a not transparent governance of the preservation policy.
• The backwardness of the intervention modes proposed in the various recovery tools corresponds to an insufficient maturation of a specific technical culture. Analysis describing the context to preserve with adequate cognitive frameworks concerning the physical, functional, economic and social aspects is lacking and a theory that puts land use and urban fabrics in accordance with the conditions of their transformation is required. The usual methodology of intervention, bare-bones, gives way to the reconstruction of a historical urban set where it is difficult to distinguish true from false.
• In a cultural context where traditionally the historical properties are recovered by means of the reconstruction method, neither a restoration theory nor a method of recovering at urban scale have been developed. However, in the light of current conditions, the traditional approach is no longer valid. The country is therefore encouraged to update the meaning and vision of cultural heritage together with the relative policies.
• At various levels of government there is little intention to involve the local social forces in the conservation plans. This is reflected by the low consideration of both the players in the field and the conditions of transformation, which gives a huge operational power to demolition with reconstruction and results in the space being used in rough and speculative ways. Therefore it comes a political short-circuit: if there is no increase in the bottom up dynamics, it will not be possible to stimulate a review of government preservation policy; on the other hand, if there is not a significant development of bottom up initiatives there will not be openness in government policies.
• The widespread practice of demolition is also the result of an incomplete maturation of the complexity of history and forms of identity: China still has to come to terms with its history, which was denied during the Maoist era and left on the shelf during the decades that followed.
In conclusion, a revision of the current destructive approach is not sufficient for addressing the main issues of providing new meanings and functions for Chinese historic cities. A more comprehensive discipline of conservation as well as a more far-sighted vision of the future of the cities is required. A vision that is able to properly legitimate the reasons, objectives, forms and contexts of demolition, ranging from urban restructuring, such as that of the *artiste démolisseur* Haussmann, to the removal of accretions in the plans of Cervellati in Italy. In fact the issue of demolition is so multifaceted that the relative problems can be only solved by means of an interdisciplinary approach. In other words, demolition must be conceived as an instrument of a political action, which is able to address specific strategies for the enhancement and development of historic assets, which must be saved from political ideology and pure real estate market.

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Figure 1. A Hutong in the north of Beihai Lake. The area was totally demolished to rebuild a commercial district. (photo Marlène Leroux)

Figure 2. Luo Guo Hutong before its transformation in a commercial street. This Hutong was renovated step by step following the market opportunities. The original function changed, the population moved out, architecture has been distorted; yet some traces still remain like old doors, some architectural elements and the original dimension of the street. (photo Marlène Leroux)

Figure 3. Gateway of a Siheyuan in a Hutong. (photo Marlène Leroux)

Figure 4. Courtyard of a Siheyuan partially preserved in Houhai area in Beijing. (photo Feng Wei)

Figure 5. Courtyard of a Siheyuan filled with various small extensions that meet the growing needs of living space for more dwellers. (photo Marlène Leroux))

# CONSERVATION AND DEVELOPMENT METHODS OF HISTORIC VILLAGES: A CASE STUDY IN CHINA *

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**Abstract:** *At the early stage of the conservation of historic towns and villages in China, government basically focused on protecting the material space. At that time, tourist industry did great effect to help the historic towns and villages to survive. But, in the process of the rapid urbanization in China, Some of them are turned into tourist attractions without control. The contradiction between protection and development become more and more significant. They are facing the problem: how to balance all the factors? This paper studied a typical case in Jiangsu province, China.*

*Frist the paper summarized the general planning methods during the main stage of conservation development in China. Secondly, the paper studied the current status of the typical case, and generalized the problems under the current conservation planning system, such as lack of safeguard mechanism to carry out planning, stress of land-use transformation, excessive tourism economy, and losing of the traditional lifestyle. Thirdly, the paper analysed the need and effect of different members involved in this case. At last, to solve these problems and balance different kinds of need, the paper presented three planning methods: first, put tourism land-use outside the core protection area. Second, set up the environment protection area, to avoid the stress of sprawling of urban area. Third, develop suitable and small-scale commercial activities. And the paper put forward two strategies: firstly, government should pay more attention on the carrying out of the planning, and give more rights to the local groups. Secondly, carry out dynamic planning.*

**Keywords:** conservation and development methods, historic villages, China

## 1 Research background

The conservation of historic villages of China started at the end of 1980s. Investigating the material space was the core work of the protection that time, which only some scholars took part in. Not until the beginning of 21st century, Ministry of Construction and State Administration of Cultural Heritage carried out the evaluation of the historic towns and villages (Qiu, 2014). Since then, 276 villages have been given the title of Historic Villages of China. This makes all levels of government and departments pay attention to the conservation of historic villages.

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In 2013, the Ministry of Construction issued The Conservation Planning Requirements of Historic Towns and Villages, which include planning content, result request, investigation and evaluation. This realized the legalization and standardization of the conservation planning of historic villages. But how to make the historic villages develop sustainably is still a problem. And this problem becomes more serious nowadays. Both government and planners are searching for the efficient methods.

## 2 Conservation planning methods review

### *2.1 First stage*

This stage is the sprout period , which started from the early 1980s to 1994. At the beginning, some scholars brought forward the thought of conservation planning of historic villages. The studies almost focused on the forming process of the whole village, characteristic of the material space and cultural heritage(Liu, 1998). For a long time, the conservation planning was confines to the investigation of present situation.

Near the end of this stage, multilevel conservation method was proposed by Yisan Ruan (Huang, 2014). Based on the investigation of architecture heritage, historic village was divided into three conservation areas in this method, which were core conservation area, general conservation area and environmental coordination area. Each of them had different protection intensity and contents. This kind of method helped to protect the historic villages in good condition.

### *2.2 Second stage*

This stage is the foundation period , which started from 1994 to 2003. In this stage, the central government put more emphasis on the conservation of historic villages. And they started to study how to formulate the standard for it. In 1994, The Specification of Conservation Planning of Historic City was issued, which the conservation of historic villages was included. And the conservation planning of historic villages adopted the conservation pattern of historic cities(Yang, 2009b).

During this stage, the conservation planning method was further improved. Conservation framework was formed, which were conservation elements, conservation theme and conservation structure. This method was derived from the conservation of historic cities. It further improved the multilevel conservation method. And it became more comprehensive. It also influenced the formulation of planning standard.

### *2.3 The third stage*

This stage is the development period , which started from 2003 to 2013. Since 2003, Ministry of Construction and State Administration of Cultural Heritage have carried out the evaluation of the historic towns and villages of China. This symbolized the conservation of historic villages entered a

new stage. In another word, the central government used this method to encourage the society to recognize the importance of conservation of historic villages. In 2008, the Conservation Regulation of Historic Cities, Towns and Villages were promulgated, which stipulated that historic villages can t get the title without the conservation planning finished (Huang, 2014). This helped to encourage the local government to carry out the conservation planning.

In this stage, the central government integrated the core content of conservation planning of historic villages. At the same time, China entered a phase of rapid urbanization. The contradiction between protection and development become more and more significant. Because of this, a lot of scholars began to looking for new approaches. According to the research data, the research mainly focused on building science, culture and tourism (Huang, 2014). Tourism has become an economic method to help the historic villages to survive. But this economic method created problems, such as environmental pollution, recession of local culture and so on(Yang, 2009a).

### *2.4 The fourth stage*

This stage is the adjustment period , which started from 2013. In 2013, the Conservation Planning Requirements of Historic Towns and Villages were enacted. It standardized the conservation planning of historic villages. At the same time, planners started to try new methods to solve the new problems, such as establishing GIS conservation database, using eco-technology and so on.

## 3 Typical case study

The paper studied the Dou villages in Nanjing, which is located in the southeast coast of China. Because of the rapid urbanization, this historic village is at the edge of destroy. And many factors clash and work together in it.

### *3.1 Location*

Dou village is located at the southeast of the main city, which is one of the economic prosperous cities in China. It is populated by descendants of the workers who built the Nanjing city from Ming Dynasty. The history of the village is connected with the city (Figure 1). Because of the spread of cities, it is facing the stress of land-use transformation. At the same time, it is facing the tendency to become a tourist attraction, because the will of the local government, who has made some of the historic villages tourist attractions.

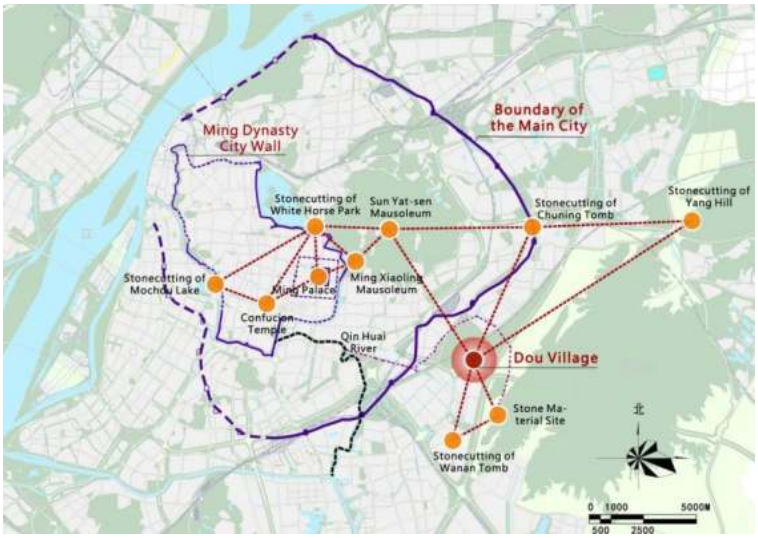


Figure 1 Location of Dou Village and Heritages Built by Natives of Dou Village

### *3.2 Historic factors*

Historic factors include historic buildings, historic streets and alleys, historic environment factors and ancient trees. According to the investigation, there are 835 buildings in this village, which include 81 historic buildings and 754 normal buildings. All the historic buildings were built before 1980. Because of lack of money, some of them are at the edge of damage, which were made of stones. And they scattered among the normal buildings (Figure 2). For this sake, it s very difficult to get the title of historic villages of China. In other word, it can t get special conservation funds from the central government.

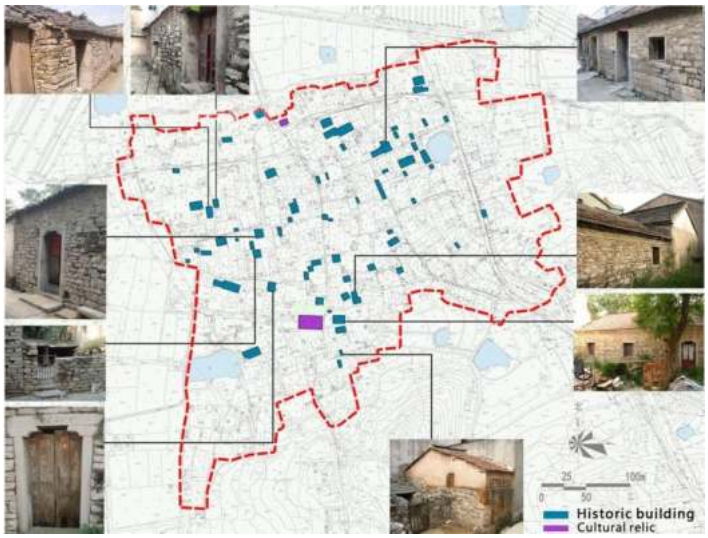


Figure 2 Distribution of Historic Buildings

Unlike the historic buildings, most of the historic streets and alleys are kept in the old way. And this village still is surrounded by farmland and small hills, which helped to avoid being invaded by the city. The other historic environment factors locate in the middle of the village, which include two Cultural Relics of China.

### *3.3 Land-use and economic condition*

According to the survey, 80.92% land of this village is Residential Land, which is 11.24ha (Figure 3). The second-largest land is Road and square land, which is about 11.45% of all. And this village has a small amount of Industrial land, about 2.45%. The others are Municipal utilities land, Cultural relics land and Commercial land. According to further investigation, the stress of land-use transformation is from the outside influence. Because of urban expansion, the land values of the other villages around Dou village increased rapidly. Most of them were turned into high density urban residential land. So the local government and some of residents want to get economic benefits from the land, which is quite attractive.

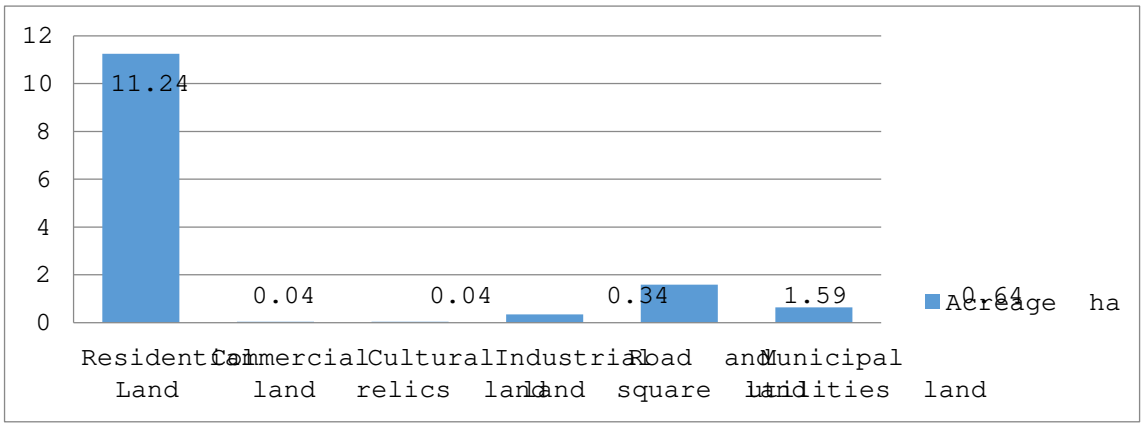


Figure 3 Land Use of Dou Village (2013)

In 2013, the average monthly income per person is 2000RMB. The number of low income people is approximately 62% of all (Figure 4), whose income is below 2000RMB. Some of them rely on agriculture for income, especially the aged. On one hand, agricultural economic helped to protect cultural relics of the village passively. On the other hand, the low income can t fit the need of them all, which result in the disrepair of historic material space. And the number of higher income people is only 13%, whose income is above 3000RMB (Figure 4). All of them work in the city, and live in the village in the evening. The contrast between this village and nearby tourism-based historic villages is so great. Affected by this, local government and some of the residents have a tendency to choose the tourist economy, though tourist economy caused a lot of negative effects in the tourism-based historic villages.

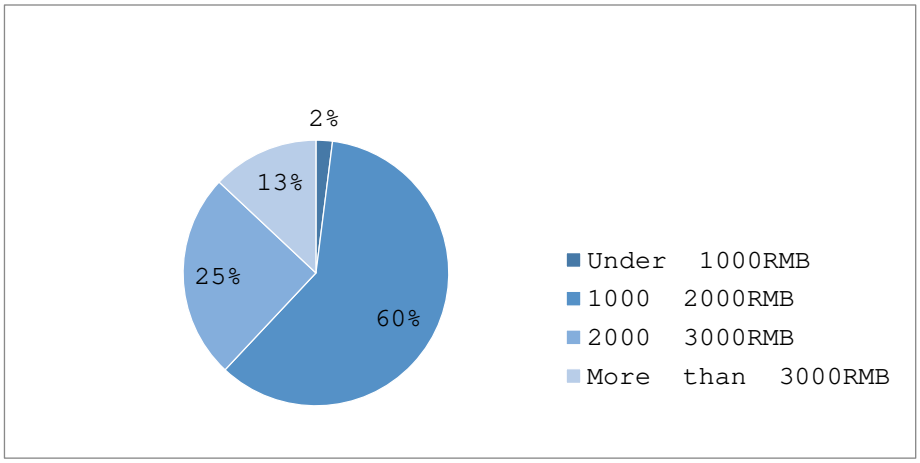


Figure 4 Incomes of Natives in 2013

### *3.4 Population structure and cultural tradition*

According to the official data, there are about 332 households in Dou village, altogether 1040 people. And the number of natives is approximately 98% of all. From the location distribution, 42.4% of the population are located at the west of the village, which is the oldest part of the village. Unlike some tourism-based historic villages, the hollow phenomenon isn t serious in Dou village, though population ageing.

Most of the natives are the descendants of the workers who built the Nanjing city. Some of the traditional festivals are kept here. But the traditional life-style changed a lot. Because of the rise of the industrialized construction way, traditional stone carving skill is on the brink of extinction, which is the most precious cultural heritage of Dou village. Only some old people still keep this skill as a hobby. Losing of cultural heritage and traditional life-style is a widespread problem among historic villages.

## 4 Major participators study

Almost like other conservation planning of historic villages, major participators are local government, superior planning bureau, native, tourist, protection group and planner in this case. And superior planning bureau, tourist, protection group and planner were most concerned with the protection of the historic factors. But the local government and native wanted to develop economic and improve living conditions. And superior planning bureau and local government were the most powerful actors of all, who offered the funds. The others played a limited role in the process (Figure 5).

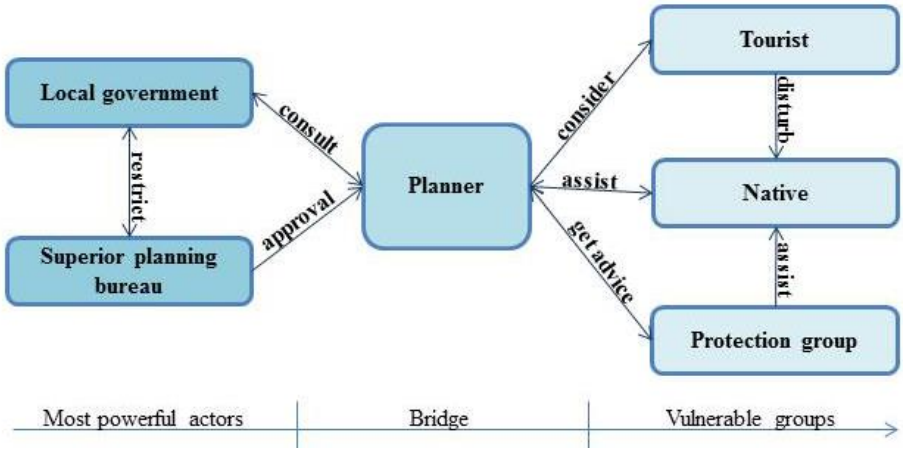


Figure 5 Relationships of Major Participators

### *4.1 Local government*

Local government is one of the most powerful actors in this planning. It not only affords most of the funds for the planning, but also takes charge of the implementation of the programme. So its intention can directly affect the direction of the planning and quality of the conservation work. In this case, the main purpose of local government is economic development. Because tourist economy helped a lot of other villages, it becomes a good choice in the local officers mind.

### *4.2 Superior planning bureau*

Superior planning bureau is the examination and approval department of conservation planning. It is also a powerful actor in this planning. In this case, approximately one third of the planning fee comes from it. Superior planning bureau and local government restrict each other. On one hand, superior planning bureau want to protect this village from being teared down. On the other hand, it has to respect the will of the local government to get the follow-up financing for the conservation work.

### *4.3 Planner*

Planner is the bridge to connect them all. Planners provide efficient conservation and development methods, which the local government and superior planning bureau both seek. In this case, planners have the same aim with superior planning bureau. But they try to find new planning methods to avoid relying on tourist economy, and pay more attention to the will of the natives.

### *4.4 Native*

Generally speaking, Natives are the most vulnerable actors in the process of planning. In this case, most of the natives wanted to develop economic and improve living conditions. Because of the

possibility of demolition, many of them united to struggle for their own rights. So the local government paid attention to them passively. But only a few of them cared about the conservation of the village. Because if the conservation planning is made, they think they can't get compensation of demolition.

### *4.5 Tourist*

To some degree, tourism has contributed to economic recovery. But the tourists are considered as external factors. In this case, the natives didn t get the benefit of tourism. On the contrary, it disturbed the daily life of the natives for the lack of planning.

### *4.6 Protection group*

In this case, the protection group played a limited role in the conservation planning. It is made up of aged natives and retired officials, who used to work in superior planning bureau. They just can give some advice about the conservation.

## 5 Planning methods suggested

### *5.1 Subarea development*

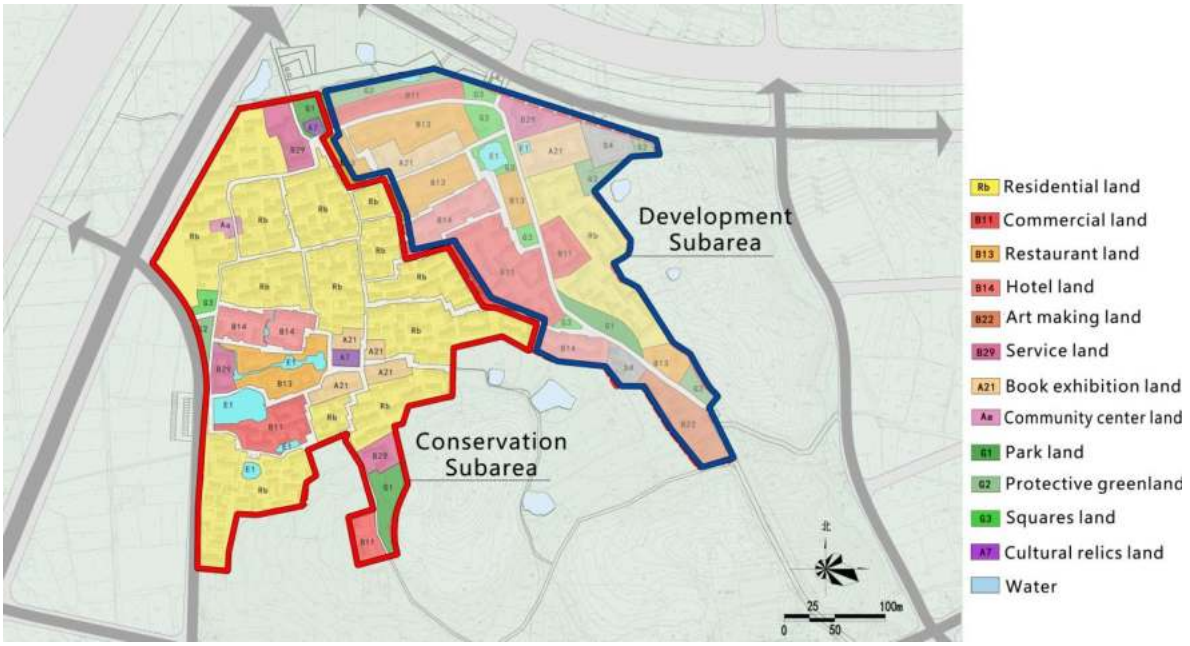


Figure 6 Land Use Planning and Zone Control

First, put economic development land-use outside the core protection area, such as tourism land-use,

commercial services land-use and so on (Figure 6). On one hand, keep the core protection area extend the tradition life-style. On the other hand, through land consolidation, develop suitable economy outside the core protection area to improve the quality of life. Second, strengthen the regulation and monitoring of the develop subarea. The conservation regulations of historic villages have fully developed. But the regulations of the develop part is still under study. And the new developing functions are external factors, which might be inconsistent with the conservation.

### *5.2 Set up the environment protection area*

Set up the environment protection area, to avoid the stress of sprawling of urban area. According to the investigation, Dou village is surrounded by farmland and hills in history, which is still kept the same nowadays. Setting up the environment protection area helps to protect this historic environment element and avoid excessive development of the urban area. And the surrounding farmland is part of the traditional life of the natives. It is also helps to protect the culture heritage.

### *5.3 Unit and small-scale renewal*

Frist, in conservation subarea, use small-scale dynamic renewal (Figure 7). The texture of the space is formed through years. Small-scale dynamic renewal can help to keep the traditional texture in the process. For the high density area, systemize and restore the traditional courtyard space. And give new function to the discarded historic buildings. Second, develop suitable and small-scale commercial activities in the develop subarea. Through house renovation, develop commercial activities step by step. On one hand, this can maintain the naturally formed texture. On the other hand, this helps to reduce development costs.

Figure 7 Units and Small-scale Renewal in Conservation Subarea

## 6 Conclusion

During the research, the most prominent problem is imbalances of the power of the participators. Under the circumstances, the effect of three planning methods is limited. To solve this problem, government should pay more attention on the carrying out of the planning, and give more rights to the local groups. At the same time, government should encourage social organizations to raise funds for the conservation. On one hand, this can ensure the implementation of the conservation program, especially when the local government lack of funds. On the other hand, this might help the local economy develop sustainably. And superior planning bureau should participate all through the program to keep the right direction, and avoid selling the historic village to profit-making institutions.

The conservation program will not end with the accomplishment of the conservation planning. So it is necessary to carry out dynamic planning. Planners should keep on taking part in the conservation program after planning finished. This can assure the successful conservation technically. To some extent, planners connect the vulnerable groups and the power sectors. It is necessary for planners to carry out dynamic planning.

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# A STUDY ON THE ACTION MECHANISM OF CONSERVATION LAWS AND POLICIES FOR HISTORIC TOWNS AND VILLAGES IN CHINA*

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**Abstract:** *In the past 30 years, the conservation of historical and cultural towns and villages in China has greatly developed. On the one hand, this paper reviewed the development, laws and policies system, and action mechanism of the conservation of historical and cultural towns and villages. First, the development of the conservation can be divided into three stages: the beginning stage, the national level conservation stage, and the legal system construction stage. Second, in policy respect, a policy system basing on two laws one ordinance was introduced, including 2 national laws, one national ordinance, several ministerial rules and regulations and over 100 local policies. Third, in conservation mechanism respect, a system of policies was introduced, including historical and cultural towns and v application and approving, conservation planning, administration and financial support. On the other hand, shortages in the conservation were indicated. First, there is lack of ministerial and local policies focus on towns and villages. Second, there are too many administrative government departments and the conservation efficiency is low. Third, there is lack of sustainable development guidance, such as economy, society, population and culture. And these are the fields to be improved.*

**Keywords:** historical towns and villages, conservation laws and policies, action mechanism,

## 1 The development of historical towns and villages conservation in China

### *1.1 The beginning stage (1986-2002)*

The first policy mention the protection of historical towns and villages was made in 1986(Zhao and Wang, 2014). Before that, the protection of historical and cultural cities towns and villages were under the Cultural Relics Protection Law of the People's Republic of China, which was established in 1982(Chinese-People's-Congress, 1982). With the pronouncement of the second batch of historical and cultural cities, the national government suggested establish History and Culture Preservation Districts to protect historical and cultural towns and villages, and set up two selection conditions, which were concentrated historical relics , and reflecting certain historical stage s t ethnic and regional characteristic completely . From then on, the work of provincial grade hist cultural towns and cities selection started. In 1991 Zhejiang Province pronounced the first batch of provincial grade historical and cultural towns, including 15 towns. In 1995, Jiangsu Province

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pronounced the first batch of provincial grade historical and cultural towns, including 4 towns. In 1999, Zhejiang Province Historical and Cultural Cities Protection Ordinance(Zhejiang-Government, 1999) was made, including the details of History and Culture Preservation Districts .

### *1.2 The national level conservation stage (2002-2007)*

The first national grade historical and cultural towns and villages selection started in 2002(Construction-Ministry, 2002). And the <National Historical and Cultural Towns (Villages) Evaluation Standard> was made at the same time, including three major evaluation fields, the degree of original conservation, the scale of current situation, and the certification of value and characteristics.

Table 1 Number of National Historical and Cultural Cities Towns and Villages Approved each Year

| | 1982 | 1986 | 1994 | 2001 | 2003 | 2004 | 2005 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 201 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Historical and Cultural Cities | 24 | 38 | 37 | 2 | | 1 | 1 | 7 | 1 | 1 | 6 | 2 | 4 | 2 | |
| Historical and Cultural Towns | | | | | 10 | | 34 | 44 | 58 | | 38 | | | 71 | |
| Historical and Cultural Villages | | | | | 12 | | 24 | 36 | 36 | | 61 | | | 107 | |

The first batch of national grade historical and cultural towns and villages was pronounced in 2003, 21 years after the pronouncement of historical and cultural cities (Table 1). Although started late, the number of national historical and cultural towns and cities increased quickly in the following years (Figure 1).

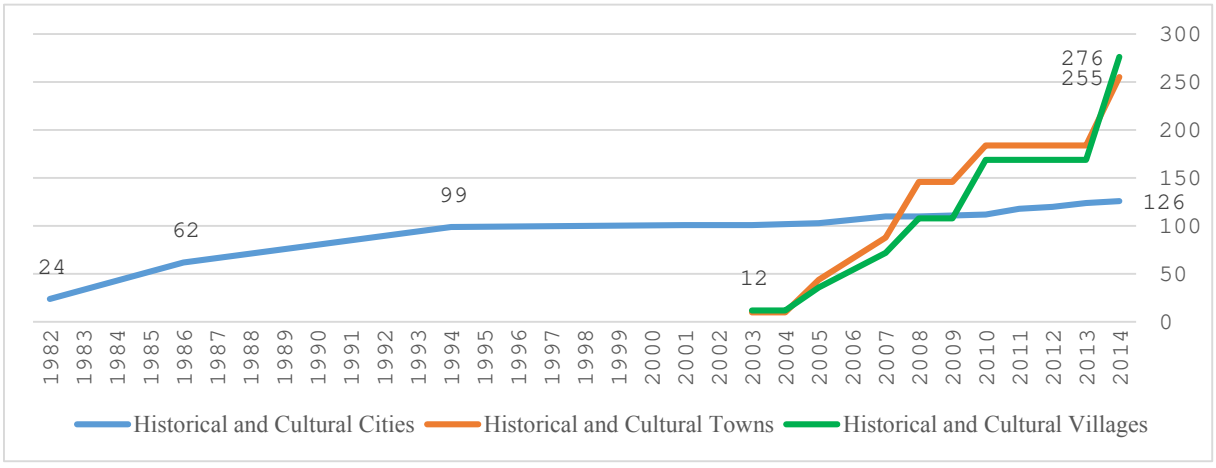


Figure 1 Number of National Historical and Cultural Cities Towns by Year

### *1.3 The legal system construction stage (2008- )*

Urban and Rural Planning Law of the People's Republic of China implemented in 2008 (Chinese-People's-Congress, 2007), replaced Urban Planning Law of the People s Republic of China(Chinese-People's-Congress, 1989). It means the importance of rural area including towns and villages was noticed. In the same year, Historical and Cultural Cities Towns and Villages Protection Ordinance implemented(Chinese-Government, 2008). Together with Cultural Relics Protection Law of the People's Republic of China the legal system of two laws and one ordinance was established.

Also in 2008, the number of National Historical and Cultural Towns overtook it of National Historical and Cultural Cities, and in 2010, the number of National Historical and Cultural Villages overtook it, too (Figure 1). And the numbers are till increasing quickly now.

## 2 Major laws and policies for historical and cultural towns and villages

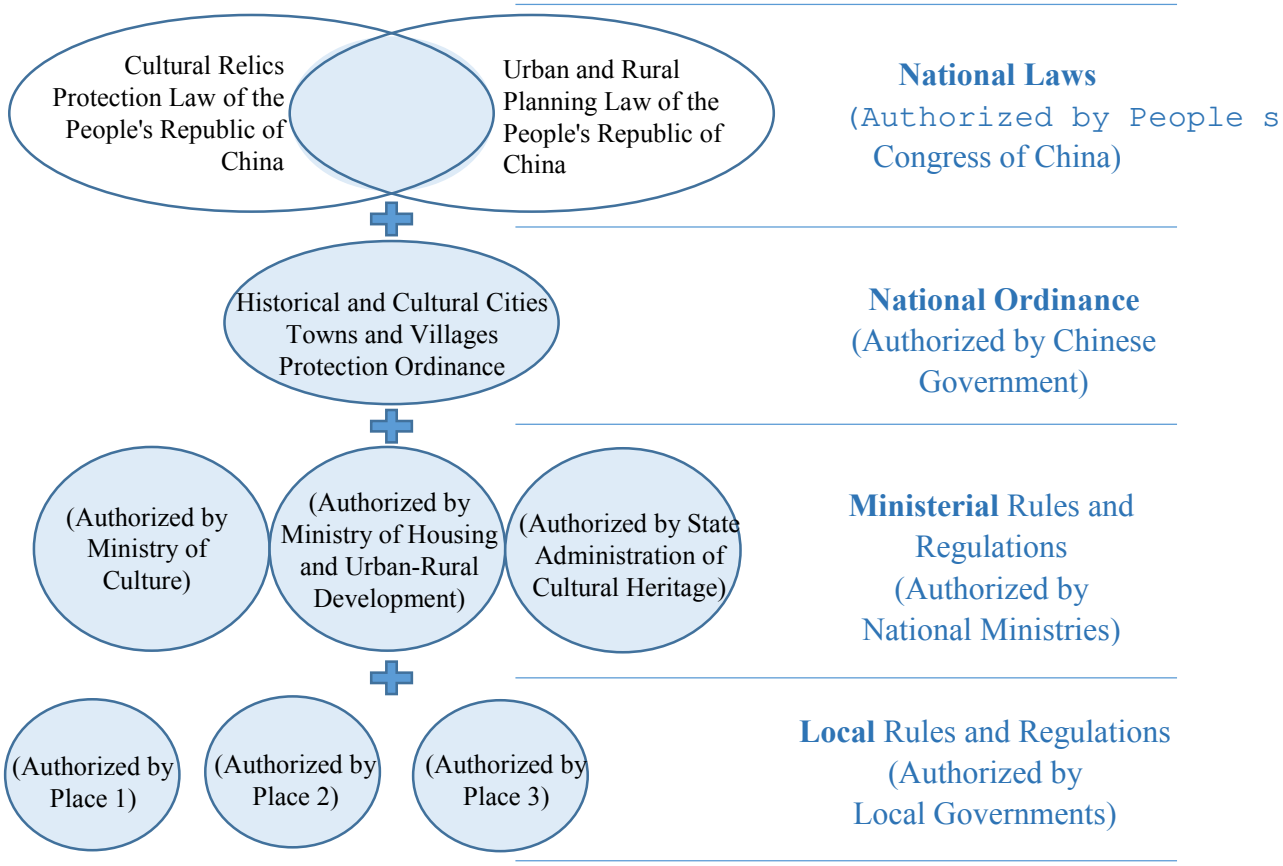


Figure 2 Structure of Major Laws and Policies for Historical Towns and Villages

There are mainly four levels of law and policies for historical and cultural towns and villages, including

two national laws, one national ordinance, several ministerial rules and regulations and many local rules and regulations (Figure 2). Among them, national laws and ordinance are the most import three ones, known as two laws one ordinance , including Cultural Relics Protection Law of the People's Republic of China(Chinese-People's-Congress, 2013) , Urban and Rural Planning Law of the People's Republic of China and Historical and Cultural Cities Towns and Villages Protection Ordi and regulations are always made under the guide of two laws one ordinance .

### *2.1 National laws*

There are two laws concerning historical and cultural towns and villages, The Cultural Relics Protection Law of the People's Republic of China, and the Urban and Rural Planning Law of the People's Republic of China.

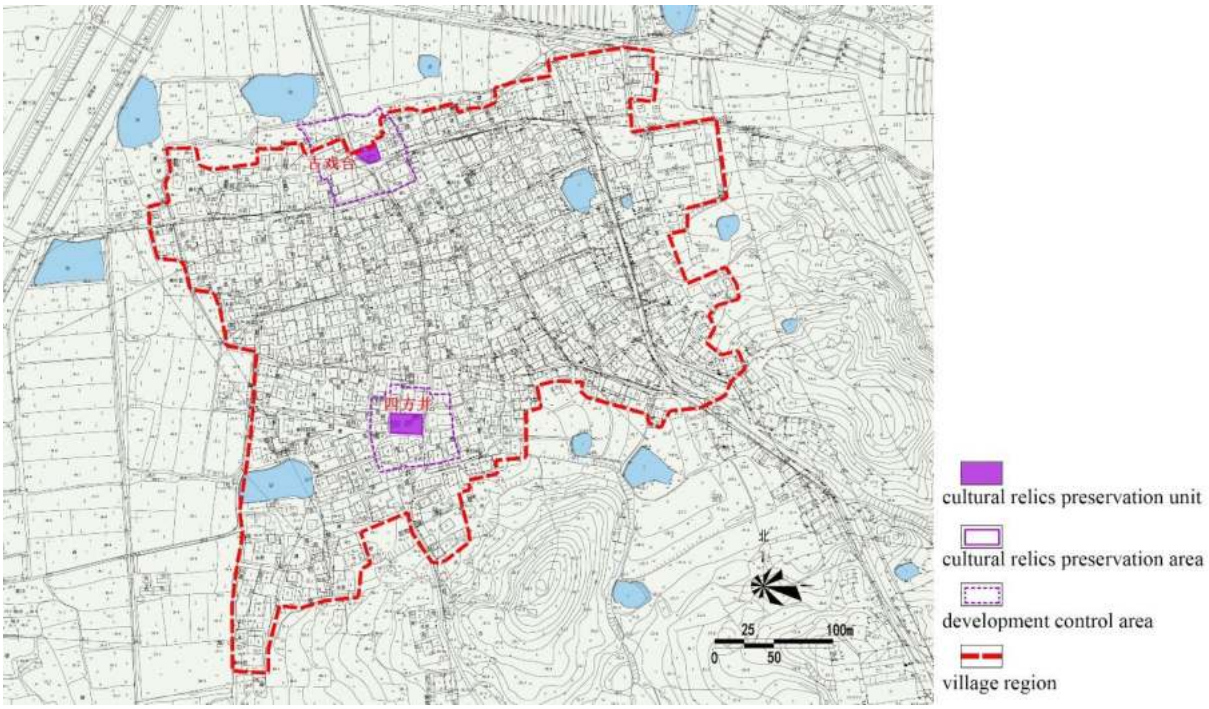


Figure 3 the Cultural Relics and Village Region of Dou Village in China

The two laws have different objects and focusses, like an example shown in Figure 3.The Cultural Relics Protection Law of the People's Republic of China focuses on and protects the most valuable cultural relics, which are always single buildings distributing separately. The Rural Planning Law of the People's Republic of China controls the planning and development of the whole towns and villages, and in all seventy provisions, there are four mentioning the protection of historical and cultural cities, towns and villages.

### *2.2 National ordinance*

Historical and Cultural Cities Towns and Villages Protection Ordinance is the most important policy that focuses on historical and cultural cities towns and villages. It indicates application and approving , conservation planning and conservation measures of historical and cultural cit

### *2.3 Ministerial rules and regulations*

Table 2 Major Rules and Regulations Authorized by State Ministries (Qiu, 2014)

| Authority | Rules and Regulations | Date of Issue | Objects |
|---|---|---|---|
| Ministry of Culture of the People s Republic of China | Measures for Repairing Project Administration of Memorial Buildings Historic Buildings and Cave Temples | 12 Jul. 1986 | Memorial Buildings Historic Buildings and Cave Temples |
| Ministry of Housing and Urban-Rural Development of the People s Republic of China State Administration of Cultural Heritage | Requirements for Protection Plan of Historical and Cultural Cities | 05 Sept. 1994 | Cities |
| Ministry of Culture of the People s Republic of China | Measures for Administration of Cultural Relics Protection Projects | 17 Mar. 2003 | Cultural Relics |
| Ministry of Housing and Urban-Rural Development of the People s Republic of China | Measures for Administration of City Purple Lines | 15 Nov. 2003 | City |
| State Administration of Cultural Heritage | Requirements for Protection Plan Compilation of the Cultural Relics under State Protection | 21 Jul. 2005 | Cultural Relics |
| State Administration of Cultural Heritage | Measures for Compilation Examining and Approving of the Protection Plan of the Cultural Relics under State Protection | 21 Jul. 2005 | Cultural Relics |
| State Administration of Cultural Heritage | Measures for Application Examining Approving and Administration of the Protection Project of the Cultural Relics under State Protection | 17 Jan. 2014 | Cultural Relics |

National ministries also made relevant rules and regulations. There are 7 major ones made by 3 national ministries, (Table 2) including Ministry of Housing and Urban-Rural Development of the

People s Republic of China , State Administration of Cultural Heritage , and Ministry of Culture of the People s Republic of China .

### *2.4 Local rules and regulations*

There are at least 120 local rule and regulations about historical and cultural cities towns and cities. (Qiu, 2014) and there are 6 about historical and cultural villages and 5 about historical and cultural towns (Figure 4).

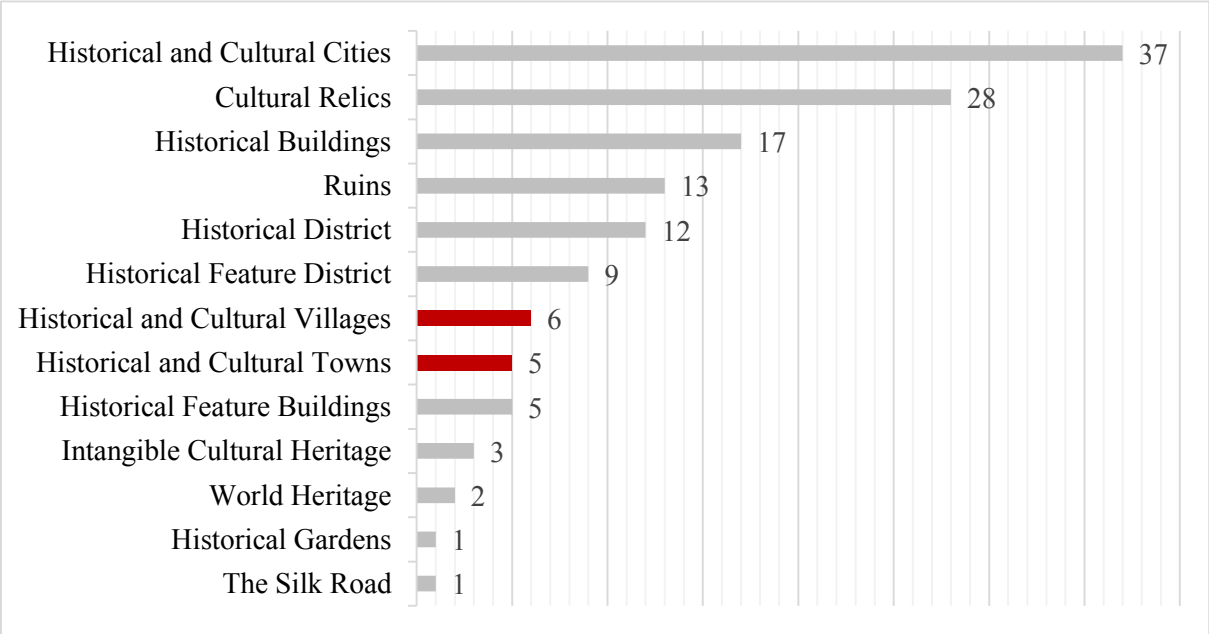


Figure 4 Number of Local Rules and Regulations about Different Objects

## 3 Conservation mechanism of historical towns and villages

### *3.1 Application and approving of historical towns and villages*

There are at least two steps for a town a village to be certificated as a national grade historical and cultural town or village (Figure 5). First, the application for historical and cultural towns and villages should be made by the County Government, and the decision-making power belongs to the Provincial Government. Once approved, the town or village will be pronounced provincial level historical and cultural town or city. Second, the development and cultural relics departments will select from provincial level historical and cultural towns and villages, choose the ones with great historical, artistic and scientific value, and pronounce them national level historical and cultural towns and cities. In addition, some local governments make their own policies, and there might be municipal historical and cultural towns and villages.

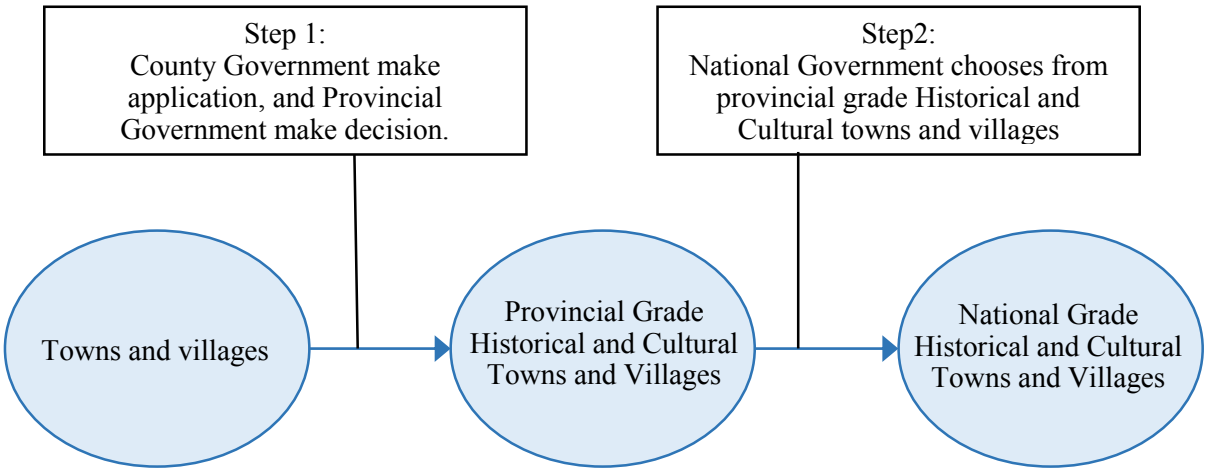


Figure 5 the Minimal Steps to Become a National Grade Historical and Cultural Towns and Villages

Five materials are required in the application (Chinese-Government, 2008). First, evolution history, local characteristics and historical and cultural introduction. Second, traditional construction layout and historical features present situation. Third, protection region. Fourth, list of unmovable cultural relics, historical buildings and historic conservation district. Fifth, the situation, destination and demand of conservation.

### *3.2 Conservation planning of historical towns and villages*

Once pronounced historical and cultural town and village, a conservation planning is required, including five main parts (Chinese-Government, 2008). First, principles objects and region of conservation. Second, conservation measures developing intensity and construction control demand. Third, the conservation demands of traditional construction layout and historical features present. Fourth, the core protection region and development control area of historical and cultural cities towns and village. Fifth, phased implementation program of conservation plan.

Although the conservation plan is demanded to be made after a town or city pronounced historical and cultural town or village, almost all towns and villages make their conservation plans before application. There might be two reasons. First, according to National Historical and Cultural Towns and Villages Evaluation Index System(MOHURD-SAOCH, 2010), an application material with a conservation plan can get 3-8 more points (full score 100 points), depending on the implementation situation of the conservation plan. Second, the materials required during application and the demands of conservation plan are quite similar, as can be seen in Figure 6, and a conservation plan can be easily made meats the requirement of application materials.

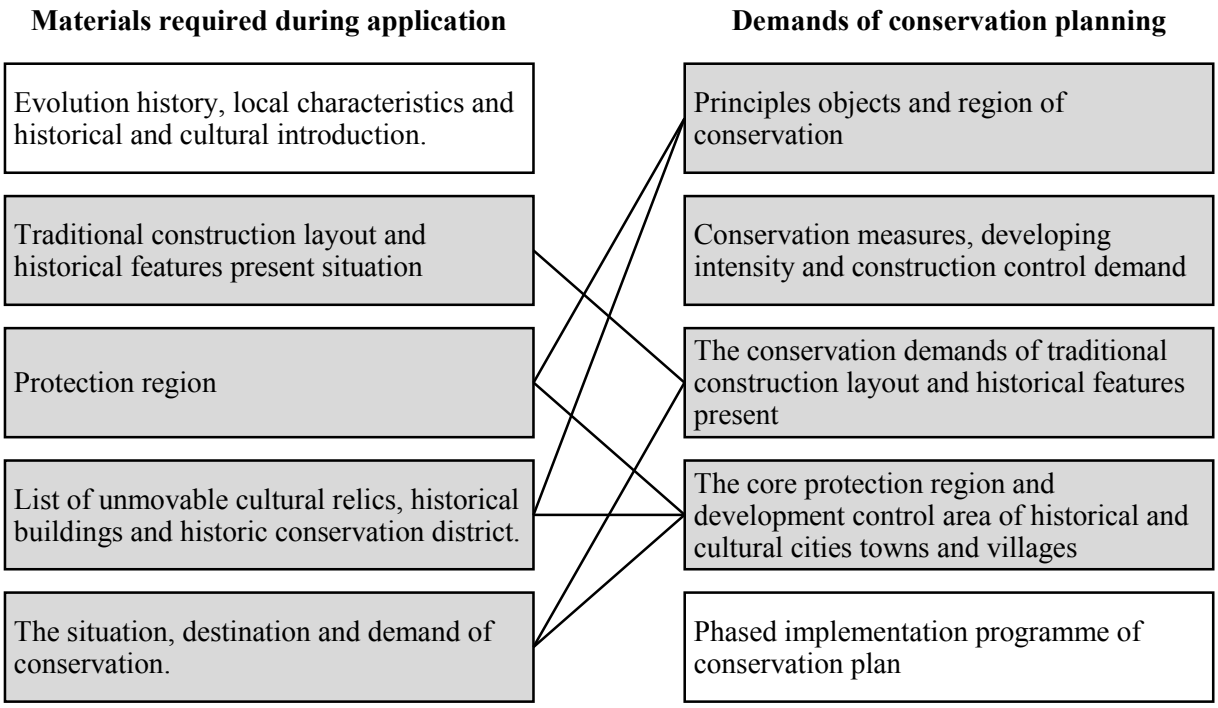


Figure 6 Comparison between Materials Required during Application and Demands of Conservation Planning

### *3.3 Administration of historical towns and villages*

Table 3 Conservation Subjects and Major Responsibility Basing on <Historical and Cultural Cities Towns and Villages Protection Ordinance>

| Conservation Subject Type | Conservation Subjects | Major Responsibility |
|---|---|---|
| National Government | Ministry of Housing and Urban-Rural Development of the People s Republic of China<br>State Administration of Cultural Heritage | Conservation Supervision Administration |
| Local Government at Each Level | Provincial Government | Conservation Supervision Administration |
| | City Government | Conservation Supervision Administration |
| | County Government | Conservation Supervision Administration |
| | Town Government | Conservation Supervision Administration |
| | Village Government | Conservation Supervision Administration |

At the national level, according to <Historical and Cultural Cities Towns and Villages Protection

Ordinance>, the Ministry of Housing and Urban-Rural Development of the People s Republic of China and State Administration of Cultural Heritage are both in charge of historical and cultural cities, towns and villages conservation, supervision and administration. Expert Committee of Hi Conservation(MOHURD, 2007) was founded by both the two government departments in 1996.

At the local level, once a city is pronounced national grade historical and cultural city, the municipal government will usually appoint a leading department in charge of the conservation, such as cultural relics department or planning department. Some cities establish special expert committees, directly subordinate to the municipal government, or subordinate to the cultural relics department or planning department.

For provincial grade historical and cultural cities, towns and villages, there are not specialized organizations, the conservation work is always done by the cultural relics department or planning department.

### *3.4 Funding for the conservation of historical towns and villages*

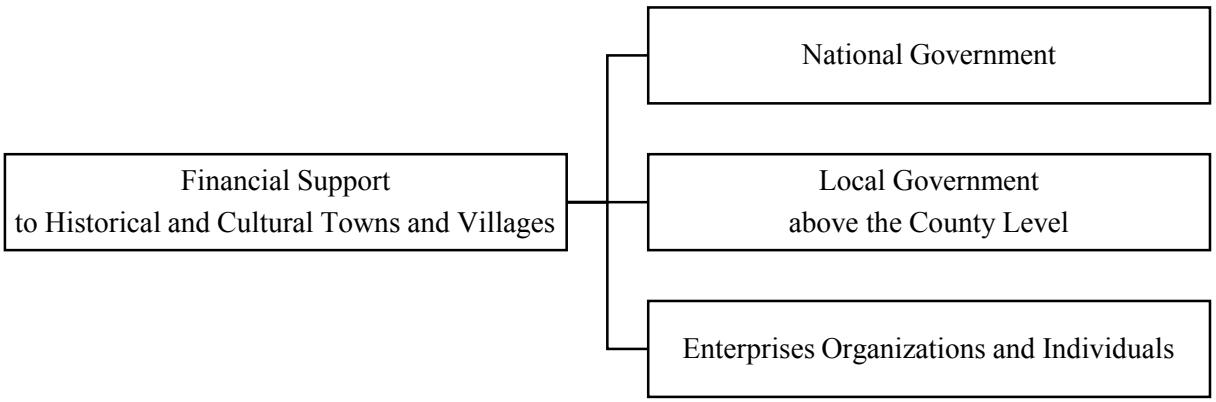


Figure 7 Financial Support Sources to Historical and Cultural Towns and Villages

According to <Historical and Cultural Cities Towns and Villages Protection Ordinance>, the main sources of financial support to historical and cultural towns and villages include three parts: firstly the national government, secondly the local government, and thirdly enterprises, organizations and individuals, as can be seen in Figure 7.

There is a different between the first two sources and the third source. To the national government and local government, financial support is put on them as a responsibility by <Historical and Cultural Cities Towns and Villages Protection Ordinance>. To enterprises, organizations and individuals, financial support is non-obligatory. Enterprises, organizations and individuals are encouraged to make a financial support, while no specific ones are forced to do it.

As can be seen in Table 4, basing on the financial support from the notional government and local government, various experiments have been adopted to develop financial support sources from enterprise, organizations and individuals(Qiu and Feng, 2014).

Table 4 Cases of Financial Support Experiments from Enterprises Organizations and Individuals

| Year | Place | Practice |
|---|---|---|
| 2006 | Wuxi City | The first foundation for the protection of cultural heritage was founded. And 24.8 million Yuan was collected in the first time. |
| 2002 | Suzhou City | Enterprises, organizations and individuals are encouraged to buy or hire historical buildings(Suzhou-Government, 2002), and those who conserve historical buildings well will get reward. |
| 1997-2002 | Xian City | Cooperation were adopted with United Nations, Japan and Norway. International technological and financial supports were used on historical building conservation. |
| Last 10 years | Shaoxing City | Multi Dimension Mechanism of Conservation, collecting money from government, citizen, enterprise and bank, has collected 14 billion Yuan in the last 10 years. |
| 2002 | Lijiang City | Financial support from Global Heritage Fund was received, helping the heritage to go to the world with the financial support from the world. |

## 4 Problems in conservation mechanism of historical towns and villages

### *4.1 Lack of ministerial and local policies focus on towns and villages*

Although the importance of historical and cultural towns and villages has been noticed, there is still lack of ministerial and local policies for towns and villages. The number of national historical and cultural towns and villages is much more than it of cities, and the increasing speed has not slowed down yet. However, the laws and policies of towns and villages are much less than them of cities, especially on ministerial level and local level. Among the seven relevant ministerial rules and regulations (Table 2), there are four focus on cultural relics, two focus on cities, and one focuses on buildings, but no one focus on towns or villages. Among 120 local rules and regulations (from 31 Provinces, autonomous regions and municipalities directly under the central government) (Figure 4), there are only six focus on villages and five focus on towns. It means that most local governments don t have rules or regulations focus on towns and villages. The governance of towns and villages still relays on the policies of cities.

### *4.2 Low efficiency with too many administrative government departments*

There are too many administrative government departments in charge of the conservation work, and it

leads to low efficiency. On the one hand, the administrative government departments are too many. According to Historical and Cultural Cities Towns and Villages Protection Ordinance, Chinese central government, each level local government and their urban planning departments and cultural relics departments take charge of the conservation supervision administration of the historical and cultural towns and villages. And other departments participate together, such as Tourism Sector, Department of Environmental Protection, Agency in Charge of Land, Transport Sector and so on. On the other hand, the work division of these departments is not made clear in the national level policies, and their responsibilities are the same according to Historical and Cultural Cities Towns and Villages Protection Ordinance (Table 3). So, the efficiency becomes low. The conservation planning of historic towns and villages has to be examined and approved to different departments step by step, the communication of them always take too much time. This may hold up the conduct of the conservation.

### *4.3 Lack of sustainable development guidance*

Nowadays, most of the formal policies of conservation planning of historical and cultural towns and villages are focused on the protection of material space, such as historic buildings, roads, or water path, rather than the sustainable development, such as the development of economy, society, population and culture. This leads to unsustainable development of some historic towns and villages. Some local government paid too much attention on material space protection rather than suitable development. In some cases, most of the historic buildings were nicely preserved, but the traditional social economy was damaged. And some traditional lifestyles were lost.

## 5 Conclusions

In the past 30 years, the conservation of historical and cultural towns and villages in China has greatly developed. In 1986, the national government suggested establish History and Culture Preservation Districts to protect historical and cultural towns and villages, which indicated the beginning of villages and towns conservation. In 2002, the first time national grade historical and cultural towns and villages selection started, which indicated the conservation had been raised to national level. In 2008, Urban and Rural Planning Law of the People's Republic of China and Historical and Cultural Cities Towns and Villages Protection Ordinance implemented, which indicated the basic conservation legal system was made.

In policy respect, a policy system basing on two laws one ordinance has been made. Including 2 national laws, one national ordinance, several ministerial rules and regulations and over 100 local policies. In conservation mechanism respect, a system of policies have been established, including historical and cultural towns and villages application and approving, conservation planning, administration and financial support. It is enumerated(Yang and Huo, 2014) that there are 531 national grade historical and cultural towns and villages, 725 provincial and municipal grade ones, and 1561 un-titled ones in conservation.

However, there are still shortages in the conservation. First, there is lack of ministerial and local policies focus on towns and villages. Second, there are too many administrative government departments and the conservation efficiency is low. Third, there is lack of sustainable development guidance, such as economy, society, population and culture. And these are the fields to be improved.

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# The plight of the "Chinese-style peasant economy" in the development of rural tourism

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Abstract:
*Rural tourism industry brought many undisputable economic benefits to Chinese villages and farmers, which accounted for nearly a third of the economic benefits of the total Chinese tourism market. However, rural tourism has brought intense impact to the "Chinese-style peasant economy" structure, which is the China s rural stable reservoir in the development of Chinese modernization. The rural tourism development pattern, including scale development, diverse planning and market-oriented, have a conflict with the Chinese-style peasant economy , which is charactered by management dispersion, landuse fragmentation and villagers self-administration. The paper researched the plight of "Chinese-style peasant economy" in the development of rural tourism, and further studied the contributions of planning. Firstly, the necessity of the "Chinese-style peasant economy" structure in Chinese villages was proposed. Secondly, the traditional production pattern was broken due to the non-coupling between the rural tourism and the "Chinese-style peasant economy". Therefore, the peasant lost the elastic space and flexible choice in the development of rural tourism. Finally the responsibility of planning in protecting the "Chinese-style peasant economy" structure was discussed. The multiple interests should be harmonized in rural tourism by planning. In particular, farmers interests could be guaranteed and maximized by means of clarifying the land right, protecting rural space and guiding the cooperation.*

## 1. Introduction

Rural tourism originated from Europe and has a history of more than 100 years. It is new attempt for modern tourism extending to traditional agricultural. It is a new form of industry, which combined eco-agriculture and eco-tourism organically by the promotion of tourism. China's rural tourism sprung up in the late 20th 90's.It has played an important role in optimizing rural industrial structure, narrowing the income gap between urban and rural areas, promoting the rural employment, driving the development of related industries, accelerating the cultural exchange between urban and rural areas, and so on. In the 21st century, rural tourism has entered a period of comprehensive development. The increasing attractions, the expanding scale, the extending distribution, all show a good momentum of development. Data show that China's rural tourism income reached 300 billion yuan in 2014, accounting for one-third of its economic benefits of the tourism market. The "first document", signed by the Central in 2015, pointed out the importance of rural tourism development for increasing farmers' income with a large space. And pledged to give full support from land, finance, banking, taxes, etc. Therefore, the development of rural tourism has become a important industrial form for increasing peasant's income.

However, the development of rural tourism is a game process among multi-stakeholder. Developers, government, farmers, tourists and other groups all want to pursue their own maximal interests in the process of rural tourism development. But in the process of the game, farmers are often in the inferior status, and their rights can t be protected properly. So, although the development of brought great material benefits to some extent, the obtained benefits are not sustainable. Considering the reason, it is directly related to the "Chinese small-scale peasant economy" in the Chinese rural society. Therefore, this article hopes to study based on the necessity of the" Chinese small-scale peasant

economy". Then the conflict between rural tourism development and the" Chinese small-scale peasant economy "was analysed concretely, and dissect the root causes of farmers interests being damage Finally, we discussed how to use plan to dilute the conflict in the rural tourism development. Thus to protect the fundamental interests of farmers.

## 2. The necessity of the small-scale peasant economy

Before the industrialization process, small-scale peasant economy exists throughout the countries and regions all over the world. China is a typical small-scale peasant economy country since ancient times. Small-scale peasant economy has existed for thousands of years in the history of China, and is the economic foundation of Chinese civilization's continuation. It has experienced the transition of system, forms and features since the formation. From modern times to the founding period, small-scale peasant economy shows an overall change from closed to open. What s more, due to the im economic development, it presents the transition character from tradition to modern in recent years. Although many western scholars have predicted the inevitable demise of the small-scale peasant economy. It still exist in the Chinese rural society, which has a profound impact on farmers' living and production.

### *2.1 The main characteristic of Chinese small-scale peasant economy*

The concept of "Chinese-style peasant economy" is a long-term study by Professor He Xuefeng， which proposed to describe the agricultural business and rural livelihoods mode, structure on the basis of "semi-cultivated in the intergenerational division of labour based semi workers" in the current stage of China. In particular, with the development and urbanization of China's economy continues to accelerate, a lot of young labour force move into the city for their livelihoods from rural. They leave the countryside temporarily or permanently, making the countryside has become a "three Left groups" (stay for the elderly, women left behind, left-behind children) habitat. These groups are also left to become the main practitioners of the rural economy at this stage. Therefore, the current peasant economy shows different from the one emphasis on family as the main production unit of the peasant economy expressed by the classical theory, but also different from ranch business model by capitalist agriculture. It performs to form a reproduction of labour power mode, based on the peasant economy family and inter-generational division.

#### 2.1.1 Basic characteristics -- "semi-cultivated in the intergenerational division of labour based semi workers

With China's urbanization and industrialization, more and more farmers choose rural migrant to increase the income of workers for family, in order to improve the overall level of income. For a rural households, rural migrant farmers are mostly in young or middle-aged labour force. According to statistics, 80% of farmer families have the phenomenon that young children work away from home, whose parents farm in rural. This structure of semi-cultivated in the intergenerational division of labour based semi w begins form national flow of rural labour since the reform and opening up in the 1980s. The earliest (1970s) appeared in the southern township enterprises. Farmer farm in busy season and work in the other time. This division formed "institutionalized half work half farm" by Professor Huang Zongzhi. Due to the rapid development of township enterprises and the policies allowing farmers to engage in trade and industry. Some labour move into the cities and move into the business. It makes the labours liberating from traditional agriculture. It improves the efficiency of agricultural production, but also improves the lives of farmer level. By the 1980s, migrant farmers began to increase, predominantly male scale. Mostly elderly, women and children are left behind. In the 21st century, the vast majority of young

rural labour force have moved into the city for work or business, who become important part of the urban labour force and important means to improve the living standards of the rural population. On the other hand, after the main labour force flowing out of rural, women's farm, elderly agriculture and peasants planting operations and other forms become the main mode of food cropping. Some carry out featured planting or breeding and some elderly and women who are still strong search opportunity to do "odd jobs" to make money. They farm in busy season and work in leisure day in the towns. Or even do manual processing in the home of the operations. Such as the development of rural tourism is one of the ways to increase revenue for villagers who stay in the village.

### 2.1.2 Essential character -- a stable reproduction form of rural labour

Although with a large number of rural labour outflow, the phenomenon of rural hollowing tends to be serious. Production began to be done basically by old people and women in agricultural. However, the current structure of semi-cultivated in the intergenerational division of labour based semi worke remains a stable workforce reproduction mode. Firstly, from the "semi-farming perspective, the household contract system is the basic agricultural management system in China, and agricultural production is the fundamental mode to maintain income and it is also the guarantee to maintain stable development of China. And with agricultural industrialization and modernization developing, labour for agriculture will be required less and less. The development of industrial diversification, rural tourism and other tertiary industries also led to increasing the added value of agriculture. The basis of agriculture development will further reinforce, and farmers can likely be achieved "income-place" increasingly, therefore staying rural farmers on agricultural production still remains great enthusiasm. Even the old people are not suitable to continue to engage in agricultural production and labour, due to the lands transfer and implementation of contracting policy, the people also can contract and transfer the lands to the other residents of the village to carry on the sustainable agricultural production. Therefore, the structure of "semi-farming" is very stable. On the other hand, from the view of "semi-working", along with the urbanization process promoting, the gap between urban and rural areas is actually still growing. In the current situation, many rural areas cannot satisfy the demand for improved their living standards by simply engaging in agricultural production, due to tensions between people and land. Therefore, the labour force is bound to liberate from the limited arable land resources out into the city to engage in secondary and tertiary industries, which has more productive rate of return. Statistically speaking, the proportion of the structure has been rising steadily when it appears in rural since the 1980s. In the 1980s the proportion is about 20%, and the regional distribution is unbalanced, mainly in the coastal areas; In the 1990s the proportion should be about 40% or more, and the region have been all over the country; After 2000, the proportion rose to 80%, and it has reached a relatively stable maximum value. Such a high percentage may be maintain for 20 years or even more. Because, after 20 years, the parents whose children were the first of the young migrant workers out of business are too old to do farm work. And the young man s children have grown up and start migrants. When they are no longer young, they would return home to take over the farming parents. This realize the reproduction of cultivated in the intergenerational division of labour based semi workers , which is very stable.

### 2.1.3 Spotlighted issues -- the small scale of Chinese-style peasant economy

The small scale of Chinese-style peasant economy mainly shows in two aspects. Firstly, from the macro perspective, the underdeveloped Chinese agricultural modernization and the lack of technological innovation and technology promotion capability have led to a small scale of China's peasant economy and inefficiency of land management. In recent years, to improve the level of agricultural modernization and industrial development has become a great concern of the Chinese government. Since 2004, the first policy document has focused on the "three rural issues" and emphasized the issues of concerning increasing farmer s income, agricultural modernization, rural planning and constru

issues. Rural Tourism Development which will be discussed in this article is one of industrial development path to increase the added value of agricultural production and land management benefits.

From the micro perspective, most of the Chinese current peasant families are running small-scale production and management activities. This is mainly because the farmers produc by land and capital. Compared to peasant population, China's arable land is extremely inadequate. Besides, the accumulation of farm families is limited. It is difficult for the peasants to have sufficient capital and advanced technology to expand production scale.

In addition, studies have shown that: because a variety of agricultural production factors have good divisibility, modern agriculture did not show obvious scales economy advantage within the family compared with other sectors. Therefore, farmers lack sufficient power to expand family business scale internally. Therefore, the traditional idea of self-sufficiency and our household land have made our land management become fragmented. And this is the biggest problem faced by the Chinese Agricultural operators at present. Fragmented land management has eventually lead to excessive inputs of invalid labour, poor land management efficiency, and lower output efficiency.

### *2.2 The necessity of Chinese-style peasant economy*

#### 2.2.1 Chinese small-scale peasant economy always ensure the agricultural income of farmers

Although with the developing of industrialization and urbanization, more and more of the agricultural population will join into the urban population, rural industry is also gradually tend to diversify and farmers' income structure will change. But agriculture has always been the fundamental industry of farmers. China has 800 million farmers living in rural areas, accounting for nearly 60% of China's total population. It's an important safeguard for Chinese stable and healthy development to ensure that 800 million peasants' lives. The main form of peasant economy as a traditional agricultural production to ensure the continuation of the agricultural economy, ensures the ultimate source of income for the 800 million farmers and provide sustainable basic living guarantee for them.

#### 2.2.2 Chinese small-scale peasant economy is the ultimate protection for migrant workers returning home

With the accelerating process of urbanization, China has about one million migrant workers working in cities, become the resident population, but did not enjoy the urban population as a welfare policy should not be the domicile of the urban population in the true sense, no really integrate into the city, so that employment which 200 million people are always at risk. But this is the part of migrant workers to complete reproduction of labour power by the "semi-cultivated in the intergenerational division of labour based semi workers" structure. So that migrant workers at risk of unemployment, you can choose to return the countryside, continue to engage in agricultural production, ensure the overall income of the family. In other words, the vast majority of migrant workers did not sever ties with the countryside. As long as the current agricultural basic management systems stable, staying in the country farmers can still guarantee their life and production stability through diversification of agricultural production and industrial development path similar to rural tourism development, and they may fail to migrant farmers Workers provide a smooth passage to return home.

In addition, for the reproduction of small-scale peasant, the failure migrant workers into the city don't have to stay in the city. Compare to the average of developing countries, Chinese farmers are much more fortunate, because they can return home to work in agriculture. The so-called rights, first and foremost is the right to choose. The choice rights of farmers into the city or return reserved, is to give

farmers the most basic human rights. Because the city failed farmers can choose to return home, so when migrant cannot survive in a decent city, they will choose to return home.

#### 2.2.3 "Chinese-style peasant economy" structure is the China s rural stable reservoir in the development of Chinese modernization

Any developing country in the development are impossible not to meet the economic, financial, social, and political aspects of the crisis that occurred in the city and its most highly developed structure. Once the urban structure of crisis, whether this country has the ability to deal with the crisis or not, has become the key to the country's modernization can be completed. Chinese urban crisis, if the centre of gravity in rural areas remained stable, the Chinese-style crisis manifested in the city, then under the stable centre of gravity of the role of the countryside, and soon stabilize. China Rural fairly stable and provide support for the city of migrant workers huge peasant economy was stable social structure where the centre of gravity of China, is one of the key for Chinese stability in any complex situation.

## 3 The present condition of the Chinese-style peasant economy in the development o tourism

In recent years, the development of rural tourism is increasingly prosperous. First of all, in the circumstance of the experience economy, profound changes have taken place about the idea of the consumer's consumption and the way how they consume than before In terms of the structure of demand , while the tourism consumers focusing on product quality, we find out the increasing proportion of emotional needs among them; In terms of consumption content, Popular tourist products are losing their advantages, consumers begin to pursue the products and services which can reveal their personalities ; In terms of the value and target , consumers have changed from paying attention to the products itself to value the feeling when accepting it; In terms of the way receiving products, consumers are willing to participate in the product design and manufacturing initiatively. Consumers are increasingly emotional, personal, perceptual, changing their core demands from the pursuit of practical to pursuing the experience. Along with the improvement of the traffic conditions and the quality of life of visitors, domestic existing hot spots become crowded, and the environmental quality of urban living people falls down. Cities and traditional sights is no longer able to provide proper and comfortable experience for visitors. While the vast country with diversity natural landscape and rich cultural connotation, acting as a major carrier to the original idyllic scenery and traditional way of life, can provide tourists with multi-level diverse experiences of visual, hearing, and further interaction. Therefore, the rural tourism development has been developing rapidly in recent years, followed with the considerable economic benefits. As too many Subject of interests are involved in the development of the rural tourism, including the government, farmers, corporations and tourists, and farmers are vulnerable groups whose interests will always be subject to a strong sense of market competition. As for the reason, it is because the "Chinese-style peasant economy" structure On behalf of farmers management characteristic is impacted by the rural tourism development.

### *3.1 The characteristics of the rural tourism development*

#### 3.1.1 Multi- subject of interests participation

There are four main relative subject of interests of rural tourism development: farmers, governments, corporations and tourists. The process of the development rural tourism is actually the process of the four subject of interests pursuing their own interests maximally in the game play. Government

determines the development orientation of the whole rural area, guiding rural development, strengthening the infrastructure, attracting foreign investment to build a platform to enhance regional influence by taking charge of the rural tourism planning. The development corporations of rural tourism hope to do some development activities with taking advantages of the rural land, agriculture, ecological resources to obtain maximum profits by cooperating with the government. Meanwhile tourists hope to attain their expected travel experience form the ecological environment and the rural landscape in the countryside with the cooperation projects and activities set by the government and corporations. For rural residents, the priority is to improve the quality of life, by changing the traditional mode of production through the development of rural tourism, increasing the added value of agricultural production and increasing the income of "semi-cultivated" part. Meanwhile farmers hope to improve the environment, improve infrastructure, and improve the living environment through the development of the rural tourism. Therefore, based on the demands of different subject of interests, the process of rural tourism development becomes a multi- subject s participation and game.

### 3.1.2 Large-scale of the development and management

Large-scale of the development and management is mainly reflected in two aspects: land resources and projects. Rural Tourism Development Project is generally based on ecological or agriculture, thus requiring a large area of land, so in order to meet the needs and benefits of large-scale operation of the project, brings out the need for rural development to integrate the existing land resources management. Those common picking garden, organic food cultivation, leisure farms and other development projects, all need the land resources which is centralized, larger scale, and the better ecological basis to meet the needs of project development. On the other hand, even a single project area may not need a large area of land, such as a simple farmhouse, simple handicrafts, and other specialty products for sale, but because the government vision for the positioning and development of the whole area generally requires companies and enterprises to formed an industrial chain forming a sustainable driving force, therefore the scale effect among similar enterprises and the cooperation among heterogeneous enterprises and also need to be gathered on the development and operation of the project is running, to form the whole area of the scale. As used herein, select research Huaijiu road Area Rural Tourism Development Area of Fanchang County, Current situation is there already exists some picking based enterprises, but they business their own way, be independent to each other, there is no agglomeration of scale, and cannot form the entire Area core competitiveness and foreign brand.

### 3.1.3 Government-led, market operation

Development of rural tourism refers to the original landscape has not been carving, the beautiful natural landscape and historic folk culture and tourism with the appropriate resources and tourism products in rural areas, including the Integration and development to rural bucolic, rural architecture community, rural natural environment, traditional farming village farming, rural traditional rural folk culture tourism resources. It is the technical economic activity to meet and attract urban population come here to travel. Therefore, as tourism development, within a certain range land, it is a comprehensive social and technical and economic activities in order to attract and reception of tourists with tourist facilities conducted training and other construction of tourism environment. Thus, the tourism development is a systematic project, mainly premised by the development of tourism, market demand-oriented, tourism resources as the core, focused on improving and enhancing the appeal tourism resources to the tourists, Reaching around a lot to attract tourists and meet their, visit, study, entertainment, or simply relax contains a certain technical content of various needs of economic activity. Therefore, the government leading of unified planning and market demand as the leading factor is one of the important characteristics of rural tourism development.

### *3.2 The impact on the farmers' interests of the rural tourism development*

According to the analysis of "Chinese-style peasant economy and the characteristics of rur development, it is easy to find that there are some conflicts and contradictions on the main feature. The conflicts of the characteristics will impact and even violate the different interests of farmers in different ways which includes the land rights, sustainable economic benefit and environmental benefit.

#### 3.2.1 The landuse right

The characteristic is widespread in the peasant economy that the land management is a small scale, which conflicts with the characteristics of scale management in rural tourism development under the market economy. The conflicts and contradictions are reflected in farmers' land rights. In particular, the land is the most elementary condition for the development of rural tourism, some enterprises and developers ignore the local actual. Therefore the rural collective land is often expropriated. The resources including the land in the development of rural tourism are generally owned by villagers collectively. According to the nature and process of the rural tourism development, expropriation of land is an essential link for most of the rural tourism developments, unless it is spontaneous for farmers to run their own range of small-scale rural tourism model. Land is the most basic factor of production and the basis of survival and development for farmers, and the land right is the farmer's most important property right. So if the farmers lose their land, they not only lose the right of management, usufruct and some disposition, but also a lot of relevant rights and interests attached to land. In the actual development of rural tourism, because the government is engaged in the profitable business activities of tourism market, it has become one of the main beneficiaries in the development of rural tourism. However, countryside and farmers have become spectators, instead of enjoying the economic benefits from rural tourism, they have to endure a series of adverse consequences. The government seized a large amount of revenue because of the wide difference between expropriation compensation and land price. As the developers, the enterprises or individuals will also grab the high profits. As a result, the landless farmers will lose much.

#### 3.2.2 The sustainable economic benefits

Farmers in the small peasant economy have relatively free production autonomy, while the rural tourism development has the obvious market rules that it determines the direction and content by the market demand. Therefore, the independent production and the market operation have a certain conflict in the "Chinese-style peasant economy" which will affects the sustainability of the economic interests of farmers.

The limited space determines the risks when the farmers participate in the development of rural tourism. If the farmers' land is used as a rural tourism development, the agricultural production of farmers is bound to be impacted. Because the limited land cannot simultaneously meet the demands of the scale of rural tourism and agricultural production. Also, the market is always risky, the rural tourism and agricultural production have a strong seasonal and random characteristic. In the rural tourism season, farmers may be obtain substantial revenue because of the successful development of rural tourism. But in the low season of tourism, farmers' incomes cannot be guaranteed, because the land has been occupied by tourism development, they have been out of agricultural production.

On the other hand, project development of rural tourism requires an accurate assessment of enterprises and need to analyse the demands of the market. Once the analysis fails, the fragile ecological space has altered substantial construction and development, its recovery will be very difficult, and it will take a very long period. Therefore, farmers will suffer greater economic losses during this process. Instead of

obtaining benefits through the development of rural tourism, famers lose their land in the construction and development. The reproduction of agricultural land is very inelastic, and the land is poor of reversible. Therefore, after the production independence of peasant economy is destroyed, the economic interests of farmers in the market operation may be only temporary, is not sustainable.

### 3.2.3 The environmental rights and interests

Development of rural tourism is essentially a process during the period of destroy and rebuilt. In particular, in order to obtain economic benefits from the development of rural tourism, the destructive behaviours must have done. This destroy is not a pejorative concept in the narrow sense. In the long term, destroying is the first step and prerequisite to benefit. It can seems to ignore the temporary economic losses caused by the destroying while the damage caused by destroying and the harvest are compared on the economic benefits. But from the point of view of social and ecological benefits particularly the environmental, the countryside is an area with very advantageous ecological. And some countryside also assume the functions of eco-conserving division and ecological conservation areas. Therefore, once the rural ecological environment has been destroyed by the tourism development and construction, not only the primitive rural scenery will disappear, but also the ecological value of the countryside will reduce. It is an obvious manifestation that the farmer s liv greatly diminishes. On the other hand, the rural carried rich and varied cultures and the history is long, industry modernization invasion will inevitably erase the traces of traditional culture, including traditional houses, traditional settlements and so on. And then the traditional architectural culture, neighbourhood atmosphere and long farming culture will disappear. Nowadays, the city's living environment and culture has been buried by the rapid development of urbanization and industrialization. As the last pure land of environment and cultural heritage, countryside assumes a more important and extraordinary ecological, social and historical significance.

## 4 The responsibility of planning-- protecting the "Chinese-style peasant economy" structure and guarantying farmers interests

"Chinese-style peasant economy" is the production and management of Chinese farmers'. Production and life interests of farmer concentratedly reflected in the structure of Chinese-style peasant ec The development process of rural tourism attacks the "Chinese-style peasant economy". In fact, it attacks the structure of existing production and living of farmers. The peasant economy is not without problems, but the main features of the peasant economy still determines the necessity of the existence of it as the above analysis.

Therefore, planning as government action, should effectively slow down the impact of rural tourism development to peasant economy, to ensure the interests of farmers and to achieve maximum benefit of farmers in rural tourism development.

### *4.1 Large-scale of the development and management based on clarifying the landuse right*

The scale operation of rural tourism development is the inevitable requirement under market economy. To protect farmers' land rights and interests as well as to follow the laws of the market competition of rural tourism development, the main way is to operate on a large scale on the basis of making clear of the land rights of farmers, the main means is a diversified land circulation form. Land circulation refers to the transfer of land use rights. Land use right transfer means farmers transfer their land management rights to other farmers or economic organization through subcontracting, transferring, investment, cooperation, lease, exchanging and some other ways. Government encourages farmers to transfer contracted land to professional investors and cooperatives, to develop the scale of operation in agriculture. Diversity land circulation promotes the appropriate scale of operation of rural land,

improves the land utilization ratio and output rate; brings about the agricultural structure adjustment, improves the economic efficiency, promotes the transfer of rural labour force, increases the income of the farmers. It is conducive to agricultural technology extension and the formation and development of the agricultural industrialization management. Diversity land circulation ensure the farmers land ownership and the rights and interests in the rural tourism development.

Resulting from the comparison of various ways of land transference economic performance, and land circulation patterns which has higher degree of marketization brings greater economic performance than the lower one. However, from the comparison of the results of social performance, the result is completely different. Land circulation patterns which has relatively low degree of marketization may have a greater economic performance than the higher one. Different patterns of rural land transfer bring different transfer performance. Brought a kind of rural land transfer modes of economic performance and social performance and better than other rural land circulation patterns. Economic and social performance of one rural land circulation mode may not be better than other modes. Therefore, in the practice of rural tourism development, the land transfer mode should select according to the characteristics of their own country, balance the economic and social benefits, select the most appropriate way of circulation, and meet the needs of the scale of operations, farmers econom and land rights.

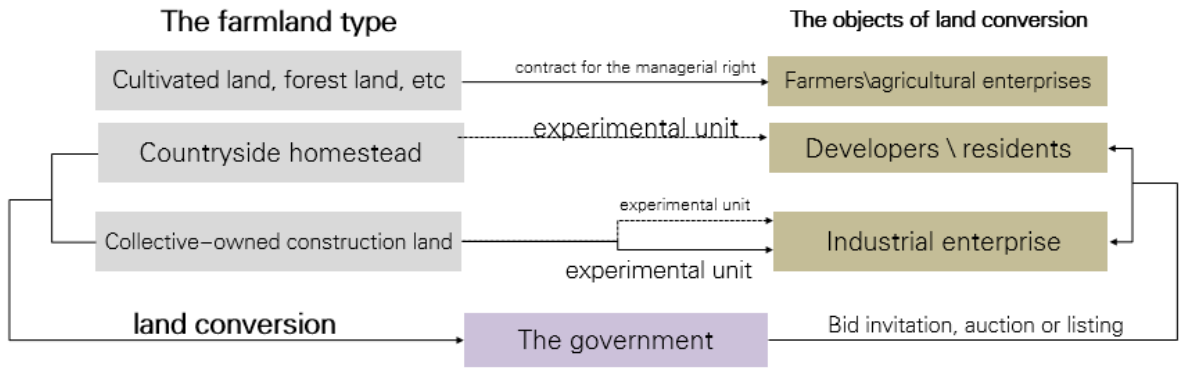


Figure 1. The sketch of land conversion route

### *4.2 Build a control system dominated by respecting the original appearance to ensure environmental interests of farmers*

#### 4.2.1 Low-impact construction of the ecological management and control

The ecological environment in rural areas is the focus of farmers living environmental protection. Including water, mountains, forests, lakes, farmland, biological, atmospheric resources, etc., all of them are the important elements of the rural ecological base. Firstly, urban planning has a duty on building control system about ecological management, clarifying the control limit, formulating the control regulation. Furthermore, urban planning also need to supervise behaviours of tourists and enterprises in the development of rural tourism. Especially for the enterprises, which should be controlled strictly in environmental protection standard. It is important to control the pollutant emission in countryside. The most significant issue is protecting the farmland strictly, because China s grain production is the basis of urbanization and modernization. Removable architecture can be used in construction to reduce the destruction to the farmland. It will be more flexible and sustainable. On the other hand, special planning of environmental protection is essential for rural tourism development areas. The construction of paths

about infrastructure and environmental hygiene facilities should be included. In addition, the overall image in countryside should also be paid attention. For example, the environment of waterfront, lakeside, riverside, hillside, etc. . All in all, low-impact construction of the ecological management and control should be the main principle to achieve the goal which is keeping the rural original appearance and make the construction integrated with nature.

#### 4.2.2 The rural dwellings protection

The significance of the rural dwellings protection lies not only in protecting farmer s human settlement, but also protecting the traditional style of rural image and residential architectural culture. It has great social significance. Including the whole village appearance, for rural residential use and transformation. For the whole village appearance as example, urban planning and design should maintain the mutually relationship between the village and natural environment in harmony. Controlling the skyline from far view of villages to emphasize the outline of mountain. Moreover, controlling the rural buildings and public buildings along the street interface, conducting regular inspections of the village environment, and prohibiting non-standard construction practices to maintain the overall image of village. From the aspect of rural residential using, urban planning can choose the utilization patterns from the whole lease and self-management, etc., which depend on farmers how to participate in Rural Tourism. As for the transformation of rural houses, urban planners must evaluate the rural dwellings to decide to demolish, enhance or protect.

### *4.3 Guide benign cooperation between farmers and enterprises to ensure the sustainable economic interests of farmers*

#### 4.3.1 Cooperation and win-win mechanism

Rural tourism development involves a multi-party including government, enterprises, farmers, etc., so in the development process, development is not the only one goal. It is also significant to protect the interests of farmers in the market behaviour. Therefore, in planning practice, the appropriate business model should be choosed based on the characters of rural tourism development area to achieve the common interests of farmers, businesses and governments. Common cooperative business model including "community + company + farmers" model, "government + company + farmer tourism association + travel agency + farmer" mode, autonomous mode of operation, the overall leasing mode. "Government + corporation + travel agency + tourism association of farmer + farmer" mode, for example, Ping Ba County, An shun City, Gui Zhou Province Tian Longtunbao Cultural Village adopted this business model in sharing of benefits to avoid excessive commercialization. Government is responsible for the planning and construction of infrastructure, and optimizing the development environment. The company responsible for the management and business operation. Rural tourism association is responsible for organizing villagers to participate to opera performances, guided tours, crafts, provide accommodation and catering services, and maintenance and repair of their traditional houses. Travel agencies responsible for market development, organization source, effectively avoid the farmers in the tourism industry may cause excessive commercialization atmosphere to maximize their local cultural authenticity, so that visitors feel real and natural simple folk. The proportion of income allocated as follows: 11% government, 10% of the village committees, 14% of farmers tourism associations, travel agents, 11%, 54% of the company. Because of government intervention and management, and constantly expand the brand effect, so cooperative model has been protection policy, thus greatly ensure the stability and sustainable economic benefits for farmers.

### 4.3.2 Optimize the revenue structure of farmer

With the flourishing development of rural tourism, the revenue structure of the villagers presents different characteristics under the influence of the Chinese small-scale peasant economy". It can be divided into three categories: the first category is migrant income based; the second is farming income based; the third is mainly comes from the tertiary industry developed by rural tourism. The planning should respect the existing revenue structure, as well as the living and production style under the Chinese small-scale peasant economy". And do not break the structure of semi-cu intergenerational division of labour based semi workers . Then further enhance and improve ther according to their own characteristics. For the first category income structure, on the one hand, we should ensure the creation of the living space for the rural staying residents, especially the children's growing space. On the other hand, try to attract them to participate in the project operation by a variety of ways. Thus to increase the overall income level for them. For the second category, on the one hand, the cooperation mechanism between enterprises and farmers in agriculture can be promoted. On the other hand, the tertiary industry which has bigger degree of relation with agricultural production can be increased properly. This can really maximize the value of agricultural products, increase their income other than traditional agricultural production, and make the rural development diversified and sustainable. For the third category, the projects of rural tourism development should be guided to form a good win-win cooperation mechanism. We should focus on the management of the market order, and effectively protect the interests of farmers in the market behaviour.

## 5 Conclusion

This paper researched how the "Chinese-style peasant economy" was impacted by the rapid development of rural tourism, as well as what we can do to mitigate the effects by planning. Since "Chinese-style peasant economy" stands for the Chinese farmers production and liv interests, including the landuse rights, the sustainable economic benefits and the environmental interests, are damaged to a variable extent. Therefore, the paper further studied the contributions of planning in guaranteeing and maximizing farmers interests by protecting "Chinese-style pea structure in the development of rural tourism. The conclusion can be divided into three parts. Firstly, large-scale of the development and management is necessary. The point is to clarify the landuse right by diversified land conversion patterns. Secondly, urban planners should control and protect the rural space morphology effectively, including ecological environment and rural dwellings. Thus to guarantee the farmers environmental rights and inherit the rural traditional culture. F sustainable and maximized interests, benign cooperation between farmers and other stakeholders in the development of rural tourism should be guided by planners.

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# CREATIVE-BASED TOURISM DEVELOPMENT IN SMALL SCALE TOWNS: A CASE OF ALA˙ATI

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**Abstract**

*Today, tourism has rapid expansion with the term of globalization (Hall and Page, 2003). Globalization offers technological innovations in transport, communication and information spreading around the world and it also reduces borders and barriers for culture exchange. Tourism development has been viewed as an opportunity for economic development of many destinations. In spite of the fact that negative impacts embodied in rapid development of tourism based on globalization process. Many tourism areas are in danger of mass tourism that consume sensitive landscapes and characteristics of settlements (Endresen, 1999). In that sense, the new phenomenon of creativity including various concepts such as creative economy, creative class, creative industries, creative clusters and creative tourism comes out as a driving force to contribute development of tourism (Florida, 2002; Landry, 2000; Richards, 2011). For this study, small scale towns, which have a risk of substantial losses of their cultural values, landscapes and way of life due to the rapid development of tourism, is examined in terms of creative-based tourism development. In this context, an urban design approach is defined as a tool that has a hand in guiding creative tourism development. Moreover, urban design toolkit which has various methods and techniques is used for* fostering and understanding creative environment of Ala at , which is small *Turkey. Ultimately, the study investigates creative environment of the small scale town for understanding the dynamics between creativity and tourism in the context of sustainable development*.

**Keywords:** Creative tourism, Small scale town, Urban design toolkit

## 1. Introduction

Development of tourism contributes to change in social, cultural and economic structure of communities. Accordingly, globalization process, which offers lower transaction costs, rise of service economy, knowledge expansion and virtual networks, emerges as a pushing factor that contributes the tourism development (Hall and Page, 2003). In this context, the rapid development of tourism constitutes negative and positive impacts on social, environmental and economic structure of cities, direct and indirectly. While positive impacts of tourism brings opportunities based on economic and social development of communities, negative impacts cause loss of traditions, commercialisation of culture, noise, pollution and waste and rising cost of services (Girard & Nijkamp, 2009). In this scope, especially, small scale towns, which are known with their distinctive characteristics such as accessible places, identity, sociable and tasteful way of life, have risk of over use of cultural resource, loss of cultural identity, undermining of local traditions and ways of life due to the rapid development of tourism (Knox & Mayer, 2009). Ultimately, the rapid and uncontrolled tourism development effects social, economic and physical characteristic of many settlements depended on globalization process.

In line with clarification of negative impacts of the tourism development, the phenomenon of creativity that generates social and economic success in the context of tourism development emerges as a fundamental tool for balancing cost and benefits of tourism development (Florida, 2002; Landry, 2000; Richards, 2001; Pohl, 2010). In this conceptualisation, the phenomenon of creativity with various conceptions including creative economy, creative class, creative industries, creative clusters and creative tourism leads to economic development and growth of communities based on knowledge

exchange (Florida, 2002). Accordingly, creative tourism that promotes knowledge-based activities with the creative individuals, locals and visitors within in the context of creating new ideas, artifacts, and products mainstreams local identity and cultural assets of the settlements (Florida, 2002; Landry, 2008). Ultimately, the phenomenon of creativity emerges as a development tool in the context of sustainable development.

Within this wider array of debates, the term of creativity is generally conceptualized in the context of metropolitan cities in developed countries that have larger networks, strong labor markets and agglomeration economies by many scholars (Seleda et al. 2012; Bell and Jayne; 2009; van Heur, 2010; Lewis and Donald; 2010). However, growing literature has been attempted to identify creative economy of small and medium sized towns in both developed and developing countries that changed their development path towards under increasing globalization (Seleda et al. 2012; INTELI, 2011; Zhang et al. 2011; Waitt et al. 2009; Waitt and Gibson, 2009; Lewis and Donald, 2010; Mc Grahanan et al. 2011, Munoz, 2010). In this context, creative tourism that eliminates the negative impacts of tourism development comes out as a driver force for contributing cultural life of small scale towns.

More central to research, this paper draws attention creative place making process of small scale towns in terms of tourism development. In this context, the paper comprises four sections. The first and second sections introduce literature review on the phenomenon of creativity by an investigation of the relationship between creativity and tourism. The second part examines the case study based on the findings of urban design toolkit, which is evaluated for understanding creative environment. The final section represents briefly summarize of the research and concludes. This section also discusses the importance of creative-based tourism development in small-scale town.

## 2. Theoretical Arguments

The concept of creativity takes its roots from 1980s and it has become the focus of many scholars (Florida, 2002; Landry, 2008; Hessler & Zimmermann, 2008; Verwijnen & Lehtovuori, 1999; Hall, 2000; Durmaz, 2012). In 1980s, the idea of creativity was developed with terms of culture, arts, cultural resources and in the mid-1990s; the cultural industries became creative industries that came forward as a combination of culture, creativity, art and technological products together (Landry, 2008). In the beginning of the twenty-first century, especially with the rise of digital media and networks, the phenomenon of creativity has become have become main debate of sustainable development (Florida, 2002; Landry, 2000; Richards, 2001; Pohl, 2010). In this context, in order to understand drivers of creative- based tourism development, key terms of creativity including creative economy, creative class, creative industries, creative clusters and creative tourism are examined as follows:

### *2.1 Creative Economy*

Creative economy that appeared in the twenty-first century conceptualized with innovation, technology transfer, and intense knowledge exchange of creative workforces (Landry, 2008). Florida (2002) clarified creative economy as a transaction of creative product that put extraordinary value and wealth on science, technological innovation, novelty and intellectual property rights (UNCTAD, 2010) Furthermore, United Nations Conference on Trade and Development (UNCTAD) defined the creative economy as an evolving concept based on creative assets potentially generating eco development (UNCTAD, 2010, pp.15). In this context, Landry and Florida point out that creative economy come into prominence with the concept of knowledge economy . Additionally and Frithsch (2007) emphasize that the creative economy play a fundamental role in cultural and economic development. In this conceptualization, the creative economy has shaped the economic and social structure of cities based on the changes in production systems, technology, labour markets and dynamics in locational agglomeration (Scott, 2006). Ultimately, the creative economy brings opportunities by integrating art and creativity in economic structure of cities.

*2.2 Creative Class:*

The term of creative class developed by Richard Florida (2002) is defined as a sources of creative capital for economic development of cities (Florida, 2002). In this context, Landry (2008) defines the creative class as the group of people including designers, scientists, artists and brain workers, who maintain their jobs with creativity. Accordingly, Florida identifies creative class within two groups as follows: 1) the super creative core, including scientists, social scientists, arch (2) the creative professionals who works in business, finance, the law and advertising in the contex of creative problem solving. He also defines the bohemians including designers performing artists, media and entertainment workers and musicians as a part of creative class. In line with the definition, he claims that creative class needs a certain place to maintain their activities for economic development. In this respect, he identifies the creative class theory with Three T s base on the quality of place . The theory indicates that economic growth of place technology, talent and tolerance (Florida, 2002). Ultimately, social, cultural and environmental amenities of the place come out as an important factor in order to attract creative class for economic growth (Kunzmann 2005; Landry, 2000). For this study, location decision factors of creative class are examined in the context of small scale town.

2.3 *Creative Industries:*

Definition of creative industries varies among countries such as United Kingdom, Hong Kong (China), Japan, Singapore, Taiwan, Australia, New Zealand etc. Accordingly, in 1997, UK department for Culture, Media and Sport launched of Creative Industries Task Force defines creative industries as those activities which have their origin in individual creativity, skill and potential for wealth and job creation through the generation and exploitation o (Council, 2010, pp.16). Additionally, United Nations Conference on Trade and Development (UNCTAD) identifies creative industries as a set of knowledge-based economic activities that constitute link with traditional knowledge and cultural heritage (UNCTAD, 2010). In this concept, creative industries, which consist sector of advertising, architecture, arts and antique markets, crafts, design, fashion, film and video, software, computer games and electronic publishing, music and the visual and performing arts, publishing, television and radio, have been classified with various models and system that shift among countries. For this study, the classification system of the UNCTAD, which focuses on cultural heritage and tradition knowledge, is used for mapping creative industries. The UNCTAD classification system has four broad groups including heritage, arts, media and functional creations and nine subgroups. The following table (Table 1) demonstrates the classification system of the UNCTAD, which is used in this study in the context of creative-based tourism development.

Table 1. Classification Systems of Study
(Source: UNCTAD, 2010)

| **Creative Industries** | | | |
|---|---|---|---|
| **Heritage** | **Arts** | **Media** | **Functional creations** |
| **Traditional cultural expressions**: arts and crafts, festivals and celebrations;<br><br>**Cultural sites:** archaeological sites, museums, libraries, exhibitions, etc. | **Visual arts:** painting, sculpture, photography and antiques;<br><br>**Performing arts:** live music, theatre, dance, opera, circus, puppetry, etc. | **Publishing and printed media:** books, press and other publications;<br><br>**Audiovisuals:** film, television, radio and other broadcasting. | **Design:** interior, graphic, fashion, jewellery, toys;<br><br>**New media:** software, video games, and digitalized creative content;<br><br>**Creative services:** architectural, advertising, cultural and recreational, creative research and development (R&D), digital and other related creative services. |

*2.4 Creative Tourism*

Creative tourism, which appeared in 2000s by Richards and Raymonds, comes into the approach as an extension of the cultural tourism (Richards 2005; 2011). UNESCO (2006) defines creative tourism as travel directed toward an engaged and authentic experience, with participativ heritage, or special character of a place, and it provides a connection with those who reside in this place and create this living culture (UNESCO, 2006:3). In this context, Richards and Wilso emphasize the importance of the link between cultural landscape and creativity in terms of tourism development. They claimed that cultural landscape of cities such as festivals, cultural routes, museums, cultural heritage constitutes a strong link between the tourists, the local and creative individuals in terms of creative tourism. Accordingly, the following figure (Figure 1) demonstrates the model of creative tourism. In this context, creative tourism engages with active participation in order to access to culture via creative initiatives (Smith, 2009). For instance, Creative Tourism Barcelona program offers the project that supports local artist in order to foster creative industries. In addition to Barcelona, Obidos, which is a small town in Portugal, organize the project of for the development of creative tourism. In that sense, they provide flexible spaces to work and live by regenerating historical disabled buildings. In this project, the town generates the creative places for constituting links between local community and artists. As well as, Nelsonville, which is a town of the US, Ohio State, also promote cultural and artistic events in order to connect with the locals and creative individuals. Based on these creative activities, many creative individuals chose to locate in Nelsonville (Selada et al, 2011). Consequently, creative tourism, which is fundamental tool for protecting cultural assets through creative activities, promotes interactive participation of the creative individuals, visitors and locals.

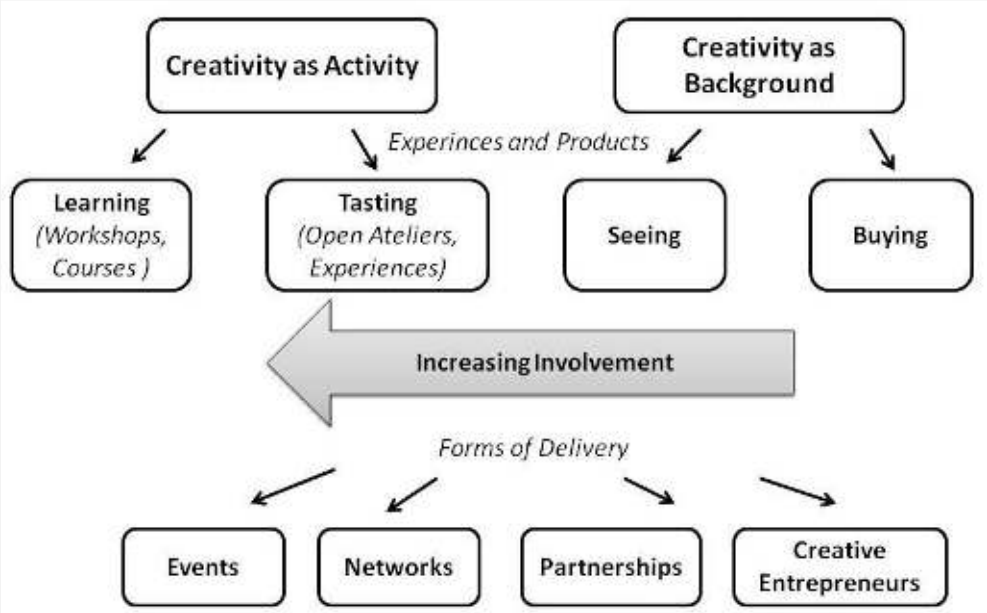


Figure 1. The Model of Creative Tourism
(Source: Richards, 2011)

**3. Case study: The Small** Scale Town, Ala at

Ala at , where is located 79 km from center of zmir (see Figure 2), is one of the small sc
Izmir with the population of 11.004. (ABPRS-Address based Population Results, 2012-
http://www.turkstat.gov.tr). Ala at has evolved under various eras including Hellen
Byzantine and Ottoman. In this scope, the town has gained tourism popularity depended on its
multicultural ethnic background, authentic architecture, seashores, vineyards, climate, natural beauties
and coastal facilities such as surfing activity. In about twenty year s per
significant transformation in the context of tourism development. In that term, planning decisions and
governmental organizations that generated positive and negative impacts on physical, economical and
social structure of the town affected this transformation process. Today, the town becomes a unique
tourism destination based on its tangible and intangible heritage. In this respect, the study focuses on
Hac Memi District that is located on the center of Ala at as a yet untou
of creative tourism.

Figure 2. Location of Ala at
(Source: Google Maps, 2013)

### *3.1 Methodology*

The study applies the mixed method research techniques of urban design approach. In this scope, urban design toolkit for creative place making that includes various analyses for understanding the context of creative clusters is evaluated in four phase. Firstly, components of tourism and creativity that come from literature review are defined for understanding creative place-making process. Secondly, diagnostic analyses including accessibility, behavior observation, mental mapping, social diversity map, cultural assets map and interview are generated according to components of tourism and creativity. Thirdly, predictive analyses including design policies, creative-based strategies are specified for scenario development. Finally, urban design toolkit for creative place-making that has two main parts including diagnostic analyses and predictive analyses was used at the case study of Ala at for understanding operational structure of the toolkit (see Figure 3) (Ince, 201

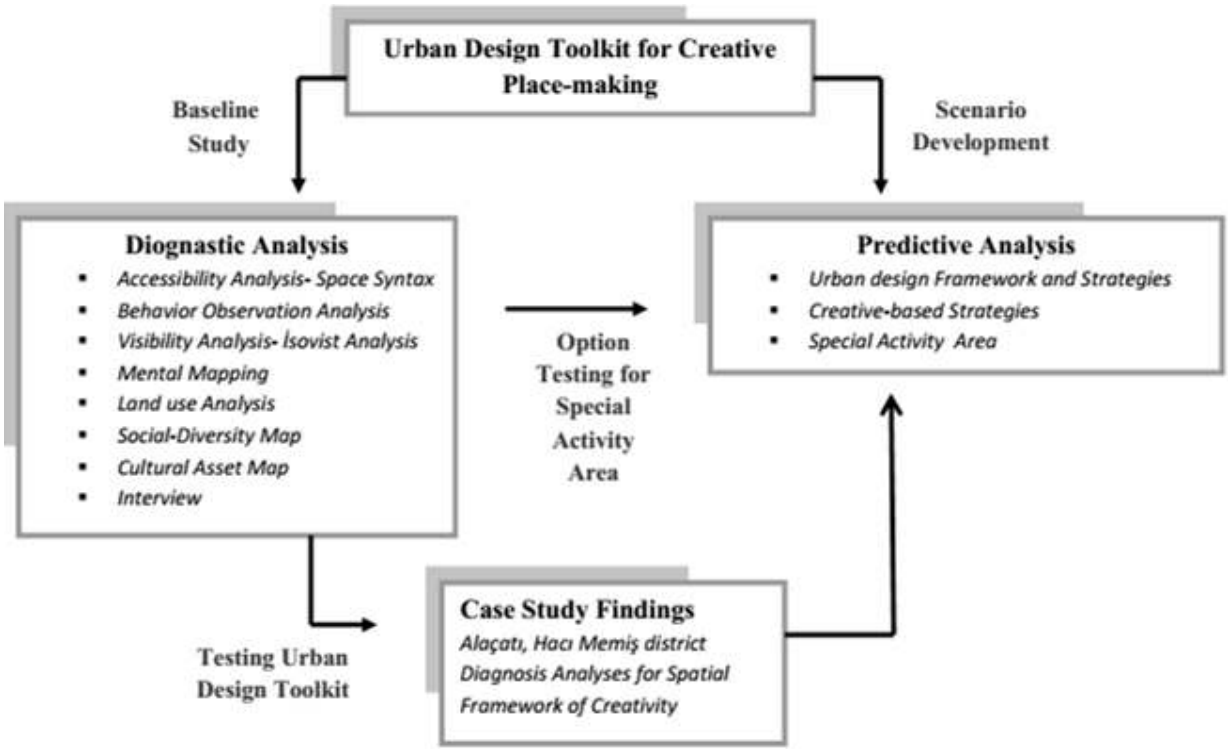


Figure 3. Urban Design Toolkit for Creative Place-making

For this study, the diagnostic analyses of space syntax analysis, cultural assets map, creative cluster mapping and interview are selected from the toolkit based on the limitations of study including date access and study time. Additionally, creative based strategy defined in predictive analyses of the toolkit is also generated for fostering creative environment of the town. Consequently, creative place-making toolkit that provides options with many tools for understanding and enhancing creative environment is used in the case of Ala at .

### *3.2* Emergence of Creative tourism in Ala at - Hac Memis District

According to interview results and site observations, the creative activities firstly have emerged in the Hac Memi District. The creative individuals including photographers, designers, and ceramist have chosen to locate in Hac Memi district since 2000s based on different motivations. In this scope based on results of the interviews, emergence of the creative tourism in Hac Memi dist described in three phases as follows: (1) The banning of the Antique bazaar in 2009; (2) Characteristics of the district including natural, physical and cultural; (3) Clustering of the creative individuals that bring positive impact on social networking. Firstly, in 2009, many antiquarians located and opened antique shops in Hac Memi District due to the banning of the Antique Ala at . In that term, art and antiques market, crafts, fashion and design s industries based on UNCTAD classification system emerged in four years at the town (UNCTAD, 2010). In this scope, the Antique bazaar came out as one of the pull factor of the creative clustering process of the town. Secondly, in 2010 and 2011, ceramist, designers, the owner of art galleries moved to the town depended on the cultural, psychical and natural characteristic of the town. Thirdly, in 2012 and 2013, many young creative individuals including fashion designers moved to the district for reaching out the community and generating their ideas with other creative individuals. Ultimately, Hac Memis District becomes one of the known creative clusters for both to individuals and the district is still in the center of creative clustering process (see Figure 4).

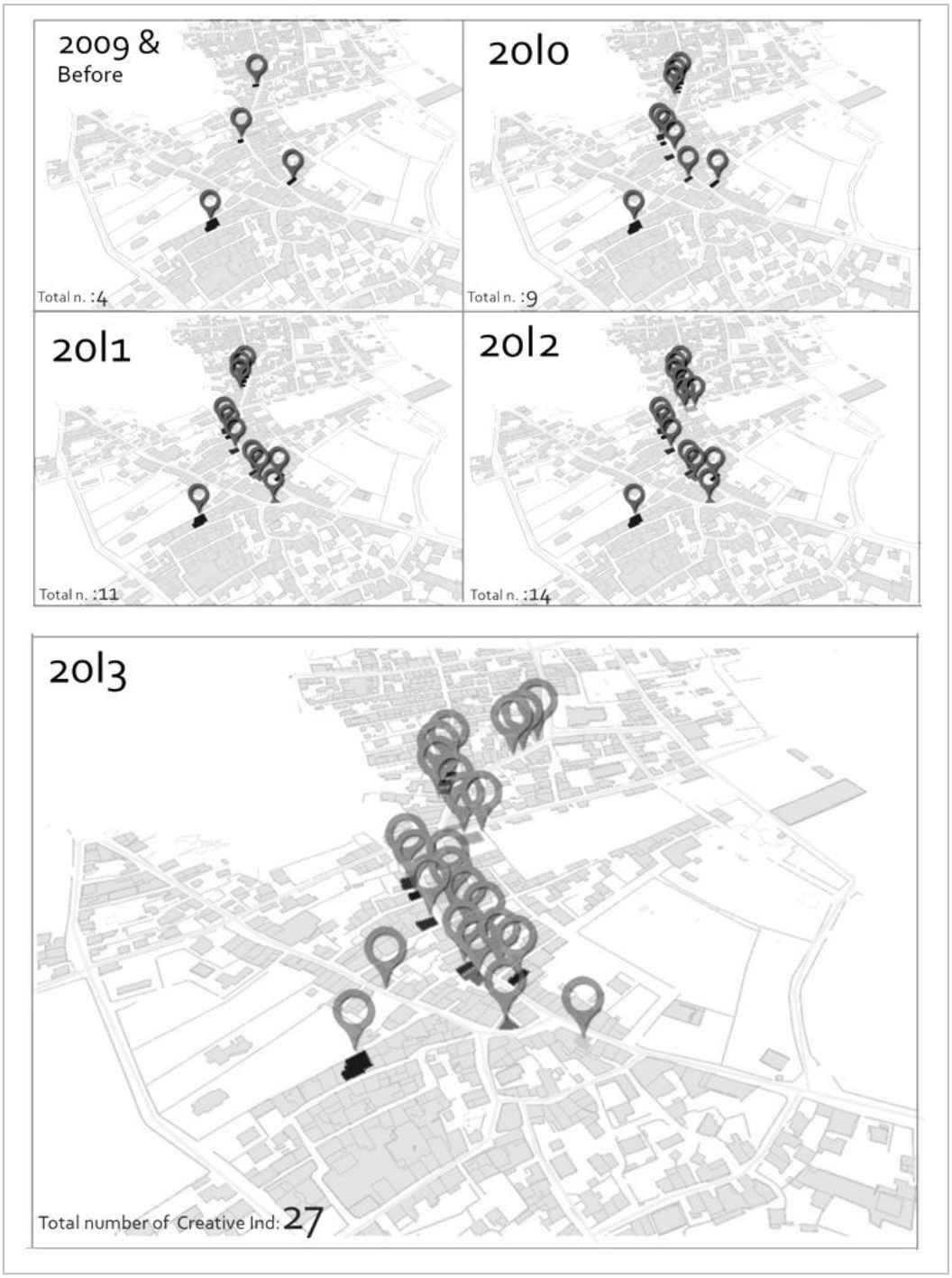


Figure 4. The evolution and location pattern of the creative individuals

***3.3.*** Generating Creative Place Making Toolkit for Ala at , Hac Memi District

The following analyses including interview, cultural assets map, space syntax analysis, creative cluster mapping defined in diagnostic analyses of the toolkit were used for understanding creative environment and creative place-making process of the Hac Memi District. Moreover, creative based strategy which leads to understand potential creative environment was constituted based the outputs of diagnostic analyses.

*3.3.1 Interview:*

Interviews provided to understand creative individual s location choices, lik terms of characteristic of the creative environment. In this study, interviews were conducted with eighteen creative individuals including the pioneers based on snowball technique in August 2013. The interviews gave detailed information about location patterns of creative individuals and the positive and negative impacts of creative clustering process in terms of creative tourism. Additionally, the interviews also revealed the relationship between the locals and creative individuals based on creative-based tourism development. In this context, the findings of the interviews demonstrated that creative individuals are working to preserve the tangible and intangible assets of the town. Furthermore, in social sense, creative individuals generate knowledge-based activities including workshops, festivals, exhibitions and micro-scale projects for promoting local lifestyle, maintaining the cultural assets and socializing with the locals. For instance, one of the respondent (43, male, has an art g Memi District) explained the project of Art Farm . In that project, they organized the pla the creative individuals, locals, visitors and academics meet via symposiums, art galleries, workshops and concerts. He claimed that they (the creative individuals) aimed to develop the creative tourism during the whole year via knowledge-based activities. Additionally, creative individuals enhance the physical quality of the town and they regulate street management as for promot district in the context of creative-based tourism development. For instance, one of the respondents (male, musician, collector and designer, has an antique shop in Hac Memi District called Es stated that:

> We (the creative individuals) gather among ourselves for avoiding the det *pattern, keeping the sound, noise in certain level. We gather for our street. Generally, we gath*er at the Dutlu Kahve .

The findings also demonstrated that creative individuals bring economic vitality to the district by working with locals and supporting the small creative businesses. Ultimately, the major positive impacts of creative-based tourism come into the prominence as follows: economic vitally, connecting locals, improving quality of public space, supporting community, and constituting vibrant spaces. Respectively, positive impacts of creative- based tourism can be summarized in the following table (Table 2).

Table 2. Positive Impacts of Creative- based Tourism

| **Physical Sense** | **Social Sense Knowledge- based actives** | | | **Economical sense** |
|---|---|---|---|---|
| | **Workshops** | **Festivals** | **Organizations** | |
| - Constituting vibrant spaces<br><br>- Improving quality of public space<br><br>- Preserving historical site. | - Connecting with the locals.<br><br>- Supporting community. | - Carrying artistic identity of the town in both national and international level.<br><br>- Maintaining the cultural assets | - Socializing with the locals. Discovering the cultural values of Ala at which sunk into oblivion.<br><br>- Protecting local cultural values. | - Supporting the small creative businesses especially the business of the young talents<br><br>- Working with locals based on art and craft production<br><br>- The length of the tourism season |

On the other hand, based on the interview s results, negative impacts of creativ comes out as prices of goods, rents and habitat loss due to rapid development of tourism. According to interview s results, many responded complained about high rental rates due the dev service tourism. In the last two years, the workplaces of locals and creative individuals threatened by the restaurants and cafes that caused the increase in the rents. On another point, negative impacts of creative-based tourism were eliminated with creative clustering process such as over use of cultural resource, undermining of local life, noise and pollution. Ultimately, many negative externalities of the mass tourism were reduced with creative-based development process.

*3.3.2 Space Syntax Analysis:*

Space Syntax analysis, which demonstrates the most accessible places based on p skills, is defined as a tool for identifying well-connected place and primary pedestrian routes in terms of vitality and permeability (Hillier et al., 2007, Carmona et al., 2003). The following figure (Figure 5) shows the potential movement choice map of the town, which measured integration R800m and calculated the angular closeness up to 800m (10 minute walk). The analysis has been done for according to formal and informal pedestrian routes in order to understand potential and high movement routes. In this analysis, red lines reveals the most chosen routes, which also indicates the current routes of creative individuals working places. Similarly, yellow lines demon potential high movement routes of the district, where the creative individuals have started to locate. Moreover, the space syntax analysis indicates the well-connected places where the creative individuals gather and stimulate their knowledge-based activities. Ultimately, space syntax analysis offers insights on the creative spaces for improving creative environment of the district.

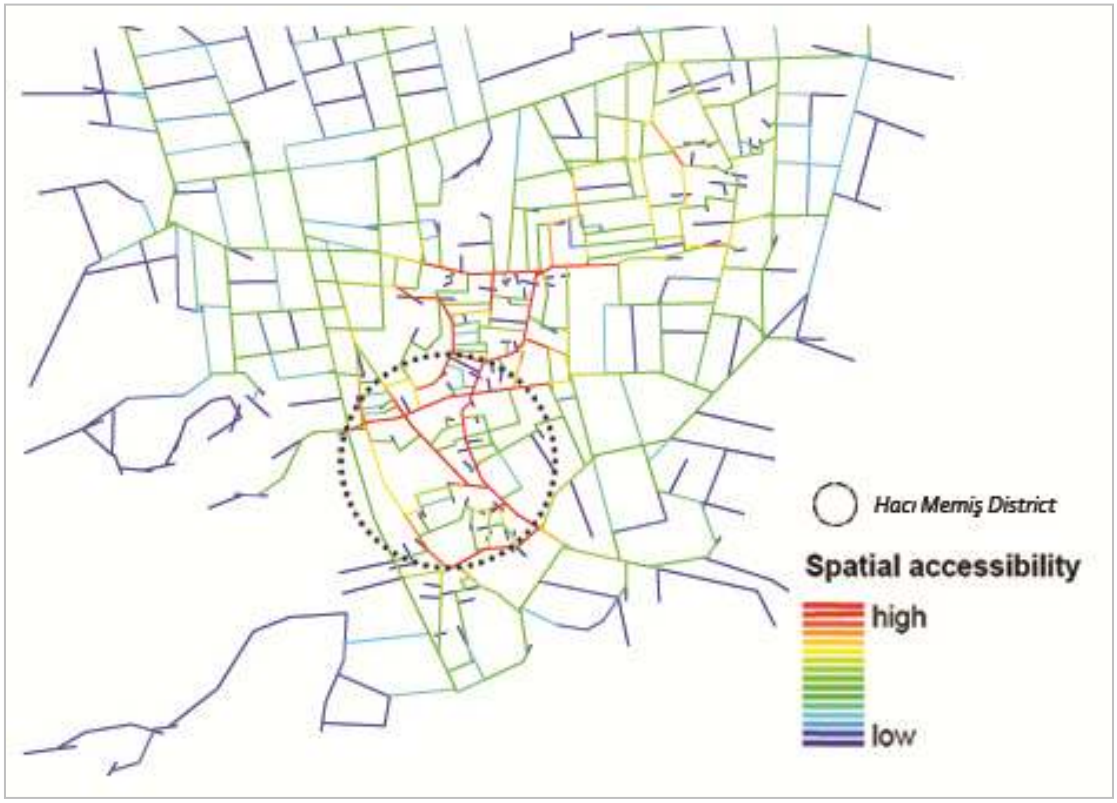


Figure 5. Potential Movement Choice Model of Hac Memi District

*3.3.3 Cultural Asset Map:*

Cultural asset map, which illustrates cultural resources including cultural heritage, industries, occupations, organizations, events and festivals, comes into the prominence as a fundamental tool for transforming the intangible and invisible assets in terms of creative tourism (Crawhal, 2008; MCPI, 2010). Furthermore, in this study, cultural asset map illustrates the physical cultural assets in order to generate key resources such as art, culture and heritage in terms of creativity. For this study, cultural asset map analysis has been applied for identifying places, events and organizations of the town as for fostering the creative environment.

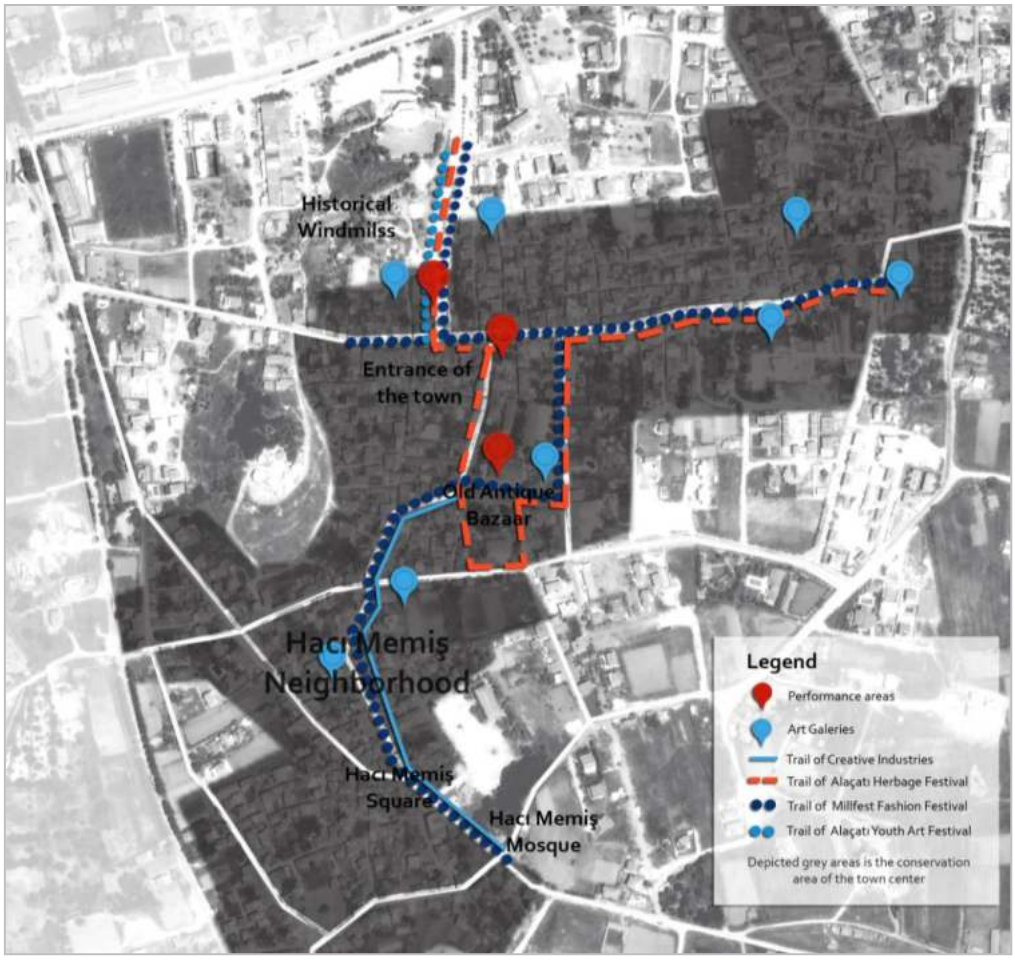


Figure 6. Cultural Assets of the Ala at

In Ala at , four associations including Tourism Association of Ala at , the C of Ala at , Ala at Art Friends and Ala at 2020 organize festivals for maint reflecting invisible assets of community. For instance, Ala at Art friends, which is a group of art enthusiasts formed by the creative individuals, organize workshops and festivals such as Youth Art Days in Ala at for promoting art life of the town. Today, there are six festivals organize associations including Ala at Herbage Festival, Ala at Youth Art Festival, Cup, Millfest Fashion Festival, International Ala at Festival, Ala at Fishing Fes hand, the creative individuals also organize street exhibitions to illustrate tangible and intangible assets of the town. Ultimately, invisible assets of the town come into the prominence through these festival and organizations. Accordingly, the cultural asset map of the town demonstrates the link between cultural assets and physical structure in order to generate creative place (see Figure 6).

*3.3.4 Mapping Creative Clusters*

Mapping creative clusters provides spatial and statistical data about creative industries in order to clarify the size and contribution of creative cluster in terms of employment, value and exports (Higgs and Cunningham, 2008). In that sense, the creative cluster mapping analysis demonstrates the location pattern of creative industries, where creative individuals stimulate their activities.

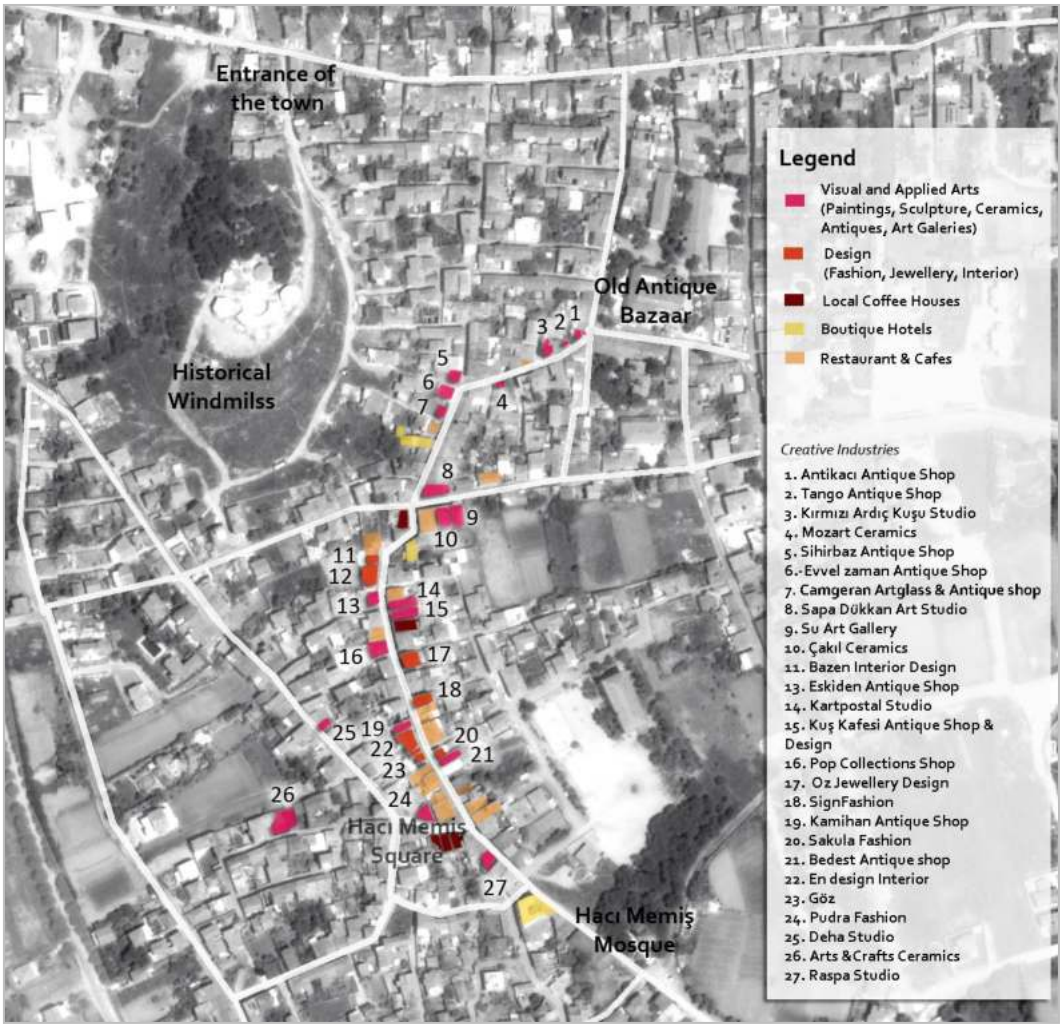


Figure 7. Creative Cluster Map of Hac Memi

For this study, the creative cluster mapping have been done for the Hac Mem UNCTAD classification system that includes design and visual and performing arts (UNCTAD, 2010). The analysis illustrates the detailed land use map of creative industries o including art galleries, antique shops, fashion, design and ceramic studios. Furthermore, the creative cluster mapping analysis also demonstrated the local shops (e.g. coffee houses, grocery) of Hac Memi District in terms of creative-based tourism development. Ultimately, the analysis indicat twenty seven creative spots of the Hac Memi district that provide oppor between the locals, creative individuals and visitors (see Figure 7-8).

Figure 18. A View from the Workplace of the Glass Artist

*3.3.3.5 Creative-based Strategies*

Creative-based strategy defined in predictive analyses of the toolkit is identified as a tool for fostering creative environment. Creative based strategy aims to promote endogenous assets, specific amenities, natural landscape, cultural heritage and creative atmosphere in order to encourage creative works in urban fabric. According to Seleda et al. (2012), creative based strategy is mainly based on three main dimensions as follows: (1) Governance that promotes the creative economy, (2) Endogenous resources based on natural and built environment, social and symbolic capital, economic and cultural activities, (3) Territorial embeddedness related with territorial position; urban densities; and accessibility. Thus, creative-based strategies, which constitute policy and design strategy for creative place-making, enhance creative activities in urban fabric through interactive participation.

In this study, creative-based strategies have been done according to the outcome of diagnosis analyses including space syntax, cultural asset maps, interview and creative cluster mapping. Outputs of diagnostic analyses, which provides detailed data about the size and contribution of creative cluster business model, the projects and organizations of the creative individuals, events and festivals of the town, constitutes a baseline study for understanding the creative environment of the town. The following figure (Figure 9) illustrates the findings of diagnostic analyses including cultural assets map, creative cluster mapping and interview. For the study, creative-based strategy has been developed based on two dimensions including governance and endogenous resources for achieving creative-based tourism development. Firstly, in governance part, the role of agents including non-governmental organizations, creative individuals, local citizens, municipality, which was defined in the findings of the cultural asset map and interviews, enhance the creative place making process. Accordingly, the findings of diagnosis analyses revealed that the role of agents promotes the creative- based tourism development. Furthermore, they mitigate the negative impacts of tourism development through projects, organizations, and festivals. For instance, street management , whic

by the creative individuals, protects local life of the town. Addition to street management, the creative individuals organized the projects including art farm project and protecting the local coffee houses, which foster cultural assets and local life of the town. In that sense, these specific strategies generated by the agents including non-governmental organizations, creative individuals and local citizens must be enhanced by participatory process in terms of creative tourism. Secondly, endogenous resources such as cultural, natural, aesthetic and built assets of the town come into prominence as an important tool for fostering creative environment. In this scope, infrastructure and support programmers become crucial (Seleda et al., 2011; 2012). Additionally, creation of creative spaces emerges such as live-work houses, studios, performing art spaces, meeting points comes out as an important factor in the context of creative-based development (Gertler et al, 2006). Respectively, according to findings of diagnosis analysis, the current creative activities of the town are concentrated on high movement routes that are shown in the findings of space syntax analysis. In this scope, in order to promote creative activities of the town, potential high movement routes can be defined as development routes of the creative activities in terms of creative tourism. Accordingly, new creative activities must be developed on the potential high movement routes by offering performance areas, open studios, arts workspaces, and exhibitions. The creative spaces, where the locals, creative individuals and visitors exchange their ideas, also must be enhanced visually and aesthetically for attracting the creative tourist (Markusen et al, 2010). Ultimately, the creative based strategies, which offers potential development routes of creative activities, enhance the creative based tourism development based on the findings of diagnosis analysis.

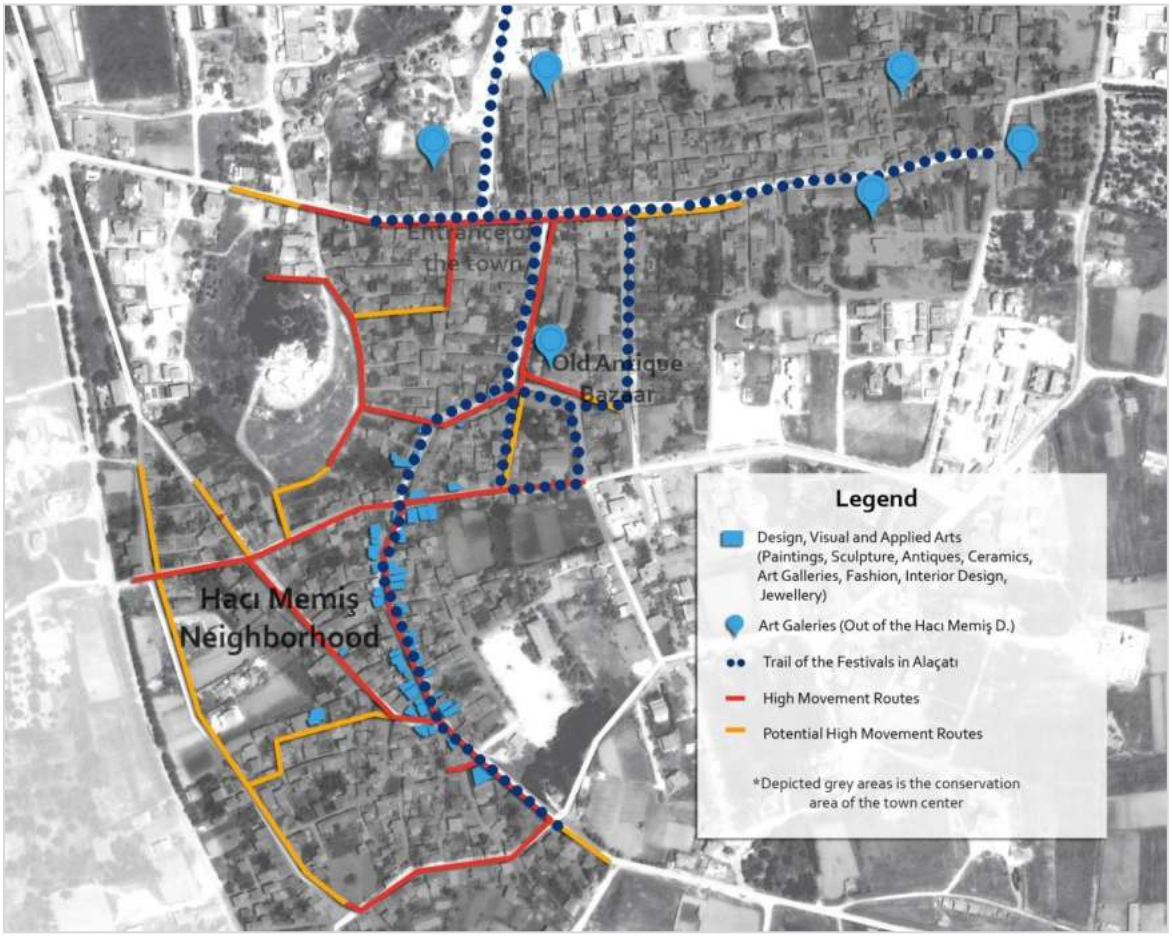


Figure 29. Diagnostic Analyses of Hac Memi District

## 4. Conclusions

In this study, creative clustering process is examined in small town settings. In this scope, urban design toolkit that was evaluated for understanding characteristics of creative environment was used for understanding creative clustering process in Ala at , Hac Memi District which e creative-based tourism development. The findings of the toolkit represent creative clustering process of the town in the context of tourism development. Furthermore, creative-based strategies defined in predictive analyses of the toolkit reveals the potential development routes for creative activities for enhancing creative clustering process. In this scope, this process can be enhanced with creative- based strategies for contributing creative tourism in small town settings. Ultimately, benefits of the concepts of creativity in terms of tourism can be summarized in following part.

Creative clustering process controls the development of tourism in small scale town. In this scope, the agents including non-governmental organizations, creative individuals, local citizens, and municipality emerges as a control mechanism for eliminating negative impacts of tourism development. Especially creative individuals who engaged in creative clustering process aim to promote local lifestyles and cultural assets of the town. In this scope, they organize micro-scale projects, organizations and festivals for the locals and visitors. The creative individuals, who strengths the identity of town, also add value on the physical quality of the town in order to enhance vibrancy of the street life. Moreover, creative tourism constitutes interactive participation between the locals, creative individuals and visitors for contributing the local economy (Richards, 2011). Creative tourism also keeps tourism alive both in summer and winter seasons and brings economic vitality in the town (Walker, 2010, Richards, 2011). On the whole, this study claimed that creativity is not solely based on metropolitan phenomenon and place-making does matter as a consistent location factor for art-based communities. In that sense, creative tourism in small scale town, which provides an opportunity for taking a place in global economy, contributes to the healthy development of small scale town (Seleda et al, 2011; 2012).

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# Coastal tourism in New Zealand: a challenge for local culture in a changing era?

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Keywords: Sustainable coastal tourism, Maori indigenous culture, Chaos theory.

## Abstract

*Tourism sustainability is based on its ability to represent local culture and being beneficial for the community. This paper deals with this topic through investigating the relationship between coastal tourism activities and local communities in five case study areas in New Zealand and comparing them according to sustainable tourism indicators. Data were collected and analysed using mixed method research approach through A) Case study visits and literature review to identify the tourism system* characteristics and connecting them with theoretical tourism models such as Mckercher s chaos models. B) Semi-*structured interviews were conducted with local community representatives to get their perception on the effect of coastal tourism activities on their culture and tourism strategies implementation. The results showed that the lack of regional tourism strategies leads to weakening of the institutional structure managing coastal tourism activities in New Zealand causing fragmentation in the responsibilities of different agencies. Local and iwi community representatives express their dissatisfaction of the planning for tourism, its negative effects on their culture and lack of job opportunities in tourism. However, they appreciate the efforts made by some governmental authorities such as MfE, DOC and some local councils in protecting coastal tourism environmental assets and their cultural heritage. The study recommends formulation of updated tourism strategies on the regional level connected with New Zealand tourism vision 2025, enhancement of community participation through using adaptive management approach, incorporating local iwi culture in tourism activities and increasing tourism job opportunities for local community members to achieve sustainable tourism outcomes.*

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## 1. Introduction

Tourism activity is considered the largest business sector of the world economy according to a World Travel and Tourism Council (WTTC) 2015 report, tourism makes up around 9.5% of the global Gross Domestic Product (GDP), at approximately 7 trillion US dollars, and it is forecast for this number to increase to almost 11% of the global GDP by 2024. International tourist arrivals have doubled in 13 years from 528 million in 1995 to 1087 million in 2013, and forecasted to reach 1.8 billion by 2030 (UNWTO, 2014). Tourism also creates millions of jobs annually, in 2013 approximately 266 million jobs where generated by the tourism sector (WTTC, 2014). Moreover, the Asia- Pacific region was the fastest growing region in the last four years in terms of the international tourist growth, with 15 million more people visited the region in 2013 than in 2012 (UNWTO, 2014).

Therefore, studying coastal tourism, its effect on the local culture and ways to increase its sustainability is the focus of this paper. This is important because coastal tourism is considered one of the fastest growing forms of tourism in recent decades, where coastal destinations act like magnets that attract tourists to visit and enjoy various activities. Reports from international organisations such as United Nations World Tourism Organization (UNWTO) showed that eight of the top ten worldwide tourism destinations in 2014 were coastal countries (UNWTO, 2014).

The paper starts with indicating research importance to New Zealand, followed by reviewing of literature showing special relationship between indigenous communities in New Zealand named as iwi

and the coast. Then discussing the conceptual model through reviewing tourism models (linear and chaos models). The mixed method research was used in this research, were mix between qualitative techniques (interviews and document analysis) with quantitative techniques (sustainable tourism indictors) are discussed, followed by brief about the selected case studies. The analysis is based on investigating the effect of coastal tourism in local iwi culture and its coastal sites and that analysis is represented through positioning case study areas on different stage of the tourism life cycle.

The discussion continues through proposing a sustainable development framework and how local community and iwi could participate effectively in its stages to ensure their local culture is protected against any threats from mass coastal tourism activity. This is followed by conclusion specifying the main issues extracted from analysis and suggestions to solve the issues and limit its negative impacts.

## 2. Research importance to the New Zealand context

This area of paper response to the importance of coastal tourism and its relationship with local communities and effect on local cultural, this is important for many countries especially in the Asia-Pacific region. The study is important for New Zealand for a number of reasons. Firstly, there is a growing importance of tourism activity to the New Zealand economy, considering it is the second largest export category in the country s economy and contributing to almost 4. with one in every 10 New Zealanders working in the tourism industry based on Ministry of Business, Innovation, and Employment statistics (MBIE, 2014). New Zealand government try to develop tourism to be a major contributor to the country s economy in the future. The g Zealand Tourism Strategy (NZTS) stated that by 2015 tourism is valued as the leading contributo *a sustainable New Zealand economy* (Ministry of Tourism, 2007, p.6).

Despite that, the goal was not achieved, but the governmental desire still exist through the New NZ Tourism Strategy 2015 aims to double the revenue coming from tourism sector from $ NZ 24 billion in 2013 to be $NZ 41 billion by 2025 in New Zealand Tourism Vision 2025, through improving the competitiveness level of New Zealand tourism in the international market (Tourism Industry Association New Zealand, 2014).

Secondly, an important part of this competiveness is the tourists experiencing local culture along with their enjoyment of the natural coastal environment (beaches). More than 1/3 of the total international tourists visiting New Zealand in 2013 stated that their main reasons to visit the country was the spectacular landscapes and natural beauty (Tourism Industry Association New Zealand, 2014). This future vision is not only focusing on the economic aspect, but depends on the brand 100% Pure New Zealand that promotes the country, as a place where environment is best reserved in the international tourism market, combining landscape with the indigenous culture to create a competitive tourism product that attract international tourists (Tourism Industry Association New Zealand, 2014)

Therefore, in order to achieve the tourism vision 2025 and increase the count tourism sector, it needs lots of investment in the tourism industry. However, this investment growth means increase in tourism activities and its pressure on the coastal areas and local culture sites. Although MBIE produced Maori Tourism Action Plan in 2011 (MBIE, 2011) to maximize revenue from Maori tourism sector, but its main focus was in increasing profit without major emphasis on protection of the heritage sites or local culture. Although their recognition that Maori culture is important part of the visitor experience. **Therefore, this paper tries to answer the question about the status of sustainable tourism practice in the selected study areas in New Zealand and their effect on the local culture.**

## 3. Maori, tourism and the coast: complicated relationship

The coast represents a special value for iwi Tangata whenua (Traditional name for iwi) consider themselves as the guardians for the coast (Kaitiaki).The role of kaitiaki involves a responsibility to ensure that the mauri (life supporting capacity and essence) of the coastal environment is protected, and that coastal resources are sustained for future generations to enjoy. This role and special connection with the coastal environment appear in the following activities:

a) Sites and areas that reflect the long relationship of tangata whenua with the coastal environment, including nohoanga (temporary campsites), taurangawaka (canoe landing sites), pa (fortified settlements), ana (caves), wahipakanga (historical battle sites) and pouwhenua (traditional markers, landforms/trees), fishing grounds.
b) Cultural and spiritual sites including islands, peninsulas, headlands, and inlets.
c) Wahitapu, including urupa (burial sites) and wahitaonga (treasured places or things).
d) Mahingakai values, including kaimoana (food sourced from the sea), taongararanga (plants for weaving/manufacturing), and rongoa (medicinal species) customary use/management practices, including rahui, mataitai and taiapure (Quality Planning, 2015).

This special relationship was translated through the principles from treaty of Waitangi and in the last decades through number of documents such as Awaroaki Manuka for Ng ti Te Ata in 1991 and The Cry of the People Natural Resource and Environmental Iwi Management Plan in 2008. Through these documents, Tangata whenua try to reflect their holistic and integrated management approach towards the coastal environment and aim to protect their coasts and local culture. (Quality Planning, 2015).

The relationship of iwi with the coast is also recognised in Resource Management Act (1991) and Coastal Policy Statement NZCPS 2010, both recognises that tangata whenua are kaitiaki of the coastal. Different policies in NZCPS also focuses on protecting the coastal areas that are of special value to iwi and recognising the Maori culture values in the coast.

Furthermore, tourism is accused of being destructive to the environment and local culture. Studies and theories were made to test this claim; concepts introducing tourism as a sustainable activity began to rise, and others tried to convert tourism towards more environmentally responsible trends like the eco-tourism concept (Crenat & Gourdon, 2007).

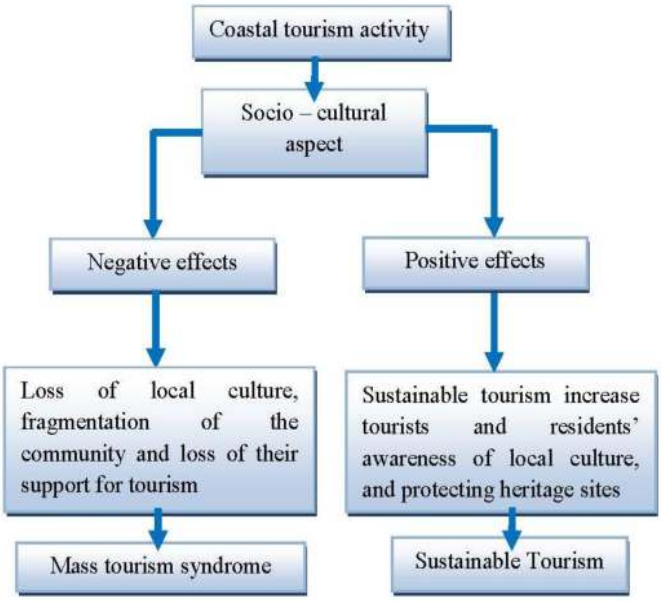


Figure 1: Coastal tourism effect on socio-cultural aspects

Reviewing such concepts is important to this study because they enlighten us to considering new perspectives for the tourism activity. A definition provided by the World Tourism Organization (1999) states that: *sustainable tourism development meets the needs of present tourists and host, while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled, while maintaining cultural integrity, essential* ecological processes, biological diversity and life suppo (Weaver, 2006, p. 20).

## 4. Conceptual framework

Tourism is a complex activity; one of the earliest definitions of the tourism system, was introduced by Leiper (1990), responding to the emergence of the sustainable development concept. Leiper defined the tourism system as a linear controlled system depending on traveller/ tourist journey from the traveller generating region, then departing to the transit route region where the travel industry exists and flight takes place to reach the tourist destination region.

Other researchers, such as Miller *et al.* (1999) explained that the tourism system could be described as an interaction between three main components (Figure 2). The Locals (L) representing the traditional communities, and Tourists (T), either domestic or international, and Brokers (B), who are representing the private sector. Miller added that the tourism system is constrained by human and natural settings, and that tourism has a direct impact on both the social and natural environment. This model tries to explain the dynamics of the tourism system and its interaction with the surrounding environment and local community, and focuses on the analysis of the power dynamics and internal relationship between system components.

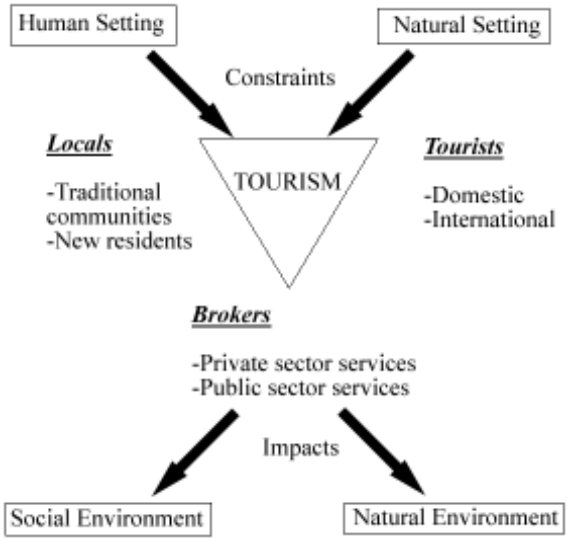


Figure 2: The B-L-T model from Miller *et al.* (1999)

However, it does not emphasise the effect of the external factors like political and socio- economic factors on the system. Other researchers like McKercher (1999) argued that the linear, controlled, predictable Lepier s model (1990) is not entirely correct, as the tourism plans produced accord this perception were failing to achieve their goals, and that these linear models fail to reflect the dynamic nature of tourism or describe the complex interrelationships that exist between organisations managing tourism challenge including local community and their culture.

He then introduced the chaos model of tourism (Figure 3), where the tourism system is described as an open model where there are continuous movements happening between the different elements of the system and that each of these elements is interconnected. McKercher added to the Leiper s system components communication sector which connects travellers to destinations, consider non-tourism externalities like changing political, economic, or social conditions and outputs of the system.

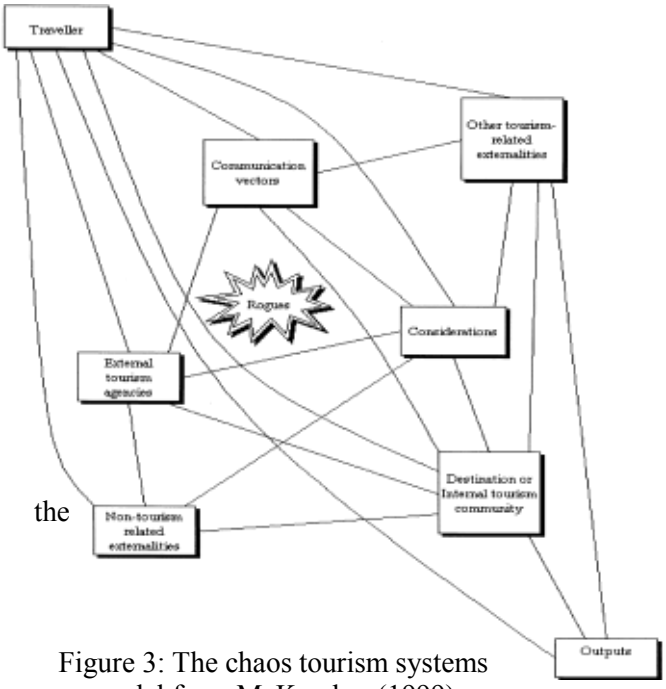


Figure 3: The chaos tourism systems model from McKercher (1999)

The tourism system components were defined further by Leiper (2004, p.) As it comprises of five elements: tourists, generating regions, transit routes, destinations regions, and tourism industries which combine to enable tourism to occur in practice (Figure 4). Responding to the rapid changes that happened in the tourism industry, its booming growth in the 1990s and as a step to emphasising external factors ignored by Miller. Leiper modified the model and suggested that the tourism system works in an operational context that includes economic, socio-cultural, political, technological, legal, and environmental variables.

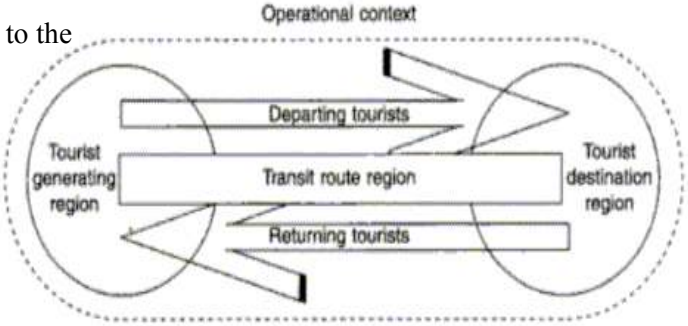


Figure 4: The tourism systems model from Leiper (2004)

However, the external factors were more generalised in the chaos model, and combining the characteristics of McKercher s model with the attributes, detailed description T model will create a better integrated definition of the tourism system that does not ignore the destination environmental, socio-cultural, economic and institutional features. In addition, the Leiper model could serve as a base to describe coastal tourism patterns in the selected case study areas.

These previously mentioned models tried to deal with the challenges facing the tourism activity, but to face the challenges the status of tourism in the selected destination must be identified precisely. Although it is older research that of Bulter (1980) produced what is known as the tourism life cycle model that clearly explains the changes happening in the tourist destination. Despite the age of this model, it is still widely used to show the evolution of tourism in any destination.

This model (Figure 5) explains the five main stages of tourism development focusing on tourism resorts. Firstly, the ***Discovery*** stage where the destination is gaining popularity and more economic opportunities are opened to provide services to meet the needs of tourists. Secondly, ***Growth and development*** stage where more tourists visit the area with more promotion of tourism activity and more demand for tourism development and infrastructure.

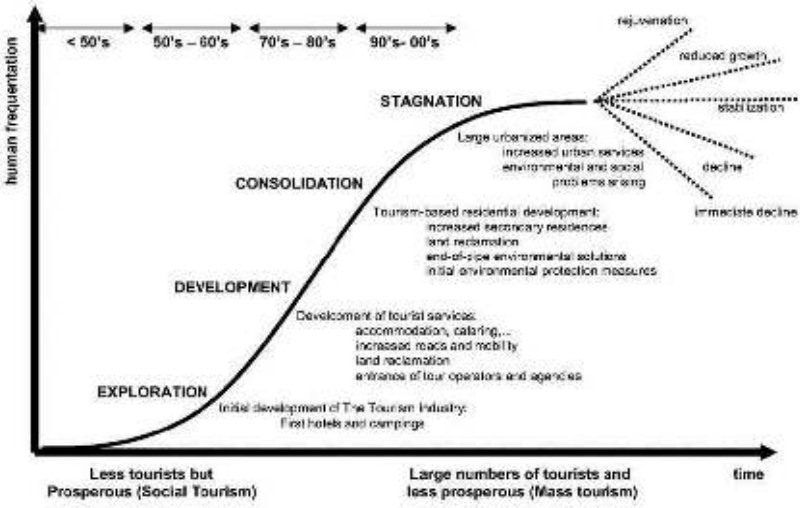


Figure 5: the life cycle tourism model from Butler (1980)

Thirdly, the ***Success*** stage where the area s facilities are fully utilised with mass tou old forms of tourism. In this stage, the destination begins to lose its identity and culture, for the benefit of international and non-unique aspects of service and culture. Fourthly, the ***problem stage*** where the destination became neglected and little of the original features of the natural environment remains. That affects the economic revenue coming for the community from tourism. Lastly, the ***decline and rejuvenate*** stage where the system either decline or develops to a sustainable pattern.

## 5. Methodology

The analytical methods are based on the triangulation between qualitative and quantitative methods (Figure 6). The qualitative methods depend on and content analysis of statutory and non-statutory documents. The Nvivo software package as a qualitative analysis tool was used to analyse interviews, and based on the responses investigate the relationship between tourism activity, and integrated coastal management practice in the case studies. In addition, identifying the main issues from the view of key personalities managing the coastal areas, and the relationship between policies stated in statutory documents and practice. In terms of practice, the quantitative methods of research come into perspective, depending on Indicators that were developed based on a collection of related national and international indices (Table 1).

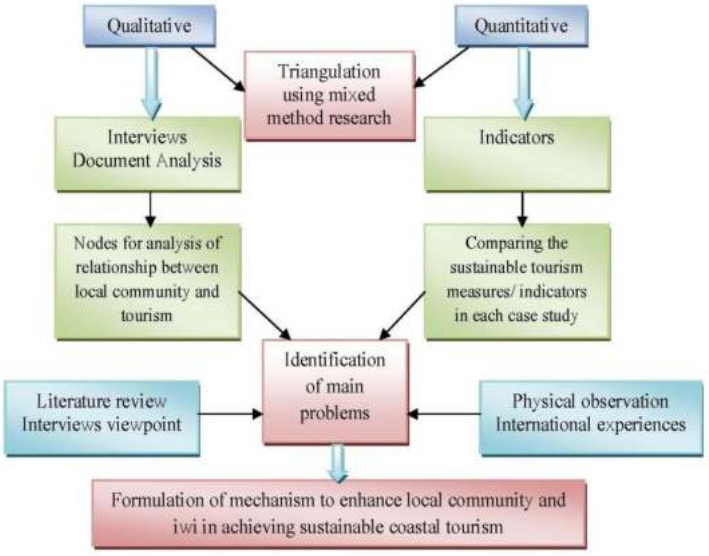


Figure 6: Chart explaining methods of data analysis

Table 1: Selected sustainable tourism indicators from literature used in the study from (UNEP, 2009)

| Section | Indicator |
|---|---|
| Sustainable tourism public policy | % of the destination with a sustainable tourism strategy plan |
| Customer Satisfaction | % of visitors that are satisfied with their overall experience in the destination |
| Recreational activities and their effects on the environment | Variety of coastal based activities and % of the coastline affected negatively by those activities |
| Sustainable Tourism Management in tourism enterprises | % of tourism enterprises in the destination involved in environmental protection |
| Protecting and Enhancing Cultural Heritage | % of the destination covered by a policy or plan to protect cultural heritage |
| Maori involvement in tourism activity | % of Maori based tourism activities operating in the destination |
| Community/social impact | Number of tourists per 100 residents / % of residents who are satisfied with tourism in the destination |
| Protecting and Enhancing Cultural Heritage | % of the destination covered by a policy or plan to protect cultural heritage |
| Quantity and Quality of Employment | Direct tourism employment as % of total employment/ % of seasonal tourism jobs |
| Tourism performance | Average length of stay of tourists (night)/ occupancy rate in commercial accommodation per month |
| Tourism Flow | Number of tourists per month/ relative contribution of tourism to the destinationys econom |

The results from indicators enforce the community / iwi perception (qualitative methods).

## 6. Case study areas

Five case studies (Figure 7) were used to investigate the relationship and effect of coastal tourism activity in local culture, and they were selected based on the following criteria: its importance to New Zealand tourism industry, the development pressure on coastal areas, variety and characteristics of tourism activities (including cultural, heritage sites) and different management approaches. A brief of them as follows:

Figure 7: Map showing location of the case study areas

***Paihia and Waitangi area (Bay of Islands)***
The area is considered the gateway to the Bay of Islands, a main tourist destinations in the north of the North Island. The area includes the significant Waitangi historical grounds; (where the Treaty of Waitangi that formed New Zealand was signed), along with some of the sacred islands for local iwi on the Paihia coastline, and Russell the first European settlement established in New Zealand (New Zealand Tourism, 2012).

***Whitianga (Coromandel Peninsula)***
Considered by many researchers as the holiday capital of New Zealand (Peart, 2009), ***Whitianga town*** on the eastern coast of the peninsula is a major tourism destination, close to Auckland metropolitan. Whitianga coasts are facing pressures such as erosion threats and increasing coastal tourism that negatively affecting scared coastal sites for iwi.

***Akaroa (Canterbury)***
The coastal town of ***Akaroa,*** is a major tourism destination in the South Island with rich cultural heritage (the remains of the only French settlement in New Zealand). It is also a main stop for cruise ships in Banks peninsula, in close proximity to Christchurch city.

***Abel Tasman National Park***
This ***National Park*** is a great example of protected areas and marine reserve regulated under the Department of Conservation (DOC). It shows the efforts to integrate coastal management between unitary authority, DOC, local community and iwi to control tourism and protect coastal assets.

***Marlborough Sounds***
These unique sensitive sounds represent a good example of coastal tourism in the South Island where there is a mixture of activities such as recreation, aquaculture, marine farming activity, and historical

significance locations for local culture. Due to its location, the area is considered the main gateway to the South Island with frequent ferries connecting it with North Island (Wellington, NZ capital).

These case studies have different management systems for coastal areas and tourism activity, between the dual system (regional and district councils), and the unitary authorities that amalgamates the two councils in one authority in Abel Tasman and Marlborough Sounds.

## 5. Analysis

The analysis is represented through the tourism life cycle, where the placement of case studies within the stages of the cycle, helps in identifying the characteristics of tourism activity including relationship between the activity and local culture. In addition, due to its flexibility, the tourism life cycle helps in predicting the future of tourism activity. Starting with **Akaroa** that could be placed in the ***Growth and Development*** stage (Figure 8), as the area is having an increase in tourism accommodation facilities, demand for better tourism development and infrastructure (CCTB, 2013).

This increase is responding to the growth in tourism industry and in number of cruise ships visiting the township. That increase create threat on local culture and put more pressure on the local infrastructure and tourism accommodation facilities overall. However, there are concerns about the iwi s role in the tourism activity and accessing the coastal area (Dyanna Jolly Consulting and Ng Papatipu R nanga Working Group, 2013). They are still ignored and their activity is minimal in the perspective of mass tourism visiting the area. Moreover, the characteristics of one day visits of cruise ship tourists with day trips from Christchurch does not allow the opportunity to fully explore the culture and heritage of Akaroa, with need for support in regional level (Canterbury tourism) and local level (Christchurch City Council).

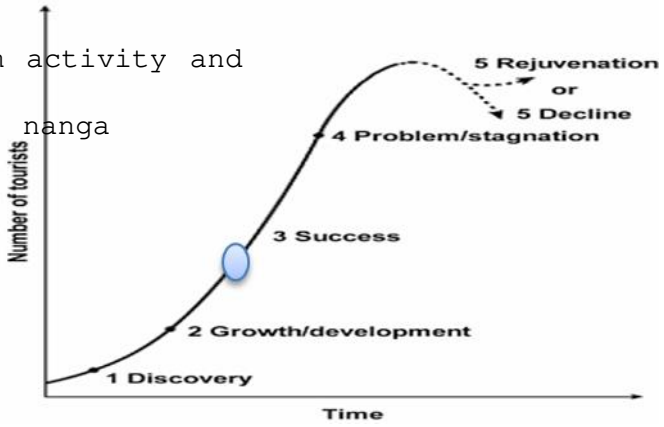


Figure 8: Placement of Akaroa in tourism life cycle

In terms of future trends, the area seems to be heading towards the stage of Consolidation (success), meaning the area is ready to increase its facilities to cater for more mass tourism. However, there is the threat of the area suffering from mass tourism symptoms by losing its identity and culture for benefit of attracting international tourism and that is concern of the residents.

**Paihia and Waitangi** could be placed in the ***Problem/ Stagnation*** stage (Figure 9), where the area is facing a number of problems. Economically, the tourism operators complain of the short tourism season (only in summer season). Also the need for upgrading tourism facilities and lack of promotion strategies limits the number of tourists.

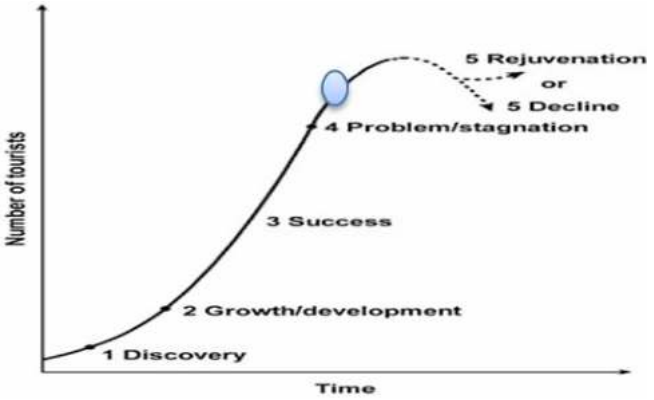


Figure 9: Placement of Paihia & Waitangi in tourism life cycle

Environmentally, catchment pollution in the Waitangi area and lack of maintenance for tourism facilities create pressure on the coastal tourism assets, especially in the Waitangi, and mean limited coastal tourism opportunities in the Waitangi beach and also it negatively affect the cultural heritage sites nearby Waitangi grounds. Another point adding to these problems is the vulnerability of ecological systems and short-term coastal defence strategies in the area make some beaches inappropriate for swimming and recreational activities and effect negatively the tourism experience.

The cultural tourism is based on coastal areas in Paihia specifically Waitangi grounds and other cultural sites in Northland region. However, iwi trustees supported by analysis of indicators show concerns about protection of these sites and efforts to increase tourists aware

The future trend of tourism in the Paihia and the Waitangi area is hard to predict. Although of community desire to develop and diversify the tourism activity through initiatives such as upgrading Paihia waterfront, along with regional and local councils support, all these factors facilitate the growth of tourism activity and head it toward a rejuvenation stage.

However, there are some points that could challenge this rejuvenation future for tourism activity in the area. The lack of funding from regional and local councils towards upgrading tourism facilities and the area s infrastructure. The lack of extensive promotion of the area for international tourists makes it lose competition with attractive destinations in the South Island or Auckland. This could push the area towards a stable status or even a decline in tourism activity. However, this depends on the cooperation degree between community, iwi, the public sector (regional and local councils) and the private sector.

In the case of **Whitianga**, the area could be placed in the ***Success / Consolidation Stage***, (Figure 10). This conclusion is based on a number of factors. The first is the full utilization of the area s tourism facilities, through the construction of new tourism accommodation, as well as the upgrading of the existing accommodation. This comes as a respond to cater for the mass numbers of tourists visiting the area.

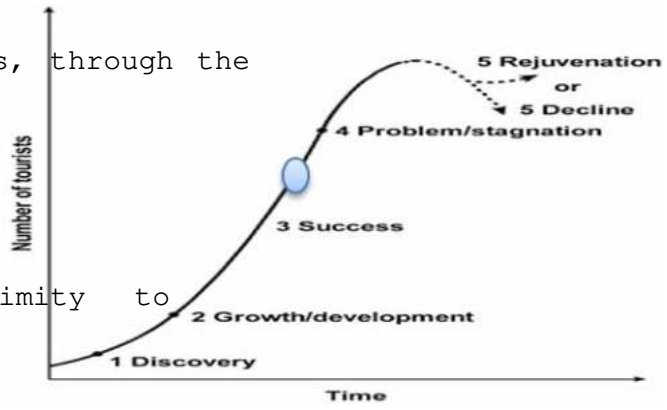

Figure 10: Placement of Whitianga in tourism life cycle

The area s relative proximity to Auckland, and its famous reputation, makes it one of the main destinations in New Zealand forecasted for the next 4 years (MBIE, 2013).

This means that the mass tourism styles coming from Auckland or international tourism are replacing old forms of tourism. The focus is on providing greater commercial tourism activities, such as recreational fishing, cruises, and kayaking, rather than cultural activities with very little input of iwi heritage in the tourism products offered in Whitianga.

The absence of a strategy to increase iwi participation and their input into the tourism activities, and an absence of a regional tourism strategy to promote the area s heritage are all factors c destination losing its identity for international mass tourism market needs. Another aspect is the absence of sustainable tourism guidelines for the area, and desire from investors to increase their revenue from tourism activity. This desire is reflected through the expansion of the yacht marina and construction of major residential projects on the coastal area such as Whitianga waterways project.

The area is predicted to head toward stagnation / a problem stage where the environmental and social problems are increasing, negatively affecting the tourism activity and local culture sites. However, there are factors that could slow the transition of the area to this problem stage. Firstly, the settlement between the Crown and the iwi tribes in the Waikato region, which includes Whitianga, is in the final stages (TCDC, 2014). This means that the iwi community will have more involvement in the coastal area and tourism activities by being the biggest owner of land in the region. The second factor is DOC s conservation efforts and its control over the marine reserve in the Ca means protection of the area s natural and cultural value. Finally, there a Waikato Regional Council to protect Whitianga s coastal areas against coastal problems.

The **Marlborough Sounds** area could be placed in the ***Stagnation / Problem stage***, (Figure 11). This conclusion is based on the increase in urban sprawled tourism development along the Sounds settlements such as expansion of yacht marinas, increase of camping sites, holiday homes, and tourism accommodation facilities. The Sounds ecological characteristics allow more marine activities to exist, such as aquaculture, marine farming, and recreational fishing. These activities try to benefit the local communities and integrate them with the tourism activity, but the ability to integrate is a matter of debate.

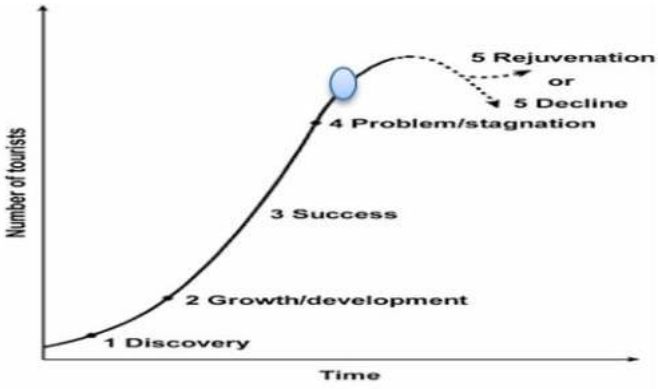


Figure 11: Placement of Marlborough Sounds in tourism life cycle

The conservation of the Sounds unique systems is a priority for the community, DOC NGOs and the government through the Unitary Council are trying to balance between the economic benefit, the environmental protection of the resources, protection of cultural coastal sites and maximize contribution of iwi and the local community in tourism activity.

The future trend is hard to predict, due to the large scale of the case study area, its unique features, and the variety of coastal / marine activities happening in the area. Therefore, it could be concluded that the area is heading towards a reduced growth stage where growth in tourism activity will be controlled due to combined efforts from Marlborough District Council, DOC, and the local community. Success in achieving this goal could lead to a shift to a more sustainable status for the area. This conclusion could be challenged with the power of investment in the Sounds and lack of strong regulations that protect the unique features of the area, an absence of a clear tourism strategy and reduction in the funding from DOC will limit their ability to fully protect the Sounds. All these factors could easily lead the area towards a status of stabilization or even a decline in the tourism activity and making the local cultural more vulnerable to thresholds.

In the case of **Abel Tasman**, the area could be placed in the ***Growth / Development Stage***, (Figure 12). However, in practice, due to the special status of the area as a national park with some parts covered under the foreshore marine reserve. As a national park, there are restrictions on the number of tourists, a limitation on the tourism facilities and development allowed (certain camping sites) which ensure sustainable practice of coastal tourism activity. This gives discussion of the tourism in this protected area a different perspective that focuses on the environmental sustainability of the coastal tourism assets and protection of local culture rather than economic aspects.

Therefore, placement of the area within the tourism life cycle would be slightly deceiving, as it is an area of controlled tourism activity that is unlikely to go through the phase of more growth (Success) or problems, unless one of the management factors is compromised. Therefore, it is fair to place the area in a sustainable status in regards to tourism activity, although the park s integrated management team is trying to upgrade the camping facilities to cater for more efficiently to more tourists with fewer effects on the coastal area and local heritage sites.

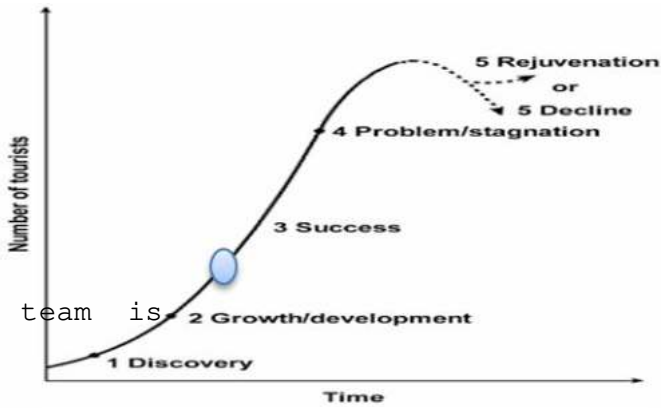


Figure 12: Placement of Abel Tasman in tourism life cycle

This sustainable status is supported by the tourism operators working in the national park and marine reserve areas adhering to DOC regulations and their desire to protect the are they are the main attractions for tourists and thus the tourism operators ma addition, the cooperation between iwi organizations, DOC and tourism operators lead to better recognition of the natural and cultural heritage in the area.

## 6. Discussion of results: Enhancement of public participation and iwi involvement

Public participation is a major factor in the sustainability of coastal development and tourism activity. In New Zealand, the role of iwi is an essential part of the process because of their special relationship with the coast, discussed earlier in this paper. The case studies analysis and discussion have showed issues regarding the degree of public participation and effectiveness of the role of iwi in decision-making process, coastal management, and tourism activity. Therefore, this section includes discussion about the role of public participation in the different stage of the suggested management framework (Figure 13) and ways to enhance it for the aim of protecting local culture.

Starting with the ***coherence building stage***, the participation of the local community and iwi in the plan preparation process is vital, and needs to be continuous in every stage of the plan preparation process. This participation is needed because of their knowledge about the existing issues to solve, identify the main goals, heritage sites to conserve and opportunities to enrich.

However, document analysis and personal communication with local community board representatives and iwi trustees showed that this role is practised at the end of the process before issuing the plan, and /or is covered quickly through public hearings without any in depth discussion to get public perception about the coast. This practice deprives the decision makers from getting the valuable contribution of the public and iwi, also making the local community feel excluded from the management process.

Following that, in the ***spatial planning stage***, the local community could help in identifying the main coastal issues and their exact locations based on their daily practice. This will add a spatial dimension to the coastal plans and help in implementation of its policies. Another important aspect is the iwi management plans; their knowledge (Kaitiakitanga) and role as guardians of the land (resources) plays important roles in identifying the heritage sites which carry importance to the local culture. However, many iwi prefer to avoid identifying their heritage sites on a spatial scale to limit accessibility and avoid any vandalism to these sites.

There are some successful examples of effective public and iwi participation in managing and conserving the coast. In Abel Tasman National Park Foreshore Plan, iwi and the local community are supporting the conservation activities and sustainable tourism practice in the park. The same practice happen through the steering group in Whitianga with public and iwi participation helped in the formation of a Whitianga coast action plan to protect the coast and its heritage sites from erosion.

The role of local community and iwi trustees as taxpayers is essential in the ***implementation stage***, because they are the source of funding for the district councils from their taxes. Their participation in conservation projects through logistical support facilitates implementation of these projects and ensure their success. This support is clear in the public participation through funding of Janszoon Conservation Project in the Abel Tasman National Park, also through funding from Focus Paihia community group to build a new waterfront for Paihia Township to encourage tourism activity.

For the ***incorporation stage***, the local community and iwi have little contribution, because they do not have any legislative power to enforce. Local community board members / councillors, as representatives of their communities, play consultative roles rather than having real power to enforce.

In the ***monitoring stage***, the community could be the best to monitor any changes happening to their beaches and coastal heritage sites. In the case in Akaroa, community helps in getting samples of recreational water quality in periodical basis. The same idea happens on a bigger scale in Abel Tasman National Park, where residents in Torrent Bay monitor any changes that happen in their area and cooperate with DOC to eliminate any degradation to the coastal environment that are significant.

In the ***information technology stage,*** the community and iwi help in increasing the transparency of data through public hearings. They could be a valuable source of information that increases regional and district council knowledge of the issues and opportunities in the coastal area. Paihia Urban Design Guidelines Report and iwi Mahaanui management plan in Canterbury are good examples of this idea.

In the ***research stage,*** the community could help in creating some research documents in cooperation with district and regional council. This case is clear in the preparation of Marlborough Sounds Coast Mapping Report for the Marlborough District Council (MDC, 2013), where local consultancy and iwi trustees helped in mapping the coast and identifying the culturally significant sites.

In the ***promotion of creative ideas stage***, the community plays an important role in identifying issues that face their local community and its coastal environment and creating some solutions for these issues. Their role also extends to protecting the coast through sustainable use of its resources based on the Kaitiakianga principles, which is almost similar to sustainable development concepts, aiming towards keeping the coastal systems and heritage sites in a resilient status for future tourism.

The main way to protect local culture from threats including mass tourism negative effects, come from enhancing the public role in the decision-making process through focused consultation with local communities. However, based on analysis of existing iwi management plans in the case studies, indicators and interviews with iwi trustees many of them showed their concern about being excluded, as they are only being consulted in the late stages of the plans preparation, knowledge in coastal protection measures which add to the threats on local culture.

The consultation should not be limited only to the community representatives but also through public hearings and focus groups with local experts to ensure different viewpoints are heard. In addition, adaptive management can make the residents act as partners in the daily management of the resources through their participation in monitoring, research process, and increasing awareness of local culture.

Another important aspect is spreading awareness in the local community of coastal issues and the significance of local culture and heritage sites. This is happening in different scales through local NGOs in Whitianga, Paihia and Waitangi, and in the Marlborough Sounds. Adding to the organisations, some of the local tourism operators are spreading awareness through their tours in the coastal area and by educating tourists about the importance of marine reserves. The role of iwi is extremely important as discussed earlier, because in some areas they have customary rights settled according to the Treaty of Waitangi such as the case in Whitianga and Paihia.

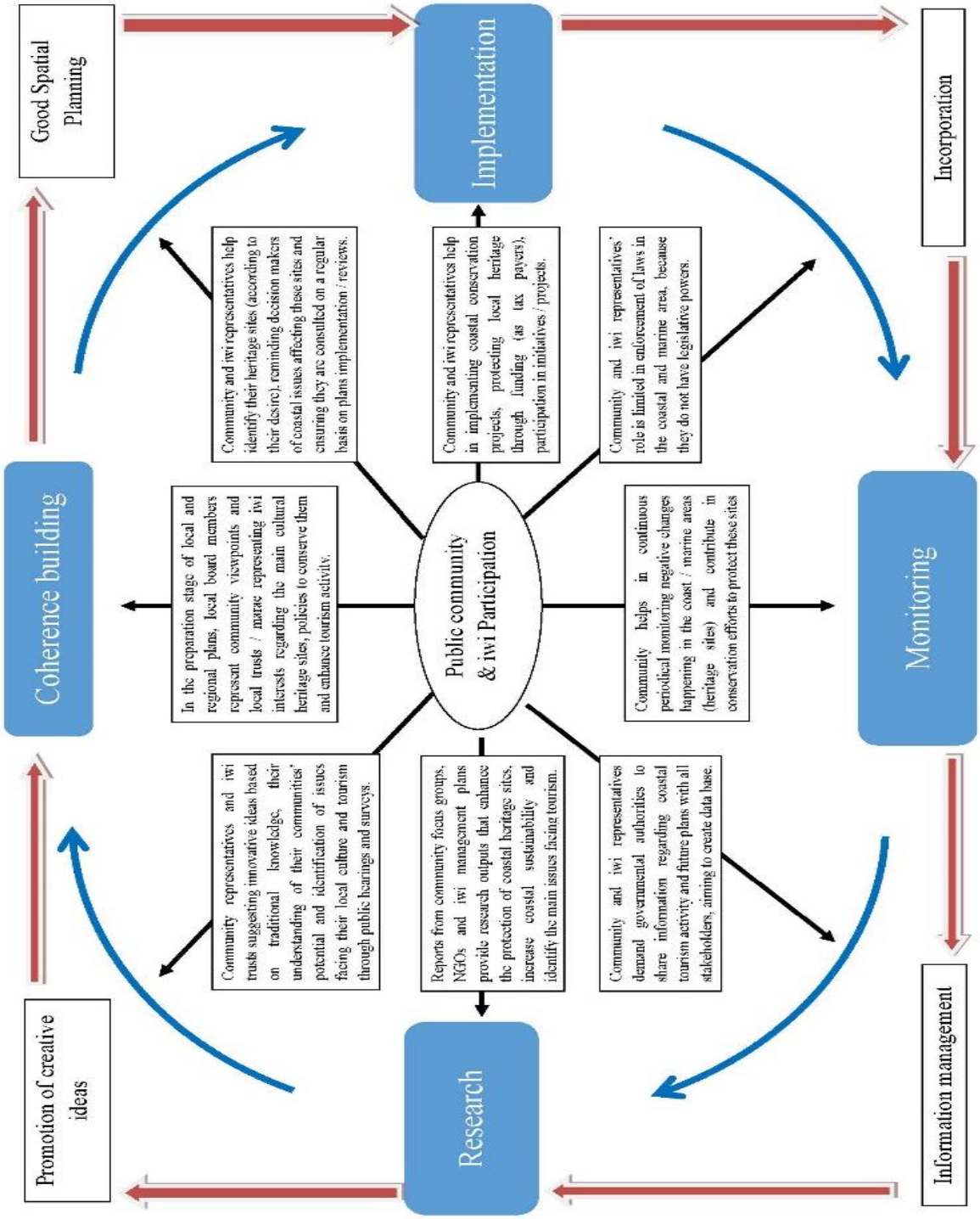


Figure 13: The role of community and iwi participation in the different stage of the suggested management framework to achieve sustainable tourism

However, the rights iwi have to access the coast is still a controversial issue and is tackled in statutes such as Marine and Coastal Area (Takutai Moana) Act 2011. In the absence of a nationwide survey about iwi satisfaction with the current situation, it is rather difficult to conclude about this relationship between iwi, tourism and the coastal management process. In order to change this situation, more empowerment of iwi representatives to represent the different voices of their tribes is required, through increasing their responsibilities in coastal areas as guardians of these resources rather than users, to achieve sustainability in these coastal areas and have maximum protection of local culture.

## 7. Conclusion

The content analysis and interpretations from the interviews and indicators analysis have shown number of issues that are facing sustainable tourism achievement across all the case studies:
A) **Mass tourism syndrome:** The increase of tourism activity means the coastal areas lose its biodiversity, fragmentation of landscapes and pressure on local culture sites.
B) **The short tourism season** issues as the tourism operators have complained about the short period of the tourism season, as most of the tourist visits are concentrated in the summer season, and the lack of diversification of tourism activities, depending on coastal tourism assets effecting heritage sites.

C) **The degradation of tourism facilities issue** arise from the case study areas which suffer from degradation in the services of coastal activities such as wharfs, yachts pier points and public services..
D) **The lack of tourism promotion:** The absence of regional tourism strategies negatively affects the activity in the case study areas, as the efforts to promote tourism activities are mainly made by local district councils through I-sites.

In addition, there are number of results obtained from the analysis of sustainable tourism scheme in the selected case study areas, 1) The absence of code of practice or a national strategy for sustainable tourism practice that incorporates the sustainable tourism concept more in tourism operations or which has legislative power over the tourism operators across the country. 2) The existing national tourism strategies, such as New Zealand Tourism Policy 2015 (Tourism New Zealand, 2007) or the new modified version New Zealand Tourism Strategy 2025 (Tourism industry association New Zealand, 2014), both focus on economic revenue, and it do not emphasis on neither the conservation of the coastal tourism assets nor the protection of heritage sites as sustainable tourism practices.

3) There are no middle level policies or plans at the regional level to translate the national tourism policy to the operative level at the local level. The role of the regional tourism organisations needs more reinforcement through legislation. 4) The community board members role is to deliver community perception to the governmental agencies. However, their role needs more enforcement in terms of formulating community consensus about tourism activity and increasing their awareness of the coastal issues and sustainable tourism practice. This could happen through holding community workshops, focus groups, getting funding for community initiatives in cooperation with local councils, and encouraging NGOs role, and iwi involvement in coastal protection measures.

5) The role of iwi is restricted due to the fragmentation of their own administrative structures because of conflicts between some tribes, as well as not having any power regarding coastal management or tourism practice. Therefore, this role needs to be enforced by making iwi management plans obligatory and prepare them in accordance to regional coastal plans and statements. These plans need also to discuss tourism and deliver methods to protect their heritage and significant cultural sites.

Such practices discussed in this paper could help in converting coastal tourism to be more sustainable and being a method to increase awareness of local culture rather than being a threat to it.

# MEGA-EVENTS DECOUPLED FROM LONG-TERM PLANNING: SHORTCOMINGS AND LEARNING FROM THE ISTANBUL 2010 EUROPEAN CAPITAL OF CULTURE

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## Abstract

Cities are increasingly turning to mega-events to secure much desired global rec
future economic investment. While events such as the Olympics or Expos are gener
of city centers, sometimes entirely divorced from the existing urban fabric, one
embedded within the city itself: the European Capital of Culture. The ECoC is a
consisting of cultural events typically situated within the city itself as well
surrounding region. One of the longest running continuous EU policy programs, th
operated for 30 years with over 50 cities holding the much coveted title. How ca
utilize this mega-event for the greatest benefit to the city?

This paper specifically focuses on Istanbul and its tenure as the 2010 Capital o
the event s use and conservation of the urban built heritage in connection with
to the ECoC, the Istanbul Metropolitan Municipality organized the Strategic Plan
as the Historic Peninsula Site Management Plan. Both documents largely ignore th
possible integration into a long-term strategy for the city. This oversight reve
found between large-scale events and host cities. The paper investigates the roo
divisions, the negative outcomes of such a disconnected and short-sighted approa
the opportunities for planning to integrate culture and complimentary economic a
commercialization and tourism.

Keywords: Istanbul, European Capital of Culture, Strategic Spatial Planning

## 1. Introduction

Over the last several decades, culture has firmly embedded itself within the pla
Authors have promoted, debated, defined, and denounced its use and proclaimed be
single comprehensive definition, culture has come to represent both tangible and
ranging from traditional built heritage to community organized events, classical
anything found in-between. While cities such as Barcelona or Bilbao have long st
representatives of the success of culture as a renewal strategy (Garcia, 2004; M
cities globally have now come to identify as cultural cities. Despite this abu
many questions regarding the ability to determine specifically the role of cultu
professed positive transformations of urban areas (Miles, 2005; Evans, 2005; Pon
Regardless of what culture has or hasn t done, understanding the role of plannin
planning tools within these processes is a worthwhile pursuit as this course of
pursued.

While many approaches to introducing culture into a city exist, the festivaliza
(Yeoman, 2004) has become an increasingly sought strategy, particularly when att
immediate attention and recognition to attract both tourism and future economic
or series of events, can be seen as a fast-track way for a city to accomplish lo

1999), which might otherwise not be attainable. Particularly with mega-events, w
investments in the urban environment are often made through infrastructure, new
refurbishment projects, it has become common practice to create a legacy by inco
works into an overall planned scheme for the city. One tool for considering and
development of the city, is the strategic spatial plan.

Unfortunately, many mega-events serve as excellent examples of great planning di
meaningful long-term impact on cities is introduced. In some cases, this failure
event sites being located in city peripheries where installing new uses followin
can be problematic. One program remaining strongly embedded within the city itse
Capital of Culture (ECoC). The ECoC is a yearlong festival devoted to a broad ra
events, typically situated within the city itself as well as throughout the surr
is one of the longest running continuous EU policies and is the flagship cultura
European Commission. Beginning in 1985, the event has operated for 30 years with
holding the much-coveted title of European Capital of Culture (Garcia, 2013). A
this program is the promotion of a distinctively European culture. With total b
tens of millions to nearly one billion euros, these events have influenced both
as well as the character and dynamics of cities (Ponzini, forthcoming). With its
culture, this event has frequently been used to develop a new identity or renew
(Bianchini, 1990). This paper questions how strategic planning incorporates a sho
such as the ECoC, into existing policies and long-term cultural goals of a city.

A particularly interesting example of this relationship between a culturally fue
strategic panning, due in part to it s overall size and complexity as well as th
transformations, is that of Istanbul and its tenure as European Capital of Cultu
event focused heavily on the city s built heritage, this paper will specifically
strategic plans to conserve built urban heritage as part of the larger goals of
global cultural hub. This paper will review two separate strategic planning docu
the Istanbul Metropolitan Municipality (IMM): The Strategic Plan 2010-2014, deal
metropolitan region, and the Istanbul Historic Peninsula Site Management Plan, f
on issues of conservation and promotion of the UNESCO World Heritage sites. On a
this analysis will consider the role planning plays in this process as well as h
planning tools, particularly strategic plans, were used. More specifically, this
account the missed opportunities regarding the 2010 ECoC and the relationship be
scale events and issues of urban preservation.

## 2. Strategic Spatial Planning

Since it s introduction to planning in the 1980s (Bryson, 1987), strategic spati
discussed by a number of scholars within the planning field, evolving into an es
planning of cities. Many different ideas and interpretations of what constitutes
While there are generally agreed upon attributes, the process, methods and final
confined to a single correct approach. In a guest editorial of The Planning Re
Balducci (2013) set about clarifying the understanding of strategic planning. Wi
scholars, they introduce several core concepts that, in their opinions, represen
strategic plans. Four keys involve plans being: long-term with a broad vision, y
comprehensive; processes which understand and cope with the dynamic nature of de
inclusive of diverse stakeholders and viewpoints; and adaptable to multi-level g
changing structures. Van den Broeck (2013) embraces the original military roots
promoting the analogy of strategic planning as the city or region preparing for

emphasized point is the need to keep strategic planning free from institutional
Kunzmann (2013) warns that strategic planning will be rendered completely ineffe
attempts, unable to accomplish anything beyond traditional statutory plans, view
and unable to cast a vision for the future of the city.

Alongside the effort to properly define strategic planning, other authors raise
this tool. Mazza (2013) raises vital questions pertaining to their actual implem
plans formed? What are the motivations of the actors involved? What is the proce
the plans? These crucial issues often determine the quality of the final product
strategic process should also not be limited to just a document titled Strategi
2004; M ntysalo, 2013). It is the in-depth understanding of existing conditions
list of guidelines, which can lead more informed decision making regarding the f
Healey (2009) recognizes the increasing trend of the production of strategic pla
merely to meet certain technical requirements or expected standards, but are oft
processes. Due to varying and sometimes vague descriptions, strategic plans risk
rhetoric, incapable of producing action (Palermo and Ponzini, 2010). Many of the
can be found in the case of Istanbul.

## 3. Context of Istanbul

Istanbul is the largest metropolitan area in Europe with over 14 million residen
range from 15–17 million) with many recent immigrants arriving from other parts o
2010). Due to this continuous expansion, Istanbul is a city in the midst of a pe
urban transformation while seeking to solidify its place as a global city (Soysa
years of history and functioning as the seat for 3 separate empires, Istanbul did not tru
recognized tourist destination until the 1990 s (Gokturk et al, 2010). According
Istanbul is also a city without a history of hosting festivals, yet in the last
to host many different events with Istanbul 2010 being the crowning achievement.
trend of cultural activities in the city is recognized within the municipality me
as part of an intentional policy to use the culture and tourism sectors as one o
future development of the city (IBB, 2011).

For Istanbul, the primary component of the cultural strategy is the promotion of
built heritage. Since 1985, Istanbul has had 4 sites inscribed in UNESCO s World Heritag
located within the historic peninsula. They include: Sultanahmet Archeological P
Mosque; Zeyrek Mosque (Pantocrator Church); and the Istanbul Land Walls along wi
areas of each site (ISMD, 2011). The majority of the ECoC program was located wi
areas of the city center (Bilsel, 2010) and these four sites, along with the ent
peninsula, were included in the Site Management Plan prepared by the IMM for UNE
site management plan has been a requirement for all UNESCO World Heritage sites
(UNESCO, 2005) and was also made a legal requirement for all historic sites in T
2683 (ISMD, 2011). Due to the lack of a site management plan for several years,
number of infrastructural and redevelopment projects located in and around prese
considered adding the heritage sites of Istanbul to the World Heritage in Danger
2011 (Marquart, 2014). Overcoming these prior negative associations may have the
factor in the decision to focus so heavily on the built heritage during the ECoC
conservation and preservation projects serving as part of the year s events (Bil
focus on built heritage, as well as actively preserving sites, the Istanbul 2010
Culture Agency, the organization responsible for the event, was appointed the ma
responsible for funding and preparing the Site Management Plan (ISMD, 2011).

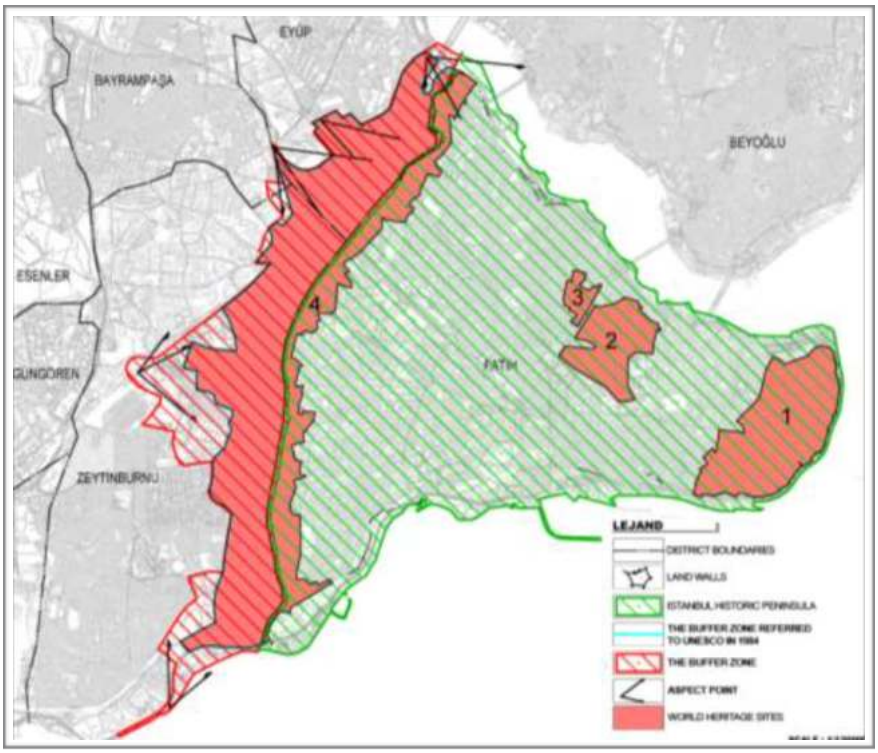


Figure 1. The Site Management Plan Area in green with the four UNESCO World He highlighted in red (ISMD, 2011).

While preparing the site management plan, the municipality also prepared the Str 2014, covering the entire municipality and focusing on 8 core areas. The sixth a Services Management and is devoted to: Contributing to the Protection and Promo Heritage of the City and Enrichment of Cultural Life (IMM, 201, p.12). This pap portion of the strategic plan. These documents accompany an existing local distr along with a metropolitan scale Environmental plan.

To better understand the particular situation of Istanbul, two heavily discussed literature and the plans themselves, must be mentioned: law 5366, the Law on Pr Renovation and Utilisation by Revitalisation of Deteriorated Historical and Cult referred to as the urban renewal law, and law 2634, the Tourism Encouragement L essentially allow the individual municipality districts to redefine a conserved or tourism areas and approve projects to be implemented on these sites. Throug designation from a conserved area to an urban renewal or tourism area, new devel sites no longer need to meet the stringent preservation codes required for prote additional law passed in 2012, numbered 6306, the Law on the Transformation of Areas un Disaster Risk has also been used to renew areas found within the historic penin determined to be prone to damage or destruction from earthquakes. These laws hav continued demolition and redevelopment to occur within the historic peninsula, a factor in UNESCO s consideration of adding Istanbul s world heritage sites to th these particular laws are relatively recent, Aygen (2013) notes that already in

certain historic and culturally significant sites were declared as unsafe or haza
them legally removed. Similar tactics were used again in the 1980 s to increase
the historic center. Therefore, these modern laws are merely the most recent ren
planning technique in Istanbul. The impact of these laws is not limited to the p
these historic areas, but also to their social and economic diversity as minorit
Roma and Kurds have been removed and relocated (Candan and Kolluo lu, 2008).

## 4. Contents of the Site Management Plan and Strategic Plan 2010–2014

Strategic Planning is first implemented in Istanbul in the mid 2000s, becoming a
with updated plans to be produced every 5 years, the first being issued for 2007-
The subsequent Istanbul Strategic Plan 2010–2014 defines it s purpose as increa
life of the citizens of Istanbul (IMM, 2011, p.7). No specific references are m
what outcomes it produced. This plan envisions cultural services, and the touris
growing into an important component in the city s continued development and the
new cultural identity for the city. The structure of the plan begins with a curr
followed by a stakeholder and SWOT analysis, leading to future outlooks and conc
of monitoring and evaluation processes. The stakeholders addressed include both
institutional actors, though these parties are considered separately. Citizens
ensuring the preservation of sites with continued availability and accessibility
Corporate/institutional interests focus mostly on meeting European standards of
cultural activity. The SWOT analysis considers the participatory feedback, but t
directly involved in creating the final analysis.

The stated end goal for cultural areas is the protection of assets through sustainable p
with the intent to continue to develop and disseminate future cultural events. T
emphasizes both conservation and the continued festivilization of the city. Th
briefly recognized as an opportunity through the SWOT analysis, it is not again
any discussion regarding future events. Though other cities, such as Lille 2004,
ECoC to launch a long-term cultural program (Paris 2011), no strategy is suggeste
major event might be used to accomplish one of the stated goals for the city. Mu
regarding conservation is geared towards raising awareness of culture for touris
many specific numbers are given of the total square meters of protected areas or
buildings to be conserved by 2014, details of exact locations or which organizations are
for these works are lacking entirely. Despite the apparent specificity, the plan
how or even why the listed goals will be accomplished. The plan also lacks any r
Management plan, the document being developed specially to guide future conserva

The Istanbul Historic Peninsula Site Management Plan, produced by the metropolit
comply with both Turkish law and UNESCO requirements defines itself as a stakeh
strategic plan. Though not published until 2011, the work is a project of Istan
one of its longest lasting legacies. Like the municipality s strategic plan, thi
thorough analysis of the existing situation, followed by a SWOT analysis, inform
input, and results in a detailed list of problems with numerous prescribed actio
issue. The plan identifies, in total, 10,413 cultural properties located within
additional existing intangible culture such as traditional crafts, guilds, and c
2010 Agency ultimately tasks BIMTAS, a private architectural consulting company
municipality, with the actual creation of the plan. As in the IMM Strategic Plan
failure to mention use of the ECoC to promote long term efforts despite the even
conservation and preservation projects (ISMD, 2011). While there are a total of

Shoup and Zan (2013) point out that only 20 deal explicitly with conservation in specified sites.

## 5. Actors, Stakeholders, and Multi-level Governance

A complicating issue when dealing with conservation and preservation is the invo leveled governance. In Istanbul, these layers range from the involvement of loca international government organizations. At each level are actors with varying re are often unclear, both to outside observers and the actors themselves. The hist mostly within the Fatih district, which has jurisdiction for conserving cultural Related departments within the metropolitan municipality includes the Directorat Directorate of Conservation, Application and Supervision (KUDEB); Directorate of Historic Sites; and the Directorate of Construction Affairs. Within the central Ministries of Culture and Tourism and the Ministry of Environment and Urban Plan whom oversee preservation in Turkey (Marquart 2014). UNESCO, an agency of the Un also provides guidelines and standards for protected areas like those in Istanbu structure and hierarchy of responsibilities is a commonly noted problem. Both pl existing governance system as one of the main obstacles to effective preservatio opportunity to establish a more straightforward structure. This negligence may b direct involvement of the metropolitan municipality in the production of the pla freedom to propose needed change. As suggested by Bayraktar (2012), this complic be an intentional design to divert power back to the central government by obscu allowing for the eventual approval of contested projects.

In the midst of this vast web are the stakeholders who are directly invested in the site d of living or working as well as the many institutions that are indirectly connec involvement with issues of planning, preservation, culture and/or tourism. Withi stakeholders are involved, meeting the participatory planning requirement of s inclusion typically involved workshops organized for participants to lend their providing input for the SWOT analysis, resulting in objectives that informed the specified in the IMM strategic plan, the site management plan cites over 100 par workshops, representing the perspectives of architects, planners, preservationis However, It should be noted that these stakeholders were involved in only very s the work and not active participants throughout its development.

## 6. Defining Problems

Strategic planning encourages the involvement of a diverse field of actors and s to define a broad range of future goals, but also to understand and define the e SWOT analysis used is a rather traditional approach to defining and addressing p analysis becomes the basis for the rest of the plans and focuses on very specifi problems. The analysis recognizes the need for specific sites to be better prese actions to be taken, but there is no further in-depth study to consider the caus need of restoration or how to prevent future degradation. The causes may be due pollution, general disinterest in preservation, etc., but without seeking to und remains likely that these same sites will continue to face similar obstacles in fall into the category of problems Rittel and Webber (1973) famously termed wic These problems may not be immediately visible and often do not have easy or obvi any at all, making them all the more difficult to address. The identification of 5366 as both an opportunity and a threat within the SWOT analysis hints at some

issues by revealing the existing divide between various stakeholders. For some, build new, modern developments is considered an important economic opportunity f whereas others view this action as a direct threat to preserved areas. By not th root causes of the problems facing the city s built heritage, the proposed solut their ability to respond to and address issues. As previously mentioned, and rep strategic plans, the complex governance structure with its unclear boundaries is identified problems, yet none of the proposed actions attempts to deal with this problem.

Despite the failure of these plans to directly address the existing governance s plan to connect Istanbul 2010 to a series of future events, a separate document Strategic Vision, a project sponsored by Istanbul 2010 to address the organizati surrounding the Topkapi Palace, considers these pressing issues. Produced by an from the UK before either the Strategic Plan 2010–2014 or the Historic Peninsula Plan, this document suggests a series of short-term interventions for Istanbul 2 15–20 year vision for the site. This document specifically references the need t catalyst for future programs and the importance of starting immediately. Additio recommends alternate governance models that could be established to better ensur continuity of the site (Metaphor, 2009). Despite the development and promotion o external consultants working with local experts, these aspects were not transfer developed plans.

The process used by the two strategic plans to define problems comes from a very of strategic planning as a set standardized international convention. The IMM St it has been developed in accordance with the strategic management approach, thou ultimately determines that no single step-by-step approach exists (Albrechts and the same way, the site management plan follows a standard established by UNESCO World Heritage Sites. The production of these two plans is therefore not solely problems and proposing solutions, but also contain certain political motivations or westernized standards (Soysal 2010). In this sense, strategic planning can means to a particular end, but also, or perhaps instead, an end in and of itself preservation, plans existing just to be plans are rather useless if they lead to

## 7. Planning Results

Regardless of the primary intent behind these plans, it is worth noting the impa order to better understand what strategic plans are capable of producing. Both p every year with new plans to be developed every five years. The longest projecte a maximum of five years. This time span is a limited period in which to establis With this constraint, the plans become buried in hundreds of overly specified re specific actions and projects to be conducted without considering the overarchin the specific actions detailed, Shoup and Zan (2013) note that very few have any actual preservation. They describe the plan as a document filled with buzzwords, significant and specific preservation steps to be taken. Many of the plans promot create more plans. The authors also point out that while general sources of fund actual operational budget for any of the projects is stated nor funding promised

At the end of 2014, the strategic plan for 2015–2019 was released. This updated 2010–2014 document and highlights some of the differences between the methods of plans, but is silent on the outcomes of the earlier work. The stakeholder and SW

that many of the cultural goals for the city are similar if not identical to tho
plan (IBB, 2014). One of the main products of the site management plan was the c
additional governance body, the Istanbul Site Management Directorate. Despite th
organization, the group s primary role is not in managing the entire site, but i
other responsible groups (Shoup and Zan, 2013). Though essentially a planning bo
future role for this organization or how it will continue to function as it lack
carry out any projects of its own.

With the completion of the site management plan in 2011, UNESCO decided to remov
sites from consideration for the warning list. Yet, a 2014 report reveals that t
activities related to law 5366 have not ceased and subsequent calls are made for
and reconsider adding the Istanbul sites to the World Heritage in Danger List. T
amount of ongoing demolition, reconstruction, and damage caused in the areas aro
as well as to the walls themselves (˙orakba et al., 2014). The laws used to al
development within the historic peninsula have essentially rendered the site man
defenseless and reveal an insight into the understanding of heritage and its con
Through these laws, the historic value of a structure or of a place is a quality
unchangeable, but flexible and open to interpretation. Planners, historians or ev
are not the actors ultimately determining what is or isn t historic, the decisio
metropolitan municipal officials. These dynamic definitions create an additional
when attempting to define the actual borders and boundaries that the plans apply
strategic plans produced are ineffective in ensuring the proper conservation and
many historic sites identified within their jurisdiction.

## 8. Review of Strategic-ness

In considering these two plans, which present themselves as strategic documents,
asked: Are they actually strategic plans? Despite the warning provided in the
institutionalization of strategic planning is precisely what has occurred in Ista
approach has become legally required for both plans with the metropolitan munici
approval. A general lack of innovation and creativity can be observed with both
traditional analysis methods to reach standard solutions. The heavily relied upo
as the basis for the work, yet from this analysis no clearly defined vision emer
the many proposed actions. Nor does it attempt to utilize the 2010 ECoC event as a means o
establishing a long-term cultural focus within the city, despite explicit intent
cultural events.

The example of Istanbul reveals clearly that following a step by step process ca
innovation and creativity. In this instance, many contributing factors share res
of strategic-ness within the plans. Through her research, Marquart (2014) iden
academics and professionals involved in the development of the site management p
were ignored in the final document as well as others who were removed from the c
disagreeing with the official vision. A host of cultural, political, historic, s
some of which have been discussed in this paper, contribute to this particular c
production of these un-strategic plans.

While further research can lead to better understanding how actual strategic plan
implemented, Healey (2013) raises another valuable question in seeking to unders
through which planning ideas transfer between nations. Though not specifically a
planning, this tool serves as a relevant example of how ideas spread from one co

Originally a radical idea developed from corporate strategies in the US, strat
over the course of decades become a standardized document for cities and organiz
world. One liable party is METREX, the Network of European Metropolitan Regions
(Levend, 2011). METREX actively promotes the use of strategic planning in metrop
Europe as one of the necessary tools for European cities. Strategic planning is
a clearly defined western or at least European system. While producing the strat
with the rest of Turkey, was actively seeking accession to the European Union (S
et al., 2010). These sentiments are strongly emphasized in the opening ceremony
the speech given by the mayor of the city. He makes very clear the purpose of the
that Istanbul is an inherently European city (Gokturk et al., 2010). Strategic p
mega-events, and their subsequent use of heritage and culture (Aygen 2013), can
only as elements relating to issues of planning, but also exist as political dev

## 9. Conclusions

The example of Istanbul well illustrates that though a document might be called
may not necessarily meet the theoretical ideals for a strategic plan. In a centr
Turkey, producing a document reflecting the key aspects as described in the lite
possible. It is therefore paramount for continued discussion to understand how ic
applied in practice, as espoused by Balducci and Bertolini (2007) and Beauregard
literature should consider how planning ideas and tools are implemented within a
to understand if they are indeed capable of accomplishing what they have been pr
The situation in Istanbul also highlights one of the fundamental contradictions
spatial planning. When the municipal government produced the strategic plans, th
cast an unrestrained vision for the future that could consider all options. Yet, when an
plan containing more innovative solutions was produced, but lacked government su
were never implemented and eventually disappear in future works. Perhaps in othe
results may have differed, but in the case of Istanbul strategic planning alone
method of realizing conservation and preservation projects or integrating a mega
term strategy. At the same time, it is worth noting the weight strategic plans c
international community. By removing Istanbul from consideration for the warning
to the production of a strategic plan and not the observable change in negligent
reveals the institutional value placed in such planning documents. In this respec
does not concretely secure the protection of built heritage against threats of renewal a
it has been successful in retaining at least the official recognition of the uni

This paper is part of a larger research project, which will continue to pursue t
article. First, how have other ECoC host cities approached the incorporation of
long-term policy and how does their experience compare to that of Istanbul? Seco
in others, what are the specific factors that cause the breakdown between planni
practice? Finally, how do existing cultural and preservation policies adapt to t
introduction of a mega-event and what lasting changes do these events have on ur

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**An initial exploration of Disneyland Shanghai from a planning perspective**

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Keywords: Disneyland Shanghai, Cultural difference, planning perspective

Abstract: *After more than ten years negotiation, Disneyland ultimately decided to locate in Shanghai. This article firstly makes an introduction of the background of Disneyland in Shanghai, and analyzes the balance of its investment and return, explores cultural difference, which will help culture exchange Disney culture was brought to Asia, and local culture in Asia, especially in China, affected western culture other than Disney culture. On* the other hand, it ll help Walt Disney World and government to plan a better Disneyland which is well catered to the visitor s ta

*Furthermore, it explores the strengths and weaknesses of five existing Disney worlds. It analyzes the influence on economic, cultural, planning and governance/management field, and costs and benefits. From the study of Disneyland worldwide, especially Disneyland Hong Kong, according to the background of Shanghai and China, several suggestions are proposed to Disneyland Shanghai, to present an initial exploration of the range of issues that can be raised about the influence of the Disney theme park on Shanghai.*

*Finally, this article draws a conclusion---an agenda for further research and policy analysis from a planning perspective, including their operation mode, competition with other theme parks and its survival issue, and ticket price and ticket selling system. Last but not the least, it analyzes the potential influence on the price of land and house, as well as the stock market.*

## 1. Introduction

The Walt Disney Company announced in November 4, 2009 that the Project Application Report (PAR) for a Disney theme park in the Pudong district of Shanghai had received approval from the relevant authorities of the central government of China. After more than ten years negotiation, Disneyland ultimately decided to locate in Shanghai. Besides several accidents and transfer of personnel in Walt Disney and Shanghai municipal government, there are still other important factors for such a long period negotiation. First it is a huge public project, which could greatly affect the public s benefit. Therefore, the government must take careful consider project making profit.

Secondly, the openness of national policies and strategies, including opening up the retail sector to foreign investment, are also restrictions which slow the advent of Disneyland. In fact, the reason why the negotiation in 2003 passed peacefully away is also the result of delayed approval issued by the State. According to the "Industrial Catalogue for Foreign Investment" made by State Economic and Trade Commission, the construction and operation of this large-scale theme park was included to the scope of limited industry of foreign investment. This is what Disney had never encountered before in Japan and France. Not alone with such a large area in Shanghai, a city with a serious shortage of land issues.

Additionally, Shanghai and Disney need each other, which is why they are both so patient. Facing the global economic depression, Disney becomes more important for Shanghai to stimulate its economy, to promote its GDP and employment rate. Theme parks in Shanghai are very scarce. So far in 2015, there were only two theme parks in Shanghai---Jinjiang Park and Happy Valley. While theme parks in China now are increasing, they are still not well-developed systematically. Most of theme parks in China are concentrated in Shenzhen, south of China. And there are few theme parks in middle China, nevertheless, there is absolutely no theme park in northeast and west of China.

Therefore, Shanghai Disneyland will definitely make up the gap of the tourism in Shanghai and China(Figure 1).

1 Hong Kong Disneyland (area for visitors is no more than 20 hectares. Total area:126 hectares)

2 Hong Kong Ocean Park (17 hectares)

3 Shenzhen Happy Valley (35 hectares)

4 Shenzhen eastern OCT (900 hectares)

5 Folklore Culture Village, Shenzhen (24 hectares)

6 Splendid China in Shenzhen (30 hectares)

7 Window of the World in Shenzhen (48 hectares)

8 Minsk aircraft carrier theme park in Shenzhen (8 hectares )

9 Beijing Happy Valley (56 hectares)

10 Shanghai Happy Valley (90 hectares)

11 Jinjiang Park in Shanghai (11 hectares)

12 Guangzhou Changlong (167 hectares)

13 Fang Te theme park in Wuhu, Anhui (125 hectares, land area 53 hectares)

14 Window of the World in Changsha (40 hectares)

15 Tang Paradise in Xi' an (67 hectares)

16 Hangzhou Song Castle (52 hectares)

17 China Dinosaur Park in Changzhou (40 hectares, planning area: 200 hectares)

18 Southeast Asian Culture Village in Hainan (20 hectares)

19 HarborLand in Ningbo (26 hectares)

Figure 1. Famous Theme Parks in China

On the other hand, Walt Disney also needs Shanghai, a perfect city with tremendous market potential, to expand its business and broaden its brand influence. China i dynamic, exciting and important countries in the world, and this approval marks a very significant

milestone for The Walt Disney Company in mainland China, said Robert A. Iger, CEO of The Walt Disney Company.

Furthermore, this article also analyses the balance of investment and return, and explores cultural difference, which will help culture exchange Disney culture was brought to Asia, and local culture in Asia, especially in China, affected western culture other than Disney culture, such as Chinese food, Gong Fu and Monkey King. On the other hand, it ll help Walt Disney Wo local government to plan a better Disneyland which is well catered to the visito

**2. Strengths and weaknesses of five existing Disney worlds**

Walt Disney Parks and Resorts now includes a collection of five of the world vacation destinations Disneyland Resort, Anaheim, Calif.; Walt Disney World Resort, Lake Buena Vista, Fla.; Tokyo Disney Resort, Urayasu, Chiba, Japan; Disneyland Paris, Marne-la-Vallée, France; and Hong Kong Disneyland Resort, located on Lantau Island.

In this part, this paper will explore the strengths and weaknesses of the five existing Disney worlds, as well as why some of them fail and some of them succeed. I ll make a comparison of these five Disney lands and mainly focus on Disney Hong Kong and Disney Tokyo, especially Hong Kong, which will have the most important influence over the development of Disney Shanghai.

*2.1Disneyland Resort, Anaheim, Calif.*

It was opened to the general public July 18, 1955. Currently the park has been visited by more than 515 million guests since it opened. It is the second most visited park in the world, behind the Magic Kingdom at Walt Disney World(Figure 2).

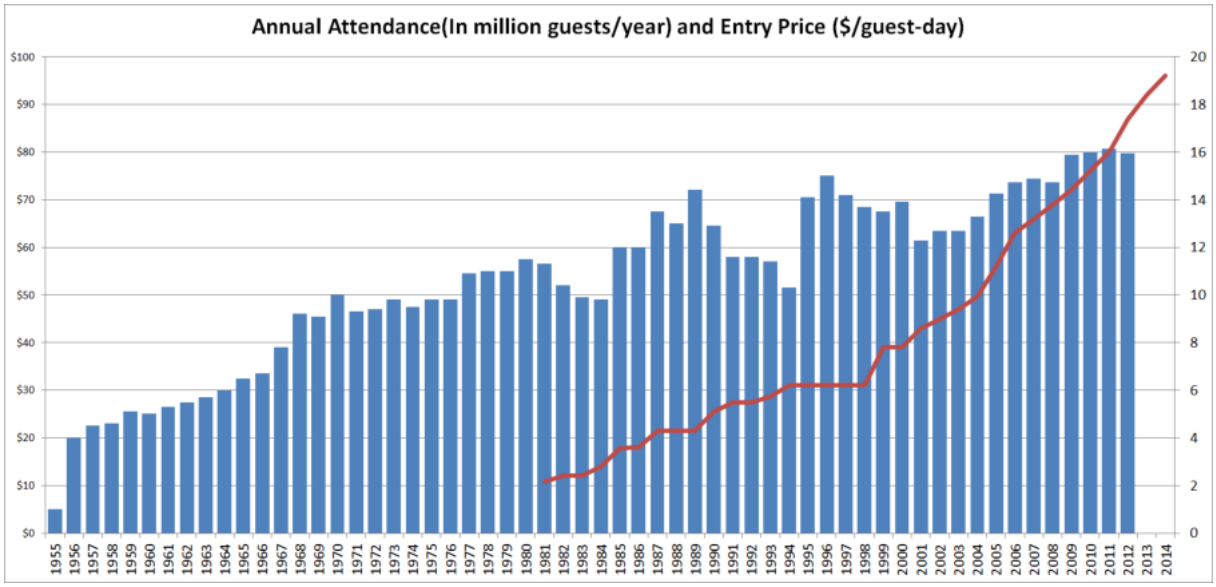


Figure 2. Attendance of Disneyland Park in California(Aerotheque,2014)

*2.2Walt Disney World Resort, Lake Buena Vista, Fla. (Magic Kingdom)*

It opened on October 1, 1971. It is the most visited theme park in the world. The Magic Kingdom was built in a larger area. It was the only theme park on the resort at the time and opened concurrently with two hotels on the property. The park opened with twenty-three attractions, three unique to the park and twenty copies of attractions at Disneyland.

*2.3Tokyo Disney Resort, Urayasu, Chiba, Japan*

Tokyo Disneyland is a 115 acre (465,000 m²) theme park at the Tokyo Disney Resort located in Urayasu, Japan, near Tokyo. It was the first Disney Park to be built outside of the United States and was opened on April 15, 1983. The park was constructed in the same style as Disneyland in California and the Magic Kingdom in Florida. It is owned by The Oriental Land Company. Tokyo Disneyland ranking it as the third-most visited theme park in the world, behind its American sister parks, the Magic Kingdom and Disneyland.

It is the most successful Disney world overseas, a genuine copy of American Disney world, because the different culture rightly meets the taste of Japanese who seeks unconventional and new experience. Japanese like cartoon very much. And visitors could willingly accept American elements. TDL is now ranked the country s number one date course A majority of Japanese women TDL the single greatest pleasure-giving experience of their lives. There are stories of couples who got married because of Avi D. Raz, (1999)

*2.4Disneyland Paris*

Occupying 566,560 m² (140 acres), it is the largest Disney park based on the original in California. The park opened as Euro Disneyland on 12 April 1992.

Modifications to the park were made to protect against changes in weather in the Parisian climate. "People walk around Disney World (sic) with humidity and temperatures in the 90s, and they walk into an air-conditioned ride and say, 'This is the greatest,'" said Eisner.

The park, as well as its surrounding complex, initially failed to meet financial expectations. It fails because of several reasons. Firstly, the company is over confident which result in the inadequate research of European visitors. Europeans are very economic, while products and hotels in Disney world are overpricing. Wine forbidden for employees had intrigued huge dissatisfaction and resent. Wine is also instead by coca cola which sell to visitors in Disneyland, ignoring the fact that French people like wine so much. And fast food is provided at lunch time, which totally conflict with the customs that Europeans like enjoying their lunch, sometimes for several hours. the fact that French are dominate by their local culture and very proud of it, especially offended by arrogant attitude of American manage leaders, they turned to have more exclusion and repulsion of American culture.

*2.5Hong Kong Disneyland*

Hong Kong Disneyland is located on a reclaimed land in Penny's Bay, Lantau Island. After years of negotiations and construction, the park opened to visitors on September 12, 2005, considered an auspicious date according to Chinese almanacs for the opening of a new business. Disney attempted to avoid problems of cultural backlash by attempting to incorporate Chinese culture, customs, and traditions when designing and building the resort, including adherence to the rules of Feng Shui. For instance, a bend was put in a walkway near the Hong Kong Disneyland Resort entrance so good "chi" energy wouldn't flow into the South China Sea. Seasonal entertainment, such as Disney's Haunted Halloween, A Sparkling Christmas and Disney's Chinese New Year, are held in the park to celebrate main festivals. (Wikipedia, 2005)

Hong Kong Disneyland is different from Tokyo Disneyland. In Tokyo, domestic tourists accounted for 95% of the total population, so the park s language is mainly Japanese. Hong K use three languages: English, Mandarin and Cantonese. The capacity of the park is 34,000 visitors per day, and is the smallest Disneyland Park. It has so far fallen short of meeting its targeted visitorship figures. The park's small size is often cited to explain its under-performance. Currently 22.4 hectares (55 acres) in size, it will be expanded to 27.4 hectares (68 acres) when three new themed areas are completed. Eventually, the park capacity will increase to handle up to 10 million visitors annually over a 15 year expansion period.

Hong Kong Disney was criticized for the overcrowding problems[1], food safety[2] and fingerprinting[3] issues. However, the park did little to solve these problems.

## 3 Influence on economic, cultural, planning and governance/ management field, costs and benefits

From the study of Disneyland worldwide, especially Disneyland Hong Kong, according to the background of Shanghai and China, several suggestions are proposed to Disneyland Shanghai, to present an initial exploration of the range of issues that can be raised about the influence of the Disney theme park on Shanghai.

### *3.1 Economic issues*

Disney Shanghai has a tremendous influence on various fields, such as tourism, hotel, commercial, catering, building industry, real estate, and cultural industry, as well as the price of land, house and stock market. It was said that Disneyland Shanghai would promote more than one trillion values of GDP output (hundreds of billions of dollars), and provide millions of jobs. From the macro level, Disneyland Shanghai enriched the park system of the whole city. As a famous international brand, DLS will play an excellent benchmark in the consumer market as well as related industries and other deputy industries and products such as cartoon, movie, and media. Firstly, it s commercial development, especially the real estate, among which, the hotel and catering is the most prominent industry, because after the opening of DLS, the previous short-term visitors will stay three to four days instead of two to three days, which will definitely bring large amounts of benefit to hotel, catering and other service consumerism.
What s more, DLS will drive the development of the city, in addition to related facilities, as well as the surrounding commercial industry.

### *3.2 Cultural issues*

Culture and activities

Disneyworld must keep the spirit of creation all the time if it wants to conquer Chinese markets again, besides Chinese are not so familiar with Disney cartoon characters. They have their own characters which are their hero symbols such as Monkey King and Hua Mulan. It is hard for Disneyland to be charming to visitors and for visitors to have real fun being in a park with a totally unfamiliar theme and unknown characters. Therefore, there are two ways for Walt Disney to deal with this issue. One is to add some familiar Chinese characters into the theme park, to intrigue people s to expand the influence of Disney cartoons on the youth in China, such as better promoting its movies and products. It was said that Shanghai Disneyland will integrate Gong Fu into their performance. However, they should be careful to prevent the performance from becoming a hodgepodge, with diverse characters and completely different performances that nobody knows what it is going on.

It is a good paradigm that Disneyland Hong Kong held special activities during the special spring festival. In Shanghai Disneyland, more custom traditional anniversary activities should be associated right according to the holidays in China. On one hand, Chinese people could celebrate their festivals in Disneyland instead of other places. On the other hand, people on holidays are a big fortune to Disneyland, because they ll have time to travel.

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[1] During Chinese New Year 2006, many visitors arrived at the park in the morning bearing valid tickets, but were refused entry, because the park was already at capacity.

[2] The officers investigated a food-poisoning case in the park's restaurants.

[3] Visitors to Hong Kong Disneyland have their finger biometrics scanned at the entry gate.

**Food**
There is only one Japanese restaurant in Disneyland Tokyo, which is the most popular restaurant in TDL. And there is only one Chinese restaurant in Hong Kong too. While in Shanghai, I think it is better to provide various Shanghai special snacks and restaurants for visitors to have more choices. Because most of the parents cannot get used to the American food, especially the fast food, it is Disney s responsibility to not just let the consumers have a good time, but also

**Landscape**
Feng Shui is well brought into Disneyland Hong Kong, which is a good reference for Shanghai. What s more, Shanghai Disneyland should consider more of its local landscape cha the whole Disneyworld well-coordinated with the surrounding landscape, instead of building a full closed castle, totally separated from the surroundings. Further, it could study the ancient Chinese art of Landscape gardening. Shanghai lies in the region of Jiangnan which is pretty famous for their ancient gardens. If Disney could learn the essence of garden on the Yangtze Delta, it will be a great creation and a new era for Disneyland Design.

**Overseas replication problems**
The difficulty of Disney's overseas expansion, first of all, is culture. All of the industrial chains of Disney are based on its strong cultural identity. Disney culture is deeply rooted among the United States. But out of the United States, can other countries and regions accept this?

For example, in India, could the Bollywood song and dance culture, with a high degree of recognition of the market, make room for receiving foreign culture? Can China accept both the traditional Eastern way of thinking as well as the culture of English-speaking countries? A 32-year-old Ms. Wang in Shanghai told reporters, "For those Mickey Mouse stories in Disneyland, I am not familiar with it and not very interested."

This may be the complexity of a typical mentality of Chinese consumers. Of course, in China, another key factor of Disney overseas expansion is the policy. Many overseas films may not be able to be introduced at the same time into the Chinese market, and through the relevant examination, many films will be shut out, which means the strong distribution system in the U.S. market cannot be copied without changing.

> *"We are also aware of the problem, but it is very difficult to go beyond. We can know the schedule of the film in advance in the United States so that we could simultaneously start the design and production process of consumer goods, but in China, you do not know whether this film will be introduced, or screening. Then all-consuming retail derivatives are difficult. "Disney insiders* said. Policy *constraints are temporarily unable to go beyond, but once the policy has been relaxed in the future or now through Disney's English language training of potential customers growing up, Disney maybe receives rewarding in various industrial fields in China." China and the United States chief knowledge experts Zhao Huan Yan admitted. (Jun Li, 2009)*

*3.3 Planning and governance/management issues*
*3.3.1 Market strategies*
In the process of entering the international market, whether to use global marketing strategies (or standardization strategies), or localized marketing strategies (or adaptive strategies), is an important decision that multinational markets are facing. Walt Disney Company brought the U.S. model to Tokyo, Japan, and received success. However, when the same management system, experience and value were copied to Europe, there emerged a lot of problems. Then what strategies should Disneyland adopt to get the ultimate benefit from China? To ensure Shanghai Disneyland in China gets ultimate success, so that the Disney Company and the Shanghai Government can achieve a win-win situation, we should make a combination of globalization and localization according to operating status of theme parks in China, as well as Disney's experience and lessons in Hong Kong, Japan and France.

**The globalization of product brands**
For Disney, its main essence is reflected in its culture and management. Disney's culture --- relaxation, leisure, and happiness is its biggest attraction and its heart and soul of long-term success. Taking into account the issue of Chinese and Western cultural differences at home and abroad, some scholars believe that Disney would be a purely American style which will have conflict with the nation's indigenous culture, because China has its own culture --- Monkey King, Nezha and so on. However, I believe that service expectations are very susceptible to be influenced by mother culture. This expectation is formed by their cultural background and past experience. If its core culture is polished and localized, it probably is not the world-renowned theme parks which customers would like to see, and thus it will lose its distinctive characteristics and the soul with unique personality.

If Disney culture wants to get acceptance from customers, it must be able to be compatible with the customer's own cultural ideas. There is a considerable difference between Japan and France in this respect. Japanese continue to maintain their own cultural content as uptake and processing independence, so the profitability of the Tokyo Disney may exceed the parent company; while France is a highly sensitive nation, they resist American culture, and therefore the entire United States-style Disney with a high profile moved to Europe, will inevitably lead to a struggling situation. For the Shanghai Disneyland, in this market, one of the reasons that people choose foreign products is that there is no similar product on the domestic market, and then only the original pure American-style will have more attraction to visitors. Otherwise, without such special features, people might choose "Happy Valley" with a relatively cheap price in Shanghai in the future. Only if the global standardization of culture and corporate come true could Disney be awarded with an advantage of corporate image and brand loyalty.

**The localization of marketing strategies**
(1) Localization strategy needs to study customer requirements and desire to design the products they want.
(2) Localization strategy needs to consider the cost customers are willing to pay.
(3) Localization of marketing should let guests get the information or services of Shanghai Disneyland conveniently.
(4)We must communicate with customers effectively by adopting a localized marketing strategy.

**Localization of human resources**
Local talent can not only reduce operating costs, but is also an inevitable choice to occupy the Chinese market. According to the cultural background, customer requirements and the changing business of the outside world, Disneyland's management and staff should have to make corresponding adjustments to adapt to the current environment ( Lu Yiou, 2007).

In Tokyo Disneyland, almost all high-level management and most of the staff are Japanese, leaving only a small management United States team to act as advisors and consultants; while in Hong Kong and France, the park is almost full of United States people. Clearly, the team is facing flexibility in the management in satisfying the local market needs and communicating with local staff with communication barriers. Therefore, only if Shanghai Disneyland will recruit local staffs, can Disneyland truly meet the needs of customers.

*3.3.2 Risk and Crisis Management*
Disney basically does not share the market risk, and investment risk. If all of the risks of a huge international tourism project are on the local government, it will be eventually undertaken by every taxpayer. Therefore, from the country s interests, the supervision authorities should prevent enterprise from "abusing" competition among cities to make profit. The land sector could conduct market supervision through regulating land or other resources.

*3.3.3 Operation mode*
The advent of Disneyland greatly stimulates the price of housing and land in surrounding areas. But the customers and developers should be careful about it because whether it will be worth the crazy

rising value or not is still a puzzle. As it is known to all, Disneyland always hold harsh negotiation conditions and strict requirements for the surrounding land use and business facilities. It wants to have full control of the surrounding area and is unwilling to drop one penny out of its pocket. There are several operation modes of Disneyland, one probably is full-closed mode, meaning all of the entertainment, consumption, and accommodation are in the park, in which way there will be relatively small impact on the surroundings like Disneyland Hong Kong. Disneyland Hong Kong located in Zhuhaowan, Dayu Mountain, which is far from the downtown area, and transportation around is very inconvenient, so the visitors have to stay in the park and do all of the consummation within the park.

It is horrible to see the lights in Disneyland are on, but the surroundings are still in the dark. Another mode is keep hotels a distance to the Disneyworld, which could bring up the development of the areas between and around them like Disneyland in Florida and California. That is absolutely a better way for Shanghai s development. Long before Walt Disneyland decided to come to Shanghai, real estate experts from Hong Kong asserted that Shanghai Disneyland would not drive the development of the surrounding property market. Because of the harsh negotiation conditions Walt Disneyland holds, the surrounding residential and commercial land will be far away from Disneyland. Therefore we should fight with the Walt Disneyland company for the second development mode, only in which way could we stimulate the regional economic benefits.

Furthermore, urban area development of Shanghai is currently too dense. The population could be shifted outwards with the extension of many industries. In fact Disney is a good foothold.

Moreover, quite different from Disneyland Hong Kong, from the previously published land use planning we can see, Shanghai Disneyland is not far away from the city's commercial center. If Disneyland Shanghai allows visitors with tickets in and out in business hours in one day without limiting the number of times, then visitors can choose to have meal in Chuansha town which is about 3 kilometers away.

Chuansha town is always the commercial center of the suburban area in Shanghai. The commercial facilities have been well developed before Disneyland moved here. Therefore, the commercial activity and accommodation of visitors could easily be satisfied here. Obviously, Shanghai Disneyland could introduce the development of local commercial shops and hotels, and then stimulate the market demand for hotel, shops, etc. After a large amount of tourists visit Disneyland and surrounding areas, demand for employment will definitely be increasing, which then stimulates the demand for residence.

*3.3.4 Facilities and transportation*

Recently, Shanghai Development Strategies Institute is investigating the transportation, facilities and etc. at Pudong area. Mass Transit Line 11 will link Disneyland and the downtown city. After Disneyland is built up, there will be a Disneyland station. Pudong Railway will soon commence building, and Disneyland is only 3 kilometers from Chuansha town. Chuansha town's main advantage is convenient transportation and complete facilities. It is close to Pudong airport, and north of Haigang new city, south of Waihigh bridge, west of the highway, and connected with mass the perfect place for development.

*3.3.5 Modifications to the park*

Like Disneyland Paris, modifications to the park were made to protect against changes in weather in the Shanghai climate. Windows in Disneyworld are small and weirdly set up, sometimes in order to pursue the beautiful effect of façade. But in Shanghai, the climate is completely different from Florida or California. It is wet and hot. Windows are too small to satisfy the requirement of ventilation and natural light. If we use artificial lights and air-conditioning to maintain the whole building system, it will be a big waste of energy. Therefore, architectures should be designed acco rather than form.

*3.3.6 Public participation*

What s the result of ten-year negotiation? How will they plan and design Shanghai Disneyland? All of these questions should open to the public instead of being a secret, because Shanghai Disney is not only a tourism project, but at the same time, also a big public project with huge government investment.

Though the project is so urgent, there are still three problems needed to be discussed publicly. First of all, it s the government investment. If it wants to get the support from the public, the financial investment cannot be decided only by the government officials, it should also open the related information, and allow the public to express its opinion completely to protect t know and supervise.

Secondly, whether Disneyland Shanghai can make a profit is a problem. Opponents take Disneyland Hong Kong and Paris as the failure examples, pointing out that American culture is already out of date, and 80-year-old Mickey Mouse s money-making ability is far less than previous years. Therefore, the profit plan should be opened to the, and at the same time ideas could be collected.

Thirdly, how to guarantee the public interest requires an open discussion. Since Disneyland Shanghai is a government investment project, the taxpayers profit should be protected. Theref situation of Disneyland Shanghai should be transparent.

Actually, about the Disney project, whether it is those Disney items in America, or the Disney project in Shanghai, there is always some voice of opposition, maybe because Disneyland costs too much money, or is perhaps hiding critical information. Though the project has been approved, Shanghai municipal government still needs to answer why the Disneyland is built to the public.

*3.3.7 The relocation of residents in resettlement*

According to the original planning, the first phase of Disney project occupies two natural villages, and part of another village, including 1800 households, 6000 individuals. Therefore, the relocation will not be a big problem to deal with. The land of these villages has been frozen for nearly ten years, forbidden to develop and build factories, which let the villages lose the develop opportunities. Therefore, the municipal government should compensate villagers by relocating them.

*3.4 Costs and benefits*

Walt Disney is famous for its smart business head. Take Hong Kong Disneyland for example, Hong Kong SAR Government has spent 22.45 billion Hong Kong dollars for land formation, construction of transportation networks and other infrastructure facilities and another 3.25 billion Hong Kong dollars for Disneyland construction, only got 57% stocks, while Disney Corporation only invested 2.45 billion Hong Kong dollars but got 43% share. In order to introduce Disneyland to Hong Kong, Hong Kong Disneyland was accepted the harsh conditions: location of cities as a major capital investment side, is responsible for construction at the same time, and no matter how many visitors, how bad the business situation, the government must pay tribute to the Walt Disney Company with a fixed rate of return. Compared with Tokyo Disney, Disney Corporation only got 10% for ticket fee and 5% from other products income.

As for Disneyland Shanghai, the government should carefully deal with the cooperation with Walt Disney. Walt Disney has a much more mature business system and market strategies, therefore, it is hard to prevent Walt Disney from taking advantages of Shanghai government. But Shanghai government had negotiated with Disney for 10 years, it is said that Shanghai Disney government invests 24.48 billion renminbi (which more or less equal to the expense of an aircraft carrier) and will have a pretty similar way of pooling funds with Disney Hong Kong, therefore, though we have no choice on the macro direction of investment, we could hope that Shanghai will have a better result than Hong Kong in details. On the other hand, with a decline in its commercial performance, Walt Disneyland is going to expand its business including stepping up propaganda efforts on commercial products and activities such as providing free TV programs. All of these show the attitude of Walt

Disneyland and its purpose---to gain access to Chinese market. So not only Shanghai needs Disney, Disney also needs Shanghai. There is no necessity for Shanghai government to sign an unequal agreement with Disney.

## 4 Conclusion---An agenda for further research and policy analysis from a planning perspective

*4.1Operation mode*

The future cooperation mode of Disney Shanghai will be the operation mode like Disney Hong Kong. Since the municipal government is the largest stockholder, we should try to avoid setting everything within the park. We should struggle with Walt Disney to create great values, because the real value is outside the park.

*4.2 Competition with other theme parks and itself (survival issue)*

**Disneyland Shanghai v.s. Jinjiang Park**

Jinjiang Park now has more than 30 large and medium sized rides. In order to meet the growing domestic and foreign tourists and cultural entertainment and fitness needs, Jinjiang Amusement Park in recent years is constantly adding new items. In May 2003, it also built large luxury double-decker merry-go-round projects, which won the favor of Chinese and foreign tourists. The strengths of Jinjiang Park are the good location, convenient transportation and much lower ticket price than Disney.

**Disneyland Shanghai v.s. Happy Valley**

Happy Valley is famous for the landscape and large-scale of stimulating mechanisms. It is so successful because it focuses on incorporating cultural factors into the theme park's construction and development process. The theme parks not only fully reflect the Chinese elements, such as Prachuab Sensation area in Chengdu Happy Valley, Shanghai beach in Shanghai Happy Valley, but also make an excellent combination of Chinese and foreign culture, such as through various forms of festive activities, turning Chinese customs and the world's cultural heritage into performance form. However, Disneyland has its own stories, long history and deep culture. These two theme parks will have different attractions.

**Disneyland Shanghai v.s. Disneyland Hong Kong**(Table 1)

Table 1. Disneyland Shanghai v.s. Disneyland Hong Kong

| | **Hong Kong** | **Shanghai** |
|---|---|---|
| Land use | The first phase of the park area is 126 ha. | First phase of the park area is 116 ha, while after completely completing, the total area will be 4km2, which will be several times of DHK. |
| Short time profit | Before opening of the park land development and facilities construction already brought 12 billion yua while building the park and facilities brought 9 billion yuan, providing 16,000 jobs. | Stimulate economy and promote employment rate. |
| investment | The total investment of phase 1 is 14.1 billion yuan and related facilities invested by HK government is 15.2 billion yuan. | Total investment is 24.48 billion yuan |
| Market management | Annual visitors now are 4.5 million. According to questionnaire, 90% of visitors | DLS is 6-8 times larger than DHK. Population of S is 2.5 times of HK. Visitors |

| | | |
|---|---|---|
| | satisfied with the park, 92% visitors willing to revisit. | are 3 times of HK. So visitors of DLS are expected to reach 2 times of HK, 10 million. |
| Long term profit | Estimated to obtain 148 billion net benefit in 40 years provide 35,800 jobs. | Provide 50,000jobs. 80 mainland visitors will be attracted to Shanghai. |
| Influence on stock market | From the launching to the building, DHK set off market investment boom in the stock market. Related stocks gained tremendous gains. | Disney has a huge and far-reaching impact on a city s economy and variou and related stocks associated with construction related to real estate, industrial chain-related stocks are abnormally hot. |

The estimated ticket price of Shanghai is close to Hong Kong, while the area of Shanghai is much larger than Hong Kong, maybe 8 times larger. Disneyland Shanghai is only 20 minutes by bus from Pudong airport. The broader crossing visitors could stay for 48 hours with visa waiver. And mainland visitors have no need to go through exit formalities. Besides, the expense on accommodation and transportation is much cheaper than Shanghai. All of the advantages indicate that the competition is inevitable.

Hong Kong Disney Park s attendance was 5.6 million in the first year, one-third o expected to be from mainland China. Others are from Guangdong province, South China and Southeast Asia. Therefore, Hong Kong Disneyland's market objection is mainly in South China and Southeast Asia, while Shanghai Disneyland will mainly attract visitors from the mainland. The Chinese market could entirely accommodate the existence of two Disneylands. Whether a win-win situation or a lose-lose situation will be achieved, will be due to whether these two theme parks could create their own characteristics and attract different people.

**Competition with itself**

Theme Parks in Shanghai are hard to survive. In the last century, the late 90s, " Universal Paradise", "American fantasy Paradise" and the Jinjiang Amusement Park were very popular. Now, except for Jinjiang Amusement Park, which is still on business normally, the other two parks had to go out of business.

According to the survey, the Chinese theme parks spent 150 billion yuan, of which 70% are at a loss of status, only 10% make profits. It is not because Shanghai has not enough market demand for theme parks, but result from investors blind investment without serious market res entertainment Shanghai people need. The supporting facilities, management, services, transportation, etc. cannot keep up, thus resulting in the batch of the theme parks that mostly ended in failure.

*4.3 Ticket price and ticket selling system*

Tickets price

Consider the competition with Disney Hong Kong and whether people could affo whether visitors are willing to revisit it. It was said that the ticket price wi (more than 40 dollars), which is a little high for citizens. I believe most of go to the Disneyland Shanghai twice with that price.

Ticket selling system

Because of the lessons we learned from Disney Hong Kong, a sophisticated reservation ticketing system should be introduced, particularly for tour groups. Improve communication with major mainland travel agents and close monitoring of tourist flow.

*4.4 Influence on the land and house price, and stock market*

Customers and developers should be careful of the risk of the big business. We c
how long the land, house, or the stock will be increased and whether it will fall after the rise.

*4.5 Theme park Area*

It was said by some media that Disneyland Shanghai will be the smallest Disneyland in the world, with only 116 hectares. That is definitely not the ultimate area. The municipal government has already levied 4 $km^2$ of lands, therefore, there is no doubt that the 116 hectares are only the first phase of construction of the core area of the park. And the smallest park rumor soon co

*4.6 Investment and return*

With the similar investment with an aircraft carrier, how to obtain benefit becomes the hottest topic. For DLS, keeping the ability of creation and innovation, expanding deputy commercial and product, and promoting media propaganda are the paramount issues.

*4.7 Generating other theme parks*

Perhaps driven by DLS, Guangdong Original Power Culture Communication Co., Ltd., who Pleasant Sheep and Big Bad Wolf --- the most popular cartoon in China now, even surpassing Mickey Mouse, started to pick a location for its theme park.

The last but not the least, a theme park about Pilgrimage to the West sho definitely achieve great success because of its diverse characters and interesting stories.

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# SOCIAL COHESION BETWEEN HERITAGE AND TOURISM

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Keywords: cultural heritage, tourism, cultural associations

*Planners have the responsibility to promote social cohesion of a territory. In some regions the cultural heritage is a very strong resource that must be valorized to achieve this goal.*
*One of the main opportunities to develop tourism is by the implementation of cultural local heritage.*
*The development of cultural planning can give to the planners a new tool.*
*Analyzing under another perspective, we can verify that the social cohesion at the local level, has been supported during the last decades on organizations spontaneously emerging from the population.*
*When urban planning does not have conditions anymore to value the territory with investments in new constructions, in part due to the current economical difficulties, a new look at the potential of the populations and their culture can be a very interesting alternative namely to develop tourism activities.*
*The study that has been undertaken is meant to identify some organizations that are keepers of some interesting cultural heritage in peripheral territories of the Metropolitan Area of Lisbon, its characterization and classification, its mapping at the local level and in the context with the cities where they belong.*
*With this information local planning can create spaces of visibility within these communities. These spaces can be associated with inside spaces or with the appropriation of public spaces that may gain new dynamics with the activities that are developed there.*

## 1. Introduction

This paper analyzes the relationship between the need to promote social cohesion and the tools that urban management can use to achieve this; planners have the responsibility to promote social cohesion of a territory as part of their qualification and in the benefice of urban economy.

The concept of a cohesive society works towards the well-being of all its members, against exclusion and marginalisation, creates a sense of belonging, promotes trust, and offers its members the opportunity of upward mobility (OECD, 2011)

In inner urban areas the sense of belonging has its roots in who always lived there, but often the people's impoverishment process, creates a form of territorial marginality that is difficult to be eradicated, so in these parts of the cities the sense of belonging tends to decrease when the population living there disappears or at least is significantly reduced and the area became socially emptied. This process is known and now local authorities have tried to fight it using various types of urban tools.

For a while, national or local governments used the financial programs for housing rehabilitation hoping that with this change, the population could return and grow, and together with those who had stayed there, increase social cohesion. This hypothesis was not verified and later on requalification interventions were made within public space with no social component.

This process that has been observed in many urban areas led the search of new instruments to regenerate the old areas by appealing to the memory and its materialization in heritage.

This new approach that connects to the development of urban economy, calls other populations particularly through tourism in urban areas that will use the assets as the purpose of the visit.

The heritage that we can find in the cities has two faces: the material or built heritage that considers building, monuments and architectural ensembles, and the intangible heritage more directly related to the population and therefore also linked to social cohesion (Choay, 1999).

The intangible heritage has been preserved among others by associations that have this goal (Veschambre, 2008) but also by others who were there and were keeping important aspects of intangible heritage, being in a way they themselves an heritage place.

## 2. Characterization of local associations in Portugal

The Associations are formed by the organization of groups of persons around some common interest that can be either cultural or of leisure (according to portuguese legislation) and are quite often in Portugal a place where the intangible cultural heritage of the group of associated and their families is kept alive.

When we analyse the associations of local scope, in the Metropolitan Area of Lisbon we note that they can be classified according to their objectives in:

- Cultural associations with vocation of cultural production and promotion
- Cultural and leisure associations promoting compatibility between culture and leisure or recreation
- Sport associations developed towards the practice of sport

In some cases we can verify by the name that was attributed to them, that they have as goal the organization of individuals with the same territorial origin, organize the association in function of common activities or of support to the families of the associated.

Among this vast set, this paper as chosen to study the cultural and leisure associations, in one parish, because they have been an important element of social cohesion and are those that explicitly or implicitly preserve intangible heritage of the population where they are inserted.

In some towns developed around big cities and in the respective metropolitan areas, the importance of intangible heritage that most often corresponds to its geographic origin, prior to the migration towards urban areas is the most important intangible heritage the population have.

With this group of characteristics we find some centres of municipalities in the Metropolitan Area of Lisbon, and among them the city of Almada gathers a varied group of associations and was therefore chosen as case study.

## 3. Almada, The case study

The city of Almada has a remote origin. The first traces of human occupation date from the neolitic and it has been since inhabited.

Until the XIX century it was an independent town, that developed slowly in the bank opposite to Lisbon, connected to the rural territory around it and to the Tejo river. It played always an important role in the defence of the Tejo estuary and of the city of Lisbon, but due to other aspects, among which the earthquake of 1755, it hasn t many significant built heritage.

Since the middle of the XIX century the process of industrialization changes quite significantly its population profile, with the migration of the population to work in the industries that were created in the banks of the river Tejo, namely in the area of Cova da Piedade.

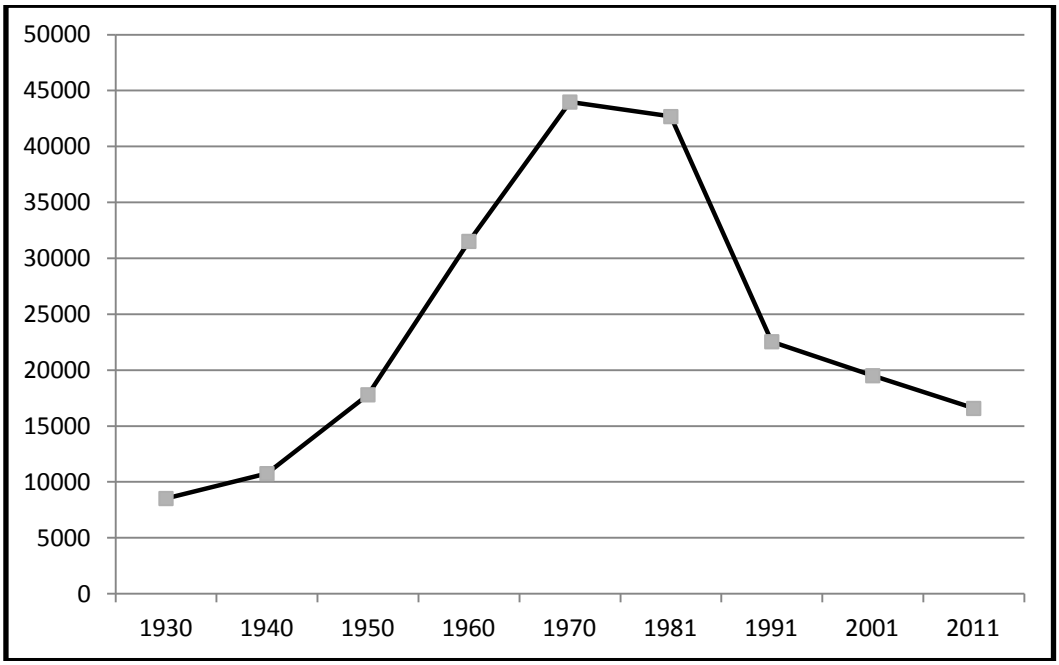


*Figure 1. Evolution of the population in the municipality of Almada and in the parish of Almada (1864- 1930) Source: INE*

Population growth in the municipality and in the parish of Almada becomes meaningful since the middle of the XIX century till the middle of xx century (Fig. 1).

It is the population of the rural world that comes to work in the secondary sector that will create the first cultural and leisure associations located along *Rua Capitão Leitão*, central axe of the city centre of that time (Fig. 2).

Since 1970 the population of the parish of Almada decreased moving to new parts of the municipality, and the old inner city suffers in his social image.

The first finance programme in this area began in 1989 in the area of "*AlmadaVelha*" and since then several programmes were implemented there (Moreira, 2002).

In the last years the municipality is focused in supporting the local associations with the objective of to promote cultural and social regeneration to local people but also to the population of all Metropolitan Area creating a cultural cluster in this old inner area

These associations have the mission, expressed in their names, of organizing activities that help to surpass needs and to fulfil the times of leisure in a time when mobility was reduced and the technology of sound and image non existing, so creating philharmonics was a priority and at the same time were built the places where to perform.

The first association, "*Sociedade Filarmónica Incrível Almadense*" was started in 1848 and created the first philharmonic, the fist theatre and the first cinema in town; it also built a party hall of big dimensions where are still performed different shows, namely of Portuguese rock bands.

The "*Academia de Instrução e Recreio Familiar Almadense*" founded in 1895, also as a philharmonic ~~also~~, a theatre, dance teaching and a library. They built a big hall for shows, and cinema, being the biggest in the municipality with conditions to present a diversified number of shows.

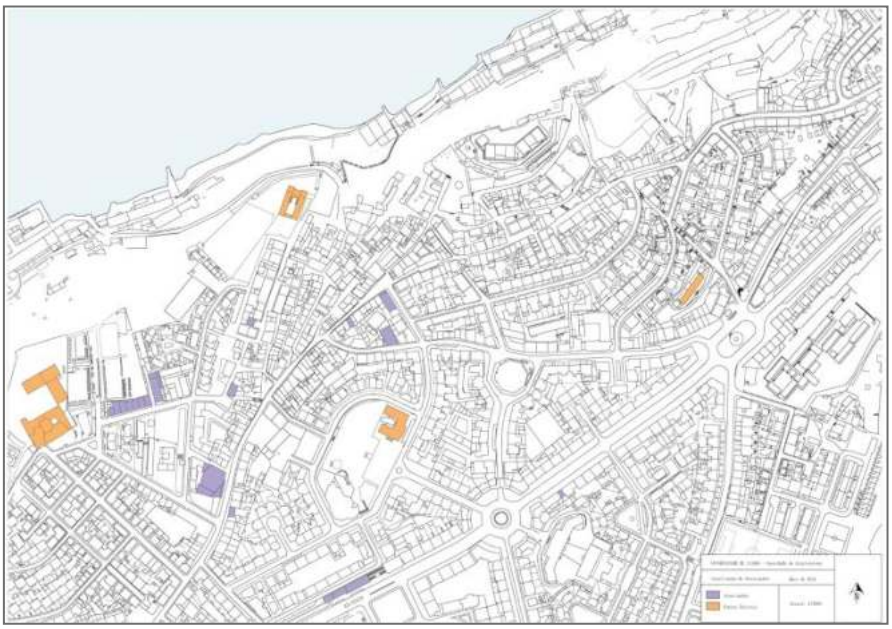

*Fig.2- Localisation of some Associations in Almada*
*Source:FAUlisboa*

In the 90 s of the ~~XX century~~ new ~~surgeon~~ associations were created, also located in the consolidated tissue of Almada, but with quite a different profile. These have no build heritage, using temporary facilities belonging to private owners or to the municipality or using public spaces.

The music component loses relevance and formation in performing arts dominate, namely theatre.

The Cultural association *O Mundo do Espectáculo* is a project created in 1990-91 wit giving education and promoting animation in the arts area targeting a differentiated audience.

The "*Teatro Extremo*" started its activity in 1994, becoming a cultural association in 1996. It organizes since the festival *Sementes – Mostra Internacional de Artes para o Pequeno Público* ("Seeds - International Arts Performance to Younger Audience") and has its facilities in a garage in an habitation building.

The "*Associação Cultural e Artística de uma Sociedade Original*" (ACASO) was founded in 1997 with the aim of promoting plastic and visual arts.

"*ASSIM SER: Associação Intercultural Brasílica de Portugal*" founded in 2009 to promote the intercultural dialogue, promoting social and leisure activities, towards fairer world, better and more equitable, aiming the valorisation of human beings and their integration in society.

"*Associação Al-Mada – Associação Cultural e Recreativa de Almada*" created in 2009 with the objective of promoting cultural and leisure activities.

This group of associations has the ability to intervene in urban space whether being land marks through the activities that they periodically develop and that duly advertised can be important to the dynamics of the city, or by the ability of connecting social groups and its support to the urban

economy of city. The Municipality has been helping to promote their activities and is presently trying to integrate in the municipal planning these group of urban actors.

## 4. Conclusions

The Cultural Associations have played an important role in the cohesion of the population that had migrated from the rural areas, mainly from the South of the country, and can be in the present an important tool in the area.

Local municipality has supported in an expressive way these associations as it recognizes their role in the qualification on the population, therefore in the qualification or revitalisation of the city .

The associations are a material and intangible heritage that can attract new population to their activities in special theatre from the Metropolitan Area but also foreign tourists.

It is important that their characteristics are kept as an element of urban cultural development.

Local planning must use these actors of urban life as partners in regeneration policies of the cities

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# NEGOTIATING CULTURAL HERITAGE: THE CASE OF THE NEW DUTCH WATER DEFENSE LINE

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The shift from government to governance has changed the relationship between the public
many policy fields. Providing collective services and goods is traditionally seen as a s
but is recently more and more provided in close cooperation with the private sector. The
values takes place in dynamic policy arenas where there is continuous tension between th
interest. This paper focuses on the critical conditions for successful negotiations.
Framing and institutional planning theory emphasize different variables that explain the succ
negotiations in governance arenas. A crucial difference between both theoretical perspec
problem definition in negotiations. Whereas the institutional planning perspective takes
problem as a fixed, static entity that different actors try to solve in the most effecti
theory suggests that different actors could interpret the collective problem differently
From this viewpoint the problem definition is shaped and reshaped by the actors during t
The relation between the institutional context and the framing of policy problems is the
paper.
The cultural heritage sector is a perfect example of a sector that has changed from a pu
to an arena in which public and private actors are negotiating on policy outcomes. This
the action arena was set around a static and single problem definition, resulting in a p
in which integration of diverging frames was extremely hard.

## Introduction

In 2008 the Dutch municipality of Houten initiated a process of what they called
(uitnodigingsplanologie). Local entrepreneurs were invited to present ideas and
redevelopment of the Island of Schalkwijk. These (former) agricultural lands are
Dutch Defense Line; a system of fortresses and inundation areas that were meant
and economic heartland of the Netherlands in the case of war. Since the rise of
system has become obsolete and has obtained the provisional status of a national and
heritage site. The ideas and plans from entrepreneurs should be commercially via
time fit the aim of protection of the site and provide the resources for maintai
the surrounding landscape. Many local entrepreneurs were willing and able to inv
long time the island was designated as a site for housing development for the ci
national planning policy. Therefore many farmers had sold their land to project
speculated on the opportunity to build houses. In the aftermath of the financial
2008 and the ensuing decline in the housing market, these developers seemed to h
a poke'. Many of them seemed to be prepared to support development as long as it
for at least a part of their losses. All together the situation seemed reasonabl
in which public objectives such as cultural heritage and landscape protection we
private and commercially viable investments. The public actors explicitly wa
with private parties and these private actors had the resources and were interes
area. Nevertheless, so far despite several initiatives in the public sector and
investment in the private sector, the policy has largely failed. In this paper w
failure of public-private governance in a situation that on the surface offered
such an approach.

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The case is relevant for different reasons. This episode of planning the redevel
Schalkwijk is illustrative for the new approaches of heritage planning in the Ne
al. 2010, Janssen et al 2014, Van der Valk 2014, Hulst 2010) and other European
(Fairclough 2003; 2008, Heathcott 2006, Loulanski 2006, Shipley & Kovacs 2008) w
government to governance has led to fundamental changes how public services or g
Traditionally, public services such as nature preservation, cultural heritage pr
management were provided by public agencies in a hierarchical fashion. In the la
more of these collective services are provided in close cooperation with private actor s
The shift from a productive role for government in terms of actively providing a
collective services and goods, towards a practice where governmental agencies ne
and non-profit organizations to protect certain collective values, is part of br
This transition is based upon assumptions that well organized and managed cooper
public and private sector actors will lead to more creative solutions, increased
and improved effectiveness of policy. This neoliberal trend started prior to the
2008, but as a result of austerity politics since the financial crisis in 2008,
accelerated this transition (Meegan et al 2014).

These new forms of governance have in common that the creation and protection of
many areas have become objects of negotiation between the public and private sec
the public authorities largely hierarchically determined the course of action. E
negotiations between public authorities and privatized water companies on the pr
water. Successful delivery of public goods and services is therefore more and mo
constructive interaction between actors with very different backgrounds and inte
a constructive dialogue or negotiations between actors is a new challenge for he
Typical for negotiations on heritage values is the sensitivity of the bargaining
compromises between public interests (protection) and private interests (develop
importance that is often attached to the symbolic value of cultural heritage put
makes negotiations sensitive. Also the different ways in which actors define the
the scale level on which solutions are sought makes it particular hard to reach conse
field of cultural heritage (Ashworth & Howard 1999, Deben et al. 2004).

In this paper we use the term governance to describe the approach to collective
middle road between hierarchical governmental decision-making and a market appro
"multiple interdependent public and/or private actors are involved in a particul
problem" and try to produce results through close interaction (Evers and De Vrie
so the paper aligns itself with concepts such as self-governance (Ostrom 1990),
(Hajer 2009), interactive governance (Edelenbos, 2005) and collaborative plannin
This implies that the search for clues about the success or failure of governanc
conditions that facilitate cooperation and/or negotiations between actors. In ge
governance looks in different directions for explanations, such as institutional
characteristics of the arena, process management, interests and incentive struct
frames that actors use (Kjaer 2004, Hajer & Wagenaar 2003, Van Assche et al 2011
directions overlap; most contributions have a tendency to put an emphasis on one
Nevertheless, there is a clear distinction between contributions that depart fro
(Ostrom, 1990; Scharpf, 1997) and contributions that put an emphasis on the way
as a basis for their actions (Sabatier 1988, Healey 1997, Hajer, 2009). In our v
are not mutually exclusive, nor do they start from paradigms that are incommensu
focusing on the characteristics of the arena that is constructed and the frames
this paper provides a more comprehensive explanation for the success and failure
heritage policies.

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A framework of analysis for the governance of heritage protection

Traditionally heritage policy in the Netherlands was organized in top-down hiera objectives of policy were served by creating a regime existing of rules for the and landscapes, providing subsidies for narrowly defined goals – leaving little discretion to beneficiaries of these subsidies – and by bringing the maintenance valuable heritage sites in the hands of government agencies. Within the paramete in the cases where heritage was not given status of official protection, it was (commercial and non-commercial) to decide whether or to what extend protection and worthwhile. With respect to the New Dutch Waterline this meant for example that sold to an entrepreneur, which transformed the site into a residential area. Bes private stakeholders and top down regulation, governance has emerged as a third collective action problems. Governance has profoundly different characteristics

Table 1: collective action arrangements.

| Collective action arrangement | Typical solutions | Indicators |
|---|---|---|
| Hierarchy | Top down intervention and regulation. | one dominant public actor<br>substantive control by: regulation, directly managing public goods or providing subsidies for narrowly defined objectives. |
| Competition (Market) | Privatization, transforming goods and services | multiple and autonomous public and or private actors involved in a collective action problem<br>limited government presence; establishing level playing field, reducing negative external effects. |
| Governance | Collaborative governance, network governance | multiple interdependent public and private actors<br>existence of formal and informal structure for making joint decisions.<br>Independent mediator/facilitator of negotiation process. |

Source: retrieved from De Vries & Evers (2003), p. 540.

This mode of collective action, instead of government that is superimposing itse all parties, governmental and non-governmental, are considered mutual interdepen direct, collaborative or adversarial, interaction actors have to come to concert what extent and in what ways actors will be able to reach coordinated action, is variety of factors.

Below the conditions that according to the academic literature on governance see interaction between actors will be sketched. The literature that brings these co largely based on the idea that problems, actor configurations, rules and so fort described on the basis of acts and statements of stakeholders. Subsequently, the discussed, which is based on the idea that conditions and problem definitions ar actively constructed and re-constructed by actors, which implies that the way ac

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problem at hand, their relationship with others and opinions about right and wro
explain the success or failure of interaction.

Actors and Arenas

The metaphor of an arena is often used to describe the material and social setti
interact. "The term action arena refers to the social space where individuals in
and services, solve problems, dominate one another" (Ostrom, 2007, p.). Most lit
arenas and actors can only well be understood when their embedding in institutio
included in the analysis. The institutional perspective underlying the elaborati
institutions as 'rules and norms' (Ostrom, 2007) formal and informal procedures
conventions that shape patterns of behaviour (Hall & Taylor, 1996). They pro
cognitive templates for interpretation and action (Hall & Taylor, 1996, 939).

Shaped by institutional conditions these arenas have a variety of characteristic
frustrate collaborative action. The network of actors forms an important dimensi
arena. The characteristics of the network include the range and density of the n
of the ties between actors. Which actors are members of the network and to what
mutually dependent? Governance is often deemed an appropriate approach for situa
been described as shared power worlds (Crosby & Bryson 2005). On the one hand th
makers that hold relevant powers and resources should be part of the network. On
larger the number of actors involved in solving the problem at hand, the more di
based approach gets (Ostrom, 1999). Which channels of communication exist? How f
actors encounter each other? These are important features, as it is known that g
communication and durable relationships increase the changes of cooperative beha
(Ostrom, 2007). Moreover, the level of trust between actors is often mentioned a
success factor in governance, assuming trust facilitates conflict reduction (Heale
strategic uncertainty, and thus investments in uncertain collaboration processes
interdependent actors with diverging and sometimes conflicting interests. (Klijn en K
594)

Arenas bring together actors from different backgrounds. In this situation effic
given. Differences in (organizational) cultures may form barriers for interactio
compared to trading zones in which traders from different cultures that speak
(jargon) have to find ways to conduct transactions. Anthropologists are familia
cultures encountering one another through trade, even when the significance of t
of the trade itself- may be utterly different for the two sides. (Galison 1997,
2006). The more actors that will be able to develop a local infrastructures of
instruments (Galison 2010) that enables such an exchange, the more likely that
be possible. Trading zones are therefore defined as local infrastructures in w
exchange planning ideas, proposals, and opinions by using exchange languages (Ma
18). This exchange language is created by the actors and concerns the physical p
way, the planning object sets the boundaries for the arena in which actors inter
language addresses the locality of the planning object, and includes planning co
practical solutions. It is a highly specific inter-linguistic structure to faci
between two or more pre-existing linguistic cultures (Mantysalo et al 2013: 11).

A further determinant of the successful governance concerns management of proces
Since parties in governance arenas are mutually independent there is no actor th
means to steer other actors. As a result the actor managing interactions has negotiating
skills, skills to bind actors and skills to forge new solutions that appeal to various actors whos
resources are required to implement solutions (Klijn and Koppenjan, 2012, 593). Also ind

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of the process manager is often mentioned as an import factor, so that he/she wi
parties involved (De Bruijn & Ten Heuvelhof 2008, De Vries, 2008). Moreover, a s
the part of the actors in the arena to the problems that are on the agenda is a very important
(Klijn and Koppenjan, 2012)

Furthermore, an important characteristic of actor arenas concerns the configurat
constellation (Scharpf, 1997) or action situation (Ostrom, 2007), concerning the
involved in interaction aimed at solving particular problems. The degree to whic
backed up by means to achieve them, are compatible or incompatible, largely dete
space for solving problems. In addition the nature of the problem that is addres
of solutions that are possible. A dimension that is commonly used is the extent
excluded from using a good or service and free-riding can be avoided. If exclusion is ir
to realize or deemed undesirable, individual actors are very unlikely to provide
some sort hierarchical intervention or cooperation will be needed. In considerin
problems that will influence the range possible solutions and modes of interactio
think about the temporal and physical characteristics (including the geography
(Ostrom, 1990).

In general, when institutional capacity shared meaning, concentration of power
procedures for decision-making (Healey, 1998) is larger and other circumstance
allows for more comprehensive and elaborated forms of collective action (Scharpf

Framing
The framing literature (Tversky and Kahnman, 1981; Rein and Sch n, 1994; Hajer 2
that the way actors perceive the arena, the institutional conditions that shape
problems at the center of the arena, rest on frames. The term frame refers to t
conception of the acts, outcomes, and contingencies associated with a particular
a decision-maker adopts is controlled partly by the formulation of the problem and part
norms, habits, and personal characteristics of the decision-maker. (Tversky and
453). These structures of belief, perception and appreciation (Rein and Sch n,
actors down certain paths rather than others (Murdoch, 2004, 50). A frame deter
perceived and interpreted (Rein and Sch n 1994). Framing theory suggests that fr
what actors see as being in their interest and, therefore their problem formulat
solutions are grounded in different problem-setting stories (Rein and Sch n 199

These frames can be subject of change through exchange and learning, although so
basic beliefs about causal effects of policy interventions- are more susceptible
fundamental believes about right and wrong (Sabatier 1988). Furthermore, Rein an
assume that intractable policy controversies can only be resolved when re-framin
actors will change their perceptions on the problems, their own and other s role
necessary to understand the frames that actors apply in interaction and not accep
definitions and rules as given and per definition unchangeable.

It is important to note that frames are not floating free around but are grounde
sponsor them (Rein & Schon 1994: 29). This means that the institutional backgrou
related deeper-rooted beliefs make it more likely to sponsor certain frames. Fur
(1988) hypothesizes that policy actors form collaborative ties on the basis of s
form advocacy coalitions. This means that coalition partners are selected by how
beliefs of others. As a result, within an arena actors can often be grouped toge
sometimes four coalitions.

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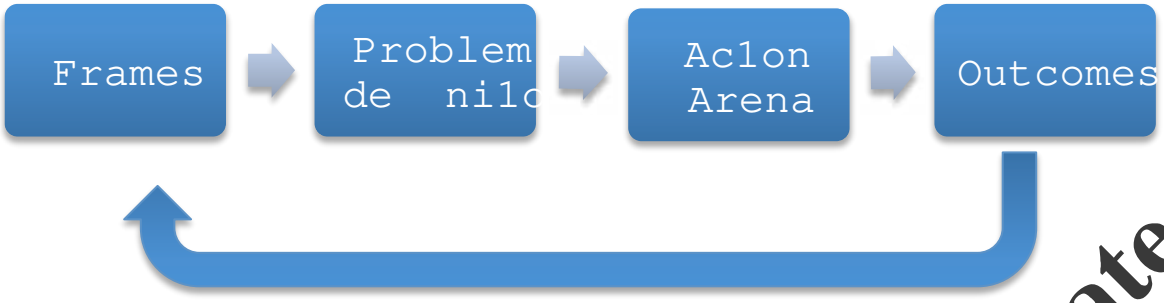
Building on the previous, the following conceptual framework is built:




The conceptual framework is built on two premises. Firstly, actors are mutually
collective action problems and second, that actors hold different frames, and th
problems and the actor arena differently. Hence, actors define the problems and
individually, but in order to reach collective action, actors need to reframe the nat
collectively. The action arena however, consists of different institutional fact
regulation, knowledge and other resources that constrains the ability of actors
outcomes of this process affect the frames of actors.

In reconstructing the episode of the invitation planning for the Island of Schal
on the different building blocks of the conceptual frame. The analysis is based
the process as it happened, using documents and interviews focusing on who was i
proposals were made, and which meetings took place. This was complemented by usi
to reconstruct the perceptions of the stakeholders on these events.

Case description
Some key characteristics of the Schalkwijk have been brought forward in the intr
paper. Summarizing briefly: with an invitation planning development strategy,
started a bottom up process in which local entrepreneurs, investors and farmers
up with initiatives that would support the revitalization of the New Dutch Water
former military defense line is a UNESCO world heritage site and has the official statu
Landscape. Typical in this case is that farmers sold lands anticipating national
development in the area. Thanks to the land deals, many (former) farmers have re
the area and real estate developers are willing to support any development to co
Most farmers have their roots in the region and feel strongly connected to it. L
perceives the decline in the local economy as their main concern, since many far
(investing in) their agricultural businesses. With invitation planning the mun
to persuade the local farmers to mobilize their resources to invest in a new g
is based on slow tourism, green energy production and revitalization of cultural
Interestingly, the (former) local farmers are willing to invest in the region an
negotiations. In this paper we analyze whether a combination of framing and inst
could provide a more comprehensive insight in these negotiations.

Research methods: Structured Interviews and the Q sort methodology
A combination of structured interviews and the Q sort methodology makes it possi
actor frames systematically, the relationship between the frames and its institu
structured interviews provide insight in the institutional context, the action a
between the actors. It also enables the interviewees to reflect on the decision

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to research the frames of actors, the Q sort method was selected, because it is
subjectivity (McKeown & Thomas 1988).

Q sort methodology

The Q sort methodology was developed by the British physicist and psychologist W
in the 1930s. Although it is an experimental methodology, which has existed for
method has been recently re-discovered in social and political sciences. The Q
been used before to analyze frames in the field of cultural heritage. There are
publications in the field of geography and planning in which the Q sort method i
overview the article of Wolsink and Breukers (2010, p. 539).
The Q sort method makes is possible to reveal value patterns in the beliefs of a
the method means that respondents are asked to rank statements on a fixed scale from m
most disagree . In this way it is possible to find out which actors have simila
statements are most contested. Importantly, the Q sort method is not intended to
generalizable results; it is a way to provide an in-depth portrait of typologie
prevail in a given situation (Steelman & Maguire 1999: 363). The Q sort method
causal relations.

The scattered field of opinions, problem definitions, viewpoints and perspective
public and private actors must fulfill provides a good rationale for applying th
The application of the method follows five stages. The first stage is to identif
the collection of all the possible statements respondents can make about the su
De Graaf 2005: 5). In figure 1.1 (on the next page) the concourse is illustrated
cloud in which it is hard to distinguish different discourses or frames. In this
explored by literature research and 17 in depth interviews. The second stage is
concours to a set of numbered statements (34 in this case). The selection of sta
balanced and tested, and should represent all possible discourses in the concour
respondents are selected and clear instructions are formulated. In this research
selected ranging from civil servants operating on different governmental levels, t
entrepreneurs and representatives of involved NGO s. The instructions to the res
divide the statements in three piles (agree, no opinion/don t know, disagree), 2
them, 3) distribute the statement cards over the fixed distribution (see figure
and the last instruction 4) to reflect on their distribution and think of statem
missing (to make sure the card deck is all inclusive). The fourth stage contains
the distributions made by the respondents. With PCA (principal component analysi
rotation it is possible to reveal factors. The output of this is a number of fac
each represent a group of respondents having similar viewpoints. This output is
correlations between the distributions made by the respondents. Another way to p
generates five ideal types of card compositions which are statistical mostly d
stage respondents are connected to these factors or ideal types (e.g. the dist
has 70 percent similarity with factor 1 and 40 percent with factor 2). This indi
possible to gain insight which actors have similar viewpoints and on which state
disagree.

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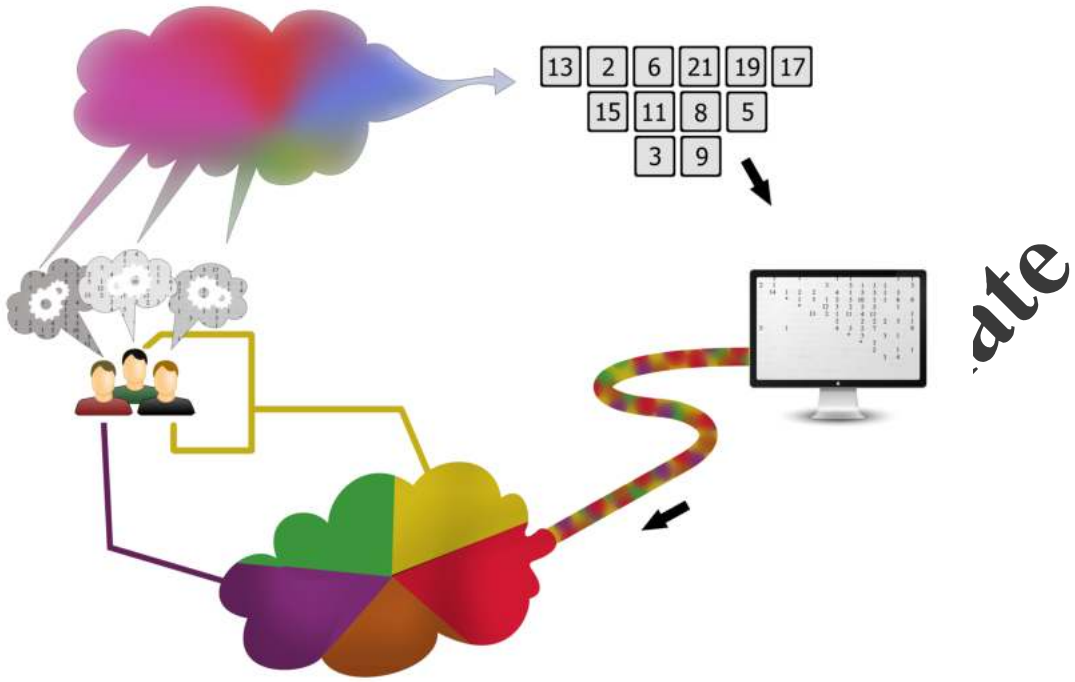
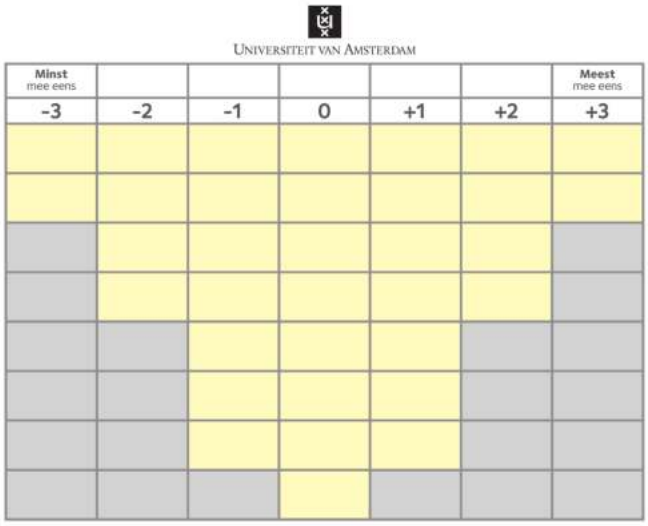
Figure 1.1: schematic illustration of the Q sort method application




Source: created by the authors.

Figure 1.2: Fixed distribution for the statement cards




Source: created by the authors.

The action arena introduced: institutional conditions

Application of the conceptual framework to the case description and the Q-sort a range of reflections on the possible causes for failure of the project in the Is section first focuses on the characteristics of the arena, the actors and their Subsequently the focus shifts to the institutional conditions and problem defini

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arena and structure the expectations and behavior of actors. This analysis shows
successful governance are manifold and cannot be reduced to a single or most imp

In the arena in which the invitation planning process is taking place at first s
are active. First, there are governmental actors. The municipality takes the rol
and initiator in developing the Island of Schalkwijk. The project bureau New Dut
Line s main aim is protecting the cultural heritage values of fortresses and lan
variety of government actors is involved as transformations in the area touch on
responsibilities: the water board, the province, the State Forestry Commission a
Department of Waterways and Public Works. Second, there are 17 (former) farmers
indicated to be prepared to invest in leisure services in the area. Their intere
aligned and in some cases actors are direct competitors. Third, there are multiple pr
(AM Vastgoed, Bouwfonds and ASR are the developers with the biggest share; 800 o
hectares of land are in the hands of real estate developers). The governmental a
interests and are guided by different frames as the Q-sort analysis reveals and t
in unity, as the government sector is not without problems. The other actors in
fragmented action by the public sector as one of the major problems to establish
between public and private actors. Roughly sketched, on the one hand the governme
formulated ambitions for the area and the private sector has the resources to re
other hand private parties are in many ways dependent on public agencies. Many a
the private sector need permits and require changes of planning regulations. Fur
many investments at least partly are aimed at creating public goods, which makes
for exploitation by free riders, they look to the government to co-invest. In sh
interdependency between actors from the public sector and the private sector, bu
relationship between these two groups of actors is rather asymmetrical, with gov
dominating the process.

Research findings: Frames
Five different frames are found in the Island of Schalkwijk case with a cumula
variance of 63 percent. This means that the five frames cover 63 percent of all
the 24 respondents. In other words, 63 percent of the colored cloud (figure 1.1)
frames. With the pre-flagging mechanism of the Q sort software, respondents are
frames with regards to how much their personal distribution is similar to the fo
groups of respondents are composed that show similarities in their distributions
are built up around two dimensions: first, the problem definition that is follow
this includes ideas, motives and thoughts about what is and what ought in th
Schon 1994) and second, thoughts on the organization of the public-private coope
the division of specific tasks and responsibilities.

The first frame is labeled as the waterline as a collective, cultural-historic
explained variance). This frame holds the most conservative thoughts on the prot
heritage in the area. The problem is defined on a very abstract level; the main
military landscape should be protected from commercial development. The accessib
prime issue in this frame; the monumental status of the cultural heritage is dir
that every fortress should be publicly accessible. The societal value (openness
cultural heritage) of the former military defense line legitimates a strong steer
in this frame. Strikingly, only public sector actors that operate at a regional
frame.

The second frame is labeled as the commercial landscapers (15 percent explained var
the respondents that related to this label work in the private sector. The probl

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this frame is grounded on the value that is assigned to the qualities of the cul
contrast with frame one, this frame has more attention for the values of the loc
green open landscape instead of the historic values of the regional military str
attached to this frame believe that the historic meaning of the waterline is to
planning process, and by doing so, to many initiatives should be based upon this
approach of government to revitalize the old military structure is not understoo

Frame three, the cooperative entrepreneurial vision (10 percent explained vari
focused on the problematic relation between the public and private sector. Gover
slow and frustrates private initiative with too many rules and regulations. In t
strong belief that government s unitary vision on the revitalization of the waterlin
counterproductive in the sense that the production of governmental plans on the
control and is instrumentally applied on private initiatives. Although the attac
critical on the waterline program, they also admit however that civil servants a
rules. The cooperative element in this frame is also visible in the belief that
together in the waterline project.

The fourth frame, the waterline is a controlling vehicle (10 percent explained
means the most critical frame found. The main objectives of the governmental pro
questioned: the openness of landscape, the touristic development of the region a
waterline is an important factor for the identity of the region. In terms of role
frame is aggravated by the too conservative, to slowly operating government. The
found on the most positive side of the spectrum a fatalistic attitude towards th
has many plans, but I do not have any influence . In contrast with the previous
with other entrepreneurs is found to be not necessary.
The last frame, frame five is labeled as the mobilizing waterline for bottom-up
Strikingly, only civil servants that work at a high policy level are attached to
the previous frame, this frame reasons that the waterline element can enable pri
trigger bottom-up processes. Similar to the first frame, the main objectives of
are not questioned. In this frame however it is thought that the working attitude
change. The controlling attitude of government should be replaced by a facilitat
flexible and above all gives civil servants the opportunity to work faster. The
government should be the alignment of plans from entrepreneurs and initiatives f
sector.

The frames found are not only based on the Q sort methodology. In addition, 42 in
in order to better understand the Q sort outcomes. All frames are critical of th
cooperation to give the waterline a sustainable future. With the exception of fr
reason that local initiatives are limited by general planning concepts that are
manner on the Island of Schalkwijk area. The planning concept of the waterline i
for planning objectives such as the openness of landscape, unity of the defense
of heritage objects, identifiability and protection of historic values. Both pub
acknowledge that these abstract planning ideas are directly translated to a regu
governmental agencies. In the interviews, actors speak and reason often in a we
public and private sector actors take in opposing positions. The Q sort analysis
even though public and private actors indeed have distinct frames, the group of
considerably dispersed. There is no such thing as the public and the private
system , in fact both groups are internally extremely scattered.

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Discussion

The Q sort methodology reveals that actors hold diverging frames that are based perceptions on the nature of the problem at stake. The public actors involved de different scale levels. The municipality as the main organizer of the process de of a coherent set of leisure services as the key challenge; they see the current the area as the main problem, because many farmers stopped farming as they sold the municipality defines the main policy problem at a local level, the managemen Dutch Water Defense Line perceives the protection of the landscape and heritage object policy problem. The New Dutch Waterline Defense Line is seen as a coherent colle objects: this makes the openness of landscape, the historic-cultural value of th authenticity of the defense line as their main policy concerns. The private acto two groups: the ones that are competitive and are not very willing to cooperate actors and the entrepreneurs that seek for alliances with other local actors. Th most private actors follow is of a much more practical nature: they want their p profitability of their plans is protected.

The frames of the actors diverge also on how actors perceive their role, the rol the rules of the game in play. The municipality chose for the so-called invit approach , meaning that they want to facilitate the planning process. The munic meetings and develops criteria for local planning initiatives. In practice, the perceive this facilitating role differently. They perceive the action arena as a the municipality forces the entrepreneurs to translate their individual plans in plan for the Schalkwijk area. The entrepreneurs have to adopt their plans to bur well as to plans the other entrepreneurs proposed. The entrepreneurs feel that t completely different branch of the economy. They are frustrated by the variety o dropped on them from different public agencies. Sometimes these rules and regula particular solutions.

The institutional analysis revealed that institutional factors hamper integratio the arena. An important factor is the bureaucratic structure behind the resource project. To get access to the budgets available for the project, plans have to m regulations, set by various actors, to justify public support for private plans. provide a stimulus to spend public money at high speed since there are fixed exp Another important institutional factor is the issue of accountability that limit servants to act. Although there is the clearly articulated ambition to support l still have to report on the most things they do since governmental action have t transparent, this means that civil servants cannot always act as quick as they w measures that were taken during the process made civil servants risk averse and justification, also a factor that contributed to a sometimes slowly operating an When analyzing the process from the angle of communication the dominance of the comes to the fore in several ways. In overcoming differences in organizational c construction of an exchange language the process seem to have failed. The gramma Water Defense Line heritage project and used by the municipality Houten have not development of a shared vocabulary or exchange language. At some point, for exam municipality asked the entrepreneurs to invent a collective market strategy for many entrepreneurs openly questioned. Conceptual language and the meeting cultur source of annoyance on the part of non-governmental actors. Some entrepreneurs f absorbed their plans.

The lack of trust among the other actors appeared to be another defining factor in the ac history the Island of Schalkwijk contributed to the lack of trust. Most resident

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were against housing development in the area, while the municipality supported i
blame the municipally for not representing their residents with regards to this
to developers created also distrust between the (former) farmers. Whereas many f
that they were not willing to sell land, many of them did sell eventually. The d
actors is an important institutional factor that hampered reframing. Important t
most entrepreneurs believed the level of trust increased during the process.

Conclusion

The case of the Island of Schalkwijk shows that the transition from government t
fraught with inconsistencies. Paradoxically, the desire to give room to non-gove
contribute to heritage protection goes along with many actions to maintain contr
Because governance by definition implies the involvement of a variety of actors, most go
actors translate their desires into instrumental rules. As a consequence actors
project are confronted with a stack of regulation. Furthermore, because the tran
driven to a great extent by austerity measures, governmental policies are very m
quantified targets. These targets are at odds with the innovative ambitions of t
extent imply a step in the dark. As a result, stakeholders are overwhelmed by bur
requirements and feel stripped of their own responsibilities.

The followed analytical framework revealed the frames actors hold as well as the
conditions that affected the reframing attempts that appeared in the planning pr
of framing theory and institutional analysis can provide a comprehensive outlook
success and failure of negotiations in actor arenas. This paper shows that struc
of frames can reveal how actors perceive their role in governance processes, wher
analysis made clear that institutional factors hampered actors to actually take
Consequentially, mismatches appeared at 3 levels. First, the inconsistency betwe
and action frame that the municipality of Houten holds: the invitation planning
regulated, putting the entrepreneurs entirely on the wrong track. Second, the le
problem was defined: municipality, regional authorities and entrepreneurs all fo
problem definition and the rather fixed regulations hindered interactive reframi
conditions that were set for public expenditure seemed to be not applicable on th
entrepreneurs developed. This bureaucratic reality did not match with how the mu
own role. The three revealed mismatches show that institutional theory and frami
mutually exclusive and can be applied together in a case study. Although both th
very different assumptions, when combined they provide us a better understanding
processes in governance arenas.

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# PERMANENT PUBLIC ART FROM THE PERSPECTIVE OF CLAIMS AND CONTEXT

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**Abstract**

*Permanent public art is one of the layers of the city. In the Czech Republic the practice of public art dramatically changed after1989. All the legislative and institutional support that regulated and ideologically controlled this domain was abolished. New strategies and policy have not yet been established. However, new permanent public art is still installed into the cities.*
*This contribution analyses three phases of the process leading to the new art in the city. Claims, context and art itself are three elements of the whole. They have equal importance. Theoretical understanding of claims, context and art can lead to the precise articulation of future claims, appropriate expectation and better evaluation of benefits. Claims are specific in time and space. Claims, often expressed by the subjects initiating the process of creation, represent mental soil. They are formulated in official strategies (general level) or discussed for the purpose of a specific work. The importance of context developed significantly in the last decades. Context is considered a crucial element in the meaning of public art. Location of important public art, monuments and memorials requires a complex approach and the involvement of artistic professionals, architects and preservationists. Art in public spaces lays on the intersection of different forces: artistic individuality and public interest, sensitivity for actual issues as well as long-term values.*

## 1. Introduction

In this contribution I would like to present the results of the continuing research on the permanent public art installed in Prague after the Velvet Revolution in 1989. Two aspects of permanent pubic art, claims on public art and context of it placing, are addressed and provide theoretical perspective. Official permanent public art in the city is shaped by various actors who participate in vision making, artist selection, decisions on placement and other tasks. The claims are emphasized by the different actors and the understanding of the potential of a specific place are crucial for the success of the artwork, acceptance from the public, and integration in the public space. In the 1980·s the role of public art in urban regeneration was strongly advocated and supported by municipalities, urban planners and developers. In Europe and the USA numbers of new public artworks emerged. Critical writing from different perspectives including artists, cultural theorists and urban and cultural geographers appeared in the late 80·s (Hall, 2003). In the last three decades the important body of the literature has opened up the multi-professional discourses. In the Czech Republic the production of public art is less prolific compared with the situation before 1989 and with other European Cities (1). Professional criticism is rare. Strategies and support for permanent public art have not been developed by any municipality. The exceptions, to some extent are Liberec and Brno. NGO Spacium (active from 2001 to 2010) in collaboration with Liberec municipality succeeded in placing several new sculptures in the city and the region. In the city of Brno the long term municipality project Statues for Brno organizes competitions for monuments and sculptures.

As a part of the introduction I will mention the different concepts and definitions of public art. Afterward I address the complexity of the phenomenon of art in urban spaces. Although art situated a city works as a solitary detail and its effect is more acupunctural, the scope of the question overlaps with dimensions of urban design as summarised in the Mathew Carmona and col. book Public Spaces Urban Places (2010). Therefore the phenomenon of permanent public art requires the perspective and knowledge of various professionals.

### *1.1* What makes Public Art Public ?

What are the specifics of art in the city? How is Public art different from mere Art ? Is it category? Or is it an independent area of cultural production? All these questions are relevant, there is no such thing a single definition of public art. Cameron Cartier defines four conditions for public art and at least one must be fulfilled: 1. Public art is in a place accessible for or visible to the public: *in public*. 2. Public art is concerned with or affecting the community or individuals: *public interest*. 3. Public art is maintained for or used by the community or individuals: *public place*. 4. Public art is paid for by the public: *public funded*. (Cameron and Willis, 2008, pp. 15). Cher Kraus Knight argues that "art is most fully public when it extends sincerely emotional and intellectual access to its viewers" (Knight, 2012, pp. 23). In contrast, Patricia Phillips defines public art rather than on the basis of its presence in the public space or the importance of accessibility to a wide audience, but on the basis of challenged issues related to public sphere (Senie and Webster, 1992, pp. 298).

### *1.2 Complexity of Permanent Public Art*

Official permanent public art similar with architecture creates the built environment of the city and together they share three fundamental characteristics. Firstly, public art and architecture enter the space of the city for a period of time which is not clearly defined. It is presumed their presence will last for decades, centuries, or even for ever . The permanency of public art is often pro with temporal and community based tactics which are less object oriented and more public concerned. There is also the argument of the inability of permanent public art to address the actual issues in a changing society (Miles, 1997; Pavlickova, 2003; Whybrow, 2011). Secondly, art in public space needs the official agreement of authorities and institutions. It is part of the policy of the state, city or private sector. This is one of the reasons why the reputation of permanent public art is so low in the creative communities (Cartier and Willis, 2008). Autonomy of the artist and art declared by modernists is threatened. The artist becomes the instrument and co-author of political and economic power instead of critically examining it. Thirdly, permanent public art, as with architecture, transforms the city scape, thus the citizens are inevitably exposed to visual and spatial effect.

Art in the city is only structure without any specific practical function. It is created by an unrepeatable meeting of art and space in an unrepeatable historical moment. Behind every artwork lies astory that refers to the process shaped by the main questions: What is the idea of the project? Why do we want to create it? How will we do it? Where will the art be placed? Some authors emphasize the need of situated knowledge of various actors or group of actors (Pavlickova, 2003; Zebracki, 2012). Typical participants in the process include artists, architects, city and state institutions, NGOs, cultural theorists, private investors, contractors and citizens. Actors share responsibility for dealing with the various aspects associated with the planning and implementation of art in the city. Their competence varies, although they may overlap.

## 2. Methodology

The first part of the research examining the claims and context is based on the theoretical literature of art theorists and cultural geographers. The historical perspective on official state programs in USA creates the background for actual strategies and discourse. The conceptualisation of context and overview of claims summarized in the book Public Artopia (2012) written by cultural geographer Martin Zebracki are highlighted as a contemporary theoretical framework.

In the case study of permanent public art in Prague after 1989 I present the set of results from the current research. The research concentrates on the influence of political changes on public art and quantitative analysis of Prague·s art-scape and visual typology.

## 3. Claims on public art in strategic programs and critical reflection

> The history of art has sometimes been presented as a history of styles. The history of public art will more likely be seen as a history of intentions (Miles, 1989, pp. 39)

Official permanent public art is driven by a specific intention or set of motivations more or less declared. In some cases, a genuine intention to place a statue in the city is hidden from the public, in others it is clearly expressed and fulfilled. Intentions articulating a process and leading to the placement of a sculpture are possible to examine and refine by demands that the actors place and have the competence to ask. Evolution claims on public art can be viewed in two domains. First is an official strategy and policy of countries, cities, institutions and organizations that support and implement public art. I will mention the most fundamental of them in the history of public art programs in the USA and the actual claims defined in the documents of various organisations and institutions. The second domain is the critical writings on various aspects of public art.

*3.1 History of claims on public art*

In 1982 The Fairmount Park Association was founded in Philadelphia. This private non-profit organization, later renamed as The Association for Public Art, was the first company focused on the promotion of public art and urban planning. Its founders believed in the value of art in public spaces as an extension of the museum. Art should not be an exclusive matter. Art has the potential to play an important role in the life of the population of Philadelphia. Until 1906 art originated only in the Fairmount city park, later the organization's activities have spread into the area of the city "as the counter of expanding industrialism and to promote and foster the beauty of Philadelphia, in its architecture, improvements, and the city plan" (Bach, 2001, pp. 13). In 1959 Philadelphia was the first city in the nation to accept the percent-for art program, three years before federal percent-for-art policy was established. The nation-wide support for public art opened the Federal Cultural program, which was a part of President Roosevelt·s policy known as the New Deal that was supposed to allevia impact of the economic recession of the 1930s. The support program was incorporated into several separate projects. For the period up to 1935 the most effective was the Public Works Art Project (PWAP), which lasted from 1933 to 1934 (Cartier & Willis 2008). His goal was to create jobs and decorate federal buildings (post offices, schools, libraries, museums). In 1935 the largest and most important government program to support the arts-the Work in Progress Administration (WPA) was launched. It included the Federal Art Project (FAP), designed by visual artists. This program lasted until 1943, when the US entered the Second World War. The WPA tried to learn from past experimental programs. One of the goals of the new WPA was to strengthen the relationship of artists and their communities to prevent the lack of jobs and outflow of artists in large cities. The FAP was a centrally managed program, however, it was able to influence cultural production at the regional level throughout the United States (Adams and Goldbard, 1996). Crucial support and proliferation of public art came in the 60s through two federal projects. The General Service Administration (GSA) launched the Art-in-Architecture program in 1963, which was the first state program in USA to use 1 % of the budget for the construction of federal buildings for the creation of art integrated into the architecture. The program was put into life during the onset of President Kennedy's inauguration. Kennedy was aware of the ugliness of fast growing cities and the unsatisfactory state of federal buildings (Radisic, 2007). The program established three principles: 1. Distinguished building design should be acquired from the finest American architects. 2. No official governmental style should be allowed to develop. 3. Attention should be paid to each building·s site for its location and beauty. However, perceived the presence of art in architecture as decoration (Radiscic, 2007). The revision of the program initiated by President Nixon brought closer collaboration with another federal organization, the National Endowment for the Arts (NEA). The first new requirement placed on the Chief Architect emphasized the selection of the locality for art and integration into the overall design of the building (Radisic, 2007). One of the first realizations was Flamingo by Alexander Calder, designed and engineered for the Federal Centre in Chicago. The NEA initiated its own program named Arts-in-Architecture, which aimed to strengthen the democratic distribution of power in the field of commissioning and realization of art in public spaces. The growing influence of the private sector accounted for the program to strengthen local government and NGOs, which initiated the project and used NEA support for the partial funding and organizational patronizing (Radisic, 2007). NEA and GSA have undergone radical transformation since the negative reactions on the installation of Tilted Arc in 1981 by internationally renowned sculptor Richard Serra. Both programs tried to democratize and support the idea of public art but the results suggest promoting certain cities and locations using

the work of internationally acclaimed artists as an attractive product and brand the cause lies in a definition of public art only in terms of presence in public space. Art is alienated within its context and often in a sharp aesthetic or spatial contrast with a built environment. A radical revision of the objectives of both programs occurred in the second half of the 80s, after eight years of litigation between supporters and opponents of Tilted Arc installed in Federal Plaza in New York and 1989 removed (Knight, 2008).

In the 60 s and 70 s many American cities adopted the percent-for-art ordinance and drew up plans to strategically support art in the city. In the 70s the public art policy expands in Europe. Since 80·s art is advocated in urban regeneration planning thus the importance of site-specificity is advocated and implemented in the strategic documents. The website managed in past by Arts Council in England [(4)] www.publicartonline.org.uk, surveys, informs and publishes sets of data and documentation valuable for different purposes such as research, commissioning and strategy making. The public art policy programs of many England cities are listed. In Vienna the organisation KOR enhances and funds new public art. Documentation is accessible through a virtual archive. KOR published eight guiding principles in its website. Four of them mentioned the urban related aspects of identity of place, revitalisation and social issues. Between 2004 and 2014 KOR supported 72 permanent projects. In Denmark KOS, museum of public art, collects the artwork relevant to the process of creation (models, sketches, drawings, video documentation). KOS manages an interactive map of Denmark permanent public art. The city of Chicago in its official website describes public art as site specific artwork commissioned through *community-based process* . The definition itself incorporates democratic values of public art. To support public art there is not only percent-for-art ordinance, although it is a powerful instrument. The aim of this short survey is underpin the variety of the states and cities engagement in awareness of public art and improvement the quality of new artworks.

*3.2 Theoretical reflection of claims on public art*

Comprehensive overview of claims on public art are formulated by Martin Zebracki in the book *Public Artopia* (pp. 26-27). He mentions various authors as an inspiration and source of thoughts for the summary (Hall, 2003a, b; Selwood, 1995, Miles 1997). Zebracki appoints first physical-aesthetic demands where art contributes to the attractiveness of the place and thus encourages greater use of urban space. Art also increases the visual and aesthetic quality of the site and stands as a landmark. Other qualities can be mentioned too. The second area includes economic demands. For example, increased investment in the arts, support for economic regeneration by creating a visually more attractive environment, support for marketing and promotion of a certain town or city, providing employment opportunities for artisans, transport, or the promotion of cooperation between public and private sectors. The third area concerns social issues, which range from promoting interaction within the community, helping to integrate, support for social change, reducing vandalism and making a secure environment, supporting links between artists and professionals who have an influence on the built environment, such as planners, architects, engineers, landscape architects. The last group of issues is related to the cultural and symbolic level. Art is able to raise awareness of the history of the site, promote national identity and inspire further actions and ideas, promote the identity and character of a place.

The aforementioned issues are interrelated and it is possible to distinguish hierarchy within them. Respectively, some claims - for example, the creation and promotion of national identity through a monument to anti-Nazi resistance is paramount and require the utmost care and multidisciplinary discussion. Claims such as creating job opportunities for transport companies and contractors is rather a positive side effect. Hall and Robertson (2001) pointed out that officially formulated demands are often essentialist, critical reflection on the implementation is rare. There is also lack of evaluative tools for both, the art and the claims.

**4. Contextual approach in public art**

The importance of site-specificity has grown distinctively in the last decades. As Kwon (2002) proves this evolution was influenced by new tendencies in the art world and the proliferation of modern sculptures in the public domain in the 60·s and 70·s. Artists such as Richard Serra, Robert Smithson, Donald Judd and many others re-contextualize their installations in the space of the gallery. They also discard the aura of authenticity of a sculpture, composing the objects from prefabricated materials. They escape the system of artistic production in realisation of the landscape installation in the great distance of civilisation. Landscape art is sometimes seen as forerunner of public art (Rendell, 2006). At the same time the advocacy of public art and creation of policy in many states and cities increased the number of new realisations. But sculptures are placed without any significant relation to architecture or place. They serve as an aesthetic object or decoration. The alienation of the artistic object and public space is characteristic for already established modernist principles of the autonomy of artist and art. Theses art objects are later on described as plonk art , plop art o the square (Whybrow, 2011). The reaction is strong criticism of the mentioned practice and a growing interest in the context of public art. From the 80s several new modes of use and strategies were explored. The aim of this contribution is not to reproduce the phases of evolution of site-specific tendencies in public art ending in process oriented community practices. I would rather emphasize the crucial position of context through five paradigms conceptualizing the interrelations of art and public space as presented in afore mentioned book by Martin Zebracki Public Artopia (2012, pp. 15 16). The first paradigm, Art *in* public space , is based on mere presence of art in public space, without a fundamental connection with a place as is typical for socialist sculpture. The second paradigm Art *of* public space , re/valuates public space and thus includes all art connected with the public and issues related within the public sphere regardless of whether it is placed in a public space or in a museum. Following the essay of Patricia Phillips Temporality in Public Art (Senie ed., 1993), art is truly public when artists critically challenge all political and social issues. For example Kris installation, Memento Mori: Of One·s own Volition , street light turned up towards the Nuselsky Bridge has the power to redefine a sad history. A tacit and neglected place of personal human tragedies is overriden by a powerful embodied of a moment of hope. Arts constitutive role of public space defines the third paradigm Art *as* public space . Democratic values integrated in the notio space is driven through art. Such as Maya Lin·s Vietnam Veteran Memorial in Washington, whi works with landscaping, and movement and strength of a complete list of the names of fallen soldiers. The forth paradigm Public space *as* Art , is very much presented in the tendencies of the 70·s and 80·s where art with function was advocated as valuable and not generating conflicts. The realisation of art as urban design and furniture sculpture (Whybrow, 2011) amenities were supported. In Prague, the Bollards of Karel Nepras installed in 1993 in front of the Lichtenstein Palace have not yet been accompanied with other creation of a comparable artistic quality. The last paradigm Art *for* public space , art representing public space, is typical for the most of the monuments and memo Sculptures as a statement or attractive image representing the subject may also be included. The sculpture I love Money , designed by Jan Slovencik and Iva Junkova placed in front of the College of Banking is an example. The architecture of the building is more monotone than original and the locality itself suffers from poor urban planning. In a space primarily used by car drivers the sculpture provides outstanding visual quality supported with humour. These five paradigms are schematic and provide orientation in the continuous conceptual interrelation of context and public art. The boundaries are open for overlapping and interconnection. Zebracki defines the sixth paradigm as implementation of all five concepts. Through Zebracki·s innovative summary I intended to show the complexity of problematic of permanent public art as an integral part of a particular place which is, in the words of Lucy Lippard, the intersections of nature, culture, history, and ideology. (Lippar

**5. Permanent public art in Czech Republic: Case Study Prague after 1989**

*5.1 Situation before 1989*

By the1950·s, the socialistic state of Czechoslovakia totally governed the permanent public art practice. The first decade of socialism is connected with the construction of expensive monuments. The most famous and demanding was the realisation of the Stalin monument dominating Prague from Letna hill. Avery close collaboration and connection of architecture, statuary and mural painting was supported. The idea of total work was less and less influential at the end of 5(

costs by Khrushchev, the new Russian leader (Karous, 2012). The cult of the former head of the Russian state J. V. Stalin collapsed and in 1962 the monument was blasted, seven years after the completion. Since the 60s the Czechoslovak state has supported the creation of a smaller scale sculptures, often without direct ideological connotation (Karous, 2013). Massive support and distribution of sculptural and mural works suggest the use of art as a tool for strengthening cultural influence and a clear definition of its borders. Due to percent-for-art ordinance, adopted in 1961, sculpture production entered the period of greatest proliferation through its participation in the centrally planned construction. In 1965, the efforts to strengthen cooperation between architects and artists were culminated in the document Resolution of the *Government of the Czechoslovak Socialist Republic on the use of fine art in construction projects* which contained 14 principles. Preparations for the architectural design and engaging art work was carried out in with the cooperation of three institutions, the State Commission for capital construction, the Union of Czechoslovak architects and Union of Czechoslovak artists. Decision-making powers related to the selection of the artist and the ultimate decision on implementation was entrusted to the Czech Fund of Fine Arts (Karous, 2013). Architects had the task of selecting artists and jointly submitted a proposal to the Commission. Artists and had secured supply contracts, if they were willing to keep the circuits themes and formal language of exhausted modernism.

*5.2 1989-2014*

After 1989, the Czech Republic had a radical transformation of cultural policies associated with the production of art in the city. Institutions that were designed to promote and control public art in the cities were cancelled. Percent-for-art law was revoked. The overall character of new works in the territory of Prague and the number of new annual installations changed significantly after 1989. What seems to be unchanged is tentative interest in permanent public art by politic authorities and cultural professionals and the questionable quality of some of the new realisations. There is no official strategy by State or municipal governments. Consultancy (on a commercial basis or provided by NGOs and cultural institutions), which facilitates communication between different participants and helps formulate visions for art does not occur in the Czech Republic.

The capital city of Prague on www.praha.eu has not yet published any report, concept or strategy to support art in public space. In 2014 IPR (The Institute for planning and development of the city of Prague) published a *Handbook for design of public spaces*, which defines seven principles for placement of art in public spaces (pp. 273-276), (semantic and spatial relationship to a place, choice of location should not be coincidental, the importance of collaboration between architect and artist, evaluation of site-specific conditions before assignment for art, scale selection and material responsibility for maintenance, a plaque as an aesthetic element). In the text, the emphasis is on the relationship with the context: "A work of art should never be taken out of the context of time and place, but rather to resonate in a particular locality" and "Artwork contributes to the quality of public spaces, if aptly reflected its ideological and spatial relationship to the place "(pp. 273). The text accurately describes the problem of existing public art ex post set up in urban space, t support and quality selection. The manual is binding according to the subject to which it relates. For districts and private entities it serves as a basis and a tool in the creation of further development for Prague city and contributory organizations drawing on the city's budget is binding (pp. 14-15). This text is unique in the Czech environment.

In Prague various subjects create a new impetus for the implementation of art. For example, Lamp under Nuselsky Bridge artist, Kristof Kintera, initiated in cooperation with the civic association Dvojka Sobe (Souskova, 2012). The NGO Automat commemorates the accidental death of its founder Jan Bouchal, installing a silver bicycle on the street light pole close to the place where the accident happened. In 2014, the Gate of Infinity sculpture was revealed as a result of the cooperation of the Prague 3 municipality and the sculpture studio at the Academy of Arts, Architecture and Design. Two years before, in collaboration with the same studio, Praha 9 realized the statue The Dancer in front of Polyclinic in Prosek. The Private College of Banking commissioned the design and implementation of a significant attractive sculpture I Love Money . A rare example of the use of art to promote a

housing development project is Kejruv Park, even though the quality of integration in site is more than arguable. It is obvious that although the number of new works after 1989 has decreased significantly, Prague (at least its centre) has become a space where a wide range of initiatives have entered the field of official public art, for now without clearly defined rules. Some of the art-works were donated to the city and they remain despite the loud criticism of the professional sector and institutions. If there isn t any regulation at the level of government, it is an opportunity for municipalities and the local authorities to develop their own public art strategy, guidelines for dealing with donations and failed realisations.

*5.3 Mapping of permanent public art in Prague*

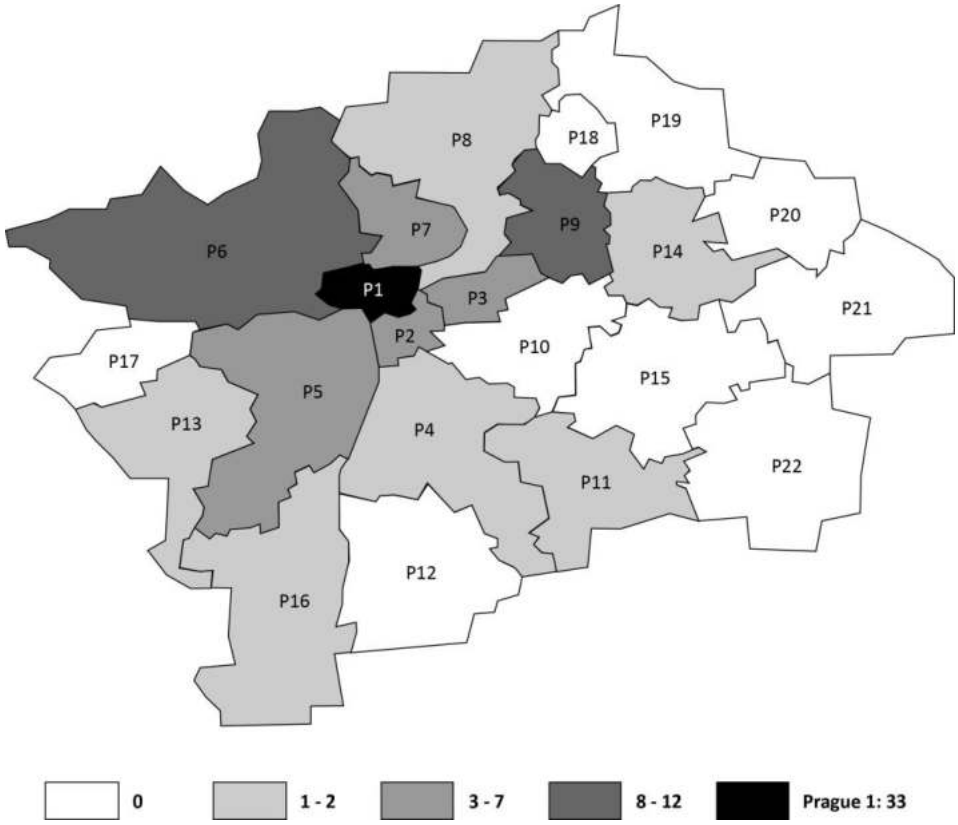
Permanent public art installed in Prague after 1989 has still not been thoroughly investigated. The partial documentation and mapping is provided online the Prague City Gallery archive and internet database www.socharstvi.org. The Aliens and Herons Project focuses on socialist sculptures from 1948 to 1989.

To create a database the main source was the internet, terrain survey, checking tips and literature. The database covers public art from 1989 until April 2015, however, it is still open and its final appearance will coincide with the current situation at the time of completion of the research (i.e. 2017). As far as the public space is concerned, the works are placed in freely accessible public spaces, public space with the regime (parks) or in the private space, which is freely accessible (exteriors of business centres, arcades), but under certain visual control (guards, cameras). Also included were three-dimensional works that are physically tied to architecture (except commemorative plaques and busts) and then the works, which, although located on private property of an institution or a housing complex, but the way they are installed clearly directs to the audience "behind the fence". What is important is visual and semantic overlap in the public space. Data referring to each part include: installation year, title, author, material, location (administrative district, location based on identification, other specifications), visual category. There is also data whose collection is still unfinished (photo-documentation, type of process that initiated the establishment and location of work - open or invited competition, gift to the city, individual activity, initiative, civic associations). The starting point for creating a visual typology is drawn from Zebracki (2012). There are four categories of art: 1. Monuments and memorials 2. Statues (figurative and abstract sculptures) 3. Installation/ environmental art/ landscape 4. Art with function. The first category includes only monuments and memorials that have been explicitly intended. Works that from the viewpoint of the artist's motivations are commemorative are assigned to the second or third category. Installation and other forms of permanent art, which avoid the classical concept of a sculpture on a pedestal as the centre of attention are assigned to the third category.

*5.4 Artscape and visual typology - quantitative results*

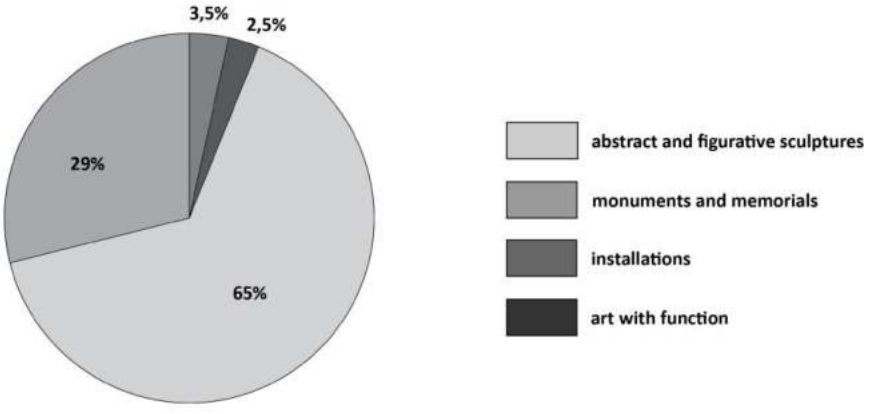
From 1989 to 2015, 82 works originated in Prague. That represents approximately 3 new works per year. 12 works are part of the two groups of sculptures (Hadovka Sculpture Park, sculptures in the development project Kejruv Park). 33 pieces, 40 %, are located in the administrative district Prague 1, where 2.35 % (29,586 out of a total 1,256 million; data released by CSO in 2014) inhabitants have permanent residency. It is in contrast with other administrative districts where none of the remaining 21 districts have more than 11 works. In nine administrative districts there has not been created any artwork in the post-revolution period. See Table 1.

Table 1. Quantity in administrative districts




In terms of visual typology, mapping generated the following results: The group of monuments or memorials includes 24 works. Then there is the 53 abstract or figurative sculptures. There are only three installations which can be identified as working: Time Machine on Letna known as the Metronome, the twisted lamp Of his own volition under the Nuselsky Bridge and Aeronaut , which is in the Hadovka Sculpture Park. Only two works operate with function: Bollards in front of the Lichtenstein Palace at Little Side and Bench again part of the Hadovka Sculpture Park. See Table 2. 40 sculptures engage realistic rendering of the human figure or object, based on the tradition of classical sculpture.

Table 2. Quantification of visual typology



## 6. Conclusion

From the ongoing research of the artscape in Prague, the following outputs emerged: 1. Number of new public art-woks and proliferation within districts 2. The quantitative survey in visual typology. 3. Prague has a great lack of policy making, evaluative methodology of various aspects in public art issues. 4. Some results need further research and interpretation, for example, the concentration of works in Prague 1 district which is 30x 3x higher than in other districts of Prague. There is also the question of the absence of public art in the nine districts.

For a better understanding of the situation in the permanent public art-scape in Prague after 1989, the notion of claims and context in the theory and practice were addressed and researched in the body of documentation and literature. The claims on public art were developed in time through various state programs. Since the 80s, theoretical reflection and the academic sphere have shaped the thinking and created new input in policies and strategies of municipalities and states. Contextual approach, site-specificity, public art as place making this terms are inherent for both academic discourse and strategic documents.

**Notes:**

(1) In Prague in 1989 2014, 82 new public art works was installed. KOS, virtual museum of public art in Denmark, provides 209 record in the same period in Copenhagen. Martin Zebracki mentions 375 public art in Amsterdam public in 1985-1999 and 156 in 2000-2009 (2012, pp. 63). KOR in Wien, in 2004 2014 supported 72 new permanent art-projects.

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# SHANGHAI LILONG RENEWAL FROM THE PERSPECTIVE OF CONSUMER CULTURE

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## Abstract

*With the development of social economy, the renewal of traditional lane residential areas in Chinese cities is significantly affected by consumer culture. In the case of Shanghai, Lilong (the local name of lane residential area) renewal has always been combined with tourism and commercial strategies, and has created a new format of urban development since 2000. In this paper, 5 typical Shanghai Lilong areas are selected. To study the characteristics of consumer groups, motivation, behavior, the attraction of street space and cultural elements of these areas, a questionnaire survey is conducted, and the commercial structures of the 5 samples are also analyzed. The paper has discovered that the characteristics of the main consumer groups in Shanghai Lilong are represented by 3 Hs (high education, high income, and high social class) also by lower age, higher percentage of international population and distinct regional features (far higher percentage of native Shanghai people), etc. Through a statistical analysis, 4 representative consumer groups are identified: white-collar workers, college students, foreign tourists and business people, and natives of Shanghai, whose core motivation of consumption is considered to be the construction of social identity and self-identity, reflecting complex values and behavior characteristics. To better cater to its consumer group s motivations, the Lilong keeps on strengthening the significant characteristics of consumer culture like unique, historic and aesthetic features, as well as the middle to higher consumption tendency and the density of significance. The author argues that the renewal of traditional Lilong has really improved the image of the city and stimulated consumption, but also led to some potential problems, such as the social contradictions, the loss of the authentic culture represented by Lilong, and the superficial trend of cultural connotations in consumption. This research is intended to provide a case study for the renewal of traditional Lilong or lane residential areas in Chinese cities and some reflections on corresponding problems.*

**Key words:** *consumer culture, Shanghai Lilong, consumer motivation*

## 1 Introduction

As the development of social economy in Chinese metropolises produces abundant material products, the first-tier cities, represented by Beijing, Shanghai and Guangzhou have entered consumer society. In a consumer society, consumer culture is featured by mass consunmption which is more for symbolic significance rather than the real value of the purchased commodit

significance could be understood as a certain social position or some cultural residential areas, which carry the historic culture of a city with unique cultural connotations and architectural symbols, can bring special historical and cultural experience that ordinary residence areas can not offer to consumers, but creates in reality some scarcity in the historic culture of traditonal lane residential areas(Steven Tiesdell, Taner Oc, Tim Heath,1996). Once excavated, the scarcity will in return create great economic potentials. The universality of consumer cultur pursuit of people and broader, deeper market needs, producing a new round of the traditional lanes renewal. As a matter of fact, the consumer culture has begun to affect the renewal of traditonal lane residential areas in Chinese cities profoundly. Since 2000, the lane residential area renewal in Shanghai has been combined with tourism and bussiness, shaping a new format of urban development, which, on one hand perceives great popularity and on the other, presents some potential problems.

In this paper, five representative lane residential areas: Xintiandi, Sinan Mansions, Tianzifang, Duolun Road, and Dongping Road are chosen as research targets. A questionaire survey was conducted about consumer groups, consumer motivations, consumer evaluation of the cultural characteristics in the sample lane residential areas, so as to go deeper into the social contradiction and cultural matters of the renewal pattern combined with tourism and business. The causes of these problems are discussed in this paper, and hopefully it can provide some suggestions for the renewal of other similar traditional lane residential areas in Chinese cities.

## 2 Relevant researches and research questions

### 2.1 Relevant researches

#### 2.1.1 Research on consumer motivation

Many scholars have introduced consumption theories related to social studies into the study of consumer culture in urban space. For example, there is the study of symbolic e by Shron Zukin. Based on Chinese consumers behavior at McDonald s, American Anthony M. Orum and Chen Xiangming put forward some consumer motivations as follows: 1.special experience; 2.social interactions; 3. social status (Anthony M.Orum Xiangming Chen, 2002). The majority of Chinese scholars criticize the negative effects on urban space caused by consumer culture. For example, Bao Yaming, who specializes in social science, has studied the negative consumer psychology in bars, such as the emotional expression and self-identity verification (Yaming Bao, 2001). Ma Jiewei also carried out researches on bars, he pointed out that it is the simulation of the past time and present development, the connection of local features and multinational imagination that attract consumers (Jiewei, 2006).

According to Maslow s theory of hierarchy of needs, consumer motivations are div needs and high-level needs. Consumption needs influenced by consumer culture include consumption conceptions and behaviors based on identity which are seen as the high-level needs for a sense of belonging, respect and self-actualization, while the basic needs are out of physiological needs and security concerns. Identity includes self-identity and social identity , the role some takes for us. It is an attribute given by others and the identity of the social group that one belongs to (Qing Wu, 2009). Self-identity is defined by oneself for his character, quality, temperament and appearance. It is the identity of self-attribute (Ning Wang, 2001). Through research and interview, the authors found that consumer motivations are somewhat closely related to social identity in Lilong space: status motivation, social motivation, and conformity motivation; consumer motivations are also closely related to self-identity: hedonic motivation, taste motivation and personalized motivation.

### 2.1.2 Research on evaluation of characteristics of Lilong

This part is to summarize the characteristics of consumer culture in Lilong based on theoretical studies and the pre-survey. The theoretical study tries to summarize some vocabulary to describe Linong s characteristics from mass media and journal articles. To evaluate lan Xintiandi and Tianzifang, the main concerns are focused on several aspects: 1. Historic significance, or the basic feature of lane residential areas, some representative words used old Shanghai culture , and classic culture ; 2. Uniqueness. Lane residential areas boast features that stand out to compare with other areas around. 3. Fashion. Fashionable culture, industries and environment are integrated in Lilong and will lead the cultural trend in future. 4. High-end consumption. Characteristic and the high-end service facilities and the assembled consumer groups demonstrate the high-end characteristic of these areas. 5. Unfairness. Traditional lane residential areas tend to become exclusive spaces for the strong social groups, where only the needs of social elites are satisfied. 6. Quality and nostalgic feelings. Nostalgic culture and romantic environment always attract people and make them eager to stay. 7. Artistic atmosphere. The Lilong area is full of artistic tastes, such as architectural space, studios of fine arts, photography and sculpture, street art, and artists. 8. Cultural integration. Lilong is the integration of the new and the old, the modernity and fashion, the Chinese tradition and western styles.

To avoid inconsistency of opinions between consumers and the authors, this paper uses the induction vocabulary mentioned above in the questionnaire survey for consumers to choose the most suitable ones. Then, the vocabularies with highest frequency will be selected for a classification analysis, to initially define the cultural characteristics of lane residential areas. Further research will be conducted in later formal investigation.

### 2.2 Research questions

Previous researches start with both social issues and consumer psychology, while in this section, the following questions will be studied from consumers perspective:

(1) Who are the consumers in the traditional lane residential areas?

What are the characteristics of the consumers, including their age, education, and social class? Who are the mainstream consumer groups?

(2) What are the consumer motivations?

Why people like to consume here? What are their psychological needs? What are the different motivations among different consumer groups?

(3) How do consumers evaluate the cultural characteristics in traditional residential areas? What are the cultural characteristics of Shanghai Lilong?

(4) With the renewal pattern, what are the hidden problems of Lilong?

## 3 Research design

### 3.1 Sample selection and introduction

To answer these questions, five traditional lane residential areas are chosen as samples in this paper, they are Sinan Mansions, Xintiandi, Tianzifang, Duolun Road, and Dongping Road (see Figure 1). Of the five samples, Xintiandi, Tianzifang, and Sinan Mansions belong to Huangpu District. Duolun Road belongs to Hongkou District. Dongping Road belongs to Xuhui District. These samples are chosen in consideration of the following reasons: (1) great social influence; (2) representative renewal patterns; (3) different business models and consumer groups. The consumption mode of Xintiandi, where the consumer group mainly consists of foreign people, therefore is a foreign consumption-oriented place; Tianzifang, where consumers are mainly foreigners and younger people, it is tourism consumption-oriented; Sinan Mansions consumption mode is an upscale-club c high-level consumers make up the majority of its consumer group; Duolun Road, featured by cultural collection, has less consumers; Hengshan Road s consumption mode, built for consumer groups Shanghai-style night-life culture, includes white-collar people and the native residents.

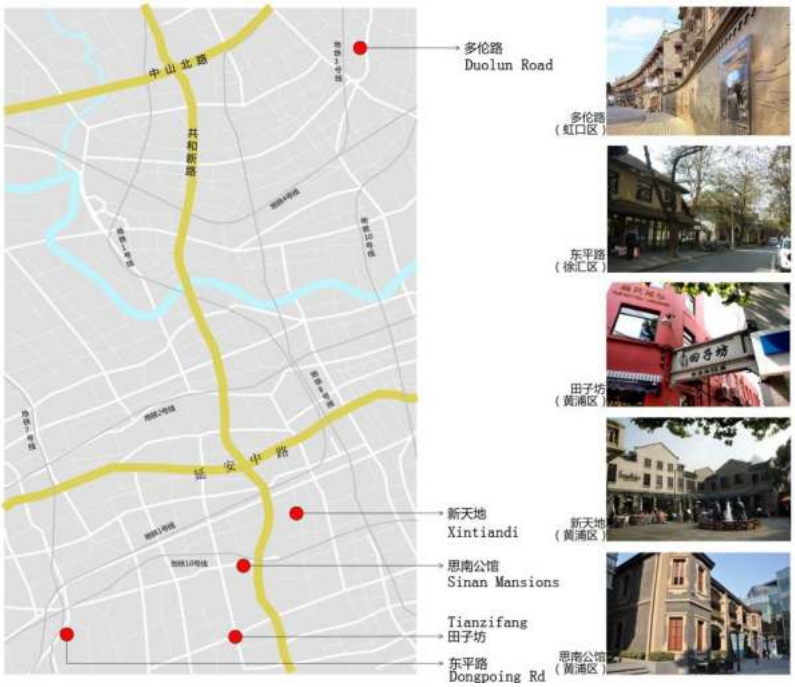


**Figure 1.** Map of the five samples

Through observation of the five samples, the business characteristics of traditional Shanghai lane residential areas are analyzed from the perspective of consumer culture. The reasons of success and failure of these areas in terms of business are also summarized to provide references to the renewal of traditional lane residential areas.

### 3.2 Questionnaire survey and problem evasion

#### 3.2.1 Questionnaire design and survey

The questionnaire survey is an important means for this research and the questionnaire is

designed mainly for consumers/tourists. The questions include the identity information of respondents, consumption conditions, psychological needs, motivations, perception and evaluation of the sample areas. Before the questionnaires were formally handed out, more than 50 questionnaires had been pre-surveyed and problems were checked out, then the formal questionnaire was re-designed for the research survey.

To collect authentic and effective questionnaires as much as possible, the questionnaires were handed out at random in the sample areas. The respondents were mainly the consumers of all kinds in the areas. In order to make sure that the sample areas are comparable, the survey time was kept consistent, most of which were conducted at weekends, and there was a certain ratio of questionnaires handed out on week days. The survey was conducted in 2014 from August to October and 948 questionnaire papers were collected. With 82 invalid questionnaire papers, there were 866 valid ones and the efficient rate was 91.4%. The number of papers differed according to different scales and the numbers of people in the sample areas.

### 3.2.2 Problem evasion

Beyond any doubt, defects of this questionnaire survey are unavoidable. For example, it is more convenient to conduct a survey on tourists hanging outside the restaurants and shops in the sample areas; it is more convenient to collect questionnaires from Chinese than from foreigners; the elderly are more likely to refuse the participation in the survey. The following routes are designed to evade these problems:

(1) Proportional relation of respondents is determined through a general observation to ensure the comprehensiveness of respondents;

(2) According to the measuring method of sequencing, the basic attributes of crowd (gender, age, education, profession, place of residence) are separately surveyed. Then the crowd proportion is counted as a weighting basis to arrive at actual crowd relations;

(3) Besides, questionnaires are handed out at different street passageways and squares to ensure the randomness of handing out questionnaires and the authenticity of crowd proportion;

(4) Through interviews with working staff in the areas such as servants, shopkeepers and public securities, crowd proportion can be deeply understood in terms of sensibility and compared with research results. If the difference is small, the accuracy of the results is verified, but if there is a big difference, the causes need to be found and better research methods shall be discovered and applied.

Hopefully, the ultimate research results can faithfully reflect the structure of respondents.

## 4 Research findings

### 4.1 Characteristics of consumers

According to statistics, the mainstream consumers showed the following characteristics (see Figure 2-5):

(1) social chatacteristics: 3 Hs chatacteristic, that is to say, people higher income, and higher social class account for a very large proportion;

(2) age characteristics: low in age , that is to say, young and middle-mainstream consumers and among them, college students account for a larger proportion;

(3)nationality characteristics: foreign consumers occupy a fairly large proportion; the proportion of foreigners in five sample areas range from 30% to 60%, about 45% on the whole;

(4) regional characteristics: the number of local consumers is far beyond tourists from other parts of China.

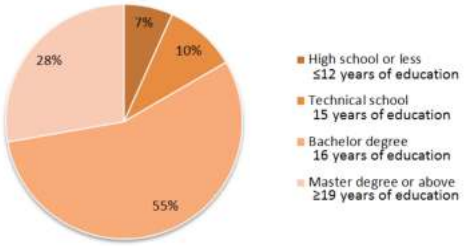


Figure 2. The structure of consumers education

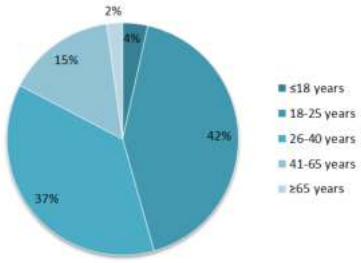


Figure 3. The

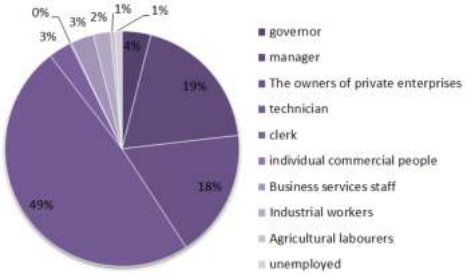


**Figure 4.** The proportion of ten occupations

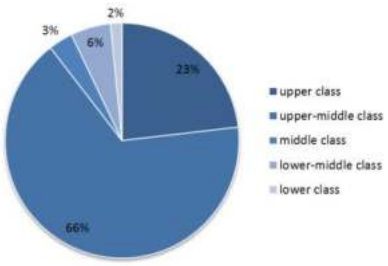


**Figure 5.** The proportion of social classes

### 4.2 Psychological needs and activity characteristics of representative crowd

Based on data analysis, this paper studies consumers psychological mot characteristics of the four representative mainstream crowds: white-collar workers ( 3H s groups), college students (low age groups), international consumers and local tourists, and evaluates the cultural characteristics of traditional lane residential areas.

#### 4.2.1 A comparison of consumers psychology

Through a statistic analysis, it is found that there are both communality and difference in the consumer motivation structure of the four mainstream crowds, showing complex values and behavior characteristics. Based on standardized survey data of psychological needs, different scores are used to reflect consumer psychological needs. There are four categories of scores with x as the psychological needs. For example, x 2 2 x 2.5 2.5 x 3 and 3 x, mean that the corres psychological needs do not exist , with a certain tendency , with an obv stand out (see Figure 6).

[1] *Questionnaire of Psychological Needs* is designed on 5point scale method. In data statistics every reply is given a score point. For convenient calculation, in this paper, never totally agree; don t agree; no opinion; agree; totally agree are assigned to 0 1 2 3 4 respectively. It can be seen that 2 stands for unclear attitude; smaller than 2 means disagreement. The smaller the score, the stronger disagreement. On the contrary, the bigger the score, the stronger the positive attitude. When the numerical value is 3 , it means the attitude toward the item is rather clear.(Refer to 24-45 questions in the Attachment A Questionnaire for specific problems)

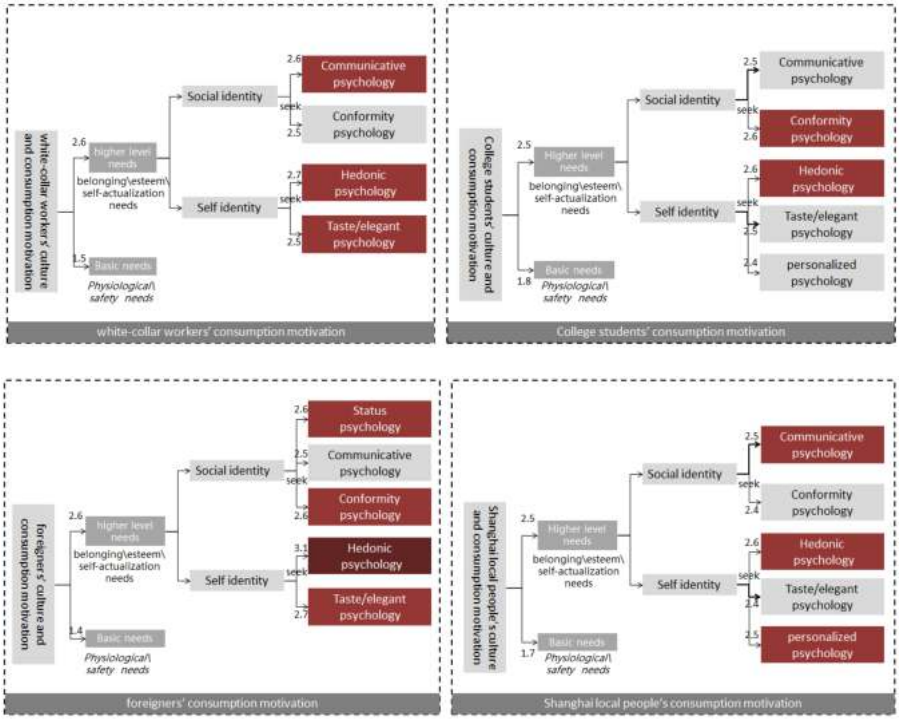


**Figure 6.** A comparison of psychological demand motives of 4 groups

(1)Communality: hedonic and communicative psychology stands out, while status psychology is not so strong.

The demand motive of consumers is clearly partial to higher-level needs, which is far above basic needs, while the needs for self-identity is far above social identity; hedonic consumer motivation (which belongs to self-identity), the communicative and conformity consumer motivation (which belong to social identity) are obvious.

Thus, it can be concluded that on one hand, consumers care about their own happy and comfortable feelings, so they demand a better environment of the areas, including the elegant style of shops and the delicacy of goods; on the other, they care about the interpersonal communication so they seek suitable places in order to make friends and cultivate social relations as well.

(2) Difference: each group has a different psychological demand structure

The difference of psychological motivation of each group is mainly demonstrated by different structures of six molecular groups. Hedonic consumer psychology can be clearly seen in each group, but that of the international group is relatively the strongest; personalized psychology of the white-collar group and the international group is relatively weak, while their conformity is relatively strong; conformity and personalized psychology of college students and local people in Shanghai are clearly seen, which demonstrates that all groups are influenced by both the reputation of the sample areas and their own complicated psychological needs for personal preference, uniqueness and distinctive things. The psychological needs of consumers are complex and contradictory.

### 4.2.2 A comparison of typical activity characteristics of each group

The main activities of the white-collar group include dinner party, business-related interview, working lunch and so on. Although these activities belong to catering and leisure services, what white-collar workers consume are actually the cultural atmosphere and petty bourgeois tone of Shanghai Lilong. Meanwhile, their requirements for space include a graceful environment, well-equipped facilities, private spaces and so on;

Young students are curious about society and history, and their major purpose of coming to Lilong is to experience more and know better about themselves. What they pu culture and artistic atmosphere of the areas. In addition, the creative culture and the fashionable elements can satisfy their curiousness to pursue something new.

Activities of foreigners are mainly for social interaction, business and fun. On the one hand, they are attracted by bars of different kinds and styles; on the other, they are also attracted by the architectural space with local cultural characteristics. Their affection for history and culture is embodied in their experiences of enjoying the architectural space, rather than historical stories and soft culture.

The main activities of Shanghai local people are experiencing the culture of old Shanghai and enjoying trips on weekends. They are attracted by the cultural symbols of old Shanghai and the spatial features of traditional lane residential areas. They are also attracted by the original and creative cultural atmosphere, surreal romantic sentiment, literary and artistic scenes as well.

### 4.3 Evaluation of cultural characteristics of Lilong areas

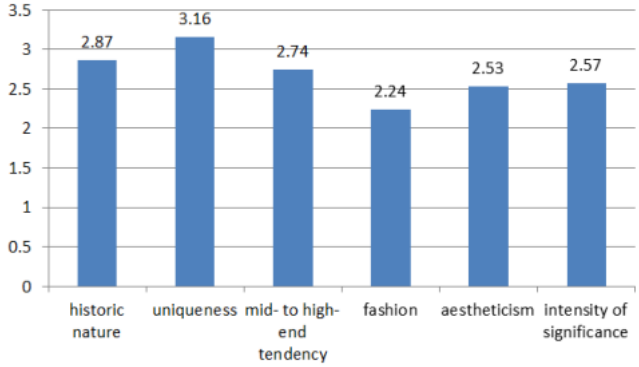


**Figure 7.** Evaluation on the characteristics of Lilong areas by consumers[2]

The questionnaire is designed based on scale design of every single characteristic. The score of 2 means a vague attitude of the respondents to the characteristic, that is, they do not agree and they do not deny either; 3 means they agree about this characteristic; 4 means degree of recognition, based on the scores, is divided into 3 limits: 2.0 , 2 are divided into 4 levels, represented by y . In case of y<2, it means consume characteristic; 2 y 2.5 means that the characteristic gains certain recogniti the characteristic is quite obvious; 3 y, the characteristic really stands consumers highly evaluate the characteristic of uniqueness ; then that of historic n

[2] *Questionnaire of Characteristic Evaluation* is the same as *Questionnaire of Psychological Needs,* designed on 5 point scale method. In data statistics every reply is given a score point. From never totally agree to totally agree , every reply is assigned to a number from 0 to 4 . In the final statistics, 2 stands for unclear attitude, the smaller the score, the stronger disagreement. On the contrary, the bigger the score, the positive attitude is stronger. (Refer to 22-27 questions in the Attachment A Questionnaire for specific problems)

historic nature and uniqueness actually supplement each other because hist
uniqueness and material space is the carrier for both uniqueness and histo
tendency is also an obvious characteristic, showing an apparent social disti
aestheticism and intensity of significance also gain a score greater than 2
residential areas not only conform to aesthetic requirements but also serve as something like a
meaningful and cultural space. mid- to high-end tendency and fashion have recog
degree, showing the whole consumption level and consumers in Lane residential areas are not so
high-end and fashionable . (See Figure 7)

1 Prominent feature: uniqueness

Uniqueness is the most prominent feature of the traditional lane residential areas and it even
exceeds the basic cultural characteristic of historic nature . That means
characteristic is far more appealing to consumers and culture consumption for uniqueness is of greater
significance in the consumer society. Uniqueness is the quality that all pr
Therefore, Lilong areas also need to show their unique features while being made into a tourist product, they are unique in both material space and cultural connotation. After renovation, the traditional Lilong areas are emancipated from declining and backward environment facilities, shines with their uniqueness to attract a great number of consumers.

2 Obvious characteristic **I**: historic nature and mid- to high-end tendency

Historic nature is an important cultural resource both in consumer cul
residential areas to rival market which is centered on economic interest. Hist
by the architectural space of the traditional residential areas such as brick walls, hipped roofs, and stone gates. They are different from modern architecture and carry the memories of old times, making it easier for people to experience the culture and the historic nature of the areas in old times. Besides, the art stores and creative industries related to the culture of old Shanghai help to increase the historic taste of the areas.

The characteristic of mid- to high-end tendency is also widely recognized, which is
with consumers evaluation on consumer price of the areas. The price is conside
and belongs to a mid to high level. On the other hand, it is because the consumption level is affordable to consumers they choose to come here. Compared with other industries, the consumer price here also belongs to a mid to high level. According to the questionnaire data, 45% respondents think of the consumer price here as ordinary, 16% as slightly cheap, and 34% as slightly expensive. The data show
that consumption level of the areas is a mid to high one, so the mid- to high-e
obvious characteristic.

3 Obvious characteristic **II**: aestheticism and intensity of significance

The characteristics of aestheticism and intensity of significance are p
cater to the needs of consumers for beauty and cultural significance in c
more possible for consumers to use their imagination, receive a spiritual joy and realize self-value in a graceful environment of specific significance. On the one hand, the renovation of traditional lane residential areas restore the original pleasant scale, balanced proportion, exquisite building components and graceful greenery landscape; on the other hand, the new architectural elements, the reformation design of showcases and greening, all the increase of sculptures and decorative articles
beautify the environment and manifest the characteristic of aestheticism .

The characteristic of intensity of significance is partly rooted in the history, traditional lane residential areas and partly influenced by consumer culture. The areas are created into places of significance, for example, some of the areas have been defined as creative area, and Shanghai culture brand . Many shops are labeled as Old Shanghai Culture , Fresh and Young Culture , etc. In such places of significance, consumers are a relax, improve emotional communication and cultural identity among friends, thus to gain spiritual solace and joyful emotion.

4 Tendentious characteristic: fashion

The characteristic of fashion is recognized by some people but it is not a also not consistent with the comments of media. Fashion is usually connected with the opposite of history and tradition . The elements of fashion can more historic and traditional nature of Lilong areas. The traditional symbols of transformed by modern design philosophy and technology into tall and straight gates, transparent glass windows and well-organized streets, along with fashionable stores and creative articles of daily use, adding fashionable elements to the areas. Tradition and fashion could cause confli intensities, so how to make a good integration of them is a real problem.

## 5 Problems of renewal

### 5.1 Social problems

#### 5.1.1 High-end consumption brings about issues of social equity

Nothing is wrong about high-end consumption itself, but if the renewal of residential areas is centered on high-end consumption, serious social equity issues and vicious competition problems will stand out. In the courtyard with green hedges and under the extravagant lights in the traditional lane residential areas, the general public still have to face economic, cultural and social pressures that are new to them.

This problem cannot be solved within Lane residential areas. It is often followed by problems of social stratum differentiation. If the traditional residential areas are transformed to be distinctly high-end, it indirectly reflects the serious problems of social stratum differentiation within Chinese urban society. But if we take social equity into consideration, we still hope for the emergence of a civilianized renewal to serve and appeal to the general public.

#### 5.1.2 Disharmony with the surrounding communities

We can see clearly from five sample areas that they are not in harmony with their surrounding communities, especially in the case of Tianzifang and Duolun Road. Xintiandi is thoroughly renewed and the project has transformed the old Linong architectures and the indigenous people completely, who had dwelled in the area of Taiping Bridge around Xintiandi. The southern and northern parts retain an imprint of Lilong or the traditional residential area, while the other parts have been transformed into modern skyscrapers. After renewal, Xintiandi is, to some degree, in harmony with those high-end residential areas nearby, while the areas around Taiping Bridge are still mingled with the crowded, cluttered and old-fashioned Linong areas waiting for transformation. In Duolun Road area, only one block has been renewed, thus the indigenous communities on both sides are preserved. However, the renewed business functions on the road are totally far from the daily life of the

community residents and Duolun Road is only used as a roadway. As a result, Duolun Road area and the bilateral communities form a striking contrast. Tianzifang also has this problem. Tianzifang, on the one hand, has been used to develop economic interests by some indigenous people; on the other hand, it induces conflicts with other indigenous people. Noise, crowds and behavioral interference have resulted in much protest.

5.1.3 Over-Westernization tendency

Over-Westernization tendency refers in particular to the Westernization of consumers. Shanghai is an international city so it is understandable for some areas or blocks to be highly Westernized or internationalized. However, there is a matter of degree. If every area in the city is Westernized, then it is a real problem, particularly seen in Xintiandi, Sinan Mansions and Tianzifang. In these traditional lane residential areas, a great number of Western-styled coffee bars, restaurants and bars gather there[3] instead of Chinese traditional halls. More and more consumers gathering here are mostly Western tourists and white faces.

**5.2 The loss of the authenticity of cultural matrix**

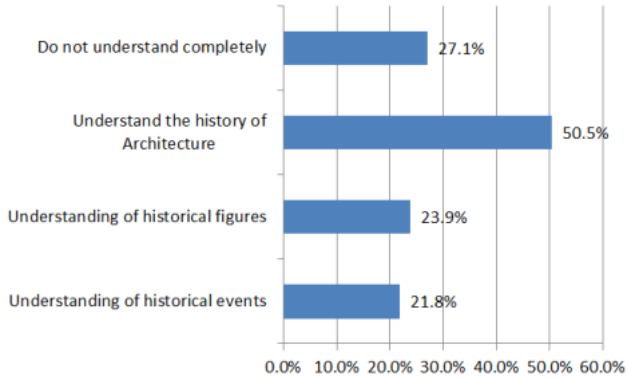


**Figure 8.** Research on consumers knowledge about the history of the traditional Lilong ar

It can be seen from the results of questionnaire survey that the authenticity of the culture of the traditional lane residential areas is not closely related to satisfactory evaluation.[4] First, consumers do not know about the culture of traditional lane residential areas well. Data shows that nearly 30% of the consumers even do not know about the culture at all, among them, nearly a half do not know about the architectural history of the areas, and about 80% do not know about any historical figures or events (see Figure 8); second, consumers cannot tell if the authentic history of the areas has been reserved; even though they know the need to preserve their history, they do not know how to do it; third, in the five sample areas, consumers satisfaction has no positive correlation to the authenticity. Xintiandi is a typical example, where much authentic information of history has been lost. However, consumers are most satisfied with Xintiandi. Duolun Road and Tianzifang do well in preserving the authenticity of history but consumer s evaluation is rather jus Figure 9)

[3] Surely, there are problems like environment pollution and fire hazard caused by the lampblack of Chinese restaurant, but is there any solution?

[4] In the questionnaire, whether consumers understand the culture of the sample Lilong areas, and whether they deny these Lilong areas have preserved well the original history are investigated (Refer to 20-21 questions in the Attachment A Questionnaire for specific problems); at the same time, the satisfaction of consumers for Lilong areas are evaluated from two aspects: satisfaction on the environment and facilities of Lilong areas; the emotional satisfaction. (Refer to 49-54 questions in the Attachment A Questionnaire for specific problems)

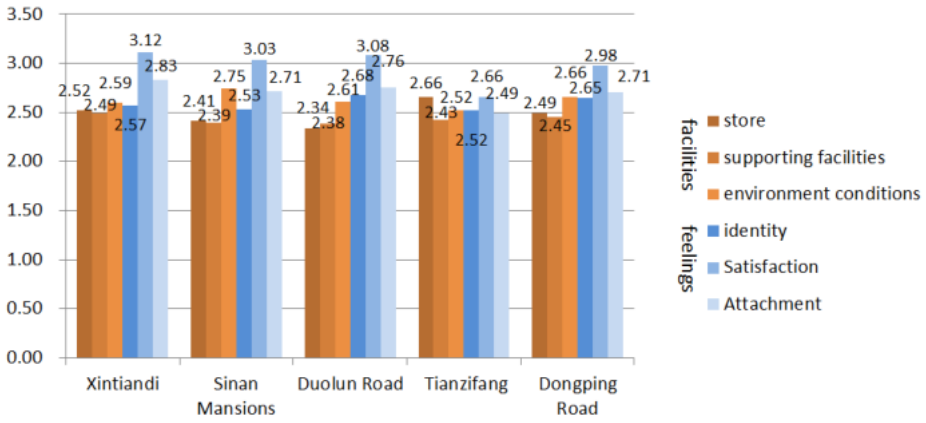


**Figure 9.** A comparison of consumer satisfaction in the sample areas

It suggests that consumers are blindly interested in the traditional lane residential areas, it is also the main reason why so many false historical symbols are used and historical symbols misused. For instance, the pattern of the gate of Shikumen (the stone gate house) is ubiquitous, while the real logic in the application of those historical symbols is neglected. It is because consumers do not look into the truth of history and instead, they often show their affection for this kind of misusage. In this way, the culture of the traditional lane residential areas is gradually divorced from the real connotation of the culture of traditional Shanghai lane residential areas.

5.3 The problem of excessive symbolization

The most important characteristic of consumer society is being full of various cultural symbols (Celia Lury. 2003).The intensity of significance, which is mentioned as a cultural characteristic of Shanghai s traditional lane residential areas before, is the intensity of symbols. A culture, information symbols and meaningful space, high intensity of symbols should be controlled within a reasonable range. Once the degree is exceeded and there is excessive cultural information, negative effects will be caused. Excessive-symbolization in Shanghai traditional Lilong areas can be explained from the perspective of quantity and quality .

(1)Excessive quantity

Excessive quantity is mainly reflected in the symbol information provid forms. Linong space and architectural size are both small but their commercial value is increasing gradually as the cultural value of Linong space is demonstrated. Besides, commercial interests are everywhere. With shop rent increasing and more detailed division of stores, the traditional lane residential areas are invaded by more and more commercial stores, countless commercial advertisements and store logos crowd the street with a non-stopping trend, which all lead to excessive commercial information per unit area of the areas. Wandering in the narrow and small street, you can find that various logos, conceptual meanings and symbol information are coming from straight ahead, and even historical culture is covered by them, thus leading to a sharp conflict between commercial culture and historical culture. Of the 5 sample areas, Tianzifang is the most typical example, where tourists are easy get the impression of being vulgar and chaotic. ( see Figure10)

**Figure 10.** Commercial symbols are flooding Tianzifang

(2)Excessive quality

Excessive quality of symbols mainly refers to impractical exaggeration a places even make vulgar, distorted and forced-associated cultural statements to cater to tourists. Such cases can be commonly seen in commercial advertisements and happen not only in cultural descriptions of tourist spots, but also in traditional lane residential areas. For example, lots of goods are connected with Shanghai traditional culture for irrelevant reasons, works of art are becoming vulgar, while some simple products are labeled gadgets of creative culture and so on.

## 6 Conclusion

After an investigation into 5 sample areas of Shanghai s traditional Lilong that the characteristics of main consumer groups in the areas are 3 Hs (high education, high income, high social class) low age, higher percentage of international population and distinct regional features (far higher percentage of native Shanghai people), etc.

Through a statistical analysis, 4 representative consumer groups are identified: white-collar workers, college students, foreign tourists and business people, and natives of Shanghai, whose core motivation of consumption is considered to be the construction of social identity and self-identity, reflecting complex values and behavior characteristics. To better cater to motivations, the Lilong areas keep on strengthening the significant characteristics of their consumer culture like uniqueness, historical value, aesthetic views and mid- to high-end consumption tendency. The authors argue that the renewal of traditional Lilong areas in Shanghai has really improved the image of the city and stimulated consumption, but it has also led to some potential problems, such as social contradiction, the loss of the authentic culture represented by traditional lane residential areas, and the superficial trend of cultural connotations in consumption. This research intends to provide some reflections and serve as a reference for the renewal of traditional lane residential area in Chinese cities.

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# THE CULTURAL TURN OF WATERFRONT PLANNING IN CONTEMPORARY METROPOLIS: INTERNATIONAL EXPERIENCE AND THE PRACTICE OF WATERFRONT AREA IN SHANGHAI XUHUI DISTRICT

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Keywords: Waterfront, cultural corridor, Shanghai Xuhui District

The waterfront area as an important strategic region of the international metro cultural turn in urban planning and management through international experienc area in Shanghai Xuhui District is the last remaining urban waterside area developed completely in Shanghai on a large scale and a complex of municipal fu waterfront landscape, urban waterside public space and industrial sites renovati

Through field research and investigation, studying its planning history and interviewing, referencing case studies, this article analyses the rebuilding city image and place, the roles and responsibilities of government and public agencies in operational capacity, local culture production of value and wisdom, education o cultural rights and responsibilities in the development of cultural corridor Shanghai Xuhui District. In conclusion, it indicates a culture-centered concept key to sustainable development in Waterfront Area in Shanghai Xuhui District; a n waterfront planning in contemporary metropolis that takes the middle path will e

## 1. Introduction: Cultural Turn

Nation reconstruction and economic recovery after World War II make cities enter development and expansion phase globally. Beginning in the 1970s, arts led str into culture led strategy with a broader meaning, began to be regarded as one urban renewal. Originated in the United States, this cultural turn spread to E other regions in the mid-1980s and began to impact on the development of cities 90's. This strategy by counting cultural resources into the urban planning and c contributing to the creation of public value, in the development stage of nowada produced three models. Although these three models all demonstrate the use of cu the process of urban planning, the goals are different, thus should be different

The first model is the simple use of cultural resources to promote the practice model takes the economic recovery and attractiveness promotion of the city as a obvious economic directivity characteristic. However, this model has brought a s development dilemmas. Among them, the most prominent dilemmas are dilemma of spa result in the tension of center periphery areas in the city and increasing g space; dilemma of economic development, which indicates the development of cultu cultural tourism projects are just tendencies to stimulate cultural consumption, local production chain of culture; dilemma of cultural investment, which points decide that public funds should be invested in short-term cultural festivals or facilities. (Bianchini & Parkinson, 1993)

The second model is the community movement, which is based on community, with si
characteristics of social directivity, focuses on the combination of traditional
culture and economy, the growing of the autonomy of the public. Western European
on fulfilling the public responsibility in cultural participation, and the built
and identity. Its practice is the use of non-governmental efforts to establish a
local vibrant cultural life and the activation of community traditions, to highl
features, to promote community integration. In the context of globalization, mod
damages to the environment and force people to rethink the importance of fragile
improve a harmonious relation between people and the natural environment. Commun
emphasize citizen participation, grassroots empowerment, self-management, focus
establishment of social networks, and set a practical foundation for the city ov
planning .(Bianchini & Parkinson, 1993)

Third, beginning in the 1990s, Cultural Planning by strategic and overall use of
the target, the model rose in North America, Europe and Australia and other West
Cultural planning is based on the goal of sustainable development of cities, comp
two models, which absorb the diversified development strategy, with a more holis
Originally inspired by community governance theory and practice, cultural planni
from community level to city level. There is a definition of Cultural Planning ir
urban renaissance? : one hand the art of urban planning (Munro, 1967) and als
integration of arts and cultural expression in urban society. It is also describ
cultural resources for the integrated development of cities, regions and countri
combined, these produce a cultural approach to Town Planning, which uses an infr
Arts Planning. Mechanisms employed include consideration of urban design, public
safety, cultural workspace and industry quarters and the linkage concept of the
chain and scale hierarchy of facilities. Given the role of cultural development
to a cultural planning approach, the exercise of local governance and community
planning processes, facility location and urban design, also incorporates Planni
Community Planning and delphic exercises such as Urban Design Action or Assistan
(UDATs) used for instance in the USA and UK for major development areas and site

The wave of urban waterfront development began in the 1960s, with the decline of
and waterfront industrial area in cities all around the world. In the 1980s, the
waterfront gradually developed into a worldwide trend throughout North America, E
Australia and other regions. Since the 1990s, China’s urbanization has gone into
the increasing requirements of urban development, a nationwide development boom o
been becoming a process with phases, which can be described as a result of indu
in late industrialization – a second development in post- industrialization .

Because of its unique advantages of landscape and environment, urban waterfront
resource, plays a significant role for development of the city. With the wave of
urban regeneration, the waterfront planning has become a new opportunity for urb
Waterfront area in contemporary metropolitans by introducing cultural planning,
structure adjustment and transformation, thereby affecting the city layout, to a
economic development and the improvement of urban modern functionality. From the expe
waterfront planning of Amsterdam, Rotterdam, Valencia, New York, Singapore, Malm
that urban spaces are open to continuous economic, social, cultural exchange.
interpreted as transition experiments (Rotmans & Loorbach, 2008). As described
City and Creativity: Promoting Creative Urban Initiatives : Internationally, ai
sustainability, are being implemented waterfronts are becoming the spaces where

creative actions. Leading to a new ecological economic base. They express the cr
resilience of cities in response to the pressures of change, highlighting the ca
transform themselves, while maintaining their identity. (T zin Baycan, Peter Nij
Girard, 2012)

## 2. Cultural Planning of Waterfront Area in Shanghai Xuhui District

Waterfront area in Shanghai Xuhui District is located in the southern extension
Huangpu River development, starts from Rihui Port in the North, ends in Xupu Bri
with a vast depth, extends to South Zhongshan Road and Longwu Road, and 2010 Sha
Park site across the river. It is one of the few downtown Shanghai land resource
planning and development.

### 2.1 History and Characteristics

According to the Huangpu River Controlled Detailed Planning of Southern Extensi
Waterfront area in Shanghai Xuhui District is divided into B, C, and D three uni
of 7.4 square kilometers, length of 8.4 kilometers along the riverbank. Within t
area of 8.546 million square meters, 287.2 hectares can be developed, and buildi
million square meters. Before 2003, the land use function in waterfront area in
District included 46% industrial and transportation land, 26% residential land,
road and square and 7% other usages. Building typology included factory building
buildings, residential buildings, public buildings and other types, in which val
and warehouse building take the largest quantity. (Sun, 2011)

Table 1. Development Information of Waterfront Area in Xuhui District

| Unit | Land area | River line | The total construction area | Land area to be developed | Gross leasable area |
|---|---|---|---|---|---|
| B | 180.2 hectares | 1.9 kilometers | 262 ten thousand square meters | 118.9 kilometers | 190.6 ten thousand square meters |
| C | 439.1 hectares | 4.3 kilometers | 529.7 ten thousand square meters | 142.3 kilometers | 294 ten thousand square meters |
| D | 119.3 hectares | 2.2 kilometers | 62.9 ten thousand square meters | 26 kilometers | 26 ten thousand square meters |
| Total | 738.6 hectares | 8.4 kilometers | 854.6 ten thousand square meters | 287.2 kilometers | 510.6 ten thousand square meters |

Source: Shanghai Municipal People's Government, 2003.

The area has its very distinguish characteristics and significance. First, water
Xuhui District along the Huangpu River belongs to the core area of the southern
development, with the potential of the gold regional in the future development o
Considering the scarcity of land resources in Shanghai, it is a geographical adv
District as a cultural and educational district in Shanghai has advanced science
education, human resources, historic resources, which can provide a strong intel
human resources and support for future development. Moreover, this waterfront ar
resources for tract development, with total land planning area of about 730 hect
Xuhui District has a good modern service industry (technology research and devel
professional services, information services, tourism and convention services, fi

services, international exchanges and education and training service) and high-t
which provides a good support to development.

After Huangpu River Controlled Detailed Planning of Southern Extension in 2003,
basic functions of Unit B and C are residential and support service. In 2004, an
competition was initiated by Xuhui district government in purpose of improve the
B&C. HPP architects (Germany) was the successful bid to Unit B, making the funct
office and business presentation. Halcrow Group was the successful bid to Unit C
business core area. After coordination and modification many times, not until 20
Detailed Planning was finalized with basic functional orientation, spatial struc
scale. In 2006 and 2007, international competitions for further function and lan
waterfront area were held. Among the projects, waterfront landscape Avenue (Drag
Xuhui waterfront business district are the most representative, promoted by PDR
CORNICHE design principals. (Wang & Zhu, 2011)

Figure 1&2. Waterfront area in Xuhui District
Source: author and www.quanjing.com

In 2007, Xuhui District launched the development and construction project of 7.4
waterfront open space. At the same time, various government departments set up W
Development Leading Group jointly. The first phase of the project was from 2007
Shanghai Expo. Xuhui Land Development Co., Ltd. undertook the construction work
landscaping and other public facilities, which has invested nearly $ 10 billion.

## 2.2 A Cultural Turn of Waterfront Area in Xuhui District

Huangpu River Regional Development Twelfth Five Year Plan plans the main tasks
developing a space-optimized structure, fostering industrial capabilities, expan
shaping the cultural brand, improving infrastructure, improving environment and
expressly Twelfth Five Year Plan , it requires focus on the convergence of urba
historical and cultural, the innovation on the basis of continuation of historic

fashion elements, the gathering and development of cultural and creative industr
variety of cultural activities to highlight Huangpu River area s charismatic per
waterfront area relies on waterfront theatre, culture theme park and other const
build new media industry clusters, to form the high cultural consumption center
center in Shanghai. (Shanghai Municipal People's Government, 2011)

In 2011, Xuhui district government decided to set up West Bund Development Group
specializes in the implementation of the project to deepen the second phase, for
Development Ltd., Shanghai Guangqi Cultural Industry Investment and Development
enterprises. Currently the second phase is expected to complete the development
land, with the investment of more than 200 billion Yuan. In 2012, waterfront are
was listed as one of Shanghai six key development functional areas during Twelf
(Chen, 2014)Then, Xuhui District issued Three-year Action Plan of Cultural Deve
announced cultural industries as the leader, using a lot of historic buildings,
waterfront area in Xuhui District creates a cultural industry zone which is diff
subsequent cultural areas, focusing on creating cultural corridor brand projec
flagship project, promoting West Bund Media Port and other media business group.
Cultural Bureau, 2012)

District government clearly stated the cultural-led, industry-led development
of urban renewal from traditional real estate-led to cultural-led. In the develo
the idea of planning in advance, scientific control , and actively learn from i
the construction and operation of waterfront area, plan the overall development
strictly to ensure the integrity and scientificity of the comprehensive developm
the industrial history and cultural heritage, as well the protection and utiliza
and environment, to make rational uses of the renovation of old buildings. Last,
Private Partnership based on the government-led, market operation principle, a
leading role in the comprehensive development. Through the development unit, join
market-oriented operation mechanism, bring the enthusiasm of market players into
a large number of planning and constructions of art galleries, art exhibitions,
center are making the comprehensive regeneration of the waterfront as possible s

## 2.3 Cultural Corridor

The second phase of the project is divided into three parts: the construction of
other infrastructure; cultural events; the introduction of media industry and entertai
The planning strategy of cultural events media industries directly spawned a lar
items, such as cultural corridor, Media Port, music festival, Biennale, art fair
media projects.

West Bund Development Group Co., Ltd., with registered capital of 660 million Yu
34.7 billion Yuan, as a primary real estate developers, in the business structur
of international giants have entered China market, relying on a blend of Chinese
resources in Shanghai. It belong to the products of market-oriented operation le
and its main scopes of work includes the cultivation and development of cultural indus
development and investment, infrastructure investment and construction, land res
development, operation management and asset management. As a pilot project, star
current cultural corridor of waterfront area in Shanghai Xuhui District is the
Oriental Dream Works formally settled in the waterfront area in June 2012. The
and American will cooperate in animation technology development, animation film,

derivative products, arts and entertainment, digital games and other aspects. At
consists of two parts, the first part is video products and derivatives industry
Dream Center , which is a large-scale urban culture gathering area in the water
theme of multicultural entertainment center of cultural consumption and fashion
lead the planning to the next phase that is Media Port . (Chen, 2014)

July 2012, Long Museum of Contemporary Art and Yuz Museum announced the location
marking the cultural corridor officially launched. After that, events have bee
waterfront area in Shanghai Xuhui District, West Bund Biennale, small concerts a
activities. Moreover, construction of exhibition halls, art galleries, performin
theaters are continually under the planning of this cultural corridor .

Figure 3. Cultural corridor
Source: collection.eastday.com

3. West Bund : The European experience, or Baltimore Model ?

From the name of West Bund we can clearly see the target point- Europe's most
waterfront – Left Bank, Paris (Rive Gauche) and South Bank, London (the south ba
Thames). West Bund Development Group Co., Ltd. makes effort to build a world-cla
area in future as Left Bank and South Bank, to upgrade the industry level as a g

and cultural industries as the core, to fully learn the advanced experience all
develops the region with its own characteristics, historical and cultural resour
starting point planning, developing high-quality, highly functional integration,
architects, artists, industry leaders together, creates a new landmark in the ci

Left Bank in Paris has a history of more than three hundred years, has experie
intellectual mainstream middle-class neighborhood in the golden age, a big chang
the largest construction site in Paris when Mitterrand in power. Gradually Left
cultural mecca of coffee shops, bookstores, art galleries and museums. The famou
French National Library are located here. London's South Bank in London, after
development of half century, has transformed into Europe's largest arts center,
and old warehouses. Tate Modern, the British National Theatre, Shakespeare's Glo
Theatre all located there.

From the urban development point of view, Left Bank belongs to bottom-up spont
pattern, while the waterfront area in Xuhui District is closer to South bank of
planning model. Compared with both, the waterfront area in Xuhui District also h
location advantage, but more importantly, culture environment - art in Paris, th
UK cannot increase by short-term material built environment, which takes quite
accumulation, also needs the role of cultural, political, economic, and arts to

Another unignorable case of cultural planning is Baltimore Inner Harbor developm
1954. As a result of the regional development victory, the concept of Cultural
to the US and the world. Since the beginning of the development of Baltimore Inn
industry has played a significant role in the core strategy of the decadent area
manufacture was replaced by leisure tourism and cultural consumption. From the b
GBC (the Greater Baltimore Committee) to the Wallace company in charge of by Jam
development had the same basic idea: large-scale mixed-use flagship projects in
like the Charles Center (1959), Maryland Science Center (1976), World Trade Cent
Conference Center (1979), Festival Market(1980), the National Aquarium (1981), c
museums and other cultural facilities (1980s).

Baltimore, not only contributed to the success of waterfront development in the
including New York, Miami, Atlanta, New Orleans, Portland, and also the emergenc
number of intentional or unintentional followers all around the world, and even
invited to personally guide urban development in other cities. Aquariums, convent
museums, IMAX theaters, open public space, festivals and other large markets of
typical basic elements are moved to Sydney, Birmingham, Glasgow, Manchester, Bar
Melbourne, Izmir, Cairo, Shanghai, Columbus, Kobe, Rotterdam, Malaga, Rio de Jan
Kuwait City, Cancun, Guanica. Only in 1983, about 4000 representatives visited B
cities around the world, were eager to learn about how this outstanding urban re
2003)

Baltimore model can be simply summarized as following: the new public-private pa
policy and private capital based on cultural as development principles

Cultural corridor outdoor museum complex began with the construction two art g
Museum and Yuz Museum. Coincidentally, these two art galleries are the brands' s
The first ones are located in Shanghai Pudong (2012) and Jakarta (2009). Accordi
and Yuz Museum can be described as the West Bund versions with certain art galle

experience and brands. Cultural corridor of the overall plan includes a series creating a cultural environment, also includes a series of cultural policies.

Yuz Museum as the first museum project settled in cultural corridor , transform architect Sou Fujimoto, has a total construction area of over 9500 square meters old building (Former Shanghai Aircraft Manufacturing Factory Hangar) as much as created a transparent glass facades extending house on the eastern side. Its whi minimalist style are different from the old building, but make the new and old t convergence. (Yuz Museum, 2013)

West Bund Art Museum, which is to be put into the construction, as a public art from private museum. Led by the Government, designed by British architect David Bund Art Museum try to create an artistic and cultural exchanges between home an communicate through various top art exhibitions, cultural activities, a platform experience, to provide opportunities for the public and young people to contact

From a series of strategies of cultural corridor , we can clearly see the trace and Baltimore model , for example, the transformation of the industrial heritag complex functions, public space optimization, post-industrial landscape, and the strategy of architecture as media. However, the unique characteristics of waterf District also make it a different model of urban renewal in old industrial areas partnerships with private capital, and public participation in cultural events a experience for future.

4. Event: West Bund 2013. A Biennial of Architecture and Contemporary Art

It is against such background that the West Bund 2013. A Biennial of Architectu Art came into being. West Bund 2013, host by People s Government of Shanghai Xu undertaken and supported by Tongji University, China Academy of Art and Shanghai Development Group Co., Ltd. West Bund 2013 is an emerging biennale that combines architecture with contemporary art, and Asia s first international, interdiscipl exhibition. The biennale invited over one hundred architects and artists of inte create an avant-garde architectural and artistic spectacle characteristic of the 2013).

In the biennial, there is a unique component that is the outdoor Fabrica . This pa focuses on the core concepts of pre-fab and in-situ . The exhibition invited architects and artists from China and worldwide to work in-situ along the waterf incorporating their work into the surroundings (total area must not exceed 200 s can be a part of the main Biennial events and can also remain on as permanent wo exhibition is over (for example functional buildings such as newspaper kiosks, c stores.) One of the best examples is the project of Johnston & Mark Lee (the Uni outdoor exhibition, which became Shanghai Photography Art Centre after the exhib May 2015. The unique space features a number of semi-oval halls, a interior with ceilings and skylights, which make crescent soft natural light shines into hall, at the without affecting the experience of visitors. External shape of the building is smooth circular body blocks, and concrete area with rich texture, which play a c bold, contemporary design once as an important work of West Bund Biennial, combi with experimental gallery space. Part of the funds to carry out this non-profit sales of gallery s collection. The center also received funding from other publi

founder of waterfront area in Shanghai Xuhui District – West Bund Development Gr
(Shanghai Xuhui District People's Government, 2015)

Architectural practice in waterfront areas can be considered as relevant practic
experiment in the perspective of cultural planning. They propose a positive ima
of the city, achieving the goal of cultural landscape.

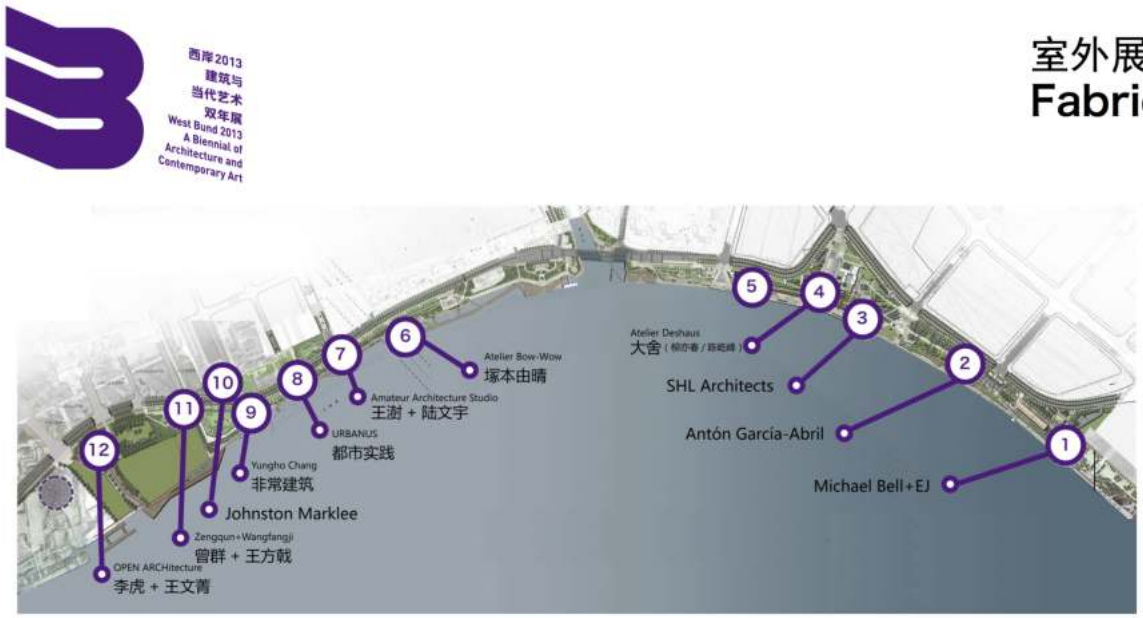


Figure 4. West Bund outdoor Fabrica exhibition
Source: West Bund 2013

## 5. Conclusion

The practice of Waterfront area in Shanghai Xuhui District, cultural corridor
project and a brand, is a positive attempt in the development of the Waterfront
metropolis. Through the joint efforts of government, universities, architects, a
public it becomes a dynamic space with inspiring architecture, various events, a
artistic tastes, culture industry and regional characteristics, which complement
city. Cultural Corridor of the Waterfront area in Shanghai Xuhui District expl
between architecture and art, discuss the interaction between city, environment
practice the concept of cultural planning and fully illustrate a glorious and im
Cultural corridor of becomes a branding project that will transform Waterfront
Xuhui District into a dynamic public space with the most attractive culture char

The cultural turn hasn t been a long period of time in the planning of waterfron
considering West Bund Development Group Co., Ltd. was established only few years
some strategies, experience and some achievements gained in a certain extent, bu
also needs the test of time. The following experience can be summarized which ha
mature system;

The cultural-led, industry cluster development orientation
The public-private partnerships under the principle of government-led, mark
Respect for industrial context, re-use of industrial heritage
Combine long-term planning of urban development with city cultural events at
Make large-scale cultural flagship projects play a great role
Public and private cultural institutions participate in cultural industry
Thematizing urban space
Active cooperation with universities and academic institutions
Support the participation of local artists, architects and international coo
Organize a variety of cultural activities
Government provides policy support for the implementation of the project in
enterprises, variety of resources to play their effectiveness

This study will hopefully bring further attention to the cultural planning in wa
contemporary metropolis and provide the experience to the development of more ef
cultural planning in the future.

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# Fall of Traditional Settlements and Countermeasures of Contemporary Planning

Seeking for balance between historic value and contemporary demands in the preservation of traditional settlement in Ancient Huizhou Area

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Key words: traditional settlements in Ancient Huizhou Area, classification methodology, preservation framework

***Abstract:*** Over the past three decades modernization in China, the traditional sett
*precious resources of both culture heritage and tourism have increasingly gained favor of tourism and entertainment. Consequently, the settlements gained profit for its resident while faced with a conflict* from three aspects. First, contradiction between the residents demand for moder and authentic feature continuation; second, contradiction between tourism s dema *and authentic feature continuation; thirdly, the authentic feature have to remain as exactly the core value and sustainable dynamics of this area. Therefore, planning have to consider an approach balancing resource conservation, economic development and living conditions improvement. The paper takes a comprehensive view of the development trend taking the traditional settlements in the Ancient Huizhou Area as an example, trying to build the framework for the traditional settlements preservation that well balances the three aspects mentioned and guide further projects. Framework building is based on careful investigation in which summarizes the central features and typology along with the all the settlements' layout database. Then the settlements are classified by their historical value to differentiate the preservation strategies guaranteeing the optimization. According to that we come up with differentiated planning countermeasures for preservation and optimization of their historical value and practical performance. It is concluded that the traditional settlements are classified to six types which are integrity-remained settlement, partially remained settlement, structural remained settlement, environment-remained settlement, limited authentic buildings remained settlement, decaying settlement. And for each typology specific planning disciplines and strategies are proposed.*

## Study background:

Over the past three decades modernization in China, the traditional settlements
resources of both culture heritage and tourism have increasingly gained the favor of tourism and

entertainment. In a consequence, the settlements gain profit for its resident, and in the same time, they are faced with a challenge balancing resource conservation, economic development and living conditions improvement. This study is subject to the National Key Technology R&D Program No. 2012BAJ08B01 and a Project supported by the National Natural Science Foundation of China (Grant No. 51378362) which taking a comprehensive view of the traditional settlements in the Ancient Huizhou Area as an example, summarizing the central features, typology and spatial structure. Then come up with differentiated planning countermeasures for preservation and optimization of their historical value and practical performance. For each typology specific planning disciplines and strategies are proposed to achieve sustainable development.

## 1 The historic process and value of traditional settlement in Ancient Huizhou Area

### 1.1 The historic process of traditional settlement in Ancient Huizhou Area

The traditional settlement originated from the Pre Qin period (before 221BC) then prospered in the Middle of Qing dynasty. (About 1750 AD) during which the main features of traditional settlement is developing with a strong planning consciousness rather than growing freely. The concerns or the function, integrity and symbolic meaning had been emphasized which is a reflection of the social needs, nationality and cosmos of the day when economy and culture were thriving.

### 1.2 The multi- layer historic value of traditional settlement in Ancient Huizhou Area

The historic value of traditional settlement in Ancient Huizhou Area can be measured in the following aspects: the environment around the traditional settlement, the spatial structure of traditional settlement, and the building communities of traditional settlement. The environment value lies in the "Fengshui" wisdom that ancestors in Huizhou Area used to guide their choice to the site of traditional settlement. The country landscape in Huizhou Area appears to be fabulous as the traditional settlement scattered beautifully in the countryside bring a rare sense of wealth and conscious gardening. The artificial space is well organized which represents the structure value of traditional settlement. The artistic space sequence starts form the nature then smoothly transit to the artificial public space, afterwards arrives in the space of private garden. Correspondingly the space are related to nature, streams of water, street and courtyard. The building communities of traditional settlement is of great architectural value that it even has a name called Huizhou Architecture. The typical architectures are village house, ancient temple and garden. Among above the traditional houses are of the biggest quantity and remarkable features as the location and planning structure reflect the influence from the mountainous landscape and Fengshui culture. Additionally the decoration style is a natural product of local aesthetic trait.

### 1.3 The differentiated situation of the historic value remains of Huizhou traditional settlement

Concerning the whole Huizhou territory, the historic value remains of the traditional settlements differentiates in several situations. The first situation is that, the authentic feature continuation of traditional settlements is perfectly preserved. Also are their integrity and harmonious unity. The village, the most common form of the traditional settlement, mainly consists of historical buildings. In the second grade situation, the authentic feature is basically maintained while new buildings merge within old ones. The historical buildings in the settlement is of certain preservation value. In the third grade situation, No original historical buildings remains while the traditional village structure is. The spatial structure and texture of old street and lane somehow survived. Following by the fourth grade situation in which the authentic architecture and original village structure are both lost but the harmonious surrounding environment is well protected. Although in such village the traditional architectural feature is not in significant level and the size of the village is usually medium or small, the relationship between the village and its environment is typical treasure given by the agricultural civilization. Finally, in the fifth village only several authentic buildings are still standing surrounded by other newly built ones. There is no a community of traditional buildings but single one of certain historical value.

## 2. Factors and Criterion for Classification and Evaluation

### 2.1 Factors

Through the study of historical value in Huizhou traditional settlement, it can come to the conclusion that the historical value of Huizhou traditional settlement mainly in four aspects: (Table 1)

Table 1:The factors of historical value evaluation

| **Building Community** | **Settlement structure** | **Surrounding environment** | **Historical buildings** |
|---|---|---|---|
| Historical authenticity | Spatial structure | Mountain | Historical span |
| Core scale | Spatial feature | River system | Cultural value |
| Historical street | Location theory | farmland | Craft value |
| Historical block | Traditional function | vegetation | Historical value |
| Historical building scale | Specific function | Nature relationship | Relic value |

**Value of building colony** is the integrated form presented by the built environment of a settlement. Space factor of Huizhou traditional settlement mainly includes: the landscape pattern of natural environment surrounding the village; the integral pattern of the settlements internal built space; the core space settlements consists of public buildings and its gathering space in front of it, such as ancestral hall, theatre and academy; and common local-style dwelling houses as the settlement texture.

**Value of settlement structure** is the layout system of surrounding environment, site selection and construction, which reflect the Ancient Huizhou Philosophy of "oneness of man and nature ".

Including the location theory, spatial pattern, spatial characteristics, traditional function and special function, etc.

**Value of the surrounding environment** is the natural environment around villages which can fully reflect the traditional village farming culture and seclusion culture, including mountain, water, farmland, vegetation and the interaction relationship between settlement and nature.

**Value of construction monomer** is specimens represents the ancient Huizhou architecture, decoration art and construction technology. Evaluation factors include history length, cultural values, craft value, historical value and `relic s` value, etc.

Extract elements respectively from these four levels in both dimensions of its typicality value and preservation of the status quo.

## 2.2 Criterion

Classification evaluation is based on the above four value aspects, and followed the principle of integrity, so that it starts from the integrity evaluation of the authenticated building colony, and then evaluates the structure, environment, construction monomer in turn. Thus evaluate the integrity of each settlement, and its traditional characteristic.

Evaluation indicators extracted from the four values are synthesize and sifted, forming the index of the classification evaluation criterion. The evaluation index are selection by means of value metrizability and effectivity for thoroughly reflecting the value state. Therefore, the building colony value will judged by authenticated retained degrees as measured by percentage. Other values of structure, environment, and monomer will be evaluated into: Intact or Destructed and Death.

Value of building colony lies in the traditional mode of inhabitation settlement, namely to fully maintain the authenticity. With the purpose of evaluating the authenticity, the indicator being chosen is the proportion with area of historical building and the surroundings in the total settlement built up area. According to the data of the ancient villages in the UNESCO's world heritage list, proportions of historical buildings and surroundings with a total area in the whole village area are concentrated in more than 60% . Therefore, 60% will be a threshold value. Finally, evaluation standard of building colony is identified as area proportion of historical building and its surroundings in the village, which evaluated into three levels: more than 60%, 30% to 60%, 0 to 30%.

Value of settlement structure reflects in the pattern of organization order in settlements artificial environment which is mainly constituted by the streets and public spaces. The evaluation considers the integrity of the history street structure; the usability of lanes and streams traditionally serving as transportation in residents daily life; the usability of spatial structure of the settlement serving as special functions such as firefighting, water supply and drainage, security and defense; or incarnation

of classic traditional theory in site selection and spatial planning. So space features and intact is chosen as index evaluated into two categories: Well Preserved or Destructed.

Value of the surrounding environment lies in the wisdom of fusion between settlement and natural environment, and emphasize completeness of various natural elements surrounding settlements, as well as the harmonious relation between settlement and its surrounding environment. Therefore, harmonious degree of settlement and natural is chosen as evaluation index, evaluated into two categories: Well Preserved or Destructed. Destruction of harmonious between settlement and natural environment means that integrity of the natural environment has been destroyed, or environmental degradation, or new construction violating the original harmonious landscape.

Value of construction monomer reflects its historical value and academic value. The evaluation will take heritage registration system as an indicative consultation to confirm featured buildings as historical culture specimens which have important value in its history, culture, or construct craft. This value will be evaluated into two categories: Yes or No.

## 3. The classification and optimization principle of traditional settlement in Ancient Huizhou area

### 3.1 Value-based classification of traditional settlement in Ancient Huizhou area

Put the index mentioned in the second chapter According to each one's importance in a descending order, then we get a matrix showing the value in several index .Then from the Matrix we concluded in the following types of traditional settlement in Ancient Huizhou Area. (Table 2)

Table 2:The classification of traditional settlement

( Integrity value to Monomer value )

| Settlement / Factors | Integrity-remained | Partially remained | Structural remained | Environment-remained | Limited authentic buildings remained | Decaying |
|---|---|---|---|---|---|---|
| Building Community | >60% | 30 to 60% | <30% | | | |
| Settlement Structure | Well Preserved | Well Preserved | Perfectly Preserved | Damaged | Damaged | Damaged |
| Surrounding Environment | Well Preserved | Well Preserved | —— | Perfectly Preserved | Preserved /Damaged | Damaged |
| Construction Monomer | —— | —— | —— | —— | Yes | No |

Integrity-remained settlement, namely the historical buildings form a complete community and occupy more than 60% of the total built area in the settlement. Besides that the authentic feature and spatial structure are well kept. The houses, waterfront, squares, central buildings stay in the old harmonious relationship. With a natural beautiful environment, farmland matches perfectly with the settlement while the artificial works with the nature. In such type of settlement, it not a single historic building of high value but the community of traditional buildings so historically high-valued buildings is not a necessity.

The second type is partially remained settlement in which the historical buildings occupy 30% to 60% of the total built area in the settlement. Besides, in the community of historical buildings, the main original spatial structure remains and is easily distinguished. The surrounding environment hasn't been damaged yet. The artificial space and nature space form a coherent whole.

Compared to the integrity- remained settlement, the partially remained settlement share some basic feature such as its environment are well-kept but the degree to which the settlement integrity is protected is not in such perfect condition as the former.

As for the structural remained settlement, the historical buildings inside which cannot form a community as they could possibly scattered around isolated from each other. The built area occupied by the historical buildings is no more than 30% of the total. The settlement has gone through a renovation process during which most of the authentic buildings are replaced except the whole structure and street skeleton. Consequently, the fabric, building density as long with the average height of the village resemble that in the past days. The surrounding environment has been inherited .Wisdom can be learned from its smart location decision-making.

Environment-remained settlement are those in which the historical buildings inside which cannot form a community and even whole spatial structure is unfortunately lost. Space being out of order lacking systematisms. The surrounding environment has been inherited in harmony with the settlement or "village".

In the limited authentic buildings remained settlement, the historical buildings inside which cannot form a community and even whole spatial structure is unfortunately lost. The surrounding environment has been damaged consequently harmony with the settlement or "village" is lost too. The only value comes from several single historical buildings.

Decaying settlement, all the elements composing the central value of the traditional settlement is lost.

### 3.2 Optimization principle classified by historical landscape value of Huizhou traditional settlement

Settlement of different value of traditional features, adopting different optimization principles and measures.

Integrity-remained settlement complies with optimization principle of Conservation, namely taking "integrity conservation strategy, from the perspective of dynamic, fully protecting of the space of lanes and alleys, texture arrangement, spatial structure, holistic pattern, construction group, the surrounding environment and all the historical element factors in the settlement. Historical buildings must be repaired, by principle of repairing the old as old", in accordance with the same way as original. Simultaneously, external new constructions shall be conventional, and be harmonious with history atmosphere.

Partially remained settlement complies with optimization principle of Improvement, namely partitioning the complete traditional area as intensive reserve area, and preserving integrally all historical elements in the reserve area, the same as the Conservation " principle, and zones outside the reserve area can be new. New constructions shall follow traditional texture, spatial logic, and be harmonious with traditional architectural style inside the reserve area. Above all, the new construction shall take responsibility of fixing the deficient texture outside the reserve area. Residents have the permission to make a certain function change, on the basis of the life needs, in their own ordinary local-style dwelling houses. The change shall follow the no- damage principle of the traditional architectural style and its surrounding environment.

Structural remained settlement complies with optimization principle of Update, namely updating the suitability of modern life on the premise of conserving the traditional settlement pattern. At the same time of necessary facilities to improve residents' life, new constructions will be permitted on the basis of the life needs. New construction shall be strictly in line with the existing landscape, traditional texture, spatial structure, scale, density, height, and the relationship between architecture and core public space.

Environment-remained settlement complies with optimization principle of Renovation. First of all, preserve the surrounding natural environment and keep the traditional way of farming and crop varieties, in order to ensure that the surrounding natural landscape traditions can be conserved. Adjust architectural composition of the existing settlement, in the meantime, so as to create atmosphere of traditional life, and convenient residents' daily life. Priority among priorities is the control of settlement s scale and its relationship with the surrounding natural environment, to ensure the harmonious townscape.

For the limited authentic buildings remained settlement, the optimization principle is Guide. That is to primarily conserve important historical buildings and cultural relics with its vicinity, entirety repair following the principle of repairing the old as old", so as to keep traditional style of buildings and the surroundings. Then generally guide the constructions in the settlement, to restore historical atmosphere

of the settlement in aspects such as texture, scale, and architectures, and ultimately preserve the important historical buildings with the effect of atmosphere foils.

For decaying settlement, the optimization principle is new-built. That is to migrate and relocate, according to the needs of economic and social development, to save land, and implement other measures beneficial to the construction of residents' production and living, and economic development. The establishment of the new settlement shall take traditional planning theory as construction guidance.

## 4. Conclusion

It is concluded that the traditional settlements are classified to six types which are integrity-remained settlement, partially remained settlement, structural remained settlement, environment-remained settlement, limited authentic buildings remained settlement, decaying settlement. And for each typology specific planning disciplines and strategies are proposed that place differentiated priority on preservation, optimization, innovation, reparation, guided construction and construction. Such planning disciplines and strategies are to guide further preservation project or development project to guarantying the quality of whole structure and spatial system.

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# How the Dark Tourism Development Effect on Post-Disaster Reconstruction – the Case Study

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Key words: Dark Tourism, , Role of Planner, Wenchuan.

Abstract: After catastrophe, sites and relics in disaster-hit areas usually deve provides many opportunities for the local government to improve economic develo employment and to solve other problems there. However, as national large-scale r and private donations decrease gradually, social concerns for disasters reduce the sustainability of reconstruction will be faced with challenges. This article Country, which is the epicenter of the "5.12 Earthquake" happened in Sichuan 2008 as a case study. The author discuss the dark tourism development one of the ma planned after the catastrophe and its effect on local urban and rural de structure and government policies based on the literature review, statistics dat as field research. The article focuses on the changes of mainstream culture relations, the correlation of development of tourism and other local industries in the development process of tourism which due to the cultural background a psychological characteristics, etc. This article tries to clarify the role of p development, provide the basis for planners to deal with the problem faced w Wenchuan correctly, and provide reference for other disaster-hit areas developm

## 1. Research Background

### 1.1 The concept of dark tourism

The conception of Dark Tourism is first put forward by John Lennon and Malco book Dark Tourism: The Attraction of Death and Disaster. It is defined as touri sites historically associated with death and tragedy, such as trips in the sit tourism generates strong emotional shocks in a deep way, which is totally diffe projects just for fun. Inspiring the courage of tourists to face the disaster sincere advice and warning to avoid repeat of tragedy.

### 1.2 Research status

The history of dark tourism research in academia is not long, but the number of
is large. Among them, according to the international record by Philip R. Stone
nearly 2000 related articles which use dark tourism as the keywords in googl
and the number came to 63900 in 2011. In China, by the end of May in 2015, the
91 articles which are mainly about dark tourism on CNKI and analyzed their st
know the real research of dark tourism in China started from the turn of the cen
climax in research process was caused by the earthquake in Wenchuan.

When running through the related articles, the author finds that most of the
concept defining, resource classification of dark tourism, the behavior motivation
of dark tourists, the stakeholders of dark tourism, the development mode of
dispute and effects, and they merely paid attention to the role definition and
planners in dark tourism planning.

## 2.Rethinking the development of dark tourism in Wenchuan

### 2.1 Overview of the development of black tourism in Wenchuan

#### 2.1.1 The reason why Wenchuan develops dark tourism

From the aspect of internal factors, Wenchuan earthquake has been considered
devastating natural disasters in recent years. There are various types of disa
tourism resource including inhabitation community sites of human beings, eart
hazards sites, destruction sites of previous tourism attractions and so on. B
touching stories emerging from the earthquake rescue are valuable and preciou
development of the dark tourism in Wenchuan.

Referring to the external environment, Wenchuan is a comprehensive travel
combines natural landscapes, folk customs or histories and adventure tourism
there are abundant and high-quality tourism attractions surrounding Wenchuan s
Huanglong and Wolong giant panda nature reserve. Overall, the earthquake touris
matched and integrated with these surrounding scenic spots, which can become
tourism resource.

Most importantly, the earthquake has raised Wenchuan s awareness and popularity
level. Additionally, people have paid much attention to the disaster and the rec
area, which is another aspect to gain the focus with high degree. Hence, the
people is essential to the development of black tourism in Wenchuan.

2.1.2 The Planning work for the development of dark tourism in Wenchuan

Reconstruction is a long process, so making a positive and scientific developme
meaning for the affected areas. Wenchuan enjoys its abundant tourism resource, a
of tourism has been paid highly attention.

Aba, where Wenchuan located, has become a separate area compiled in the "Aba
Reconstruction Implementation Plan" as the tourism industry-leading in the Sic
plan. The plan identifies three tourism brands: World Wildlife Heritage and
Tibetan and Qiang Cultural Tourism Brand and Earthquake Relic Tourism Brand.

This shows that although relevant plans propose to carry on earthquake relics
landscape sightseeing, earthquake science education and earthquake simulation e
monuments, memorials, relief spiritual wealth, and earthquake disaster science.
also arranges two earthquake tour lines: Chengdu Yingxiu Wolong Sigunia
Xiaojin Baoxing Chengdu, and Chengdu Yingxiu Maoxian Beichuan,
However, it also lacks targeted research and planning for dark tourism.

2.1.3 The action of the development of dark tourism in Wenchuan

In Wenchuan county, the development of dark tourism is placed as a very impor
second year after the disaster, the product of One day exploring the epicenter
promoted very quickly in Wenchuan, The highlights of this product included
resettlement village for the victims, White Flower Bridge, location of the hypo
the sky, Xuankou middle school site, the apron prime minister used, "5.12" l
Yuzixi viewing platform, and earthquake fault zone, etc.

After seven years of development, "5.12" memorial has become a national AAAA l
and the preparatory work for "Big Love World" cultural park, which takes grea
content, has been carried out, however, there is no more and deeper tourism p
tourism appears. And the tourism products are still mostly ruins sightseeing
humanistic spirit shown in the earthquake relief, lacking science education p
hazard research or on simulation of earthquake that can be participated in. (Tab

Table 1. Overview the black tourism products system in Wenchuan

| Class | Subclass | Content |
|---|---|---|
| Sightseeing category | The site of the earthquake ruins | Xuankou middle school site White Flower Bridge location of the hypocenter earthquake fault zone Yuzi |

| | | |
|---|---|---|
| | | viewing platform, etc. |
| | The cultural landscape of earthquake | The apron prime minister used, "5.12" ladders, etc. |
| | The display of the scene of reconstruction region | The centralized resettlement village for the victims, Yingxiu cove park The original Yingxiu primary school etc. |
| | The natural wonders of the earthquake | Rocks fell from the sky. |
| Education category | The exhibition about events of the earthquake | The memorial hall for the hypocenter, the memorial hal for Qiuguanghua, etc. |
| | The popular science about the earthquake | Lacking |
| Experience category | | Lacking |

## 2.2 The impact of development of dark tourism to Wenchuan

### 2.2.1 The development of dark tourism brings positive impacts to Wenchuan

1) Improvement of the construction of infrastructure

Before the earthquake, domestic and foreign visitors could only entered Wenchua 317 National Highway, there is no routine traffic tools between Tourist Attract the reconstruction and the development of dark tourism , which is quickly fo earthquake, the tourism infrastructure and supporting facilities of Wenchuan is the highway between Chengdu and Wenchuan has been fully available. Also, num between Wenchuan, Yingxiu, Xuankou, Shuimo and the Wolong giant panda nature re ecological scenic spot have good traffic capacity. Similarly, tourism facilities farmhouse, have also been greatly improved, all kinds of infrastructure like wat communication facilities, are far higher than the level before the earthquake.

2) Promotion of the economic growth

Based on Wenchuan county tourism related statistical data (Figure 1), before 200

less than 100 million domestic visitors, total tourism income was only about 2.3
the county has received more than 666 million domestic visitors, total tourism
billion yuan, comparing with 2007, it increased of 713.35% and 1139.89% resp
during the seven years of the development of dark tourism, Wenchuan s touris
income showed stable upward trend, the economic benefits brought by tourism has
before. (Yanzhen Wang, 2013.)

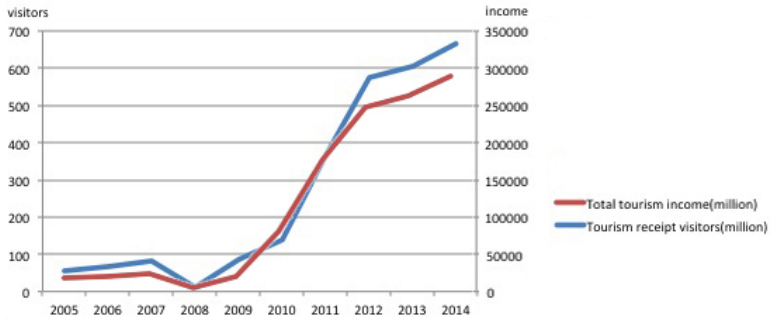


Figure 1. The development trend of tourism of Wenchuan county, 2005-2014
Source: Statistical bulletin for national economic and social development of Wen

3) Increase in employment

Tourism industry has strong linkage effect, the development of the tourism indus
promote the development of its associated service industry like catering accom
and retail and transportation, and it will reversely promote tourism developme
same time, also indirectly promote the development of other industries. (Jing L
effect not only promotes the growth of tourism and related industries, also br
jobs.

After the Wenchuan earthquake, dark tourism has a great demand for labor, al
employment level, low employment threshold, which is an important choice to ea
employment of earthquake. Xie Yuanlu, who is a professor of Sichuan Normal Uni
that in Sichuan province, the employment arrangement of every one person in to
drive the employment of 4.7 persons in entire society. (Yuanlu Xie, 2008.) Acco
2014, the county led 10000 people in employment.

2.2.2 The development of dark tourism brings negative impacts to Wenchuan

1) Hurt the emotion of residents

In the study of whether Wenchuan is suitable for developing dark tourism, some s

perception and attitude of local residents towards to develop dark tourism bas
ruins. (Zhi Li, 2011.) The results show that most residents have a positive
developing status, and focus the progress of the development. So the scholars t
of dark tourism conform to their expectation about post-disaster reconstructior
emotional taboo of local residents.

However, as per the field survey results (Figure 2) of the author, even if
occurrence of the disaster, there are still partial local residents believir
behaviors of tourists in dark tourism had caused harm to their emotions, and dar
expanded the psychological shadow brought by disaster to them.

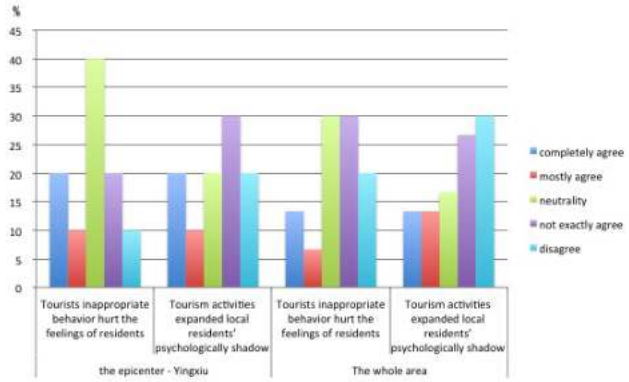


Figure 2. Residents attitude towards Dark tourism bring certain emotional damag

It can be seen that local residents maintained positive attitude to the develop
conforms to social exchange theory just because of the advantages and benef
However, the consent of local residents on the development of dark tourism wit
does not represent that they are not harmed in emotion.

2) Impacted on the mainstream culture

There are many natural landscapes within Wenchuan County, such as Wolong gian
reserve, Sanjiang ecological scenic spot, and there are also many cultural res
Qiang culture and the three Kingdoms cultural relics, etc. Wenchuan County has
hometown of Chinese folk art Qiang embroidery village", it is also the hometo
that are called the living fossil. (Committee of Chinese Cummunist Party and the
of Wenchuan County, 2011.) However, according to the main tourist attractions ir
searches on the Web after a period of development of dark tourism (Figure 3), I
dark tourism resource like Wenchuan earthquake memorial and Xuankou Middle Sch
more than people's attention comparing to other resorts.

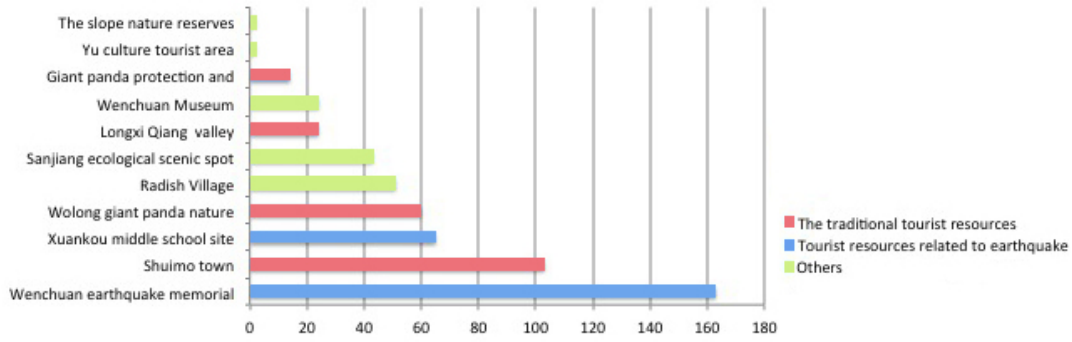


Figure 3 Search volume for major tourist attractions in Wenchuan County,

Source: http://www.mafengwo.cn/travel-scenic-spot/mafengwo/10691.html

And through the feedback of the questionnaire survey to local residents (Figure residents made it clear that the local cultural identity gave by the dark tour local traditional culture, and the number of residents who think the dark impacted on the local traditional culture, is only less than one third.

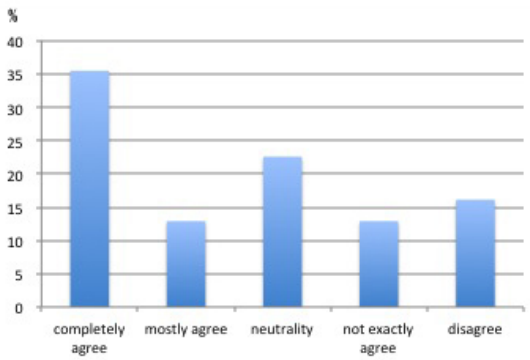


Figure 4. Residents attitude towards dark tourism on local traditional culture

Therefore, whether it is from the perspective of the outside of Wenchuan under point of view of local residents, the original culture, landscape resources an the traditional culture to them in Wenchuan, are suffering from the shock by tourism resources and the characterization of new cultural elements for them aft

3) Widened the gap between the rich and the poor

Figure 5 shows that it is generally believed that economic interests generate only benefit certain people. In particular, on one hand, in the initial stage o tourism, partly original rich residents recovering rapidly after disaster and benefit the most because they occupy most of the catering and lodging marke

advantages of capital and connections. On the other hand, residents living ne
tourist transport centers of dark tourism can get more economic benefits from th
tourism through low-budget personal business as they have easier access to most
dark tourism.

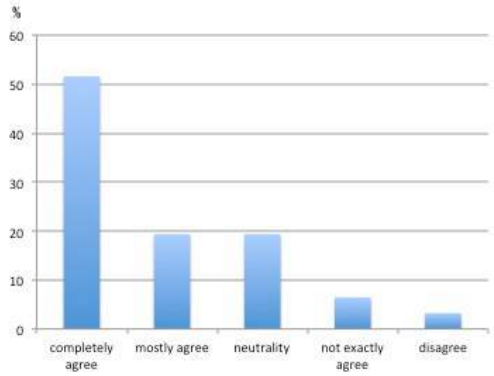


Figure 5. Residents attitude towards Dark tourism benefit only certain

The unfair distribution of tourism benefit widens the income gap between reside
to notice that some residents who benefit from dark tourism emigrate from Wench
cities like Chengdu after income improving result from the longing for city
earthquake, which causes not only the tense relationship between neighborhoods t
also increased uneasy of local residents.

3. Discussion on the role of planners during the process of post-disaster recons

Based on the analysis of the problem above,and combined with the development c
tourism with scientific planning. The author believes that, for dark tour
post-disaster reconstruction, planners should pay attention to the following fou

## 3.1 Composite type of product - make a transformation of product type multiplex

As mentioned before, after seven years of the development of dark tourism, the t
is still related to relics, memorial stadium in disaster and use them as sellin
the form of production is mainly in low-end and extensive ones. However, this s
so simple, is not enough to support long-term development of dark tourism .

Therefore, when designing dark tourism commercial activity, planners should fir
activate relic-type resources via stage play exhibiting earthwork relief humani
hand, it can facilitate disaster-hit area residents to acquire benefit via dir

tourism activity; on the other hand, it can show the cheerful and positive life in the face-to-face contact between tourists and survivors.

Secondly, planners can design tourism products with strong participation and s and education connotation such as geological disaster scientific research and experience combining with anti-seismic lab, so as to further enrich the vari products and strengthen local tourism attractiveness.

Finally, similar to tourism product of any theme, only all-weather commercial a attract and retain tourists. Thus as to Wenchuan, increasing night products with pos such as candle blessing concert to change the tourism commercial activity of morning to have a look and coming back to city at night for lunch can not only income, but also promote the mutual understanding between tourists and local re be of positive significance to the development of dark tourism.

### 3.2 Humanities concern - from tourists first to the local residents first

Dark tourism plays a positive role to educate tourists cherish life. However, d needs to be based on a period of painful memories that will bring some emoti residents inevitably. Especially for Chinese, who have traditions and cultural peace and luck and avoid disaster, death etc., although there are a number of cases in international arena, deep-rooted traditional attitudes and patterns of taboo to present dark tourism by the form of disaster and death.

Hence, during the development of dark tourism planning, planners should pay atte Firstly, we must respect and understand Wenchuan local residents traditions and If it involves some sensitive issues, such as death and disaster, planner shal project that is acceptable for the earthquake survivors, and the project shall b that planner understand local people s wishes and fully respects their trad emotions. In addition, to avoid dark tourism bringing back local residents pa tourism shall reduce the description of pain of the disaster, and tend to guide memory for the earthquake victims.

Secondly, the development of dark tourism in Wenchuan is certainly conducive t economy and promote reconstruction. However, there are some over-commercializat dark tourism exploitation - such as chrysanthemums can be presented in Xuankou through buying flowers in the form of donate , which is also a kind of dama self-improvement Wenchuan survivors. Therefore, planner should adhere to the gov organizations as dominant role when they designed the dark tourism operators

business conducts which will undermine the image of the local residents and hurt residents.

Finally, planner should not only make arrangements for dark tourism products, d work, etc., but also should take guidance measures to the behavior of dark to guidance for Xuankou middle school site, cemeteries of killed people or othe restrict tourists disrespectful act, such as frolicking, inappropriate photogra act would incurring discontent of survivors.

### 3.3 Combining with present and future – from a single cultural element to elements.

With regard to the dark tourism that was caused by earthquakes and other nat development of its tourism activities often went out attention as time gradually in the development of dark tourism in Wenchuan, the impact of new tourism Wenchuan surpassed its original tourism label, such as Panda Hometown , Qi Village if we just stressed the earthquake relics and failed to combine its local to Then, as the memory of calamity gradually faint, the existing competitivenes resources will reduce.

Therefore, designers must be clear when plan the tourism that Epicenter Wench cultural element caused by natural calamity and people s attention. It could be cultural element in local in a short time, but it must has the overall relation the other cultural elements based on powerful nature and long cultural tradition

In the real action, designers can do from two aspects. From the perspective o Xuankou middle school site, location of the hypocenter and other local touris Wolong giant panda nature reserve, Mt. Siguniang etc., to form a continuous com belt. From the perspective of the content of the products, combine the villag relics and damaged with the concentrated areas of Zang and Qiang ethnic minor show the new look of affected areas in the form of reconstruction and the t contains Zang and Qiang culture, natural scenes, and other tourism advantages tourism can benefit other affected resorts and tourism resources in the early t same time, it can also maintain sustained vitality in the local tourism resource

### 3.4 Contacting with different space – from point-like development to the development

The unfair distribution of income from dark tourism, as discussed above, could

management measures like giving jobs and welfare to moderately benefit the di
More importantly, fundamentally integrate dark tourism resources and rural area
engage local people from different areas to be a part of the dark tourism throug

With regard to tourism resources, the planner of dark tourism should alloca
spatially according to their distinctions. For example, the horrifying disaste
named after Wenchuan, at which the core of the tour should have been. But res
famous Xuankou Middle School site were located in Yingxiu, a town 60km away fr
Given such circumstance, the planner should regard Yingxiu as resource-rich tour
main target is to the relics original and real, while Wenchuan should be regarded a
tourism region where artificial efforts should be done through publicity and exh
disastrous earthquake. By doing so, we can build up connection and spatial cor
asymmetrical tourism resources.

For the development of urbanized tourism, villages and small towns in Wenchuan
foundation for leisure agriculture rural tourism by planting cheery and kiwi f
actives don t operate as a holistic business even though they re all named after We
planner could try to boost the bundled development for dark tourism and rural
providing better traffic connection and planning themed activities. With these
attraction of dark tourism to the whole region instead of several key nodes, we
tourism business that benefits all of our people.

4. Conclusion and outlook

In recent years, the development of dark tourism in Wenchuan has been increasi
also brought some influence to Wenchuan. From the related planning, practice an
tourism in Wenchuan, it can be seen that the development of dark tourism is a
also needs multiple participations. As the strategists whom the local governmen
and local residents rely on together, the planners should fully pay attention to
culture and psychological characteristics in the planning of dark tourism, pro
from being hurt in the dark tourism activities. At the same time, the planners s
interests for most people by the means of spatial layout, product design to sai
order in the developing process of dark tourism and make overall judgment ab
development of the local entire tourism including black tourism to make sure th
of dark tourism that are suitable for different phases after disasters in the lo

In addition, to discuss the influence of dark tourism in post-disaster reconstr
combine the dark tourism planning with economic and social development planning,
overall urban planning, land use planning, ecological control planning, urb

planning and so on. How dark tourism planners promote the post-disaster recon
background of combining rules should be an important subject that needs to be e
future.

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# TRACK 16

# Planning Responsibilities in the Face of Information Technology

## Track description

Co-chairs: **Paulo Silva**, **Michele Campagna**

In the rising era of big data and ubiquitous computing and sensing, new information resources open unprecedented opportunities for knowledge building, design, evaluation and decision-making support in spatial planning. Public institutions are not anymore the only actor controlling information flows as authoritative sources of information are paralleled by volunteered ones opening new possibilities for pluralism in knowledge building.

Since the welfare state crisis spatial planning became an activity not anymore exclusively under public control. The need to share responsibilities implies also the share of information. Collaboration and communication became critical factors for more responsive forms of planning as societal claims for access to information in planning may became a way to build citizenship and democracy. Hence, Information flows became central in planning debates.

However many ethical issues arise related to personal privacy, selective access, data representativeness or transparency of data processing. How to provide equal access and equal opportunity to use the information? How to get those without effective access to ICT participating in planning? How the responsibilities should be spread among all the actors?

Considering the information technology development, the shifts in planning processes and the claim for new ways of government, authors are kindly invited to submit their contributions aiming at clarifying such issues as:

- What is the role of information in decision making?
- Does more information mean better planning?
- How can information technologies adapt to a context of planning within fuzzy responsibility?
- How can information sharing deal with contexts of poverty, marginality and unequal access to ICT, contributing to citizenship and democracy?
- How do planning professionals integrate new technologies into the planning process?

These issues contain a less explored debate around ICT and spatial planning, which, considering the topic of the present congress makes much sense to be addressed. Such themes as Geodesign, Spatial Data Infrastructures, Volunteered Geographic Information and Social Media, Big Data, Virtual Geographic Environments, spatial analysis and models, Planning Support Systems, and Smart Cities are particularly welcome, but the track is open to the combination with other relevant themes raised by this topic such as governance, public participation or planning processes.

# The Role of User-Generated Emotion Data and their Optimized Visualization for Planning Decision-Making

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Keywords: Emotions, GIS-based Visualization, Event Monitoring

## Abstract

*With the rise of wearable technologies in the field of ambulatory assessment and commercial body monitoring products, the human being itself becomes a sensor of its immediate environment. In particular, user-generated vital data allows to draw* conclusions from peoples emotions *at every time and everywhere. This fact poses the question to what extent this data can be used for planning decision making.*
*For decades, ambulatory assessment methods have been* used to identify humans emotions *linked to distinctive stimuli. The research is mostly done in laboratories under controlled conditions. Knowledge transfer to real world applications is still rare due to many uncontrollable environmental issues. Psychophysiological monitoring, however, shows high potential of transferability to real-world studies.*
*If this user-generated emotion data is to be used for planning decision processes, many challenges have to be met: a) providing valid physiological, geo-referenced data in a real world environment, b) preparing and processing data for following analyses, c) joining individual and environmental meta data, d) optimizing emerging visualizations and identifying emotional stimuli as basis for planning decision-making.*
*The research at hand confronts these challenges, exemplified by a case study in the field of urban safety and security. It aims at identifying stress eliciting stimuli during an open air event. The methodical approach comprises physiological data collection and analyses, standardized questionnaires of stress experience and event perception, subjective self-assessments and spatial analyses of the surroundings as well as the combination of the results in different GIS-based visualization techniques.*

## 1. Introduction

Planning decision-making in urban and environmental planning is a highly complex process involving strong responsibilities. These responsibilities are manifold - including ecological, economical and sociological aspects. Planners, as main coordinators of spatial planning processes and therein different groups of players, have the duty to ensure citizens quality of life by preparing decision-making basis for politics. Citizens quality of life is reflected on different levels. Besides standard of living and social security, everyday quality of life is shaped by built environments and acceptable surroundings. To determine areas that are perceived as uncomfortable or unsafe, classical methods like interviews, observations or standardized questionnaires are used to collect the needed information. All these methods have the short-comings, that information is based on cognitive self-perception, experiences and social desirability. For a few years now, thanks to the fast technological progress, it is possible to measure and track physiological vital data as indicators for emotions in spatial environments. That in turn gives social scientists and urban planners the benefit to receive information about ci being (or stress) free from the mentioned short-comings at every time and everywhere. As precondition, people have to be equipped with body sensors for measuring physiological changes and

GPS trackers to determine their positions and routes. This method of psychophysiological monitoring implicates that it is still experimental, but shows high potential to get a more concrete and self-uninfluenced picture of spatial environments from a citizens perspective.
In this paper, the authors want to introduce and discuss this methodical approach as a real-world application, based on the experience of environmental planning studies on the one hand and the methodical approach exemplified at an open air event on the other hand.

## 2. Research Background

Improving human well-being is an essential part of many planning actions. The aspect of feeling safe and secure in the immediate environment influences the behaviour and provides a positive image of the space citizens live and move in daily. Environmental planners can strengthen that feeling by shaping the space around us adequately, e.g. accessibility for disabled people or avoiding places which cause anxiety with the help of lighting concepts. In practice, many disciplines (sociologists, psychologists or event planners to name a few) deal with this topic.
The research at hand is part of the research project Support Systems for Urban Events Multi-criteria Integration for Openness and Safety (MultikOSi) , research programme Research 2012 - 2017 , topic Urban Safety and Security , funded by the German Federal Ministry Education and Research. In the sub-project Social Aspects for Comfort and Safety at Urban Ev the authors occupy themselves with the measurement of well-being of event attendees, the planning and organization of safety as well as spatial components. In case of measuring the well-being, classical methods like questionnaires, observations and interviews are conducted, but extended by the here presented psychophysiological monitoring in a real world application.

### 2.1 Contextual Background

Communities are more and more in competition in order to obtain the status of an attractive place of residence and an attractive travel destination. Part of liveable communities and environments are increasingly open air events like city festivals, sport events or concerts. A favourite instrument in public sector marketing is the organisation of big events, which are magnet for numerous visitors of different milieus (Häußermann/Siebel, 1987). They allow the experience of entireness, community, mutuality and corporate identity for people with different backgrounds. In terms of socio-scientific collective experience, festivals and events are understood as largely emotional, by affect dictated events. They produce current, spontaneous, emotional and enthusiastic behaviour, which is not only socially allowed, but actually desired (Gebhardt, 2008, p.207). The common order is often dissolved. Violation of the order are in part explicitly allowed or tolerated (e.g. at street festivals). This behaviour includes a certain risk concerning the safety at events. Current state of research says, that feeling safe is an individual condition or emotion. This condition is composed of the general framework of (public) space and the personal perception (Floeting/Seidel-Schulze, 2012, p.1058). Spatial framework conditions are variables like path width, soil conditions, barrier-free design, view-shafts, lighting and knowingly placed obstacles (Reuter et al., 2012). Subjective attributes are factors like individual sense of self-worth, the capability of the body or the openness when dealing with other groups of people. Especially with increasing age, the dwindling of body s own capability leads to heightened percep of safety in (public) spaces and thus to heightened expectations towards safety measures (Ziegleder et al., 2011).
Visiting an event also comprises the arrival and departure, respectively the routes attendees take to come to an event and leave on their way back home. Planning an event consequently involves transport infrastructural aspects. Many events are characterized by security controls at the entry of a closed off area in order to avoid certain sources of risk. Masses of people can also be a danger for the attendees. That happens when the entries are too narrow, contraflows are allowed or the outflow of

people doesn t work (e.g. at the catastrophe at the Loveparade in Duisburg 2010). Another reason long queuing times, with the consequence of building up a throng where people get bothered by others. Every now and then triggered stress and feelings of being unsafe can lead to risky behaviour towards other visitors or private security personnel, as well as to avoidance behaviour, and strongly affect the safe course of the event. Safety, security and comfort are significantly dependent on social action, attitudes and value systems of the visitors of the event. According to the sort of visitors, the chosen safety measures differ (e.g. quantity of private security personnel, barriers (fences, hoarding), etc.). A further relevant factor is the trust of visitors in available information in case of risk as well as trust in present private security personnel. In addition, the trust of private security personnel in event managers/planners and hosts plays a major role. Last-mentioned protagonists have the duty to execute a risk management based on a risk assessment in case of danger or emergency (Renn, 2010, p.165). These facts emphasize that planning of events is a highly complex process, involving many different players and information channels. The consequences of a bad planning are obvious the endangerment of the health and well-being of event visitors and all involved parties on-site. The guaranty of a safe stay is an essential requirement for large quantities of people visiting communities and events. An attractive and successful event thereby contributes to an improvement in identity and image and to an increase in competitiveness of a community (Getz, 2012, p.40).

Event planning and the ensurance of safety of such events is in a way comparable to tasks environmental planners are confronted with, regarding the complexity and involvement of different groups of players. Though, the constructional actions are generally temporary with the exception of really big events, like a Football World Championship or Olympia.

The example of the sense of safety in space and especially at events emphasizes the importance of emotional data of visitors and security personnel. If this data can be made available properly, it can influence planning decision-making for upcoming events as well as environmental planning actions in terms of design of space.

## 2.2 Methodical Background

As part of subjective well-being, emotions are a current, affective state of the individual, triggered by immediate experienced stimuli or events (Diener et. al, 1997; Kahnemann/Krueger, 2006; Fischer, 2009). In literature many differently named basic emotions exist. One of the leading researchers and pioneers in the study of emotions in context of facial expression is Paul Ekman. In his early work he distinguishes between six basic emotions: happiness (enjoyment), sadness, anger, surprise, disgust and fear (Ekman/Friesen, 1971), which are still valid in his later work. Anger and fear are highly negative emotions, which are follow-ups of stressful situations (Lazarus, 1993, p.12). According to Lazarus/Launier (1978, p.296) stress is any event in which environmental or eternal d exceed the resources of an individual, social system, or tissue system . F nonspecific response of the body to any demand (Selye, 1976, p.53). For both stress scientists, not only internal factors, but also external and environmental factors are responsible for experienced stress. Selye (1976, p.54) names specific environmental factors like air pollution and social influences as antecedent condition for stress, Lazarus (1993, p.5) names harm, threat and challenge, experienced in the environment or within the person. *Harm* refers to psychological damage that had already been done [ ]. *Threat* is the anticipation of harm that has not yet taken place but may be imminent. *Challenge* results from difficult demands that we feel confident about overcoming by effectively mobilizing and deploying our coping resources (Ibid). He further gives the exa unpleasant state of mind that may seriously block mental operations and impair functioning Just the terms threat, or in case of events the term danger, and harm are crucial conditions, which especially event planners want to avoid. Possible threats to events have to be identified in the planning process beforehand, in order to formulate danger avoidance and minimization strategies. Threat, or

danger, at events implies a situation or behaviour, which causes harm and damage to property or people with a high chance, if the course of events is unhindered (Drews et al., 1986, p.220).
Event planners as well as all involved groups of players (e.g. communities, fire brigade, police, private security companies, emergency rescue services, etc.) can fall back on manifold experiences concerning possible dangers at events. Resulting in an extensive catalogue, these are for example crowds, fire, collapse of constructional parts, danger by violent or drunken people or breakdown of relevant infrastructure (Hessian Ministry of the Interior and Sports, 2013).
Consequently, the event visitors themselves can act as immediate and direct detectors for threats or risky situations. If and how danger is individually perceived by visitors depends on their subjective, intuitive risk perception. This risk perception is affected by different factors. These are given information about the source of danger, psychological processing mechanisms of feeling unsafe and previous experiences (Renn, 2010, p.163).
In summary, there is a consistent story here; that feelings of safety have an interdependence with risk perception, emotions, feeling stressed and physiological changes, triggered by certain situations which are environmental, inner psychological processual or determined by social interaction with other people.
In research, emotional experiences in linkage to distinctive stimuli are typically acquired in laboratory experiments under controlled conditions and self-reported data, in form of questionnaires and interviews. The principal aim of the research at hand is the investigation of real-life emotions beyond the laboratory. The experience of emotions in laboratory settings can likely differ from natural unfolding emotions in the real world. Influencing factors for example are the lab environment itself, the feeling of being controlled, the alien technical apparatuses and sitting immobile for at least many minutes (Wilhelm/Grossman, 2010, p.555). The acquisition of emotion data via questionnaires and interviews also has its short-comings. They rely on retrospective memory recall with the problem that information can be forgotten, especially over a long period of time. Most recent events can also influence the overall ratings of emotion. Furthermore, retrospective recall is subject to idealized self-concepts and -perception, social expectations and desirability (Wilhelm/Grossman, 2010, p.556; Redelmeier/Kahnemann, 1996, p.6.; Pohl, 2004). When the specific aim is accurately as immediate experience, these factors [of retrospective recall] induce error variance at the best and systematic bias at worst (Wilhelm/Grossman, 2010, p.556). The here presented study engages in providing naturalistic emotion data in a real-world application, derived from physiological data (e.g. skin conductivity, heart rate) of test people during an open air event. The test people act as a sensor of their immediate environment. The authors want to find out where (spatial), when and in which situations stress as precondition of feeling unsafe is experienced. Almost all current scientific knowledge about emotions is based on laboratory research or inferred from retrospective reports, although understanding real-life emotions is clearly the principal aim (Wilhelm/Grossman, 2010, p.552). Ambulatory assessment means the objective real-time data acquisition of physiological marker with the help of wearable devices, which are more and more operational outside the laboratory (Papastefanou, 2009, p.443). Within ambulatory assessment, psychophysiological monitoring offers the most pragmatic and reasoned method to continuously and objectively measure vital data of test people. Other methods are experience sampling and behaviour recording. In case of psychophysiological monitoring, measurement devices are wearables with primarily non-invasive sensors. The measurement specifically focuses on changes in vital data, triggered by the prime biological emotion- and stress-reacting systems (Wilhelm/Grossman, 2010, p.559). Two main criteria for identifying affect-based physiological changes have turned out: a) Changes in vital data have to be recorded in real-time and for every instant during the study; b) the measurement must not hinder or disturb the individual in order to avoid the collection of influenced vital data by the method or measurement device itself (Bergner et al., 2012, p.740). For real-world studies it is also important to know where exactly the changes in physiological data have taken place. So it is necessary to equip the test people with a GPS (Global Positioning System) tracker, while moving through the study area.

After gathering and analyzing the resulting data for indications of certain emotion patterns, the next challenge is to make the data available for further analyzing in the context of space.

## 2.3 Visualization Background

The idea of mapping peoples perceptions and emotions in space is not new. Kevin Lynch with his concept of mental maps worked out, that people are able to memorize paths and key locations in urban environments and draw a mental image of the city they live in. He found out that five basic elements exist, which people perceive and construct their mental image of a city from. These are paths, certain areas or districts, significant edges (e.g. walls), nodes (e.g. junctions like crossroads) as well as landmarks. How these elements are perceived is a two-way process between observer and the observed object (Lynch, 1960). Almost half a century later, Christian Nold introduced his projec Mapping as one of the first psychophysiological monitoring projects in the cont His intention was to use this method as a participatory bottom-up approach to improve a sense of community and citizens own identity with their residential area. Nold deals with the question how citizens perceptions of community and environment will change when they become aware of their own and others intimate body states (Hope, 2009, p.75). In his studies (e.g. Greenwich Emotion Map) he sent people through their residential area, equipped with a galvanic skin response sensor at the finger as well as a GPS tracker for locating the wearer s position on earth. In ret shows the participants their walk as a personal emotion map. The track shows the wearer s geographical location while the height indicates the intensity of physiological response at any particular point. The response can be positive or negative and requires active interpretation to make sense of it (Nold, 2009, p.67). Despite the weaknesses in data accuracy and subjective interpretations as well as visualization, Nold coined the term Emotion Map or Emotional Mapping and is seen as pioneer in combining psychophysiological indications of emotions and geo-referenced data in a spatial context.

The visualization of geospatial data is an important task in environmental modelling, data analysis, and geographic applications. Specifically, two-dimensional maps offer a well-known way to present a static visualization of geographic data. Additional variables can be displayed with the help of contours, colours, and heat-map overlays.

However, when considering complex data sets that contain geographic locations, time series, and multiple variables, the visualization and data mining of spatio-temporal data is a challenging problem. When thinking of multivariate time series it is also important that the visualization is tailored to the needs of the end-user, i.e., both domain experts and non-specialist public, in a way that the visualization instantly shows whether something is good or bad.

The main challenge in visualization of spatio-temporal physiological data is the integration and optimization of emerging visualization techniques as basis for the planning and decision process. Having information displayed in a way that it is easy to understand is crucial. Without this kind of visualization the participation of the public in a decision and / or planning process is limited. The visual effectiveness (Guo et al., 2006) concerns the usefulness of data views in revealing patterns. With a large data set, data items can overlap in the visual display and make patterns very hard to perceive.

With the aim of effectively visualizing multivariate, spatio-temporal data mostly two solutions have been proposed in literature: (1) animating data in a 2D representation or (2) extruding 2D representations into a third dimension. Digital Globe Systems, e.g. 3D virtual globes, meet these requirements and offer the possibility to use the third visualization dimension.

The idea of a digital earth was described for the first time in 1991 by Ne Snow Crash : A globe about the size of a grapefruit, a perfectly detailed re hanging in space at arm's length [ ] It is a piece of [ ] software called, simply, Ea interface that [ ] uses to keep track of every bit of spatial information that

weather data, architectural plans, and satellite surveillance (Stephenson, 1992, p
Berlin company ART+COM developed TerraVision , inspired by Stephensons novel
system on SGI-units. TerraVision is a 1:1 virtual copy of planet earth. One significant feature of TerraVision is the human machine interface. With the help of an interface, designed like a globe, the so called Earthtracker, the user gets the possibility to navigate to every desired spot on earth interactively and in realtime over the virtual globe (ART+COM, 1994). The first and free consumer based virtual globe system was developed by NASA and was called World Wind (NASA, 2013). For the first time, it was possible to import and export spatial data through a user interface. In addition, the integration of Web Map Services and the visualization of textured meshes were realized. Keyhole Earth Browser, in the beginning operated by Keyhole, was the initiation point for the development of Google Earth, which is today the best-known and widespread software for digital globes. As associated programming language, the Keyhole Markup Language (KML), also developed by Keyhole, is established as an Open Geospatial Consortium (OGC) standard by now.

All the above-mentioned systems offer different import and export functions, but there are only a few options to develop some additional new types of visualizations. There are some software tools available, which can transform collected data into 3D visualizations, which need to be combined manually for an appealing look. An integrated and interactive 3D-GIS application, which allows the easy integration, visualization and animation of heterogeneous data are not available today.

Within this paper the authors target the visualization of spatio-temporal physiological data, i.e., stress at a specific location at a specific time, from multiple users during large events. Stress is a major concern in our daily life and impacts both individuals and society. Furthermore, stress is a big concern when looking at the safety during events with a large audience, e.g., soccer games or music festivals.

Due to the nature of the data that has been collected during the execution of the experiment, as described above, visualizations have to be applicable for multivariate spatio-temporal data. Guo et al. (2006) present a geovisual analytic approach and the implementation of a visualization system for space-time and multivariate patterns (VIS-STAMP) that integrates a suit of visual, computational and cartographic methods. The implemented system is capable of effectively detecting and visualizing geographic, temporal, and multivariate patterns in multiple ways using a self-organizing map (SOM) and a parallel coordinate plot (PCP). The authors state that the system is limited when it comes to small-sized spatial objects, since they are barely visible on the used two-dimensional maps. The technique Lexis Pencils provides a way of viewing event history data. The approach uses a pencil metaphor and maps different time-dependent variables onto different faces of a pencil, starting with the top of the pencil (Francis, 1997). This visualization allows controlling the color mapping, the width of the pencil faces, and the assignment of the variables to the faces. Here, the pencil point could mark a static location in the spatial context of a 2 ½ D or 3D representation. The advantage of this approach is that both continuous and discrete variables can be shown in one plot. However, depending on the complexity of the time series this technique might not be tailored for large time-dependent data sets. Forlines et al. (2010) present the Wakamevisualization system. The Wakame system extends a multi-dimensional radar chart (2D technique) for static data by extruding into a third dimension to represent time. Thus, sequential measurements become radar-graph profiles at different heights of the ground plane. The shape that is formed by the radar profiles at different heights, i.e., at different time steps, illustrates the changes in the time-dependent dataset over time. As with the previous visualization techniques this method allows assigning different colours to the variables of the dataset, i.e., the vertices of the radar profile. However, in order to create an easily understandable visualization the user has to pay attention to the ordering of the variables around the centre axis. Tominski et al. (2005) present the Helix icons for visualizing spatio-temporal data on maps. This technique is especially useful for time-dependent data that has cyclic characteristics. A spiral helix provides the geometric shape. The helix icon is made of a spiral ribbon where every time step extends the ribbon in angle and height. Again colour coding can be used to encode data values along the ribbon. In order to be able to represent multiple variables the ribbon can be subdivided into smaller ribbons. Finally, the

interested reader is referred to the work of Aigner et al. (2010) providing a detailed overview of different visualization techniques for time-oriented data.

## 3. Relevance and Objectives

The education of environmental planners is already in certain terms a cross-sectional field of study and in praxis very interdisciplinary. There are many information and data channels a planner has to filter and coordinate. In case of sociological aspects, like the identification of well-being in spatial environments, classical methods like questionnaires and interviews with citizens are primarily used. With the rise of new wearable body sensors it is possible to identify indications on human emotions towards their imminent surroundings everywhere, at every time and in particular unaffected by personal views, experiences and social desirability.
The main objective is the development of a decision support tool for planners across disciplines. The tool should better the understanding of emotions and consequently of the behaviour of people in and towards space with the help of body monitoring technologies. Out of it the questions have to be answered how the emerging emotional data is visualized and what conclusions can be drawn.
Exemplified by a case study at an open air event, the authors want to illustrate how body monitoring technologies can be applied, what data can be elevated, how this data is processed and visualized as support tool for planning decision-making. The usage of ambulatory assessment in real-world studies is still experimental. As a consequence the following challenges are inherently methodical:

(a) providing valid physiological, geo-referenced data in a real world environment
(b) preparing and processing data for following analyses
(c) joining individual and environmental meta data
(d) optimizing emerging visualizations and identifying emotional stimuli as basis for planning decision-making

The potential gain for environmental planners in general and in context of safety of open air events is obvious. In a last step, the authors critically deal with the usage of this data and their significance for decision-making at this juncture of research.

## 4. Conceptual Framework and Study Design

In order to exemplify the introduced methodical approach and in context of safety at events, an experimental case study at the event Back to the Woods Open Air 2014 in Gar
July 2014 was conducted. It is a one-day outdoor music festival with about 5000 attendees. The event was stopped and cleared because a massive thunderstorm with intense rain, lightning strike and sudden drop of temperature has occurred.
The resulting data was derived from six student test people, whereas three were female and three male and aged between 20 and 24. An average state of health, no physical limitations as well as a typical age for the character of the event were preconditions. The test people didn t have to perform a s
task during the study. They should behave naturally and in their usual way. Only if they get too drunk, they should end the study and come to the meeting point. After a short briefing, the test people signed a letter of agreement and data protection. Next, the measurement device for physiological data, in form of a comfortable wristband, was strapped around their left wrist, in order to provide an adjustment period. Before the beginning of the study, the test people had to complete a self-evaluation questionnaire concerning their actual mental state. Afterwards, they received a GPS tracker and a tape recorder for subjective self-assessments when they felt extremely stressed and unsafe. All the devices were switched-on at the same time for later data synchronization. Then they were sent out to experience the open air festival at the event area for as long as they desired. At the end of the study,

the devices were turned off and the test people had to complete a general questionnaire with questions to event affinity, perceived sense of safety, social basic data, personality traits and the same self-evaluation questionnaire concerning their actual mental state as at the beginning of study.
The research area is situated on a meadow, enclosed by woods and two streams from north-west to south. The complete area is surrounded by a hoarding. The main entrance and the pay desk are located in the south/south-west. In the eastern part there is the main stage, in the western part and the central area opportunities to get food or drinks. There exist four emergency exits: one to the south and west, two to the north. For later spatial analysis, it makes sense to classify the research area in different specified zones (dancing and stopover, bar, food, toilets and entrance) (see chapter 6).

## 5. Methodology

A mixed method approach, including psychophysiological monitoring, self evaluation questionnaires, subjective self-assessments as well as visualization techniques and spatial analyses, should meet the challenges specified before. The first challenge consists in providing valid physiological, geo-referenced data in a real-world environment (a). For physiological data acquisition the sensor wristband BMS Smartband was used, developed and manufactured by Bodymonitor Systems Gilching, Germany. It measures skin conductivity, skin temperature, outdoor temperature, triaxial acceleration and electrode contact pressure. The BMS Smartband enables to collect peripher-physiological data in real-time and location-independent (www.bodymonitor.de, 2015). The authors aim to identify stress reactions by the test people as precondition for feeling unsafe. Basic emotions reflecting stress are anger and fear (see chapter 2.2). These emotional reactions come along immediately with changes in the autonomic nervous system activity, which is reflected in specific physiological parameters (Kreibig, 2010). In consensus with researchers in emotion, a negative experience (anger or fear) is existent, when skin conductivity increases (Kreibig, 2010, pp.401/403) and shortly after that skin temperature decreases (Kreibig, 2010, pp.401/404). A well-known example is the cold sweat, resulting from fear. These findings were confirmed in a statistical validation study with the BMS Smartband. Here, it was ascertained that collected changes in skin conductivity (increase) and skin temperature (decrease), measured by sensors on the inner side of the wrist, during stress episodes are reproducible (Papastefanou, 2013). The theory behind this and the measurement device itself proves, that valid physiological data can be provided. In regard to the aspect of geo-referenced data, the GPS tracker G-Log 760 by TranSystem Inc. (www.transystem.com.tw) was used, which collects satellite signals every second. A later synchronization with the physiological data was hereby unproblematic.
Preparing and processing the resulting data for following analyses (challenge (b)) was carried out retrospectively. Especially the processing of the physiological data is a time-consuming work, which is absolutely indispensable if done properly. A necessary first step is data reduction to a one second signal, because of the sample rates (e.g. skin conductivity:ten samples/s (10Hz)). Added up in about five hours, 180.000 samples are received. The serial nature of ambulatory dat identification of the specific time points when abrupt and statistically significant level shifts occur that may be associated with psychological or other events (Wilhelm/Grossman, 2010, p.565). To avoid measurement artifacts, which can influence the overall structure of data, especially if changes in physiological data are considered, an early visual examination of the elevated raw data is essential. With the help of proper algorithms in appropriate software, the resulting data consists of gradient values for every second. The algorithms have been improved, compared to former studies, and a testing of different intensity levels of stress has taken place. As result, high intensity indications of emotional stress reactions with at least a duration of three seconds are focused in the present study. After analyzing certain physiological patterns defining a stress reaction (Bergner et al., 2011: pp.250/251) and identifying the time in which a stress reaction had occurred, this data is merged with the proper GPS coordinates (challenge (c)).

Figure 1: BMS Smartband (www.bodymonitor.de) & physiological patterns defining a stress reaction

Besides the psychophysiological monitoring approach, different questionnaires were applied. At the beginning as well as at the end of the study, the State Anxiety Inventory (STAI-S) , developed by Spielberger, Gorsuch and Lushene (1970, revised 1983), was used. The STAI-S is a psychological inventory based on a 4-point Likert scale with 20 questions on a self-report basis, concerning the relation between state anxiety/fear as characteristic in due consideration of situational influences and intra-psychological processes. The aim was a before and after comparison of changes in the test peoples mental state. In order to get a more precise image of the participant Five-Inventory-10 (BFI-10) (Rammstedt et al., 2012) was applied. The five personality tr openness to experience, conscientiousness, extraversion, agreeableness and neuroticism. Nowadays, it is the most established and accepted reference model for the description of personality (Rammstedt et al., 2012, p.7). Furthermore, a general questionnaire with questions to event affinity, perceived sense of safety and social basic data should give insights, if the participants represent the general characteristics and perceptions of the other event attendees at the Back to the Woods Open Air. The test people also had the chance to give self-assessment regarding stressing situations at the event via tape recorders.

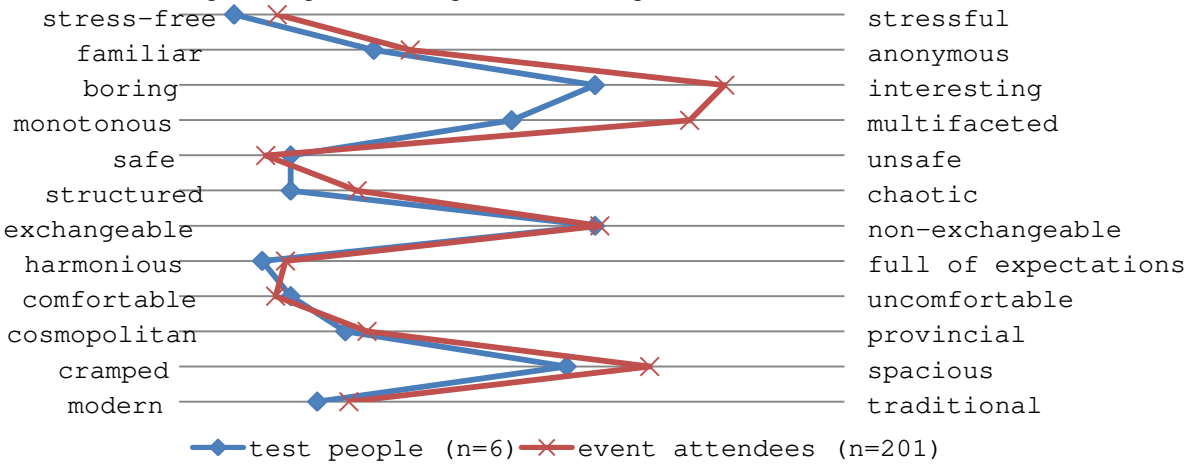
Within the context of this paper the authors utilize the GeoVisualizer application to visualize multivariate spatio-temporal physiological data from multiple users (challenge (d)). The GeoVisualizer application provides even non-visualization-experts interactive tools to produce meaningful visualizations based on state of the art techniques in order to provide a better insight in the underlying georeferenced data (Michel et al., 2013). GeoVisualizer is based on the Open-Source NASA World Wind SDK which provides a three-dimensional virtual globe and various plugins to import georeferenced data (e.g., Shapefile, GeoTiff, Web Map Service, Web Feature Service, Sensor Observation Service). The GeoVisualizer is implemented with the Java Web Start Technology, which allows starting the application on every computer connected to the Internet. Once installed, the GeoVisualizer application resides on the hard disk of the computer and can be also run in offline mode. However, if the computer is connected to the Internet a check for updates will be executed to ensure that the user always has the latest, up to date components.

Based on Nold s Bio Mapping , the approach of psychophysiological monitorin geo-referencing was tested and improved in different own studies, primarily in environmental planning context (e.g. accessibility and barrier-free design for impaired people (Bergner et al., 2011), impact of noise in urban areas (Bergner et al., 2012), orientation in open space (Exner et al., 2012) but also in other fields of research, like stress management of emergency rescue services (Steinitz et al., 2014)). This study is based on these insights and counts as the most up-to-date work by the authors.

## 6. Analysis and Discussion of Results/Findings

At the same time of the study, a general survey (n=201) with the visitors of the Back to the Woods Open Air took place within the research project MultikOSi (see chapter 2). Figure 2 shows the overall perception of the event by the event attendees as well as the test people in a semantic differential. The only difference is that the study test people experienced the event a bit more boring and monotonous. The chosen test people represent the general social structure (gender, age, social data) of the other event attendees. This is an important fact for the evaluation of the resulting data. The study test people pose no exception.

Figure 2: Open Air Perception of Test People and Event Attendees




The analyses of the test people questionnaires and data sets are carried out in a simple profile analysis, because an aggregation is inappropriate due to the small number of cases. To exemplify and discuss the results and findings, later visualizations are made available in simple profile analyses in comparison to an aggregation of all six test data sets.

### 6.1 Simple Profile Analyses Questionnaires and Psychophysiological Monitoring

The data of the six test people is anonymized and coded (e.g. HA29 represents one certain test person). The STAI-S shows that four of the test people (HA29, MA23, SA17, GA23) had a higher anxiety value at the end of the study in comparison to the beginning, whereas HA29 s anxiety value was significantly higher. The test people SE23 and EA09 had almost no change (Table 1). The increase of state anxiety is presumably connected with the abrupt break off of the Open Air because of the massive thunderstorm, which also ended the execution of the study.

Table 1: Results of State-Anxiety-Inventory (STAI-S)*

| test person | study begin | study end | difference |
|---|---|---|---|
| **HA29** | 42 | 65 | + 23 |
| **MA23** | 30 | 46 | + 16 |
| **SA17** | 29 | 40 | + 11 |
| **GA23** | 32 | 42 | + 10 |
| **SE23** | 40 | 39 | - 1 |
| **EA09** | 42 | 39 | - 3 |

* A resulting value of 20 means no anxiety, 80 the highest anxiety value.

The Big-Five-Inventory-10 (BFI-10) indicates that the test people are very different regarding their personality traits (Table 2). HA29 is more a conscientious type, but rather suspicious and less compassionate and cooperative. MA23 is characterized as a highly outgoing, energetic and compassionate, cooperative person, and less sensitive or nervous. SA17 has a tendency to be a conscientious type. GA23 is highly open to experiences, an inventive and curious person, like SE23. A tendency to extraversion and openness to experiences is shown by EA09. In case of neuroticism, none of the six test people has a high parameter value towards experiencing unpleasant emotions (like anger or anxiety/fear) easily.

Table 2: Results of Big-Five-Inventory-10 (BFI-10)*

| test person | extraversion | neuroticism | openness | conscientiousness | agreeableness |
|---|---|---|---|---|---|
| **HA29** | 3 | 3,5 | 3 | 4 | 2 |
| **MA23** | 5 | 2 | 3 | 4,5 | 2,5 |
| **SA17** | 3 | 2,5 | 3 | 4 | 3,5 |
| **GA23** | 3,5 | 3 | 5 | 3 | 3 |
| **SE23** | 3 | 3 | 4,5 | 3,5 | 3,5 |
| **EA09** | 4 | 2,5 | 4 | 2,5 | 3,5 |

* A resulting value of 1 means no parameter value, a value of 5 means highest parameter value (5-point-scale)

The psychophysiological monitoring results indicate a wide ranged percentage of being stressed between 2,00 % (HA29) and 13,00 % (SA17). The duration per stress event is nearly equal (between 4,3 and 4,9 seconds) with the exception of SA17 (7,7 seconds), who has also the highest percentage of being stressed (Table 3). The study had a duration about 3,5 to 4,5 hours. The self-assessments via tape recorder indicate that stress was experienced in dense crowds, especially while getting drinks or food. Here, the synchronized tape recorder data is reflected in the physiological indicated stress events.

Table 3: Results of psychophysiological monitoring stress parameter values

| test person | total time data set (in sec.) | number of stress events* | total time of stress events (in sec.) | average duration per stress event (in sec.) | Percentage test people were stressed |
|---|---|---|---|---|---|
| **HA29** | 13324 | 57 | 266 | **4,7** | **02,00%** |
| **MA23** | 16507 | 190 | 851 | **4,5** | **05,00%** |
| **SA17** | 16484 | 439 | 2145 | **7,7** | **13,00%** |
| **GA23** | 13246 | 233 | 1069 | **4,6** | **08,00%** |
| **SE23** | 16498 | 170 | 738 | **4,3** | **04,50%** |
| **EA09** | 16462 | 256 | 1248 | **4,9** | **07,50%** |

* Minimum duration of three seconds

In the following, HA29 (least percentage of being stressed) and SA17 (highest percentage and highest average duration per stress event) are exemplarily analyzed in comparison to the quantitative questionnaires STAI-S and BFI-10.

According to STAI-S, HA29 s anxiety level clearly increased at the end of the study in comparison to the beginning, but had the lowest percentage of being stressed, continuously measured during the study. On the other hand, HA29 has only the slightest tendency to neuroticism (value 3,5). SA17 as the most stressed person during the event shows also an increase in anxiety level at the end, but no

tendency to a high parameter value in neuroticism. As a result, no indication of an interdependency between the different dimensions (surveys and psychophysiological monitoring) can be found in the case study.

## 6.2 Simple Profile and Aggregated Visualization

Figure 3 illustrates a two-dimensional stress heat map from all users who visited the Woods Open Air within the GeoVisualizer application. In addition, the visualization shows tracked GPS coordinates of test person HA29 by using three-dimensional pins. The head of the pins is colored according to its emotional state during stress (pink pins) or non-stress phases (cyan pins). Using the third dimension allows to compare and analyze the results of one test person with regard to the data of all test people, e.g. the tracked study participant did not spend time in the stress-hotspot area depicted in the lower right corner of Figure 3. In order to easily grasp the stress hotspots of the test person, the pins have been extruded more when a stress event was detected.

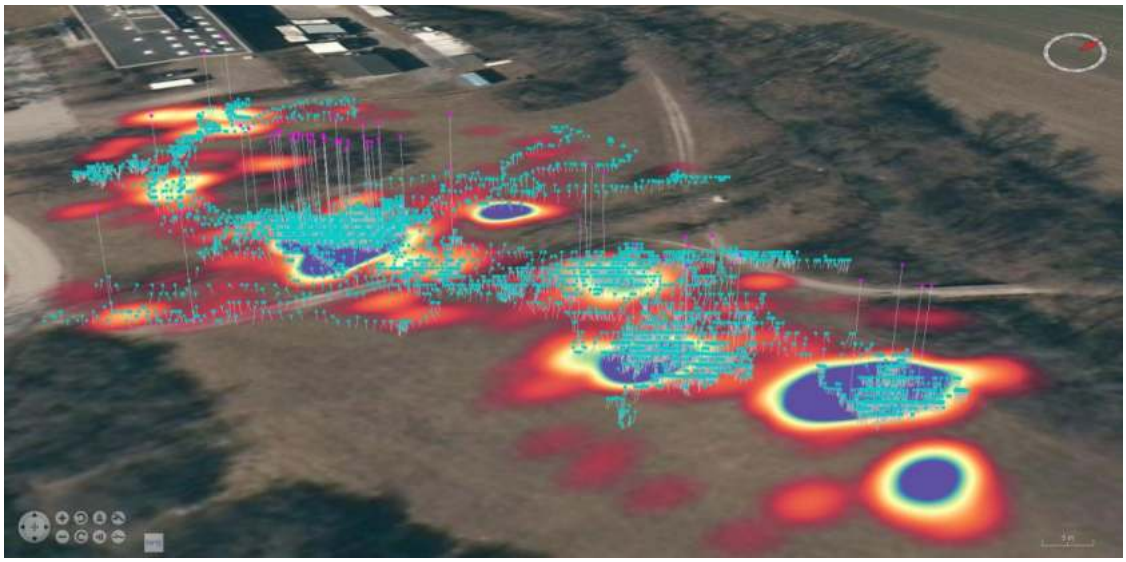


Figure 3: Visualization of the stress heatmap of all test people and the stress spots (pink pins) of test person HA29, using the GeoVisualizer

When especially interested in the relation of different attributes of spatio-temoporal time series, the two-dimensional visualization is not sufficient any more. As described above, 2D maps mostly use colours, contours or heatmaps to convey the information, e.g. river, terrain, land usage, etc. However, this kind of visual representation is limited by the number of colours that can be easily distinguished and perceived by planners and decision-makers. Furthermore, the amount of data items or layers can overlap in the visual display, whereupon information of layers beneath get lost. The GeoVisualizer application provides also a layer viewer for easy selection and comparison of the needed information.
As a consequence the usage of a third dimension is necessary in order to provide user-friendly and easily understandable visualizations. This would tackle the problems described previously. The GeoVisualizer application enables the user in a fast and easy way to feed the needed information in to the system and to get appropriate visualizations in an interactive open source tool. And as possible demonstrative, reduced to elementary functions information tool it is helpful to process the many different information channels an environmental planner as well as an event planner have to consider.
In case of the presented study, the visualizations helped to identify the most crucial areas where stress was experienced by the test people. As seen in Figure 4, the authors made the decision to exemplarily visualize and analyze an aggregated stress heatmap of all study participants, as it would have been

done if a higher number of test people had been available. As result, especially the food and drink zones as well as the dancing area are documented with a high density of stress events. On-site observations have shown, that in these areas dense crowds were present. The queuing also triggered many stress events (tape recordings). Open to discussion are the stress events in the dance floor area. Furthermore, the toilet area was very stressful for the study participants. This fact was confirmed by the participants and other event attendees. Queuing and the condition of the toilets itself were problematic.

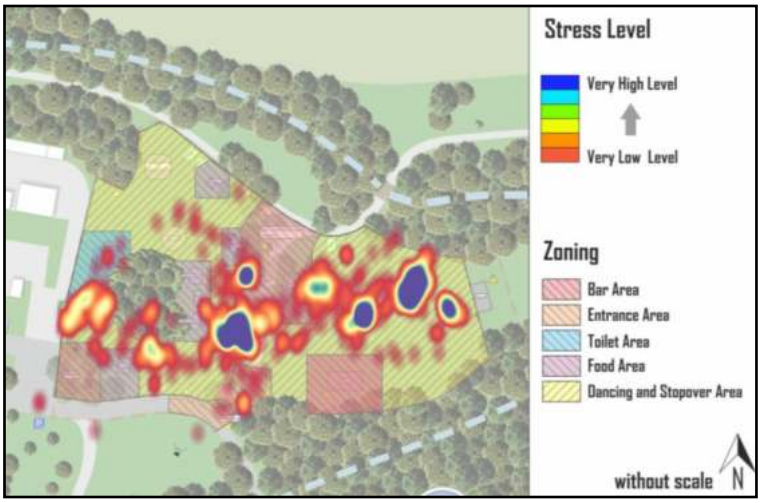



Figure 4: Aggregated heatmap and zoning of the event area

## 7. Conclusions

User-generated emotion data in the context of environmental as well as event planning shows very high potentials in delivering completely new insights into perception and experience of humans in their immediate environment. If visualized in an adequate, easy to handle and information reduced way, this data offers new perspectives across disciplines. The here presented study has met the methodical challenges, defined in the beginning. But the point of the matter is that the results, concerning this study and the mentioned former studies, are only exemplary. A lot of interdisciplinary basic research has yet to be done. Especially the identification beyond doubt of stress inducing stimuli is the biggest challenge for further studies. Data extracted from questionnaires, self-assessment, the location and visualizations can help to understand to which stimuli people are exposed. At this point, the authors basically recommend a higher number of test people, an exact defined target group or object of investigation, observations on-site, more data of the study participants personality tra not to forget, the evaluation of experts in the specific field of research. Still, there is gap between continuously, objectively measured indications of emotions by psychophysiological monitoring and retrospective recall, self-assessment methods and quantitative questionnaires which face each other and have their individual short-comings. A mixed-method approach turns out to be reasonable. Also the application of other sensor data, like crowd sensors, can help to get more objective data of the immediate environment. The analyses and validation of the gathered data is still highly complex and not completely to be automated. At this moment, the authors regard it as a high risk to give recommendations for decision-makers based on user-generated emotion data.

The experiences made at the Back to the Woods Open Air were valuable though very special, because of the abrupt end of the study due to the incoming thunderstorm. The data gathered up to that point already gave specific involved groups of players indications where problematic hotspots could be in the future. On-site observations have supported the fact, that queuing, dense crowds and the toilet situation is not only stressful for the event attendees, but also a matter of safety aspects. The study will be repeated in 2015, adding participating observations of the test people.

## 8. Acknowledgements

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**From Victims to Sensors: An Overview of PPGIS Applications in Emergency Planning and Management**

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*The term public participation geographic information systems (PPGIS) was bo
National Center for Geographic Information and Analysis (NCGIA), meaning to bring GIS technology to a local level in order to increase the data access and allow stakeholders to participate in the knowledge building and decision making process. With the growing popularity of personal computers and electronic personal devises, the contribution from public via the internet has also grown significantly based on the appearance of volunteered geography information (VGI). With the lack of immediate authoritative data, it has applied increasingly to emergency response as citizen became the sensors to report the unknown situations at the disaster area. With the growing amount of sensing and new information source, to what extent PPGIS has engaged in the planning process and changed the ways we defined data and knowledge in emergency planning and management is the core inquiry of this research. This paper takes an overview of the development of PPGIS applications in emergency management mostly in the United States, identifying its roles and functions in the four steps of emergency management mitigation, preparedness, response and recovery- in relationship to types of disaster and level of participation. A classification of PPGIS applications in emergency management is established through reviews of existing literatures, professional magazines and websites. This paper will facilitate further understanding of PPGIS, its trend, and identify new possibility in emergency management from the perspective of spatial planning discipline.*

## 1 Introduction

Public participation is a form of collaboration among public, private and civic sectors, which is also an important process in spatial planning that enables stakeholders to express their views and opinions in the decision making process. Locals are not only the main users of space but also the one with most understanding of local environment. With the contribution from public, professionals and government officials can make a more accurate and relevant spatial plan with the detailed information and advices from locals. Therefore, the communication from bottom to top has been an emphasis in participatory planning process.

Enabled by Web 2.0 which is promoted by the spirit of interaction and sharing, PPGIS (Public Participation Geographic Information System) is presented as a more people-centered GIS (Geographic Information System) compared to traditional rational planning methods, where planners control the majority of data collections, analyses and decision making process. As the new technology enable a new interface of information sharing and public dialogue, PPGIS has become one of the important methods of public participation, attributing to the instant interactions between governments and citizens. As this new field emerges, substantial PPGIS applications have grown in different types of planning process, including most technocratic-led emergencies planning and management.

Emergency planning is aimed to reduce the vulnerability to hazards and adapt with disasters, including both human accidents to natural disasters such as flood, earthquake. The needed information consists of disaster related spatial data such as hydrogeology, topological properties, soil and other geological layers to help analysis and predict where the location of disaster and the needed responses at different geographic scales. GIS has been an essential tool that for data collection, display and analyzes in emergency planning, and it has applied in avoiding damage from climate change as issue of the global warming heightens. In order to acquire the accurate geospatial data and advices from locals, PPGIS has also applied in emergency planning to aid the efforts. Websites with on-line map are provided for public

to achieve and provide the information about disaster planning, acknowledging the location of evacuate areas and routes. The managers can also gain more detailed information in a smaller scale, making the result of plans more reliable.

In recent years, on-line disaster response communities have grown and promoted as a more efficient method compared to traditional planning methods as residents face the immediacy to response to the pre-and post-disaster conditions. The contribution from public via the internet has also changed significantly due to the appearance of volunteered geography information. (VGI) Residents to establish an on-line evacuation maps by using web mapping services. Sites such as Google Map or Yahoo! Maps have created web-based mapping applications more accessible to users. The interfaces of these websites are easy to use and provide achievable, editable content. Take Kaohsiung explosion (2014) in Taiwan as an example, local volunteered residents built an on-line map at once, tagging explosion spots, hazardous area and aid distribution stations one the Google Map. The on-line map not only helps the emergency evacuation but also displays the current situation to relief workers or other people.

This paper intends to document the growing popularity of PPGIS in emergency management in relation to the four steps of emergency management - mitigation, preparedness, response and recovery. Current case studies of PPGIS applying in emergency management are drawn from the United States and some other countries. We will identify its roles and the relationship to types of disaster and level of participation. With this review, the current state of PPGIS function in emergency planning will be conclude, bringing out the new possibility in emergency management with this new technological development available.

## 2 Literature Review

### *2.1 Public Participation*

Public participation, also referred to as public involvement, can be defined as a process of allowing people to influence the outcome of plans and working processes. Public participation is the process consulting with the public before making decisions. In order to produce the best possible results, collaborative problems with the goal of achieving more acceptable decisions require adequate discussion with the public. The two-way communication is regarded as a way of empowerment and democratic governance.

The public means an open and unlimited circle of persons. It consists of the affected individuals or groups of people, like residents, house owners and stakeholders. The broad public is everybody. Public participation usually involves those potentially affected by or interested in a decision. The principle of public participation is that those who are affected by a decision have a right to be involved in the decision-making process. The term stakeholder is used for individuals or groups with term goal, like professionals and the non-governmental organizations (NGOs), representing specific interests. Stakeholders and the public can be both involved in public participation projects, but not necessarily at all stages of the project and in the same intensity (EU IPA, 2010).

After identifying the public, participation can be thought of as the specific activities that individu or groups engage in and tend to achieve a suitable and reasonable result. The discussion about participation usually focuses on the approaches of participatory and the depth of involvement. Participation can be done with different degrees of intensity: ranging from information broadcasting to consultation activities up to an active involvement, participating in decision-making process. (Firus et al, 2011) (Figure 1) Overall, understanding who the public is and defining how much the participation works would help operate a public participation project at an appropriate position.

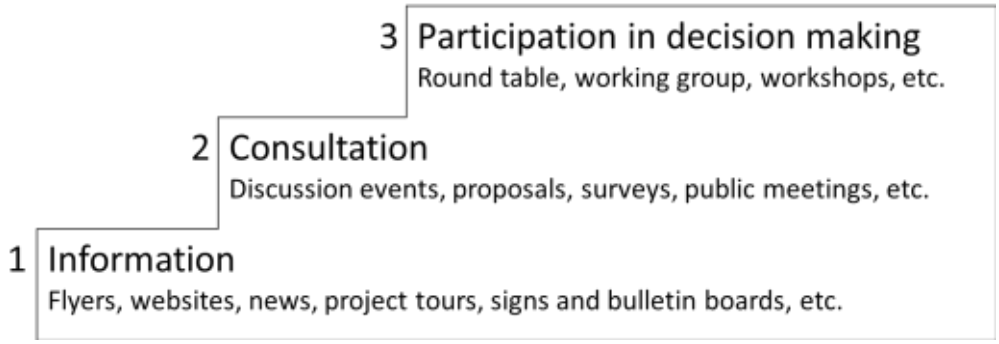


Figure 1. Intensity Degrees of Participation Processes
Source: Arbter et al., 2005

*2.2 PPGIS*

The term public participation geographic information system (PPGIS) was brought out in 1996 at the meeting of the National Center for Geographic Information and Analysis (NCGIA) in the United States. Same as the literal meaning, PPGIS is utilizing GIS technology to achieve the concept of public participation, in order to include and empower the entirety of population, and avoid marginalization. Among the societal issues, concerns that all voices should be heard in a democracy have sparked these researches in PPGIS. (Obermeyer, 1998) It can be applied to many aspects, as spatial planning is the major applied area that PPGIS provides a bottom-up system for public to join the process of discuss and decision making.

Since the 1990s, the applications of PPGIS has been extensive, ranging from community and neighborhood planning, environmental and natural resource management, mapping traditional ecological knowledge of indigenous people, to measuring change in place value (Brown, 2012). Two formats of PPGIS exist, including workshop PPGIS and web-based PPGIS (Chen and Ding, 2012). Workshop PPGIS is holding workshops for a specific issue one-time or on a regular base. It operates at planning in a smaller scale, like community planning or indigenous living area search. It is a common method in civil panel, start-up workshop, scenario workshop, and annual conference, etc. Using paper map or online map to display layers of information not only inspire the thoughts of locals but also explore issues and identify the problems.

The second type of PPGIS is web-based PPGIS. The emergence of Web 2.0 improves the implement of PPGIS, providing a new pattern of public participation. Web 2.0 s facilitate a new online participatory platform, where people not only consume content (via downloading) but also contribute and produce new content (via uploading), breaking the barriers between users and data-providers. (Bugs et al, 2010) Web-based PPGIS were developed later on and merged the idea of Web 2.0 technologies which are innovative, collaborative to provide simplified services. Different from the workshop PPGIS taking place in an actual space, most of the web-based PPGIS use internet as a virtual interaction space. With the character of asynchronous, anonymous, open-data, information conservation and etc., web-based PPGIS bring the traditional GIS to the internet surface, making the information sharing more conveniently. Citizens can get the information at once and participate in the public affairs without time and space limits. For example, FEMA (Federal Emergency Management Agency, US) established a Flood Map Service Center website, containing flood risk area map of the US. Residents can type in an address to get the flood risk area map near the site. If they discover a controversy or have some questions about the map, they can send an email to the center to confirm.

Owing to the rapid transmission of internet, the interaction of PPGIS between locals, government and the third party has become instant and transparent. However, there are two main disadvantages about web-based PPGIS, which are identity issues and information accuracy respectively. To avoid these

problems, some projects apply both kinds of PPGIS. Do a local survey by workshop PPGIS and set up all database by professionals on the internet, then establish a website to inform public.

Technically, the application of both kinds of PPGIS needs supplement data updating and data analysis. Take emergency planning and management as an example, before a disaster happens, locals can check the risk area and work on the mitigation or avoid living there. Locals should check the affected area to make a safe escape route and record the first-hand information at once when a disaster happens. Governments and emergency managers should possess the abilities to update data, integrate data, publish information, and make the spatial plan with the local knowledge.

### *2.3 Emergency Planning and Management*

There are three types emergencies divided by its causing factors, which are natural disaster, man-made disaster and both in combined, like fire disaster. According to FEMA (Federal Emergency Management Agency, USA), the definition of emergency is any occasion or instance that warrants acti lives and to protect property, public health and safety, such as a hurricane, tornado, storm, flood, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, fire, explosion, nuclear accident, or any other natural or man-made catastrophe. After the 911terrorist attacks in 2001, the US revised the context of emergency and started to emphasize the acts of terrorism. Therefore, the content of emergency planning and management has changed, moving from the focus of natural disaster to concluding more and more aspects.

Emergency planning is a continual cycle of planning, training, practicing, and revising, which are referred to a four-phase cycle --preparedness, response, recovery, and mitigation (Haddow and Bullock, 2003). The cutoff points form these phases are not always clear. Some may measure the process into five phases. Due to the need of different expertise and broad area/local knowledge, emergency planning requires collaboration with personnels from locals and other agencies. As for emergency management, it is the process of preparing for emergencies and disasters, mitigates their effects, and responds to and recovers from them. (FEMA, 2002) In short, emergency planning is a systematically method to minor the effect of disaster, and emergency management is to make sure the functions of emergency planning. In order to decrease the damage, both of them should be considered as an integrated project.

The four phases of emergency planning are illustrated in the circle of emergency management. (Figure 2) Mitigation and preparedness are implemented before the disasters happen. Response and recovery are actioned after the damage. Emergency planning and management is linked up by the four phases sequentially and cyclically. The explanation and actual content are in the following table. (Table 1)

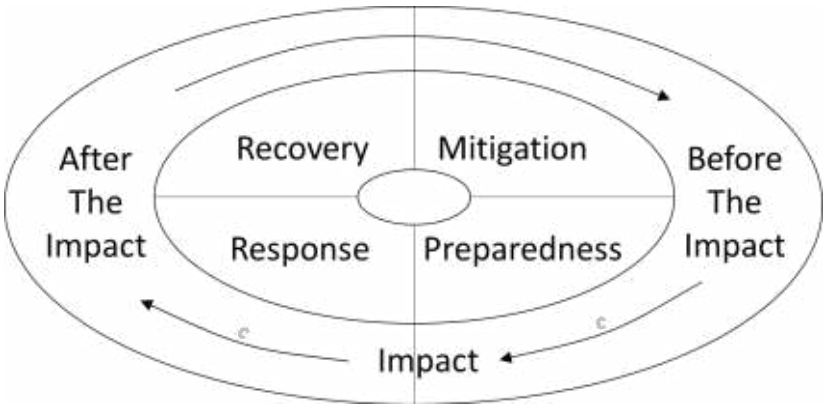


Figure 2. The Process Image of Emergency Planning and Management

Table 1. The Four Phases of Emergency Management
Source: Cova, 1999

| Phase | Explanation | Content |
|---|---|---|
| Mitigation | Prevent future emergencies or minimize the effects. | To avoid or to decrease the damage of disaster, governments draw up and implement emergency plans through policies, usually designed as long-termed plans or procedures. Mitigation measures can present in two types, structural and nonstructural respectively. For example, in earthquake risk areas, the structural measures might include changing the materials and structure of buildings and installing securing facilities. The nonstructural might include comprehensive plans and land use zoning. |
| Preparedness | Prepare to handle the occurrence of emergency before it happens. | Preparedness is to take a prevention action in case an emergency occurs, including training, planning and warning. Training maintains the ability of resilience. Preparedness plans ensure that when a disaster strikes, emergency managers will be able to provide the best response possible. Warning provides a longer time to prepare and face the disaster. |
| Response | Respond to an emergency safely during or after it happens. | Response activities take place during an emergency. Response is to put the preparedness plans into action, including saving lives, preventing further property damage and adjust the plans based on the instant emergency situation. |
| Recovery | Recover from an emergency. | After an emergency, recovery activities are taken to return the area to a normal or safer situation. The sort-term goal is to conduct lifeline systems and get assistance to help maintain the basic needs of life. The long-term goal is to recover economic activities, rebuild public infrastructure and living environment. |

## 3 Current Status of PPGIS in Emergency Planning and Management

### *3.1 Public Participation in Emergency Planning and Management*

The reflections in this paper derive from seven selected PPGIS case studies which are related to emergency planning and management in the United States, Haiti, Philippines and Vanuatu (see Table 1). Among them, four cases were applied in USA which represents the development in the past decades because USA is the country with the longest history in PPGIS. The other cases are from different countries which stand for the critical evolution of PPGIS in recent years. All of the application name were identified and divided into three degrees of public participation inform, consult and participation in decision making.

Numbers of websites applying PPGIS are presented on the internet and open to public. Most of the cases were searched via on the internet, including OnTheMap for Emergency Planning, Flood Map Service Center, NYC open data and Vanuatu disaster response. OpenStreetMap of Earthquake in Haiti and Micro Mappers of Typhoon Ruby not only take the internet browser as a surface but also applied the app technology on the personal devices. Geocollaboration Software Architecture was the only case capturing from existing literature.

OnTheMap for Emergency Planning and Flood Map Service Center are both national websites. OnTheMap is an integrated platform with various resources. Among them, emergency management is one of the public data tools that provides a web-based interface for viewing the potential effects of disasters on the U.S. workforce and population. The website lists the hazard event areas and sorted by different kinds of disaster. Then, users can click the area and see the map with optional layers and information to view the detailed workforce, population, and housing characteristics for hurricanes,

floods, wildfires, winter storms, and federal disaster declaration areas. This application of PPGIS is functioned with inform. Users can only get the information but can t reply by the syste

Flood Map Service Center (MSC) contributed by FEMA (Federal Emergency Management Agency) is an official public source for flood hazard information. Users can type in their address to get the official flood map and receive a better understanding flood risk. The whole country map was divided into same size of grids with numbers. The information is presented on each grid map. If anyone has question about the flood area, he can send emails to MSC to confirm the information. The function extend the concept of public participation from inform to consult, accepting the corrective and advisory forms of its users.

In addition to the national official website, some states or administrative areas set up their own web-resources with more detailed data. Take New York City as an example, NYC Open Data collected different types of public data generated by various New York City agencies and other City organizations available for public use. The data are presented by different machine-readable formats, such as datasets, charts, maps, documents and etc. Descriptions of the data, the collection method, and other contextual material, called metadata, are recorded and make the data sets easier to understand and use. All of them are arranged by types, category and reference city agency. Among these classifications, the maps have applied the concept of PPGIS, providing the datasets about public safety, including population, tornado, hurricane and fire disaster. The website is full of basic and advanced datasets, also possesses the function of discussion, so users can leave messages corresponding to each dataset. When citizens review the map, they can select different kinds of layers and even add new dataset on the map, then export the map. The application of PPGIS not only reaches the degree of consult but also enhances the convenience of spatial analysis. Anyone can use these datasets to participate in and improve environment by conducting research and analysis or creating applications.

Except for the official application of PPGIS with matured technology and rich data mentioned above, there are some case studies from other areas which were contributed by NGOs with different participation process. OpenStreetMap of Earthquake in Haiti was contributed by Community OpenStreetMap Haiti (COSMHA) and Humanitarian OpenStreetMap Team (HOT). Due to the serious damage from the earthquake, roads and landscapes had a radical change. To complete a functional map, the organization collected the scanned historic map and the satellite imagery from UN, GeoEye and Digital Globe which was released to the public. The largely empty and incomplete map gathered thousands of volunteers, developers, and organizers to generate the most complete map of the country of Haiti currently. They also used cell phones or devices with GPS to record the extant roads and rivers, building a new on-line map according to the current landscapes. In addition to marking roads and transit information, there was analysis of damaged buildings, displacement camps, and emergency service centers. The free and open on-line map serves more than merely a digital, web-based map for viewing the decimated region. It not only provides accurate road information for citizens calling for aid, but also make numerous contribution to the actions of rescue and recover to the response organizations and government agencies.

Vanuatu disaster response faced a similar situation with Haiti and also only reach the phase of inform, but they applied PPGIS in another method. On March 2015, cyclone Pam hit Vanuatu, left a path of destruction. The disaster response in Vanuatu was led by UNICEF Pacific, trying to provide clean water, sanitation and basic infrastructure, so the need of open data emerges. They combined existing data sets which were conducted by Akvo before the disaster happened, to help the teams to allocate their assistance accordingly. The datasets was collected from public and contained the proportion of households with no toilet, proportion household with water sealed and flush latrines, Vanuatu household size and water point functionality and etc. These combined datasets present useful information to relief teams and emergency managers to hand out in the field.

For the purpose of aiding data collections, smart phone APPs are invented and applied in emergency planning. Take Micro Mappers of Typhoon Ruby in Philippines for instance, digital humanitarian volunteers tagged images on the map by using Micro Mappers Image Clicker and rated the level of damage they saw in each location. Those that are tagged as Mild and Severe c

Table 2. Case Studies of PPGIS Application in Emergency Planning and Management

| Established Year | Application Name | Implementation Mode | Participation | Location | Organization | References |
|---|---|---|---|---|---|---|
| - | OnTheMap for Emergency Planning | Internet (Google Maps) | Inform | USA | Department of Commerce, US | http://onthemap.ces.census.gov/em/ |
| - | Flood Map Service Center | Internet (esri) | Inform Consult | USA | Federal Emergency Management Agency, US | http://msc.fema.gov/portal |
| - | NYC open data | Internet (Google Maps) | Inform Consult | New York City, USA | various agencies in New York City and other organizations | https://nycopendata.socrata.com/ |
| 2007 | Geocollaboration Software Architecture | A software architecture | Participation in decision making | Lower Swatara township and Centre Region, Dauphin County, Pennsylvania, USA | The Pennsylvania State University | Schafer, W. A., Ganoe, C. H., & Carroll, J. M. (2007). Supporting community emergency management planning through a geocollaboration software architecture. Computer Supported Cooperative Work (CSCW), 16(4-5), 501-537. |
| 2010 | OpenStreetMap of Earthquake in Haiti | Internet (OpenStreetMap) | Inform | Haiti | Community OpenStreetMap Haiti (COSMHA), Humanitarian OpenStreetMap Team (HOT) | https://opensource.com/osm |
| 2013 | Micro Mappers of Typhoon Ruby | APP, Internet (OpenStreetMap) | Inform | Philippines | Standby Volunteer Task Force (SBTF) | http://irevolution.net/2013/11/11/live-crisis-map-of-disaster-damage-reported-on-social-media/ |
| 2014 2015 | Vanuatu disaster response | Internet (CartoDB) | Inform | Vanuatu | Water, Sanitation and Hygiene (WASH) sector of United Nations International Children's Emergency Fund (UNICEF) Pacific & akvo.org | http://programmes.akvoapp.org/project/2100/update/8882/# |

geocoded by members of the Standby Volunteer Task Force (SBTF). The application shows the current situation immediately and offers images to social media, applying the step of inform in public participation.

According to the aforementioned cases, PPGIS applications perform in different kinds of format but the majority only reach the degree of inform in public participation. The last case is an academic research about Geocollaboration Software Architecture conducted by The Pennsylvania State University. Through the study in Lower Swatara Township and Centre Region, the concept of community emergency management planning is exemplified, explaining how emergency planning is a community activity with local area stakeholders, resources, and threats. They held the emergency planning meetings to bring all of the emergency-related stakeholders together in the region. After setting scenarios, applying geospatial representations and providing information about infrastructure and land use, they provide a forum for the citizens and agency leaders to reflect on how to improve their coordination and communication, based on past experiences, in order to be prepared for a large-scale emergency event in the future. Later on, Geocollaboration Software Architecture was proposed, using GIS interface to generate a geospatial representation. Every individual data layers are reusable and can be combined to produce multiple representations, and linked to other online content. The software is open to everyone and the information will be transmitted to the emergency planning and management. In their demonstration of the Geocollaboration Software Architecture, it allows public participate in decision making, which reached the ideal goal. The creation of the PPGIS software is based on the opinion from possible users. However, the application still just an experiment in the academics research so far.

### *3.2 PPGIS Applications in Four Phases of Emergency Planning*

Geographic information system has played an important role in emergency planning for decades. If the concept of public participation is integrated into the technic of GIS, how will it be presented in emergency planning? Carrying on the discussion of PPGIS case studies, PPGIS application can appear in diverse forms and contributed in different phases of emergency planning, including mitigation, preparedness, response, and recovery. After case studies, we array the cases into the matrix of public participation and emergency planning. (see Table 2)

Table 3. The Case Studies Matrix of Emergency Planning and Public Participation

<table>
<tr><th>Emergency planning / Public Participation</th><th>Mitigation</th><th>Preparedness</th><th>Response</th><th>Response</th></tr>
<tr><td rowspan="3">Inform</td><td colspan="2" rowspan="3">On The Map for Emergency Planning</td><td colspan="2">Vanuatu disaster response</td></tr>
<tr><td colspan="2">OpenStreetMap of Earthquake in Haiti</td></tr>
<tr><td colspan="2">Micro Mappers of Typhoon Ruby</td></tr>
<tr><td rowspan="2">Consult</td><td colspan="2">Flood Map Service Center</td><td colspan="2" rowspan="2">Only volunteers (broad public) involved.</td></tr>
<tr><td colspan="2">NYC open data</td></tr>
<tr><td>Participation in decision making</td><td colspan="2">Geocollaboration Software Architecture</td><td colspan="2">None<br>Website<br>Website and App<br>Academic Essay</td></tr>
</table>

In most cases, PPGIS is applied in the phases of mitigation and preparedness before the disaster happens. On The Map, Flood Map Service Center and NYC open data take the internet as a surface to present the information by online interactive mapping. Sufficient data related to emergency planning are collected for public to acquire accurate information conveniently. These websites have established for a few years. Citizens can surf on them and acknowledge the information about emergency planning in their daily life. However, if the websites haven t been well-promoted, the interaction process would be passive because not every citizen obtains the passion to learn the knowledge of emergency planning initiative. Though Flood Map Service Center and NYC open data obtain the function of consultation, the usage rate and effect is still not notable.

Geocollaboration Software Architecture has an integral and mature process of applying PPGIS, beginning from awareness presentations, to staging area planning, to software conducting. The Geocollaboration Software Architecture is not just software but include a complete process with different methods of public participation. It reached the degree of participation in decision making, applying PPGIS in the phases of mitigation and preparedness of emergency planning. The software collects the advices from public in order to organize the spatial planning. Although the paper didn t mention the possibility of applying the same concept after disaster happens, the software architecture may be a great helper in the action of response and recovery as well.

Vanuatu disaster response, OpenStreetMap of Earthquake in Haiti and Micro Mappers of Typhoon Ruby are the PPGIS application after disaster happens. No matter what kind of emergency, disasters may cause the rapid destruction of landscape and physical environment. One of the important points of response is to collect the instant information. So as to control the damage and help the victims to settle down, relief workers need to arrive in the distress area immediately. The correct status about traffic, basic facility, natural resources and other needed information would contribute great favor to the agencies. Vanuatu disaster response and OpenStreetMap of Earthquake in Haiti collected data by internet and independent devices then established a functional on-line map. To take it up a notch for the convenience, Micro Mappers of Typhoon Ruby and used cell phone app to record the situation and rate the damage as Mild or Severe . The combination of cell phone and internet bring a better flexibility and convenience to building the database. When the users arrive in the distress area, they can open the GPS to record the location, even tag photos to spread out the current images. Though most victims didn t possess adequate equipment to build the dataset, volunteers from other places can be the sensors to facilitate the data collection. These cases consult the broad public in public participation without local residents.

OpenStreetMap is an openly licensed map of the world being created by volunteers using local knowledge, GPS tracks and donated sources. Its app makes use of the smart phone owners, recording the moving routine by GPS and turning the highly-used paths into roads. OpenStreetMap not only can be applied in daily life but also catastrophe. Except for the earthquake in Haiti, the system was also applied in the earthquake of Nepal. In serious unprecedented events, the maps and information that are needed for doing the groundwork at the local scale immediately after the event are often not available. (Laituri & Kodrich, 2008) So volunteers in worldwide started to draw the map on the internet according to the satellite image. This gain a great attribute to disaster response because others can know the new terrain by updating on-line map and making the rescue action become more efficient. Because of the different conducting process, the result of map would be more close to the local users and the traffic can be calculated according to the actual usage rate of each road as well.

### *3.3 PPGIS Applications in Emergency Planning and Management*

According to the case studies, present PPGIS applications are well-functioned to inform the public before disaster happens. The GIS technology is applied fully well in emergency planning in most of the developed countries. The information is provided on the websites and open to everyone. In recent years, applying PPGIS during or after disasters are more and more common. After the experiences of Indian Ocean tsunami (2004), Hurricane Katrina (2005), Haiti earthquake (2010) and etc., the on-line disaster response operation systems have improved over these years.

Most of the PPGIS applications in emergency planning and management haven t reac participation in decision making. Some websites possess the function in the phases of mitigation and preparedness but the appliance is still unformed. So far most applications consult the volunteers with proper devices but there is still no application about consulting the advices of local residents after disaster happens. However, the action of response and recovery truly need the information from victims because they are the first responders who know the best of the local situation of that time. The spatial planning should accede to their opinion because they may also be the people who will continue to live in the environment.

On the whole, the PPGIS application in emergency planning and management is lack of two-way communication. The most common form of interaction is that the public collects and provides data to managers. Then the data managers will confirm, arrange and publish the data. (Figure 3) When different people upload data in the same location but with different description, the managers need to correct the mistakes and judge the accuracy. (Chen and Ding, 2012) Afterwards, the public not only can use the information but also be the role of supervisor and corrector if the information got mistakes. Take OpenStreetMap as an example, the map is divided into grids for users to choose the area they want to edit. The grids are colored into three colors, which mean complete, verification, verify invalid, high priority and currently worked on. The users can know the integrity of the map by different colors.

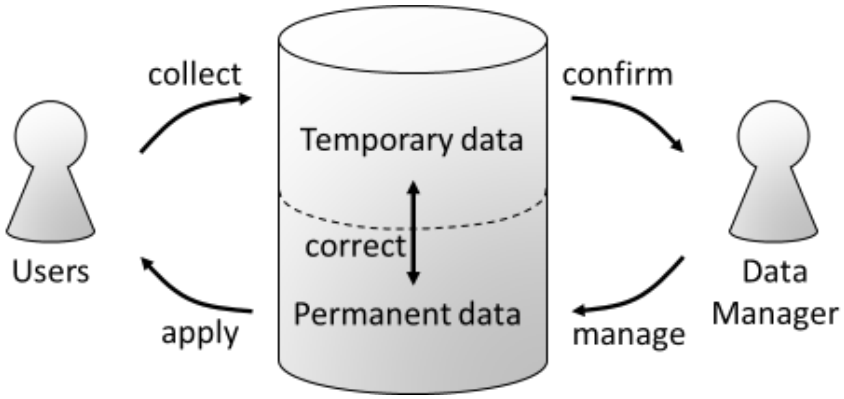


Figure 3. The process of current web-based PPGIS application
Source: Chen and Ding, 2012

The reason of lacking PPGIS application in consult and participation may be the necessary to identify users and arranging diverse data. The broad public should involve in the planning process when the emergency planning implements a spatial plan. Though the environment belongs to everyone, but if taking all the advices from everyone into consideration, it will take a long time and cost more money for sure. Therefore, identifying the participants turns important in reality, especially when governments need to select the proper public and stakeholders.

## 4 Conclusions

Emergency planning and management requires a visualization of detail information from roadways, bridges, buildings, and even parking lots of a local community. GIS is the system which is suitable to present a huge amount of information to everyone. As a result, GIS has been applied in emergency planning for decades. PPGIS applications merge the public participation into GIS, mostly functioning in spatial information collection and display. Though the current PPGIS applications are lack of consultation and decision making, the technics in information delivery is well-developed, especially in mitigation and preparedness phases. Most of the countries establish the internet GIS platform to present the spatial information. Until now, there are some GIS websites providing free platform and easy surface for public to edit information on the map or produce their own maps, like Google Map and Yahoo! Maps, allowing everyone to achieve and manage the spatial knowledge.

PPGIS can be applied in every phases of emergency planning, no matter before or after disaster happens. The applications in mitigation and preparedness usually perform the information on websites and have less interaction with public. Due to the increasing penetration of private internet device, the PPGIS technic applied in response and recovery are thriving in recent years. More and more apps are invented for emergency planning and management by government agencies (e.g. FEMA App), nonprofits (Disaster Alert, Your Plan) and donation partners (Esri ArcGIS app, HelpBridge), making the local become the sensor of various data. Some of these apps collect user general content and manage the information methodically. Some of these apps provide instant information before disaster occurs to improve the preparedness of individuals. For instance, FEMA created several GeoPlatform to provide geospatial data and analytics in support of emergency management. The GeoPlatform has seven main subjects, which are hurricanes, floods, tornadoes, winter storms, earthquakes, biohazards and man-made disaster. Users can obtain the weather report, set the disaster alarm and follow the new FEMA news. When a disaster occurs, users can also upload photos and tag them on the map through the app by GPS to spread out the image of current situation in local.

However, when most of the PPGIS applications are web-based PPGIS, the limitation of possessing devices appears. Some cases like Micro Mappers of Typhoon Ruby require using smart phone and install the specific app to collect data. In another word, the limited of devices restrict the user range. People without smart devices or computer are excluded, such as people from developing countries, elderly people and the poor. Disasters often include relocation and movement of large numbers of people to another area, the establishment of refugee camps, and the infusion of different groups of people into new areas that may not have the necessary infrastructure to support them. (Laituri and Kodrich, 2008) However, in the most of time, they are the vulnerable groups that need help and be heard in emergency planning and management. The information asymmetry and shortage situation may be a problem during the emergency planning and management. That may also be the reason why the users of PPGIS applications in response and recovery mostly are volunteers, not local residents, turning the PPGIS concept into VGI (volunteer geographic information).

To respond the unbalance problems, workshop PPGIS should be implemented in the process of PPGIS, avoid relying on the web-based PPGIS. Workshop PPGIS not only can fix the accuracy and reality during the process but also build the trust among the locals. With a coming disaster, local users can provide the updated data and opinion for spatial planning by their daily experience and observation in local through the workshops. Emergency managers can help to manage the data. The information gathered from the public will help to make the decisions more accurate at different phases of emergency planning and management. Future research should pay attention to the information gap in every related individual and group. When the technology of cell phone apps is improving rapidly, the whole public

should be considered completely as well. The concept of public participation c
PPGIS applications in emergency planning and management, continuing to bring the technology into play to decrease the damage of disasters in the coming future.

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# GEO-ICT SERVICES IN SPATIAL PLANNING: DEFINING A CONTEXTUAL FRAMEWORK FOR OPERATIONALISING PUBLIC LAND POLICY

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*Fragmented, inefficient institutional arrangements, layered on top of the weak reliability of statistical information across both the developed and developing world, and the subsequent low degree of awareness concerning the management of public property / public land rule out the effectiveness of traditional planning instruments.*

*To what extent may a Planning System incorporate geoICT (geographic Information Communication Technology) services to the mutual benefit of the planning profession, communities and policy-makers in their attempt to optimize the development processes? An open and responsive government seems more likely to encourage an aggregated view of new planning models rather than obstructing them, subsequently propelling effective public service delivery.*

*The contemporary ICT era triggers the need for masterplanning as a dynamic collaborative process / output, allowing on the integration of end-user requirements through means of a crowdsourced inflow of data, having thus modelled the pre-existing regulatory planning framework.*

*Through this paper, we aim to define a possible framework for connecting ICT models with normative and strategic planning processes at local level, starting from a comparison between different EU planning systems and how geo-data can be used in both facilitating the implementation of planning regulations and building local governance capacity.*

*Addressing the challenges and inconsistencies of spatial planning norms in relation to the real-time developments / evolutionary trends, by mapping the gaps between different planning levels, may pave the way for geoICT services as innovative binder between the co-dependencies generated at various planning scales.*

**Keywords**: Planning Systems, Digital Spatial Plans, City-Services

## 1. Introduction

Until recently, the problem of geographic analysis for public administrations was the lack of spatial data availability. The more recent over-abundance coming from various sources, such as volunteered GI activities (e.g. Wikimapia, OpenStreetMap OSM), public initiatives (e.g. Spatial Data Infrastructures SDI, Geo-portals) and private projects (e.g. Google Earth, Microsoft Virtual Earth, NASA World Wind and other 3D models), has not yet been aptly put in use, enacting planning policies in (public) land use management for a wider range of urban governance models. Weighting the costs and benefits of these policies requires both data accessibility as well as data storage capabilities to be provided by the use of geoICT.

Maps in spatial planning are often reduced to their role in evaluating the normative content of spatial plans – unlike ordinary maps, governments issue spatial plans not to describe the existing situation, but to illustrate different regulations often associated with geospatial objects (MetaLex, 2009).

Established as a policy infrastructure for sharing geospatial information in Europe in order to support Community policies (EC, 2007), the INSPIRE (Infrastructure for Spatial Information in the European Community) directive, as well as other Spatial Data Infrastructure (SDI) programmes depend on standards such as the ones provided by the Open Geospatial Consortium (OGC). As the large volumes of information collected by various public authorities become *a gold mine* for Europe's public administrations (EC, 2011), the further development of geoICT services are considered to be a factor enabling better public policy and scientific decision making, while also producing significant benefits to society as a whole (Stoter et al, 2011).

However, around the world there are significant differences in the way SDI is explained. On the one hand, in the USA the focus is on re-engineering projects, duplicate data reduction, data sharing promotion or standards and metadata revision, while in Africa SDI is used just as a decision-support tool in enhancing sustainable development, social and economic transformation or environmental conservation (Navarra, 2010). As national SDI initiatives also include the existence of a national government policy for SDI (e.g.: in Romania, the efforts of the National Cadastre and Real Estate Publicity Agency – ANCPI), with different institutional arrangements in acquiring and providing spatial information (Crompvoets et al, 2006), it is often difficult to evaluate these initiatives through the use of measurable variables.

Consequently, the aim of this article is to identify to what extent may a Planning System incorporate geoICT services to the mutual benefit of the planning profession, communities and policy-makers in their search for optimized development processes. Besides explaining the state-of-the-art in using geoICT services in spatial planning, the article presents initiatives from the Netherlands, Italy and Romania in an attempt to identify common paths that can be taken in the creation of a contextual, geoICT driven framework in operationalising public land policy.

## 2. Background

GeoICT is the end result of the combination between geographic (or spatial, geologic, geodetic, geometric, etc.) information and Information and Communication Technology (ICT), increasing the availability and accessibility of government's services by improving general planning, coordination and cooperation (Akingbade et al, 2009). As highlighted by Navarra (2010), geoICT can be perceived from three perspectives: urban and regional economics, 'techno/legal/managerial' perspective and GIS sciences perspective.

Table 1. Perspectives in defining geoICT services

| **Urban and Regional Economics**' perspective | **'Techno/Legal/Managerial'** perspective | **GIS Sciences**' perspective |
|---|---|---|
| - **public good**, used to discipline the spatial structure of the urban economics, 'optimizing' the spatial distribution of natural, economic and social activities. | - **standardisable**, formal and quantitative way, not necessarily mediating spatial knowledge, in its attempt of making space controllable and measurable. | - contingent, informal, qualitative and prone to manipulation by humans, displaying diverse values and interests. |

The first perspective analyses the provision of geoICT by achieving maximum possible output from a given set of inputs (Worthington and Dollery, 2000), as spatial and economic data define financial and strategy decisions in state governance. This concentrates upon the spatial management of cities as an administrative unit for state governance, covering for regional and urban spatial policies (transportation infrastructure, bio-diversity, local taxation), managing urban change / regeneration (rising / declining areas) and steering land use policy to act as blueprint for population behavior and development.

The succesful applicability of geoICT services in public sector governance requires the existence of comprehensive evaluation methods (DeLone and Mclean, 1992), taking into account not only the overall benefits, but also the societal and economic impacts, the latter including operational efficiency and effectiveness, as well as program efectiveness (Clapp et al, 1989).

The supply of general information is critically different from the support of real planning processes, as encountered in a survey by Campagna and Deplano (2006) on GI provision within public administration in Italian websites presenting mixed impacts on the effectiveness of geoICT to support spatial planning and decision making processes. The various forms (tourism, location of government services, online planning) were not consistently addressed, failing to provide substance to the actual planning domain.

Another example in supporting this theory is reflected in the analysis deployed by Karikari et. al. (2005) concerning the application of GIS for land administration in Ghana, finding that nearly all cadastral and land registration systems focused on record management rather than information exploitation. No GIS was used for analytical purposes by the Lands Commission Secretariat in Accra - the leading agency on land administration - but only for static map displays, leading, in turn, to limited research attention in terms of the societal benefit of resorting to dedicated geoICT services.

In the case of the Netherlands, Koomen and Groen (2004) studied the current and expected development on supply (agriculture) and demand (urbanization) side and then discussed government intervention. To this instance, STEPP - a GIS-based Strategic Tool for integrating Environmental aspects in Planning Procedures - was found to stimulate the exchange of relevant information among various stakeholders including decision-makers, providing means of navigation to explore planning scenario alternatives, thus aiding the less-equipped actors to be able to perceive land use change for achieving a more participatory process of governance and decision-making. As we will see further, an added value of such service provision will be addressed by the Legal Atlas (MetaLex standard) incorporating the legislative part of land use management.

The operational level of service delivery based on inputs (such as geo-data, geo-information and monetary resources) is directly linked to the effectiveness of the programmes using geoICT to provide such services, resulting, in turn, into a quicker decision-making process. Another aspect is the value of geo-information and how this is actually used as input for the delivery of public services. Eventually, geoICT can contribute to the making of smaller cities more fertile grounds, by providing agglomeration benefits to firms, government services and otherwise unavailable social activities in such contexts (Navarra 2010).

According to Acharya (2009), the wise use of geoICT could be the prime instrument to support the overall objective of the envisaged Land Administration System (LAS) of the nation, admitting that adopting geoICT in land administration is a problem and a solution in itself, especially acknowledging the huge investments to be allocated for mind-set revolution.

From a Spatial Data management point of view, geoICT includes: data acquisition, data assimilation, data analysis, information extraction, decisions support and data/ information dissemination. Out of

these prospects, our current focus relies on decision-support, whilst the main issue to be addressed is the integration of various information extraction processes in the scope of providing relevant and reliable interoperable public services.

Land Administration - as defined by the UN - is the process of determining, recording and disseminating information on ownership, value and use of land when implementing land management policies, focusing on the accurate boundary survey of the land parcel and the registration of rights over that parcel, whilst Land (Use) Management perceived the land as a resource from both the environmental, as well as the economical perspective. Land Reforms come to alter the pattern of land tenure and land use in specific areas.

Identifying users with information requirements into the integration of survey records information addresses an operational model of a dedicated public-enabled land administration portal (Lee 1995). Such a tool has been defined by the International Federation of Surveyors (FIG) in the form of a database containing spatial referenced land-related data for a defined area, also covering for procedures and techniques for the semantic collection, updating, processing and distribution of data (FIG, 1995) - the Land Information Systems (LIS). Within such framework, specific software development languages and methodologies have to be addressed in order to provide for geoICT related services. The Unified Modeling Language (UML) has been rapidly perceived as a de facto standard software design language, based on its capabilities of visualising the modeling language into specifying, constructing and documenting the artefacts of a software system (Rumbaugh et al, 1999).

Also, from this perspective, geoICT services for e-land administration fundament government infrastructure, in their primary scope of recording legally recognized interests of land (ownership and use) including the technical, legal and managerial issues concerning the legal situation of defined units of land. In turn, these provisions reflect upon the real estate market, and further, handling the quantitative analysis of historical states, the continuous monitoring of comparable metrics and indices in time series can scope for the optimization of future landscape development.

Safeguarding the reliability, availability, access and use of spatial information can quantify for the societal objectives of geoICT services, developing new social and organizational capacity, whilst ensuring a high degree of awareness within modern governments, which need to address a highly efficient management of land use in retrieving significant value out of the land. Under such auspices, a possibility to seamlessly handle spatial data contained in each administrative unit can be considered, assuming that the political and economic frameworks remain constant not changing over time, in clear antagonistic view with the GIS sciences' perspective. According to Georgiadou (2009), the environment to use and apply geoICT relies on the provision of rules, legally prescribed in influential text (such as regulations, policies, principles and declarations).

The following sections will provide an insight into the planning system structure of three EU-countries the Netherlands, Italy and Romania with the aim of connecting this structure to the possible use of geoICT in support of daily government operations. The highly connected world, in which international key-players emerge in the geoICT sector in the context of globalisation, requires an increased awareness on innovative trends and possible technology transfers that can be used for designing new provisions in the aid of planning processes.

## 3. Planning System Analysis

Table 1 Administrative levels in The Netherlands, Italy and Romania

| EU | THE NETHERLANDS | ITALY | ROMANIA | |
|---|---|---|---|---|
| **Central Government** (-al system) | State level (unitary,centralised decentralisation ) | State level (regional, centrally rooted) | State level (unitary, highly centralised) | |
| NUTS1 Macro-Regions | - | - | 4 | no legal / administrative statute |
| NUTS2 Regions | 12 Provinces | 21 Regions (*Regioni*) | 8 | |
| NUTS3 Micro-Regions | 12 COROP regions | 107 Provinces (*Provincie*) | 41 Counties Bucharest (+1) | |
| LAU1 (NUTS4) | inter-communal level (joint approaches) | | | |
| LAU2 (NUTS5) | 443 Communes (*Gemeenten*) | 8101 Communes (*Comuni*) | 103 Cities, 217 Towns, 2856 Communes, 6 Sectors (Capital) | |

*3.1. Netherlands*

The main responsible body, at national scale, is the former Directorate-General of Spatial Policy inside the **VROM** (the Ministry of Housing, Spatial Planning and the Environment, since 2010, the Ministry for Infrastructure and Environment, **I & M**), which became a weaker form after the recent reform in e.g. relation to coordinating central government funding, under the name of the **National Spatial Planning Agency**.

The **National Spatial Strategy** (Nota Ruimte, 2005), formerly based on the Fifth National Policy Document on Spatial Planning and the Second National Structure Plan for the Rural Areas, has is radically rescaled and reformed the Dutch Spatial Planning approach, from the imposin stage towards promoting developments . It is characterised by less detailed r the central government, fewer barriers and greater latitude for other levels of government, members of the public and market parties, in order to promote more effective local land use policies; still, besides entrusting the lower hierarchical levels of governance with such responsibilities, a clear lack of national comprehensibility is to be faced as downturn of these new provisions.

Only in the case of major infrastructure projects, energy supply and city-regions development, the Central Government takes responsibility: within each envisioned area (i.e. complex nation-wide spatial issues in the N and S wings of the Randstad the highly urbanised western part of the Netherlands in the country s Green Heart and in S-E Brabant.), the Cabinet is producing a programme that bring together the principal issues and couples them to investments by local governments and private sector parties.

One central theme inside the implementing agenda of the National Spatial Strategy the basis for developing spatial policy is the integral development of supra-local areas, which must be developed through development planning , thus development-oriented instead of plan-led. In support of approach, improving decision-making on projects relies also on measures such as the integration of permits etc.

Under the new **Dutch Spatial Planning Act** (Wet ruimtelijke ordening **Wro**, 2008) the province can include a vision for a regional area development project in a structure vision. This is a policy-oriented document and thus not legally binding upon municipalities. If the province wants to issue binding regulation, the Act provides for a competence to establish generally applicable land-use regulations which municipalities must translate into local land-use plans. But the exclusion of certain land uses is more likely to follow (for example, building in areas of outstanding ecological value) than the stimulation of a certain sort of land use, as is the case in an area development project. (Spaans, 2007)

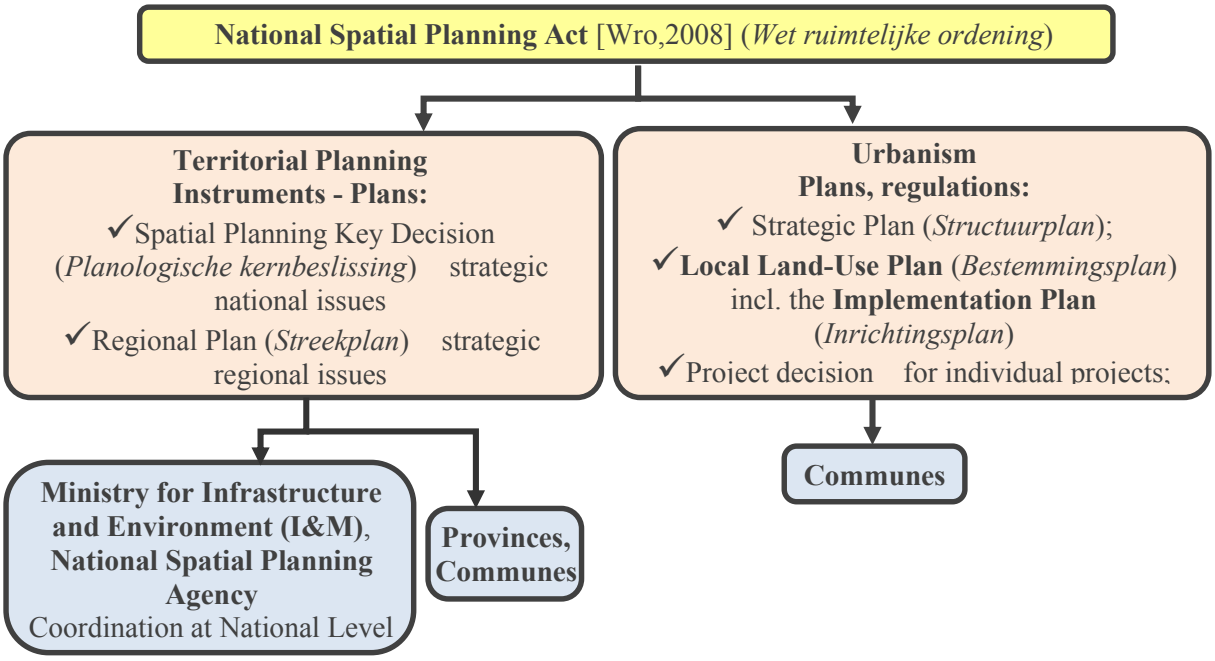


Fig. 2 Planning System in The Netherlands: main legislation, system of plans, administrative competences

The Act defines a partly mandatory set of plans (Fig. 2) specific for each hierarchical level, including the possibility to make exempt of, in some situations. Elements of each plan can be binding on lower authorities. **The land-use plan** (*bestemmingsplan*) **is the only plan that is legally binding** on citizens through the regulation of land use and prescriptions related to land use. This comes with an integrated **implementation plan** (*inrichtingsplan*). A building permit can only be granted if the proposal conforms to the land use and building prescriptions in the land-use plan. (Spaans, 2007) Besides this, local authorities can also formulate a **project decision** for individual projects. Such a plan is less comprehensive, but also legally binding. Upper levels can counterargue through means of **intervention procedures**. Still, such mechanisms are seldom used, due to time-consuming considerations. The secret of successful planning is in extensive intra-governmental negotiation and consultation, entrusting the lower-level apparatus in proceeding with their local issues. As such, the provinces do not have the competence to determine land use regulations on their own. They do provide directions - through i.e. the **regional plan** (*streekplan*) - and approve **local land-use plans** (*bestemmingsplan*), an often simultaneously combined approach. Their influence on local spatial policy is made through **verification**; through **notice of change**, undesirable land use changes can be opposed, yet usually avoided in practice due to again bureaucratic constraints.

By Wro, **the government is bound to make available all spatial plans in digital format through means of the RO-Online portal**. These are displayed as one image to allow the broad perception upon all re/developments of a specific area at once.

Related legislation provides considerations also to the geo-spatialisation processes, such as the alignment with SDI provisions and geo-spatial infrastructure standards. GIDEON, the National Spatial Data Infrastructure (NSDI) adoption was considered through the Geo-Information Geo-Information Council (*GI-beraad*) as an advisory Council of VROM, and the National Mapping Agency (Cadastre). The 2 embodiments addresed were the Space for Geo-Information (RGI) between 2004 2009 and the Geonovum since 2007, the latter as an established knowledge centre for geo-standards and geo-architecture in e-governance. The use of the Standards by municipalities, provinces and the central government itself is enforced by law in a separate governmental Regulation, for which the imposed standards are appended to. Furthermore, the innovation program space for Geo-Information , with the scope to improve the Dutch SDI, made **the framework mandatory for all projects carried out**. This was released in June 2006 as a dynamic document, extendable and improvable in time.

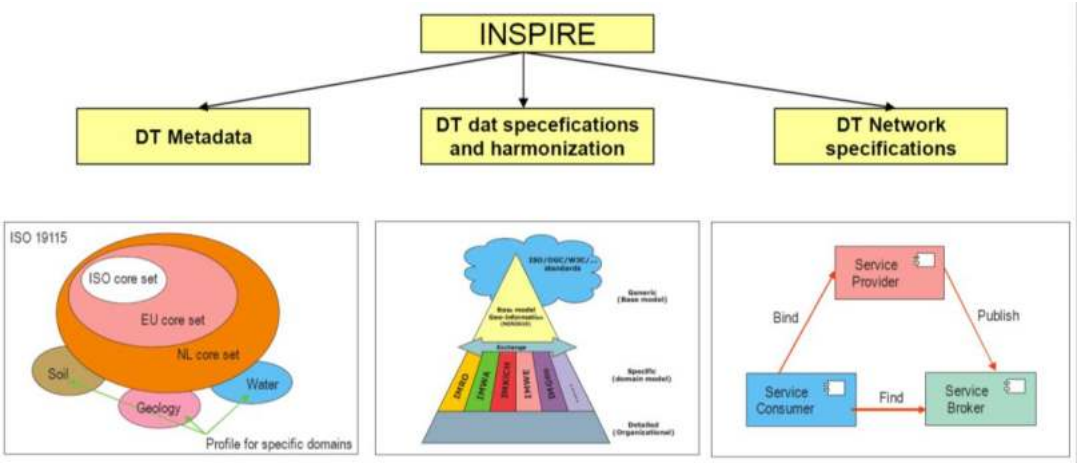


Fig. 3 Standardisation according to EU expectations e.g. INSPIRE (Bulens, J., Vullings, W., Crompvoets, J., Reuvers, M., 2007)

Other ICT relevant initiatives are few **Public Services on the map**, the **National Georegistry** and the number of central government SDI integrated initiatives, such as the **National Geo Data Infrastructure for Disaster and Emergency response management: GDI R&C** (*Rampen & Crisis*) since 2009, the EduGIS project, in which **geoinformation and GIS tools from different sources are made available for educational purposes** (www.edugis.nl) and even e-gov initiatives beyond borders, such as the **joint program X-border-GDI** with running examples including **Spatial planning, Water management, Nature and Tourism, Traffic and Disaster management** (e.g. the Geo viewer for animal disease, the Tourism project eRIGG providing hiking maps, etc. http://www.x-border-gdi.org/en/index.html)

Although only few experiences in applying the Dutch standards in the different profiles are registered, it is expected that it will result in time in an increase in operability in exchanging information over different domains.

*3.2. Italy*

The territorial fragmentation and lack of coordination between the various planning instruments have been in the past probably one of the biggest obstacles to be faced by the Italian planning profession,

since any action planned could have been extended only within the legal framework of the plan (usually municipal), and also since the effects of the intervention, with the advent of the latest regulations, have regulated the planning profession that attempted to harmonize the classification of the planning instruments, in order to set up an address for all the municipalities that fall in a given area and, overall, to regional level between the individual provinces. (Salzano, 2004)

Law 1150 of 17 August 1942 is still the fundamental law concerning urbanism, in a regulatory framework suffocated by an overlapping of norms not always of an exclusively urban planning character, which have modified but not substituted the previous ones. the need o been constantly postponed since its first considerations back in the 60s. The main planning responsibles are the national government (and in particular the Ministry of Public Works) and the municipalities.

All settlements included in the lists which the Ministry of Public Works is required to train and upgrade, are obliged to do the **PRG** (*Piano Regolatore Generale*), the General Regulatory Master Plan (Fig. 4). Settlements that do not come with PRG must still adopt a **Building Code**, which is more than the minimum of regulation of transformations, and that contains a cartographic attachment called "**Manufacturing program**" (**Pdf**). The PRG is implemented, according to the law, or for direct intervention (planning permission, building permit today), or - for certain areas or parts - by means of a "**detailed plan of implementation**" (**PPE**). The detailed plan is extended to a part of the township, and precise for it the rules provided for in PRG-level detail. It can come to indicate the plannimetric outlines and the elevation of individual buildings (*planovolumetrico*). The **territorial plan of coordination PTCP** has force indefinitely. The municipalities whose territory is included in whole or in part within a territorial plan of coordination PTCP, are required to conform to this the relevant municipal plan.

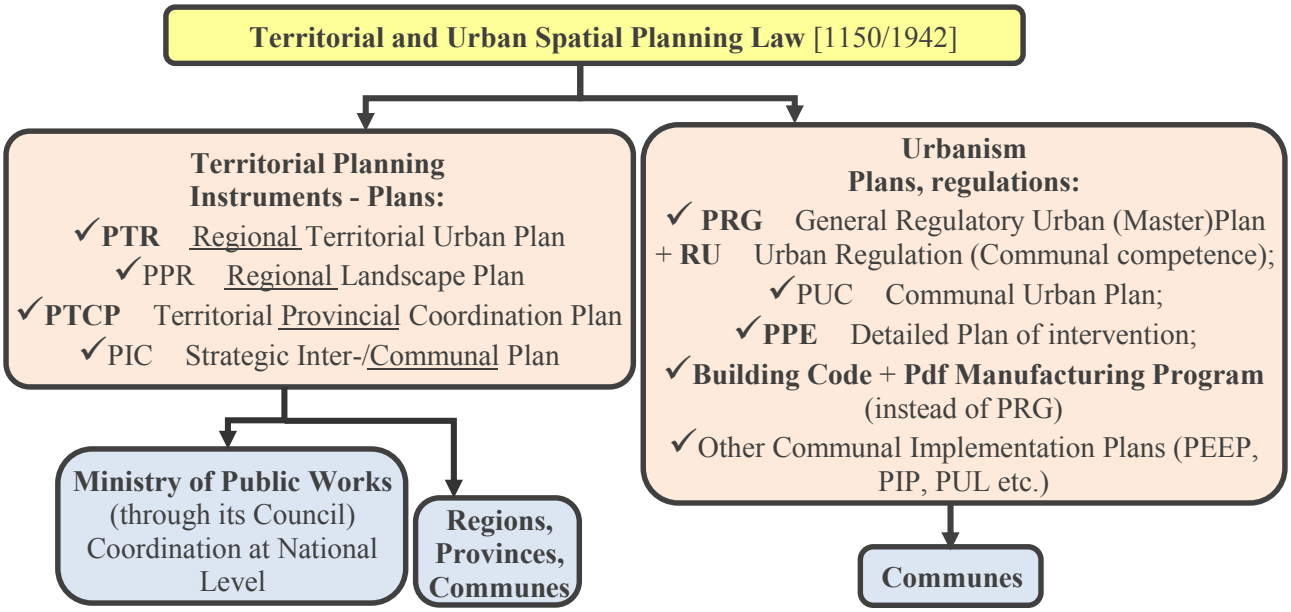


Fig. 4 Planning System in Italy: main legislation, system of plans, administrative competences

The Italian Communes have a central role in the Italian territorial planning processes, by outreaching the possibility of taking initiative and responsibility when coming to territorial planning. Other hierarchically superior entities have only a stimulating role, of guidance and control. The Communes in Italy are a highly variegated reality, with dimensions ranging from 2.5 million inhabitants in Rome to at most 100 inhabitants. This implies the fact that the Communes have absolutely diverse technical

structures and capacities. Some of them, which managed to publicize online their regulatory plans, such as the public oriented service towards the citizens comprising the community, have solved the planning informatisation, but when confronted with the problem of data model provision, even under a pragmatic approach, was generally perceived as scarcely generalizable.

*3.3. Romania*

Romania still suffers from *a rather widespread reluctance to accept planning as a democratic discipline, mainly because of its strong tradition during socialist times* (Florescu and Mitrea, 2015). After 4 decades of communist regime, characterized by an excessive centralization of the state and a planned economic regime, with an inherited taste for realising fixed general urban plans from the inter-war period, planning in Romania is still undergoing alignment in scope of assuring a greater transparency of planning processes and easing the involvement of local communities and other stakeholders. The current administrative competences for planning are established in Romania by the Law for Urban and Territorial Planning (no. 350/2001, with its subsequent modifications).

There are two main areas where planning activities take place without it being a subject of the national planning law. The first one is the environmental legislation, which stipulates the necessity to realize Management Plans for certain types of natural protected areas, containing provisions regarding land use. The second one is the regional development area, where certain plans are made at regional level (Regional Development Plans PDR) or even at local level (Integrated Urban Development Plans PIDU) in order to motivate the use of structural funds for different priority projects.

Territorial Plans (PATN national level, PATZ regional and sub-regional level, PATJ county level), the General Urban Plan (PUG) and specific Zonal Urban Plans (like the ones for central areas and protected built areas) are initiated by a competent administrative authority and are afterwards drafted by a designer/consultant which is attested by the Romanian Registry of Urban Planners (RUR - http://www.rur.ro/). The selection of the consultant is subject to public procurement regulations. For the other Zonal Urban Plans (PUZ) and for all Detailed Urban Plans (PUD), the command is issued by a private party who can choose to work with any designer attested by the Romanian Registry of Urban Planners.

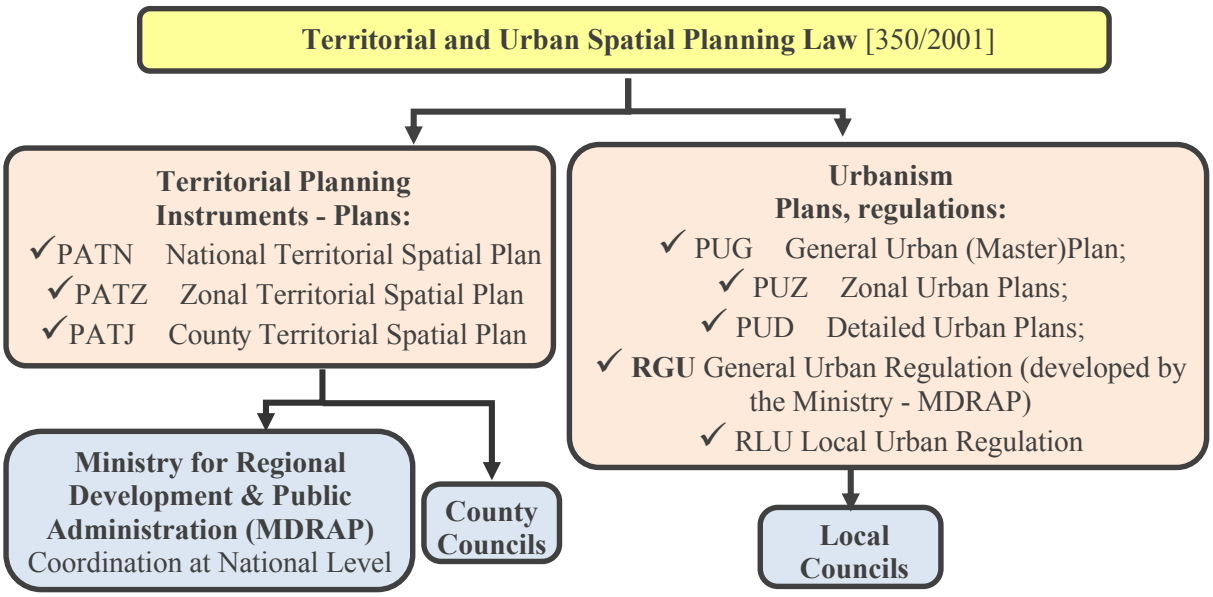

Fig. 7 Planning System in Romania: main legislation, system of plans, administrative competences

The enforcing of all plan provisions is assured through the release of Urban Planning Certificates, overseen by the Chief Architects at local level. Furthermore, the application of these provisions is supervised by the State Building Inspectorate and County Chief Architects.

The application of the planning system in practice in Romania suffers from certain legislative gaps that haven t been covered yet by the successive changes in the planning legislation. Elements regarding the operationalization of different law provisions remain unclear, but it is also worthy to note the lack of correlation between legislative provisions in different domains, especially concerning property rights (Ian i, 2008). Moreover, planning becomes more and more associated with the ab structural funds (Florescu and Mitrea, 2015), which eventually determines a submission of the national planning system to EU- level guidelines, often ignoring the need to focus on urgent local issues such as demographic decline or de-industrialised areas.

Furthermore, an analysis of policies and planning documentations in post-communist Romania highglights the territory s excessive fragmentation at all levels. This fragmented k territory, also caused by a lack of integrated data collection and analysis system, determines a lower impact of planning interventions (Groza, 2009). In this context, although there are some breakthroughs in using GeoICT services to support planning processes (Section 4.1), there is currently a lack of correlation between the planning sector and the ICT sector, with the latter only seen as a tool for decision support in some planning areas.

## 4. GeoICT services in support of planning processes

*3.1. Netherlands*

In the case of the Netherlands, IMRO is set as a compulsory standard since 2006 by the Dutch Ministry of Spatial Planning and Environment, for the definition of all land use types. This had been addressed in accordance with the GEMET thesaurus (General Multilingual Environmental Thesaurus coming in the form of a SKOS vocabulary http://www.eionet.europa.eu/gemet), covering for 40 themes of relevance to all levels of government (Hopkins et al. 2003)

An example of geoICT service is the **3D Pilot NL CityGML ADE IMGeo 2.0** a national 3D standard set up by the NSDI ExCo - Geonovum together with the Dutch Kadaster, the Netherlands Geodetic Commission and the Dutch Ministry of Infrastructure and Environment, under an ongoing national programme reaching multiple targets: harmonising the semantics of various representation of classes, attributes, code lists etc.; reaching an agreement on profiles and versions of interface standards such as the OGC Web Map Service (WMS) and Web Feature Service (WFS); coordinating reference systems, image formats, etc. in order to improve interoperability.

Related to public land management, 3D Pilot NL presents its added value covering for 3D cadastre - e.g. describing the properties owned in high rise condominium developments and integrated planning and management of underground and aboveground municipal assets. The integration of surface and subsurface data, the 3D virtual spatial planning environments (e.g. calculating soil volumes of planned tunnels), along with the recording of properties located above and below each other covering for the 3D cadastre, plus a 4D change detection are some of the use cases addressed through this initiative in its attempt to provide solutions within the spatial planning professions. (Trakas et al. 2012)

The 3D Pilot NL shares a dependency on open access to a rich infrastructure of 3D data provision and services. Such model advanced the use of geoICT services to be addressed by the planning community wherever European governments - national, sub-national or local - choose to promote such use. As ICT advances, such best practices of institutional team building and enhanced working policies need to be embedded in nation-wide incentives. (Trakas et al. 2012)

Another best practice example is the **Legal ATLAS**: a new type of corroborated service, in which legal provisions are aligned with the spatial mapping of land use regulations. Working in the form of an internet portal, the Legal ATLAS combines existing technology for disclosing legal texts with GIS. (Quote) Its main asset is the fact that it provides a map-based *normative reasoning* by checking the consistency of two sets of spatial norms for example if a zoning plan at city level fits the overall zoning plan of the province or whether a particular plan is allowed at a specific location.

*3.2. Italy*

The **Urban-GIS** project initiated as a mosaique of communal urban planning instruments (addressed at local scale) by Lazio Region - Sistema Informativo Territoriale Regionale SITR Area inside the Regional Directorate for Territory, Urban Planning, Mobility and Waste Management - with the primary scope of creating an information system compatible with the Territorial Data Infrastructure (IDT) at Regional level. (Merola, 2014)

Urban-GIS is a GIS tool thought for the harmonisation of all existing urban planning instruments enforced at regional level, with the purpose of creating a single framework alltogether. The purpose of this initiative concerns the multiuse of a facilitated and accessible consultation for all information related to urban plans. An unified legend will ensure the comprehensibility of various destinations provided by the planning instruments enforced. The project is defined in synergy with the other territorial entities (Provinces and Communes), beyond the data provisions of related competence, which consent for continuous updates within the acknowledged framework. This geoICT service performs an efficient monitoring of the current state-of-the-art in Lazio regional planning. In a first phase, the platform will run for internal utility between the sectorial operators and main providers. Afterwards, all citizens will be invited to use the regional Geoportal and provide further considerations towards the utility in consulting planning instruments. For future developments, Urban-GIS considers the insertion of specific protocols in terms of real-time (4D) provisions of wider and more reliable platform dissemination, as long as the continuous upkeeping in terms of data updating is ensured. (Merola, 2014)

**NEWPLAN** an award-winning geoICT service tackling the disparities at geospatial scale within the planning domain presents the concept of Paperless Urban Planning based on geospatial technologies targeting Workflow Management, while getting the civil society involved as co-designer. NEWPLAN started as a geoICT service based on GIS designed by Trilogis for the Autonomous Province of Bolzano, aiming to aid the central level of the territorial government, merging the urban plans of each municipality onto the provisions of the province, in line with the levels of the planning system addressed (Conti, 2013).

The problem faced by such service was the inconsistency and discrepancies inside the Italian Planning System, when trying to export its use for the neighboring Province of Trento, characterized by different land use policies.

The **Plan4All** project concerned the interoperability and the harmonisation of spatial data in scope of territorial planning. It addressed the synthesis of existing standards at the moment of implementation (2010 - 2013), the metadata profiling for territorial planning, shared data models and the harmonisation

process, relying on a database of existing best practices in Europe at regional and communal levels, taking into consideration also ongoing research initiatives at the moment of implementation, covering for the 7 themes addressed by INSPIRE.

One of the first international workshops (held in Rome in 2010) addressing these issues has managed to consolidate dialogues with the professional orders (architects', planners', landscapers', e cultural associations (i.e. INU, the Italian National Institute of Urbanism) and other interested institutions interested by these topics, evidencing the difficulty in reaching a common dialogue / language between various approaches and cultures in need of interaction. Matters of particular interest in the project focused on: (Vico et al. 2010).
1. Harmonised Data concerning Regional Laws
2. Operativity concerning various Scales and various Types of Plans

All in all, the Plan4All workshop concluded that a Territorial Coordination Plan (PTCP) would clearly establish the role of the Province and the contribution to its main tasks (e.g. provisions of the Communal Structural Plan would be addressed by provisions of the Regional Structural Plan through means of the Provincial Territorial Coordination Plan). In ensuring this, a Compatibility Plan would be consisted as a mosaique of Communal Plans. As such, with time, the Province will properly confront the hierarchical harmonisation and normalisation of the plans at various levels (vertical). To achieve this, a "telescopic" data model and an unified legend (shared dictionary) for addressing geographical objects and norms at various cartographic levels and scales have been defined and tested. The primary scope is to favor data fluxes through various hierarchical levels, whilst ensuring the preservation of certain autonomy at communal level and the integrated management of additional information of specific interests, in an extendable and exportable model (Vico et al. 2010).

The peculiarity (and the difficulty) of the Italian situation resides in the existence of 20 different Urban Laws, which are directly derived from a single national legislative node, albeit oriented in similar directions, giving form to a fragmentation of processes, procedures and cultures which render in a highly complex mode the way towards achieving data interoperability in the same national context. The necessity in proceeding towards the data and metadata models common in Europe must therefore firstly overcome the non-indifferent obstacle of the national level.

*3.3. Romania*

According to the provisions of Law no. 350/2001 with its subsequent modification, all urban planning documentations have to be realized in digital or analogic format, on topographical support which is revised using satellite images or terrain measurements. The electronic form of a documentation is very important as the law clearly stipulates the need to send the electronic data to the National Agency of Cadastre in order for it to be published on the INSPIRE Geoportal. The ICT impact is even greater on the dissemination of plans, as many local authorities publish intermediary forms of the plans on their websites for the public consultation procedures. In recent years, the development of GIS technologies has led many local authorities to command the realization of urban plans in GIS format, in order to help their management of spatial planning data (permit procedures etc.) after the ratification of the plan.

Breakthroughs in the use of geoICT services in Romania have often been funded through structural funds, including pre-accession instruments. An example is the two Geoportals (one for the discovery of spatial information at national level and the other granting access to geo-products) set upt by the Romanian National Agency for Cadastre and Land Registration (ANCPI) and the Duttch Kadaster International within the PHARE Twinning project *Geodetic network modernization and spatial data inftastructure framework* (Bulens et al, 2009).

GeoICT web services have developed at local level due to the involvement of local public administrations (Bucharest, Galati, Oradea), while at national level they were determined by the need to implement EU Directives, with the creation of portals in domain such as agriculture, biodiversity or water management (Ioni et al, 2006).

The lack of an integrated data collection platform to support planning processes is currently being addressed through the Territorial Observatory project (started April 2015). A subject widely addressed by planning professionals for years, the functioning of such a system has two main objectives: providing support to planning policy, by improving the knowledge on territorial reality and its dynamic, and dissemination of territorial information to the population in order to increase participation in implementing and sustaining planning and development policies (Groza, 2009).

The new Dynamic Master Plan for Bucharest, the capital city s General Urban Plan which is c being drafted, is an innovative example of using geoICT in an urban planning documentation from the analysis of the existing situation (using an integrated, city and metropolitan level database) to the drafting of a set of dynamic planning regulations (Florescu, 2012). The new Dynamic Master Plan aims, through the use of geoICT, to reduce spatial disparities by pursuing flexible mixes of amenities, thus pro-actively engaging with the changing structure of the city (Florescu and Mitrea, 2015).

All in all, while there is progress made in the domain of geoICT services supporting planning processes in Romania, this progress is only partially sustained at central level, with no framework being provided on the use of geospatial data in territorial and urban plans. Moreover, except from some central government initiatives including initiatives of the National Cadastre Agency -, most advances in geoICT service provision in planning have been the result of local initiatives from city halls.

## 5. Conclusions

Using plans requires the representation of the content of plans in relation to possible decisions so as to choose among alternatives knowing the expected consequences (Hopkins et al, 2003). Consequently, there is a need for decisions about urban development to be based on both analytical models of urban development processes and forecasting (Hopkins et al, 2003). While the authors above consider the implementation of a Planning Markup Language as a step in the standardisation of geoICT services supporting spatial planning, the differences highlighted in this article between different planning systems and cultures underline the difficulty of such an attempt.

A further challenge comes in tackling overlapping jurisdiction from different government bodies empowering a multitude of different regulations applied. The Metalex developers (2009) reached the conclusion that land use regulations issued by adjoining municipalities categorised differently, determine the land use `regime' in these municipalities as uncomparable. More than anything else in the world, in this era of globalisation governed by commerce and consumerism, planning also needs to go global. The interoperability of planning instruments and services is the process to be ensured so that all the related professions are able to address similar issues in similar ways. A unified *legend*, together with aligning part of the planning processes addressed by different administrations, should ensure a better outcome in the 4D attempt on Smart Planning Processes.

As we have seen in the case of NEWPLAN, systems must be designed in such a way that once a service model is available it can be reused and/or cope with ever ever-changing requirements of the geo-information users, thus ensuring some degree of sustainability and resilience (Acharya 2009). Basic provisions, such as the ownership concerning Land Administration rights held based on statutory law,

common law, customary traditions and informal use, should be a value input clearly addressed by geoICT services such as Legal ATLAS' MetaLEX (NL) or NEWPLAN (IT). Although constant efforts are made in geo-technology diverse applications, the absence of the actual reliance of harmonized planning systems in which to make use of these (see the case of NEWPLAN) is clearly noticed; hence, a further question to be addressed is: How would a Smart Planning System look like be defined?

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# FLOOD RECOVERY IN THE SOCIAL MEDIA ERA.AN ASSESSMENT OF SOCIAL NETWORK INFORMATION IN BUILDING SOCIAL FLOOD RESILIENCE

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Keywords: *Resilience*, *Social Media*, *Urban Flood*

## Abstract

*In the face of the social technological revolution the sharing of information has led cities evolving towards always more complex systems. Social media have indeed a strong capacity of connecting people, and several urban self-organized initiatives have been emerging from virtual communities impacting on urban activities organisation. By enhancing communication opportunities, social media could be taken into account to improve urban planning decision making processes, and so they can also play a significant role in flood risk management.*
*In dealing with urban flooding it is important to know how quickly and efficiently a city can recover from a flood event. Before the event, social media can help increasing awareness by enabling wider risk communication. During and after the calamity, creating easily accessible information sharing platforms, social media are able to increase the disaster recovery capacity of the affected urban system, as a sort of social recovery rate.*
*Many sets of indicators have been proposed in the literature analysing the social perspective of flood vulnerability and urban resilience. Nevertheless, in these it is not easy to include the impact of using social media coping with floods.*
*In June 2013 during the flood of the river Elbe, citizens of Dresden (Germany) created a spontaneous Facebook network to require offer aids and assistance.*
*Building on the experience, we propose a methodological approach aiming at evaluating how the use of social media can affect social flood resilience, and in this way assessing the effectively social function of the media.*

## 1. Introduction

In the today s society, social media -such as blogs, Twitter, Facebook-and other information portals have emerged as dominant communication mechanisms, overcoming any other previous technology.
Sharing information, forming connection, communicate interesting contents (Chui et al., 2012), these media mainly operate in a similar way to traditional human community and they are transforming dynamics, behaviours, and structures of our society (Kaewkitipong et al., 2012). Hence, they are significantly becoming powerful drivers in the current social technological transition. These digital platforms are effective and efficient communication channels (Palen et al., 2009), they are affecting how citizens communicate, collaborate, and coordinate with each other. Social media have indeed the capacity of linking individuals beyond geographical proximity, increasing their ability of instant connectivity for ideas, knowledge and information sharing. Moreover, these communications can be mostly realized with a minimum or non-existing cost. As such, social media can be also considered as a powerful democratization force (Lai and Turban, 2008).
In the last few years social media have been used more and more during disasters, and in particular during extreme flood events. Being powerful instruments for immediate communications and easily accessible information, social media represent a key tool during all disaster phases, from risk communication to recovery. In other words, they have been used as an instrument to increase the

ability of a system to cope and to reorganise itself after the perturbations generated by the flood, hence the system resilience. The need of quantitatively measure such system property has led over the time to several indicators able to reproduce and evaluate social resilience main parameters. However, few works have been found regarding the role played by new digital communication ways during flood disasters.

This paper presents an analysis of the use of Facebook during extreme flood events. Established in February 2004, Facebook currently has more than 800 million users globally, it is available in 70 languages and is growing at around 150% per year. It is a web-based social networking service, allowing registered users the ability to connect and share contents with friends, family and co-workers.

An assessment of the use of Facebook regarding to flood events is presented using an explorative case study. In this paper we try to give an answer to the question: how the use of Facebook can influence the social resilience of a urban system affected by an extreme flood event? The paper is organised as follow: in section 2 the conceptual framework is illustrated; a review of the concept of social resilience and the state of the art of the literature about social media and flood resilience is presented. In section 3 the method and outcomes of the case study analysis are described and discussed. In section 4 the conclusions are described.

## 2. Conceptual framework

### 2.1 Social flood resilience

Natural calamities, such as floods, earthquakes and hurricanes, often affect the stability of urban settlements. Cities are defined as complex adaptive system, where physical elements, activities and city users interact one with others in different ways. As complex adaptive systems, cities are not linear cause-and-effect systems, but rather dynamic systems: Variables, the different system s compone and the elements of each component (e.g. people, businesses, governments), are constantly interacting and changing, for better or worse, in response to each other, creating non- linear feedback loops that either promote or deplete the energy upon which their futures depend(Sanders, 2008).This complexity makes extremely difficult the evaluation of the effects critical events could have on the urban system. In fact, both extreme natural events and disasters linked to human activities (e.g. nuclear incidents), can affect a urban system in several respects, determining significant changes in its structure and organisation. Focusing on flood events in urban areas, presence of flooded areas can result into a wide range of related impacts: infrastructural damages, urban functionalities and space perception. A multi-sectorial approach, to be applied to a well defined study area, is needed to achieve an adequately complete overview of flood effects and city's behaviour once affected (Esposito and Di Pinto, 2014).

Social dynamics influence all flood disaster phases, from risk perception and preparedness up to recovery. Social phenomena represent inherent communities' features or long term dynamics, often slowly developing. This circumstance leads to consider that flood duration - on the basis of flood related impacts- actually lasts beyond the time period during which urban areas are flooded.

Even not claiming to fully analyse related impacts, it needs to be asserted that calamitous events affect cities not only in their physical elements (causing damages in infrastructures or buildings), but also in the social structure made up by city users and human activities.

As adaptive systems, cities have the ability to adapt to changes and learn f co-evolve, self-organize and give rise to emergent patterns (Frantzeskaki, 2011). Hence, they show the ability to cope with a perturbation by properly re-organising themselves. UNISDR (2009, p. 24)

defines resilience as *the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions*. In the field of urban flood the term resilience is often also to define the capacity of the urban system to absorb disturbances and perform changes without fundamentally altering its functional structure (Walker et al., 2004). Reflecting the several components that set up a urban system, resilience can be evaluated from different perspectives: social and economic resilience (Cutter et al., 2010; Boon et al.,2012; Adger, 2000); infrastructural resilience (de Bruijin, 2004; Cutter et al., 2010); ecological resilience (Holling, 1973, Adger, 2000).Social resilience is closely linked to community and social vulnerability concepts. Social vulnerability can be defined as a characteristic of a person or group in terms of their capacity to anticipate, cope with, resist, and recover from the impact of a natural hazard (Blaikie et al., 2014). As such, it is one aspect of what is meant with the term community resilience, which has been described previously starting from analysing four primary sets of networked resources: economic development; social capital; information and communication; community competence(Norris et al., 2008).

Social resilience can be assessed on different levels of analysis: individuals, human communities, larger societies (Norris et al., 2008). Even remaining unchanged the main general features of social resilience concept, a certain reference level of analysis has to be set. The literature presents several works aimed at analyse the multiple factors which contribute to a proper assessment of social structure reorganisation after an event. Table 1 reports a framework of some significant variables proposed in the literature as indicators of resilience and recovery ability in relation to natural disasters.

| Author(s) | Indicator |
|---|---|
| Tapsell et al. (2002) | "Social Flood Vulnerability Index"<br>(SFVI, based on different social groups and financial deprivation indicators) |
| Cutter et al. (2003) | "Social Vulnerability Index" (SoVI), based on:<br>-economy (income, rents, median house values; percentage of employers in extractive industries)<br>- demography (age, ethnicity, race)<br>- buildings and infrastructures |
| Dwyer et al. (2004) | <u>Vulnerability indicators</u><br>Age<br>Income<br>Tenure type<br>Employment<br>English language skills<br>Household type - family composition<br>Disability<br>House insurance<br>Health insurance<br>Debt/savings<br>Car ownership<br>Gender<br>Residence type<br><u>Hazard indicators</u><br>Injuries sustained<br>Damage to residence |

| | |
|---|---|
| FloodSite (2004) | Age<br>Gender<br>Employment/ Unemployment<br>Occupation<br>Educational level<br>Family/household composition<br>Nationality/ethnicity<br>Type of housing<br>Number of rooms<br>Rural/urban |
| Messner, F., Meyer, V. (2006) | "Susceptibility indicators", based on "social and economic units and systems" and "ecologic units and system" features |
| Cutter et al. (2008) | Demographics (age, race, class, gender, occupation);<br>Social networks and social embeddedness;<br>Community values-cohesion;<br>Faith-based organizations |
| Cutter et al. (2010) | Baseline Resilience Indicators for Communities (BRIC), based on social, economic, institutional, infrastructural, physical and natural characteristics and on community capital |

Table 1. Social resilience indicators

The need of evaluating social resilience has led to point out indicators as representative measures. The variety of indicators reported in technical literature reflects the effort to define and measure this broad (un-measurable) issue. The main challenges when evaluating social resilience indicators can be that there is no right and no wrong methodology. According to the need of the study, it is important to set the scale on which applying the indicators (e.g. Household, neighbourhood, community, region, nations), and choose the approach (e.g. national indices taxonomic approach , or household surv situative approach ) (Schröter et al., 2005).

### 2.2 Social media and flood resilience

A number of studies about communication and information sharing during extreme events, including floods, has been emerging in the scientific community in the last few years. The literature focuses on three main issues (Ryan, 2013): studies on agency communication (Waymer and Heath, 2007); studies on information seeking as part of a wider aim (Cohen et al., 2007; Hughes et al., 2007); and studies about the use of social media (Kaewkitipong et al., 2012; Kongthon et al., 2014; Vieweg et al., 2010). Social media, defined as internet-based applications that enable people to communicate and share resources and information, are an always increasingly used instrument to ensure communication schemes during flood events. More specifically the term *social media* is used to refer to the broadcasting strategy used by different individuals, institutions and companies to communicate with various stakeholders(Chui et al., 2012; Haegeman et al., 2012; Nielsen, 2012). Such strategies are implemented by using tools know as *social network sites* (SNSs). SNSs are *web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system*(Boyd and Ellison, 2007, p.211). SNSs have been used by billions of people all around the world (Hutton and Fosdick, 2011) for a wide variety of purposes, including personal, community, business, politics, and public affairs (Hoffman

and Novak, 2012). The use of SNSs emphasises the relations and the communication of an individual within his existing extended social network. Using hastag form of keywords in the contents published, SNSs make the shared messages searchable. As a result, SNSs become able to form online communities, networking people who share similar interests (Lai and Turban, 2008). SNSs are also being used as platforms where people talk about current environmental challenges and give environmental tips (Haider, 2012). Raising awareness around current environmental challenges, such as climate change and increasing urbanization, SNSs are also used to trigger citizens to actively participate in civil environmental activities that are immersed in the everyday life (Bakardjieva, 2009).

Providing new sources of information and rapid communications, increasing social participation and forming new networks, SNSs are also becoming a useful tool for victims, humanitarians, volunteers, and the general public to communicate during disasters, especially during extreme flood events (Kongthon et al., 2014; Starbird et al., 2010; Vieweg et al., 2010). One of the major issues in extreme flood events is the inability to know on a real time base where help is really needed. The use of SNSs as communication channel could be the answer to this need. SNSs have the characteristic of being accessible via smartphones, which makes them available also when traditional communication channels, such as radio, television but also phone calls and texts, are not able to cope with a higher amount of data processed at the same time (Bird et al., 2012).

During extreme flood events good communication schemes could play a significant role to ensure that the public will behave in a way where appropriate and effective steps to reduce and mitigate the risk are taken(Yamada et al., 2011).

An emerging trend in the emergency management literature indicates the use of SNSs as a way to help building a more resilient community. The basic concept of this tendency can be sought assuming that improvements in communications, risk awareness and preparedness can lead to an improved social resilience (Cutter, 2008). According to White (2011)community resilience should include a grassroots effort where social media is utilized in a number of ways to support the safety of the community. Dufty (2012)states that the use of social media by emergency agencies could assist in learning for disaster resilient communities . The contribution of social media to community resilience lies in the capacity of SNSs in forming the so called community of practices , defined as g share a concern or passion for something they do and learn how to do it better as they interact regularly (Wenger, 2011). According to Dufty (2012)the development of such communities of practices through SNSs helps in building a more resilient community in different ways. SNSs can help in developing social capital (e.g. networks, leadership, support systems) for disaster resilience learning communities; SNSs can be powerful instruments for informing others of the flood risks in their community, discussing and planning what is being done to manage the risks and what they can do; they can be used to provide support to people during and after the flood by communicating warnings and other information to affected communities. In this way, SNSs contribute to coordinate community response and recovery.

SNSs represent a platform to raise spontaneous networks useful in facing a disaster, disseminating information and warning messages. Furthermore, the large ease of access of these platforms makes them a powerful tool also during the recovery phase, as a collector of aid requests as well as to organise relief distribution. As a consequence, they contribute to make the distribution of support both based on the "rule of relative advantage" and inspired by the desirable "rule of relative needs". "Relative advantage" refers to the advantage which could be connected to being part of a community, having political connections and accessibility to resource; "relative needs" is more oriented to distributing support proportionately to the requests(Norris et al., 2008).

Acting *across* and *within* an affected community, these tools permit to share knowledge, information and also to receive/give psychological support. Norris et al. (2008) pointed out three social dimensions of "social capital": "sense of community", "place attachment" and "citizen participation". Structuring aids-network using SNSs improves all them and, in turn, the capacity of collectively react to disaster induced perturbations. It actually means put up a community and lean on community resilience.

## 3. Case study: the Elbe Flood in the city of Dresden. Methodology and analysis.

Between the 30th of May and the 3rd of June 2013 extreme heavy rains affected large parts of Eastern and Central Europe. The distribution of precipitations in the basin of the rivers Elbe, Moldau and Saale reached values two to three times higher than the normal average of June. The heavy rain resulted in surface runoff causing a severe flood situation. The city of Dresden was one of the flooded urban areas. With some 500.000 inhabitants, Dresden is the capital city of Saxony. The city was already flooded in 2002, when the whole city centre was invaded by the water. Different structural measures taken after the 2002 flood helped the city to better cope with the 2013 flood. Although these circumstances, the2013 flood determined significant impacts.

While the city was flooded, a spontaneous network of helpers was created using a Facebook page called *Fluthilfe Dresden*. This work aims at investigating the effectiveness of *Fluthilfe Dresden* page, aiming at estimating how it served in improving city' ability to arrange available resources in respect to the needs, and how it helped in improving the resilience of the flood affected community.

The analysis can be summarised in the following steps:

1. data collection;
2. post processing;
3. dataset elaboration.

### 3.1 Data collection

In order to collect data to be elaborated, a survey has been carried out pointing out the total number of *posts*, which represent the set of on-line published messages of *Fluthilfe Dresden* page. The dissemination of each post has been analysed on the basis of three basic Facebook functions: "*likes*", "*sharing*" and "*comments*". These functions allow Facebook users to show their support to published messages by approving the contents ("*likes*"), by posting the said messages on the own Facebook profile page ("*sharing*") or by adding comments giving reply and opinions ("*comments"*).

The page has been liked by ca. 43.000 users, who used it to ask, to provide help or to be updated about the flood. Data survey has led to observe that in the time frame from the 3rd of June to the11st of June 2013, 158 posts have been published on the page, with a total of 74652 sharing, 19602 likes and 4632 comments. The time frame has been chosen considering that it corresponds to the main operative period of the page, and it corresponds to the days the city was flooded.

A further analysis has been performed regarding the content of all published messages, distinguishing three main categories of contents: help requests, helping offers and communications. Although a wide variety of posts contents has been founded, requests and offers have been also organised depending on the typology of requested/offered resources (willingness/need to help or assist affected people as a volunteer; material aid offers or requests, e.g.: food, accommodations, blades, blankets).

The whole set of 158 post has resulted being made up by 59 help requests, 41 helping offers and 58 general communications.

Leaving aside communications, the set of offers and requests is resulted composed as follows:

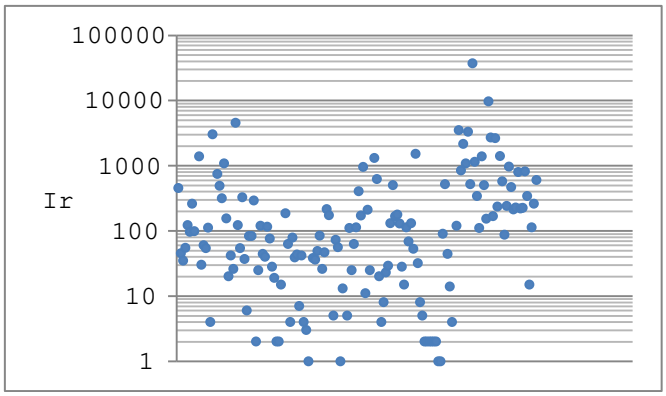
- volunteers help: requests,28.7%; offers, 22.2%;
- material needs: requests, 30.6%; offers, 18.5%

### 3.2 Post processing

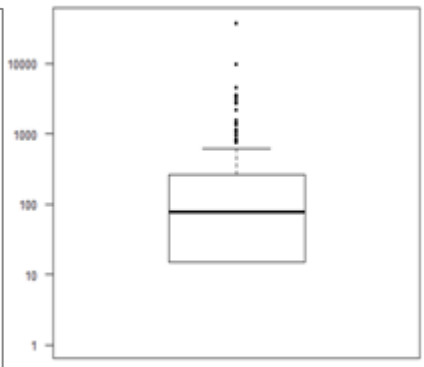
Likes, sharing and comments represent a way to virtually support, deal with and disseminate post contents. In accordance with this consideration, during post processing operations ithas been assumed that the more a post received likes, sharing, and comments, the more its contents were disseminated on line. And hence, more likely the offer/request could be satisfied.

For each post, a *response index* ($I_R$)has been defined as the sum of relative likes, sharing and comments. The $I_R$ value has been assumed as a measure of the efficacy of a certain post in terms of its spread within the Facebook users' community.

Dataset has resulted to hold both a large set of elements similar in their values and some others significantly different from the previous regarding to $I_R$ order of magnitude (Graph 1).




Graph 1.Scatter plot of "*Response index*" ($\mathbf{I_R}$) values




Graph2.Boxplot of $\mathbf{I_R}$ values in logarithmic scale

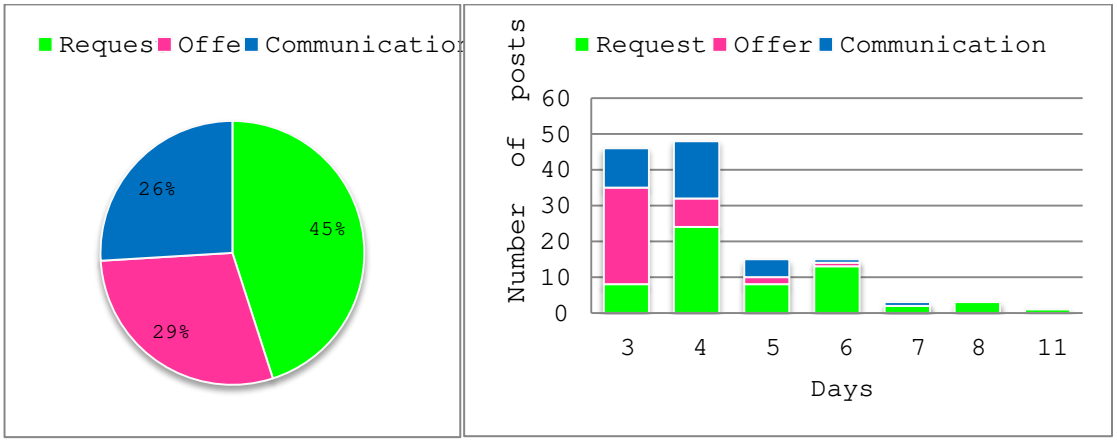
In order to substantiate the analyses, statistical based evaluations have been carried out. $I_R$ has been assumed as an observed variable and the set of its numerical value as a sample. Values dispersion has been investigated starting from quartiles, using boxplot representation. More in details, defining $q_1$ and $q_3$ respectively the first and the third quartiles, interquartile range $h$ can be obtained ($h= q_3 - q_1$). Outliers have been identified as values exceeding the range [$q_1$ -1.5 $h$; $q_3$+ 1.5 $h$] (Graph 2).

### 3.3 Data elaboration and outcomes

Once identified the outliers, they have been kept out from the reference dataset. Having pointed out 23 outliers, the original set of 158 posts has been reduced to 132 posts. The updated dataset has allowed not to taking into account outliers in all the following evaluations, ensuring an adequate significance to processed values. Main statistical moments of $I_R$ values for revised dataset have been evaluated (Table 2).

| | |
|---|---|
| Minimum value | 0 |
| Maximum value | 520 |
| Average value | 83.1 |
| Mode | 2 |
| Standard deviation | 128.2 |

Table 2. Main $I_R$ statistical moments




Graph 3.(a) Percentage of requests, offers and communication; (b) Posts by day classified in requests, offers and communications

The outliers' elimination has made the whole dataset composed by: 59 help requests, 38 helping offers and 33 general communications (table 4 and graph 3 (a)).Help requests represents a large part of the whole dataset, higher than the two comparable quantities of help offers and communications.

Further consideration can be deduced from deeply examining how posts are geographically distributed as well as within the chosen time frame.

Based on the posts' publishing date on *Fluthilfe Dresden* page, time trends have been deduced (Graph 3 (b)).Globally, the highest number of activities on the page has been registered on the 4th of June. As regards the Elbe River, the maximum water level was reached on the 6th of June. This matching shows that several factors determine the number of page users, such as: hydraulic levels and flooded zones localisation, number of affected people and their ability to be connected to Internet (as regards help requests), fame and knowledge of *Fluthilfe Dresden* page within Facebook users (as regards help offers and communications).

The distribution of these three categories through the different days is resulted to be not homogenous. On the 3rd of June the number of registered helping offers is much higher, while in the other days the number or requests is more relevant (Graph 3(b)).Help requests have resulted to be generally the most significant rate of posts' contents.

Some posts included the exact location of the concerned request, offer or communications. Thus, data collection has led to register the geographical position for the said posts. More in details, 82 posts have been geographically placed according to Dresden city districts divisions ("*Ortsamtsbereich*") (Table 3; Fig 1).

| Ortsamtsbereich | Requests | Offers | Communications |
|---|---|---|---|
| Schönfeld-Weißig | 0 | 1 | 0 |
| Radebeul | 2 | 1 | 0 |
| Leuben | 12 | 3 | 0 |
| Neustadt | 10 | 5 | 2 |
| Plauen | 1 | 1 | 0 |
| Loschwitz | 4 | 1 | 0 |
| Pieschen | 10 | 3 | 5 |
| Cossebaude | 2 | 0 | 1 |
| Altstadt | 7 | 2 | 2 |
| Freital | 1 | 1 | 0 |
| Altfranken und Gompitz | 0 | 1 | 0 |
| Cotta | 2 | 0 | 0 |
| Pirna | 0 | 1 | 0 |
| Blasewitz | 0 | 1 | 0 |
| Total value | 51 | 21 | 10 |

Table 3. Summary table on the basis of geographical available locations

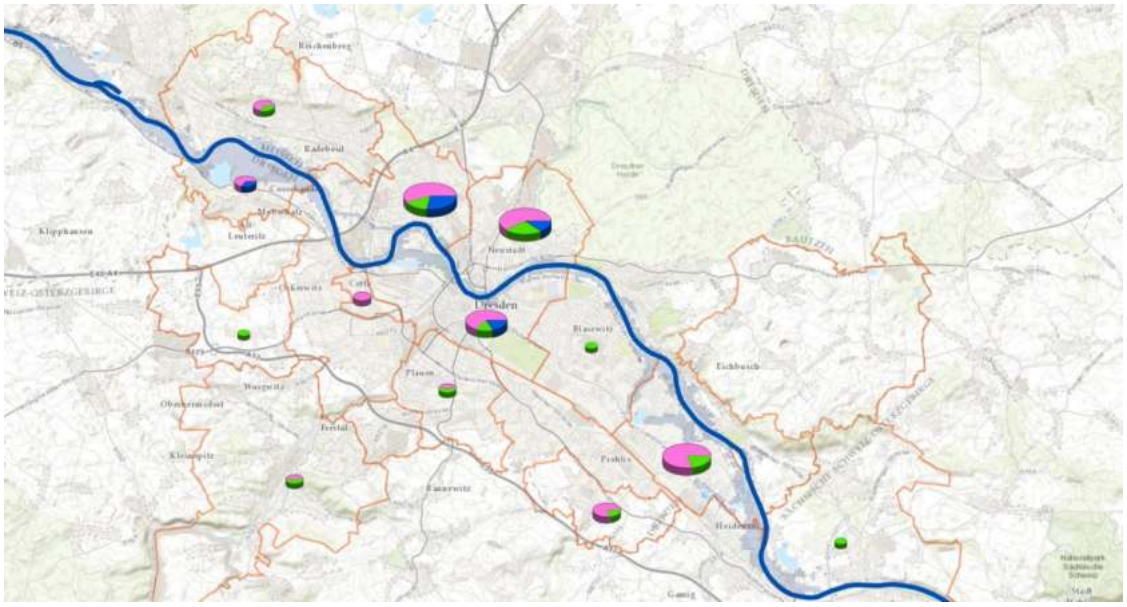



Figure 1: Thematic map (Scale: 1:150000). Dresden city districts administrative boundaries ("*Ortsamtsbereich*") (orange lines). Pie charts dimensions increasing with number of posts, representing help requests (pink), help offers (green) and communications (blue); maximum flooded area in June 2013 (light blue) based on PERILS data.

Being not possible to associate the exact place referring to all *Fluthilfe* registered posts, the cartographic representation of dataset values has resulted limited. However, data allow to point out that the webpage was especially used in the northern part of Dresden city (Pieschen and Neustadt districts). This circumstance could be related to the characteristics of this district to be mostly residential areas, easily accessible with public transport (e.g. Train station Bahnhof Neustadt and several tram stops), and to their location very close to the city centre.

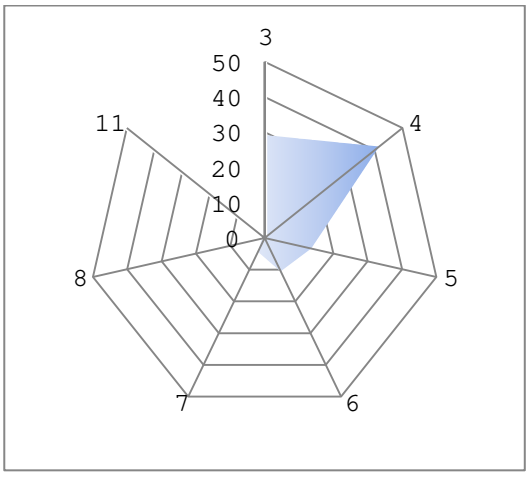
A first measure of *Fluthilfe Dresden* page efficacy can be assumed as the response index average value, equal to 83.1. Therefore, each post has resulted to be read by 83 Facebook users on average. It has to be specified that this $I_R$ average value is just an approximate estimate. Due to characteristics of dataset values, $I_R$ considers only likes, sharing and comments reported on *Fluthilfe Dresden* page, not also all Facebook users that became aware of a certain post after the latter has been shared on users' profile pages. It is clear that this observation not necessarily means that each help request or offer received 83 replies. However, $I_R$ mean value helps in highlight the high potentiality of a tool such as *Fluthilfe Dresden* page in disseminating information and needs.

The response index has been calculated for each day (Table 4). Having defined $I_R$ as indicative of the web page global efficiency, the latter results more significant in the time frame from the 3rd of June till the 5th. Registering an $I_R$ value of ca. 40 %, the 4th of June can be identified as the most page efficiency day (graph 3).

The response index has been also calculated for each of the three categories requests, offers and communications (Table 4). The most efficient posts result those classified as communications, with a $I_R$ of ca. 60%.

| | Requests | Offers | Communications | **Tot.** | **$I_R$** (%) |
|---|---|---|---|---|---|
| June, 3 | 8 | 28 | 11 | 47 | 29.2 |
| June, 4 | 24 | 8 | 16 | 48 | 41.6 |
| June, 5 | 8 | 2 | 5 | 15 | 13.6 |
| June, 6 | 13 | 1 | 1 | 15 | 10.6 |
| June, 7 | 2 | 0 | 1 | 3 | 4.3 |
| June, 8 | 3 | 0 | 0 | 3 | 0.7 |
| June, 11 | 1 | 0 | 0 | 1 | 0.0 |
| **Tot.** | 59 | 39 | 34 | | |
| **$I_R$** (%) | 26.9 | 16.5 | 56.6 | | |

Table 4. Response index per day and per post category




Graph 4. Response index (%) daily distribution

## 4. Conclusions

Besides economic losses and damage in infrastructures and buildings, flood events and related effects act as a stressor for affected people in regard to psychological and social issues. Individuals can better face a perturbation leaning on help and support that can come from the communities they are member of. Being able to create virtual communities, SNSs holds a strong potent instrument for disaster management.

This paper seeks to understand how the use of SNSs, such as Facebook, can influence the social resilience during extreme flood events. More in details, the case of *Fluthilfe Dresden* Facebook page has been deeply investigated. During 2013 Elbe River flood, this web page created a spontaneous virtual network of helpers which turned into a real and effective aids network requests, offers and disseminating useful information, *Fluthilfe Dresden* page served to coordinate aids network and to provide a better and easily accessible communication network. The page has resulted to have reached a large popularity among the Facebook users community. This fame has been in this work estimated through a survey of all published posts, and defining a "response index" as a measure of page effectiveness.

Even being an explorative case study, *Fluthilfe Dresden* page demonstrates that the creation of social virtual communities via SNSs can generate effective platforms for informa knowledge building. Both these aspects play a significant role during calamitous events. In fact, the spontaneous *Fluthilfe Dresden* aggregation of people sharing problem/needs/opportunities turned into a useful tool, serving to coordinate aids network and provide a better and easily accessible communication network. As the case of Dresden shows, it can be stated that such virtual communities, created form the spontaneous aggregation of people sharing the problem/needs, can contribute to provide support and give assistance to the real community during and after flo

These observations lead to extend the already known wide potential of SNSs, as supporting instruments for disaster management, they are able to contribute to globally improve recovery and resilience of affected communities.

Optimising use and allocation of available resources (both materials and not) and contributing to making the city system globally capable of responding to the emerging needs (acting as a community), SNSs can represent a strategic element during and after the event. *Fluthilfe Dresden* page was spontaneously created during the event recognising the considerable entity of the event and its impacts. With reference to settlements located within flood prone areas, aids networks based on SNSs could be properly arranged also before the event. Organising a web based platform able to collect help's offers -before the event- and SOS messages and requests -during and after the event- results considerable in defining community behaviour facing with the disaster.

SNSs based tools create bottom up aid networks which could integrate institutional measures. Advantages could interest all actors involved in disaster management as well as affected people: institution, organisation and bodies in the area of Civil Protection obtain a structured useful collection of "helpers" availability and their location; affected people can communicate their needs and, at the same time, receive support and help as well as real time information about the flood event and operative issues.

Improving both efficiency and efficacy of aids networks, structuring SNSs based tools help in improving community readiness to the risks they have to cope with, contributing to building flood resilience communities. This view descends from and has its roots in considering community resilience as a process to be suitably made up before the perturbation occurs, ready to be performed during emergency situation.

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# QUALITATIVE GIS AND SOCIAL JUSTICE IN THE URBAN MANAGEMENT

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Keywords: participation, GIS, social justice

## 1. Introduction

*Multiculturalism and multi-ethnicity are increasingly transforming European cities: in this complexity, making right policies to guarantee the social justice and the quality of life is really difficult.*
*More generally it s an ethical problem. Society isn t uniform, and to safeguard the multi*
*giving all the citizens (women, children, strangers, young or old people) the same rights, we must change the way of making knowledge. Planners should adopt mixed methods (quantitative and qualitative) to analyse the urban context, and also representations should include all points of view, through new mapping systems. Traditional maps could be integrated with new typologies of drawings, like mental maps or similar, to be more inclusive and more representative of the reality.*
*ICT and digital mapping systems like Geographical Information Systems (GIS) can represent a valid support for this new geographical vision: for example, touch screen devices could be used in the participatory processes to draw collective digital maps, as an interactive document for the local governments and for planners.*
*The citizens needs can be expressed with the map s language, as well as the decisions are drawn on the master plan.*
*International researches about this theme have produced some interesting experiences of qualitative GIS , forced the traditional instrument s limits, using mixed me multi-level interpretation of spatial context. In this way it s possible to bu image, influencing the spatial perception and the hypothesis of future about the urban and regional development.*

## 2. Social inclusion in the territorial analysis: a new method for a new urban democracy

Cities are evolving: in this complexity, making right policies for guarantee the social justice and the quality of life is really difficult. Consequently is necessary improve the management of a social texture composed by different cultures, questions, opinions.
It s an ethical problem (Forester, 1989; Lo Piccolo and Thomas, 2009) that determines subs consequences on the urban management, from different points of view (political, economic, social and cultural).
The traditional analysis of the urban context follows a rigid scheme: the planner observes the physical and the social aspects of the city, he analyses the urban connections and the economical-social dynamics, he finally expresses evaluations and opinions and anticipates future developments. In this way there is an unique way of knowing: the scientific point of view of the planner is the reference for the data interpretation.
However the increasing complexity of the social and cultural context of the contemporary cities needs another way to analysis and evaluation. Usually the urban policies are referred to a hypothetical person: an adult man, born in the same city where he lives, who has an average level of education (a frequent model is a person White Anglo-Saxon Protestant, WASP). The urban population are really more fragmented: there are many ages ranges, different sexual identities, different cultures, different opinions about the common services and the use of collective resources. In the city there are many rhythms, different uses of the same spaces in different times.

It s not possible to define a single point of view to represent the urban co
analysis. We need a multilevel knowledge, and an integrated system to analysis. The two-dimensional representation of the city or territory is too constrictive: there are many important elements to represent in the city map, but often they are immeasurable and we cannot compare them. This determines a representation problem: if we can t have a common s
factors, we will choose a particular and specific parameter to select references and to draw consequently the other elements. The representation of the city, and generally the management of the urban dynamics, should be more democratic and inclusive (Lo Piccolo and Picone, 2014).
In the Seventies the researchers started to introduced a critical interpretation of the scientific method to analysing: if we change the criteria of measure, we will change the results of the research. In this mutation of the scientific method s approach, especially in the human and geographical sciences related with the city, a great role has been represented by feminist critic to the theory of a universally valid knowledge, based on the principle of «eye s
2002, p.274). So we need a way to compare the different information we collect from the urban analysis, but this is very difficult because of their ontological difference (material and immaterial issues, quantitative and qualitative data). To this aim, we can utilize a mixed method, composed by qualitative and quantitative analysis, in various phases, to reach at the last a knowledge more complete.
Sara Elwood writes: «If all knowledge is partial, then incorporating multiple forms of knowledge is a fundamental practice of good science. So-called "expert knowledge" is but one of many valid forms of knowledge that may be brought to bear upon a research question, and experiential forms of knowledge be equally appropriate» (2011, p.383)
At this moment in the scientific community there is a debate about the fundaments of mixed methods: some researchers (England, 1993; Hanson and Pratt, 1995; 2003) think that is correct to conduct separately different typologies of analysis, and then express an overall assessment; others researchers (Jiang 2003; Nightingale, 2003; Knigge and Cope, 2006) think that is correct utilize a mixed method in all the phases of the research, integrating different methodologies to analysis, to achieve a complex mix of results (Elwood, 2010).
Therefore the multiplicity of the urban contexts determines the necessity of a multilevel and integrated methodology of analysis and action.

## 3. Overview of the new ICT tools: e-participation and web interactive mapping

There are various technical instruments to enhance public participation in decision making processes: surely the ICT are really a great resource in this context. In my PhD thesis I analysed some of this application: in all the cases, the main objective was to improve the communication between people and administrator, or between different social groups in the city. The communication is the most important aspect in the participatory dynamic.

### 3.1 ETM and DEMOS-plan: PARTERRE project

The PARTERRE project (Electronic Participation Tools for Spatial Planning and Territorial Development) involves the following partners: the Tuscany Region, Sector Innovation and Research in ICT, University of Palermo and the company Urban Adventure Ltd in Italy; the company TuTech Innovation GmbH and the city of Hamburg in Germany; the University of Applied Sciences in Turku in Finland; the University of Ulster in the United Kingdom; the Community Council of Voroklini in Cyprus (Table 1).This project has been developed as part of the two strategic tools of interaction between users and information exchange, DEMOS-Plan (product from TuTech Innovation GmbH of Hamburg) and ETM-Electronic Town Meeting (produced by Urban Adventure Ltd), then applied to local circumstances.

| PROJECT | TYPOLOGY | ACTORS | |
|---|---|---|---|
| PARTERRE | **European project**, focused on territorial management by ICT and innovative technologies. | ITALY | ✓ Regione Toscana;<br>✓ University of Palermo<br>✓ Avventura Urbana s.r.l. |
| | | GERMANY | ✓ TuTech Innovation GmbH<br>✓ City State of Hamburg. |
| | | FINLAND | ✓ Turku University of Applied Sciences |
| | | UNITED KINGDOM | ✓ Ulster University |
| | | CYPRUS | ✓ Voroklini Community<br>✓ ANETEL society |

Table 1. PARTERRE project

In the website of PARTERRE project we can read:
«The PARTERRE Consortium a public/private partnership consists of a balanced mix of academia, public authorities, SMEs and NGOs covering the breadth of Europe and is designed to provide a wide range of expertise on business, technical, government and scientific issues related to spatial planning, environmental assessment, Living Labs, public administration and eParticipation topics» (http://www.parterre-project.eu/?consortium=1).
In this context, the partners used two technologies to realize public participation related to discussion about local territorial topics: the Electronic Town Meeting (ETM) and DemosPlan (DP).
I would focus the discussion on ETM, because it s the typology of technology th project s context, by the University of Palermo. It was an experiences totally for many reasons, especially for the building of a new social, collective image of the city (Lynch, 1960; Memoli, 2005).
«With the Electronic Town Meeting, not only are the citizens directly involved in a public decision making process, but the issues discussed are also prioritized in a way that is immediately visible to policy designers. Recently, the Regional Government of Tuscany has imported the Electronic Town Meeting into its own policy practice, by organizing about ten initiatives of such a kind since 2006.
Over time, this has led to the creation of an Open Source, web-based application for collective discussion and voting support, which is integrated with a streaming server to host the participants who may be localised remotely» (http://www.parterre-project.eu/?electronic_town_meeting=1).
ETM (Garramone and Aicardi, 2011) it s a good method to simplify the discussions, voting and to synthesize results: often people discussions are difficult to moderat compare different points of view. Another benefit of ETM is the feedback of the users: the participants to the project feel themselves like a really authorities.
Registering their opinions and their point of view is important to confer them the appropriate importance: they really see that the computerized system has registered their votes and their ideas, and consequently this fact produces confidence in the stately institutions, because it s verified t the govern hears the people s voice.
This is the most important result of the project that we can observe in Palermo: people was proud to collaborate with University and with Europe, and consequently the participation was successfully.
In Palermo there were a lot of other topics related to the project: one of these is that the location of the ETM was in a historical building, the Maredolce s Castle, that is a symbol part of the city. Maredolce s Castle is in a neighbourhood of Palermo called Brancacci famous for its high level of criminality and for the neglect by public administration for a very long

time: people who live there would a change, a new image of their city, and the historical buildings are for they a possibility to show their cultural and artistic value.
So, the PARTERRE project was for Palermo an opportunity to recuperate values and identity, to dialogue with people, to improve civic knowledge, to confer meaning and importance to the citizen participation. In the 2014 the city s major, Leoluca Orlando, organized a cycle constituted by five different ET Meetings, to improve citizen awareness about city and territory.

3.2 Participated webGIS: local platforms

In the UK there are many experimentations about participation tools, especially about participative GIS. There are local platforms, or also regional or national instruments to m requests, the territorial needs and the political choices.
One significant example is made by Neighbourhood Initiatives Foundation (http://www.planningforreal.org.uk/) for the master plan of Slaithwaite, and is a tool to engage the community in local problems of environmental planning. In this case the base map was made by technicians in scale 1: 1000, and exhibited at the event planning group organized on the day of the local fair, crowded with many participants (Carver et al., 2001; Kingston et al., 2000).
The use of a computerized system rather than paper for the map display has allowed, among other things, to control the visibility of comments (made accessible only to the conclusion of the discussion, so as to stimulate the participants ideas and original proposals and creative ), and the recording of many more contributions at the same time of similar experiences of Planning for Real.
The end result of this process, managed through the web platform (available at: http://www.ppgis.manchester.ac.uk/projects/.html), was a new plan of the village that brings together most of the comments from people who live and work in that community.
With this project we have tried to minimize the conflict and to reach decisions acceptable to most stakeholders through consensus-building approaches based on the achievement, by an increasingly large component of the urban population, of a better understanding of spatial implications of the decision making process.
On the web platform http://www.ppgis.manchester.ac.uk/projects.html are several projects of this type, such as IntelCities, project funded by the European Community (Kingston, 2007), designed to support and make more open and transparent debate on the theme of space.
This type of system is based on flexible technology of Web Map Server of the Open Geospatial Consortium (OGC), from which provide the base maps (basemap), and supports a variety of spatial data formats including ESRI shapefiles and various raster data formats such as GeoTIFF. It also has functions for the inclusion of additional layers to show geospatial data and significant information relating to territorial policy, which means that you can deploy and change, albeit limited, depending on the particular local needs.

## 4. Participative GIS: structure, working and potential applications

The focus of my PhD thesis is the participative GIS: the question of mixed methods could be applied to the technical tool, as a GIS, so we can imagine a GIS more flexible and more adapt to describe the social and cultural component of the urban contest.
Actually there are many experimental trials: the researchers are trying to overcome the conflict between the mathematical and quantitative structure of the traditional GIS and the necessity to represent also qualitative social data.
Critical GIS and qualitative GIS are possible (Cope and Elwood, 2009; Knigge and Cope, 2006; Kwan, 2002).
The first trials to realize a GIS more inclusive in relation of qualitative information have produced a multimedia GIS: the map was conceived as an hypertext, linked to photographs, mental maps and other materials. However in this way we have the qualitative information like a later addition, not as a constitutive part of the system.
We need a GIS really inclusive in its structural paradigm, from its original design and not only in the final utilize.

The idea of a participative GIS (also defined Public Participation GIS, PPGIS) is based on the assumption that the data stored in the GIS and spatial analysis tools can give the different groups in society, including various minorities (ethnic, gender), the ability to claim their rights in decision making and planning in the redistribution of land resources.
The idea of a PPGIS could be interpreted as a reaction to the perception of GIS technology as a top-down, technocratic and not inclusive of the interests of social groups involved in decision-making.
The PPGIS is thus basically designed as a tool that works with a bottom-up mechanism, a facilitated technology, strongly characterized in a social sense. It allows users to combine their knowledge, ideas, perceptions, informal and qualitative data, with the official (but not most important) knowledge of the territory about the physical description. So we can have a different interpretation of the value and of the effective location of the geographical elements, because they aren t related only to the coordinates stored in the GIS database, but also to referencing system.
The idea of a PPGIS is not very recent, dating back to the Nineties, but since then it has expanded considerably and now it constitutes a large and consistent stream of research in the field of geographic information science (Nyerges, et al., 2011, p.350). The fundamental concept is to provide a cartography "deformable" depending on the variables you want to highlight, identifying a display adapted to each typology of variable. In this way the representation of the physical context will not be realized in the same way as that of quantitative variables of social type, and will be different from the mapping of qualitative information.
The process is reminiscent of the old system of overlapping transparencies of McHarg, in which the scholar, aware of the impossibility of reducing to the same numerical scale evaluation different typologies of variables (economical, historical, artistic, environmental, social), attempted to operate comparing, on an experimental basis, restricting himself to draw backgrounds that showed where that variable was more or less expressed, then overlaying transparencies between them, identifying where there was a higher concentration of "value" in a broad sense and where it was this minimum (McHarg, 1989).
Although the experiments in this direction are made for about 20 years, the literature on the evaluation of the real effects of PPGIS in planning practice is not very la fundamental to define exactly what we mean when we talk about PPGIS.
The concept of GIS in public participation is based on the assumption that the geographic data stored in GIS and spatial analysis tools can give to different social groups the ability to represent their interests in the democratic decision-making about the distribution of land resources.
In my PhD thesis I have applied this methodology to an urban context in the city of Palermo, comparing the theoretical issues whit the practical context.

## 5. Case of study: mapping the neighborhood

5.1 The urban context: two neighborhoods in comparison

I have chosen two neighborhood really different for many aspects: Arenella-Vergine Maria and Albergheria.
The first context, Arenella-Vergine Maria, is an urban district delimitated from an administrative point of view: it s the district number 25 in the city of Palermo. It s a periphera the sea, and the social composition of the population are quite homogeneous, because there are almost exclusively native residents. The condition of the buildings is between good and mediocre, there are only a few examples of evident degradation.
There are some monumental and significant urban buildings, like the Rotoli s ancient tuna fisheries, a decommissioned chemical industry; there are also natural references like the sea and the beach. These elements are really important at the neighborhood scale.
There are some services, but not enough in relation to the normative standards.
The second context, Albergheria, isn t corresponding to an administrative district, but part of the historical centre of Palermo. It s a neighborhood in a social sens

the population is very heterogeneous: there are many foreigners, especially people who came from Africa and Asia. There are also European immigrates, principally they come from East-Europe, but Indians, Nigerians, Kenyans, Ivorians and North Africans are the majority.
The condition of the buildings is really bad, and the public spaces are utilized by residents like an extension of their own houses: there aren t really a public control, so thi considered a social shade zone .
The aim of the experiment was analyse the sense of identity and belonging of the inhabitants in this two urban contexts, and mapping it to express, through the figurative language, the social perception of these places. At the last, the experimental process was repeated using the master plan of these two urban districts, showing the real points of interest for the urban communities, and reading in correspondence the master plan previsions for that places.

5.2 Two different representing methods: manual stretched or automatic deformed GIS maps

To represent the social perception of the urban context, I have utilized the software ArcGIS and I have applied two different methods: a manual stretching of the basemap, in order to a mental map of the same urban area, and then an automatic deformation of the map, using the tool Cartogram.
In the first case, I have realized both an urbanistic analysis of the urban context (size of the area, building typologies, services distribution, and more) and a social analysi methods like interviews and mental maps (Corbetta, 1999). Then, I have synthetized all the mental maps and the other information in a general mental map, and I have transformed it in a digital map using a common scanner. Finally, I have uploaded it in the GIS software and I stretched the original basemap (raster format) trying to match the points of reference (monumental buildings, landmarks) of the basemap with the same points drawn on the mental map. I have used the tool georeferencing to this aim: in this way I have changed not only the position of each p also the whole referencing system. I have passed from a quantitative referencing system to a qualitative elements frame. The use of the georeferencing tool is theoretically significant in this operation (fig.1).

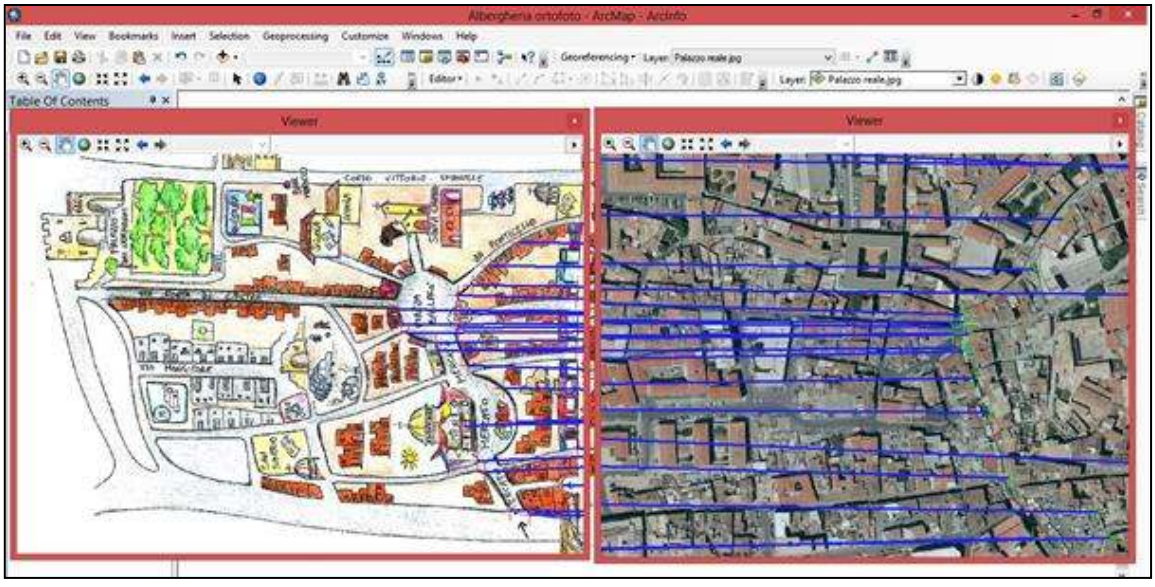


Figure 1. Georeferencing of basemap in relation to corresponding mental map.

The second method has a different process: after a qualitative survey about the social context, I have categorized the information in a table, and I have determined a value scale based on the frequency of the people s answers about the public spaces, the neighborhoo landmarks and more. After this operation, I have attributed a numeric value to each important

spatial element of the urban area, and I have selected a vectorial basemap (a shapefile of the urban area), because the applicative tool works changing the areal size of polygons.
Cartogram has been realized by two researchers, Gastner and Newman (U.S.A substantially an algorithm finalised to resize the States of the world in relation to their population and not for their areal extension, like in the fig.2

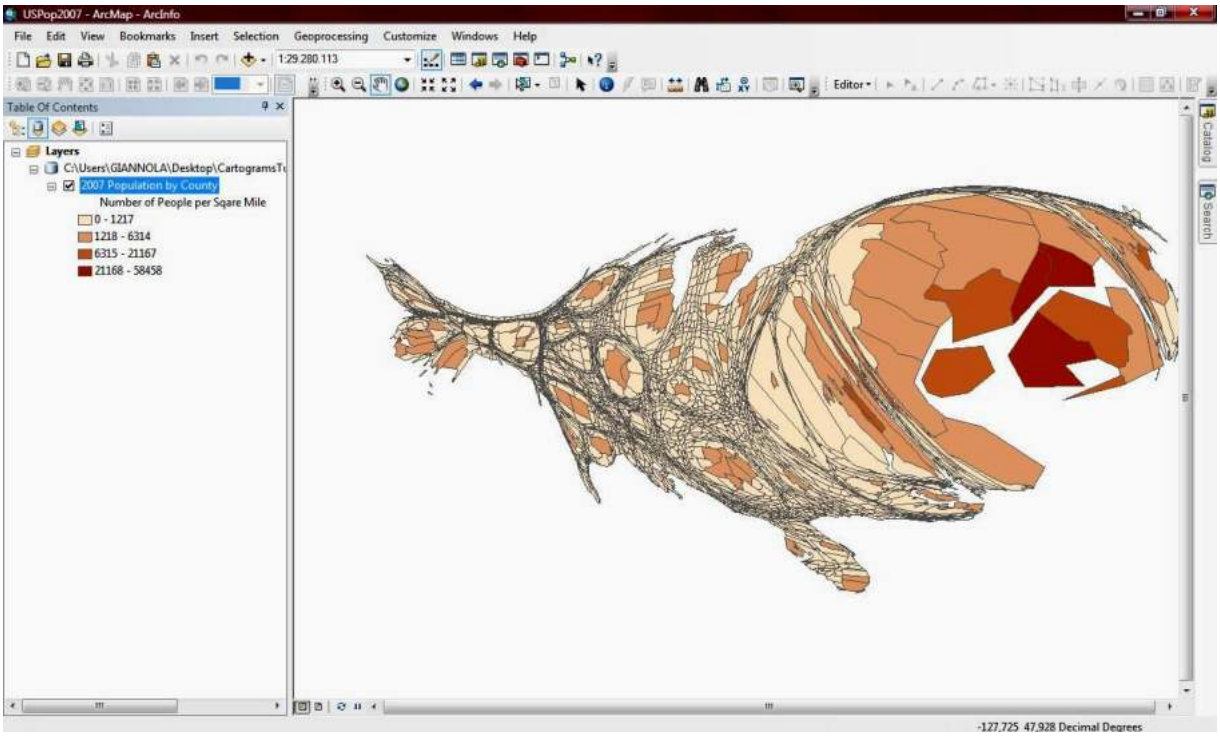


Figure 2. Demonstrative example of the Gastner and Newman s method

Cartogram it is designed to represent an approach to geography less physical and more social. It intends to enhance in the representation not the size of the territories in terms of area but the amount of people living there. In this way, as the data is still considered quantitative, scholars software authors have drawn attention to the "human" component of the territories studied, emphasizing that the presence of the inhabitants is the key element of a territory (Nyerges et al., 2011). It is certainly a big step forward in the relationship between geography, technical planning and human sciences, but it is still a partial point of view: for example, it environmental ecosystem in which man lives at the same level of importance of the amount of people who focus in it.
The definition of the fundamental criteria of a similar system of representation is therefore subject to the particular type of analysis to perform, and certainly a system of representation does not exclude the other, in view of a study as much as possible inclusive and integrated.
Comparing the two methods, the first (manual stretching) result more adapt to represent our objective: the automatic method presents some technical difficulties to appli projected for very extended geographical areas and not for little subdivisions of an urban district. Another problem is the necessity to force the qualitative information to became a quantitative datum: the choice of the value scale in that case present some critical points about the propriety of the method.

5.3 Results

At the end of the GIS processing the map has been deformed: the points of interest are more extended, some areas are stretched and some others are compressed.

This deformation has been applied in the same way to the master plan: the extension of some specific urban areas corresponds to a more deep perception of them by the inhabitants. In the fig.3 we can observe the deformation of a crossroad, called Ballarò square : in the perception it s really a large squares, because is a very important point of referer residents know.

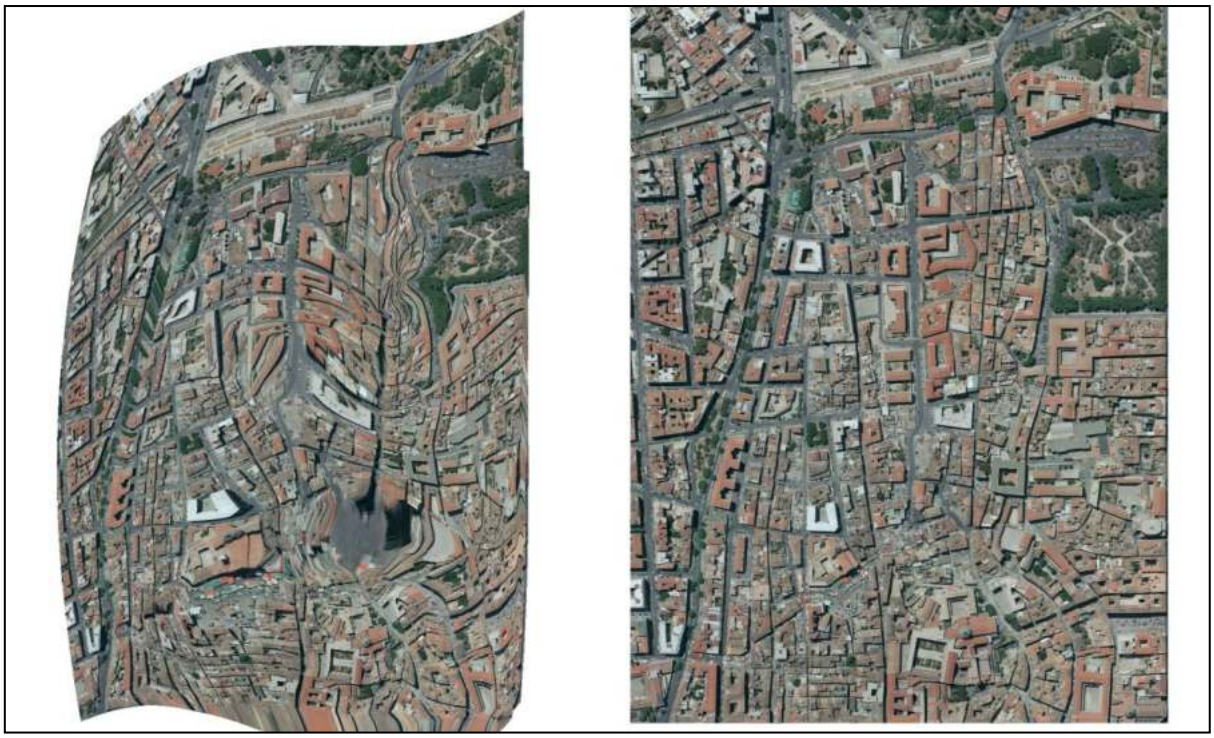

Figure 3. Comparison between deformed and original map of the Albergheria neighborhood.

The importance of this place derives from the fact that it is a place crossed to go through several directions, in each of which there is a reason of interest. To the left (south) there is the market of Ballarò; always in the same direction, the central train station; down (to the east) there is Via Maqueda, a very important commercial urban axis, where the services are focused on education (Faculty of Law) and the city administration (Piazza Pretoria and the Town hall of Palermo); on the right (north) we find the accommodation centre of Santa Chiara, and subsequently Piazza Bologni, until you get to the axis of Corso Vittorio Emanuele. Finally, on the top of the map (west) there is the Norman Palace, the police station, the public garden of Villa Bonanno, the connection to the railway station Orleans, the University campus. We can define the square Ballarò as a centralizing element of movement. We can see clearly the non-linear paths, except for a few main lines. We can note the high building density of the Porta di Castro street, where the buildings seem to thicken, and the spaciousness of via Mongitore (both in East-West direction), which also ends in a square just before Ballarò square (really it s now an empty space used for parking, where children play football and where they accumulate bags of uncollected rubbish).
In the masterplan, this focus point corresponds to a lack of planning. The master plan for this area in fact provides only that the streets are driveways: it doesn t consider pedestrians, is not given the right importance of this point as a landmark and as a sign of identity and recognition of the district.

## 6. Conclusions

The integration between the computerized map and the intuitive representation of mental map, and then the integration between the quantitative data and the qualitative ones, has determined a hybrid representation, a computerized map "deformed", expressive of both points of view.
The product obtained is an example of what could be accomplished by applying a mixed methodology of analysis (Elwood, 2010; 2011).
The fact that the deformation is made through georeferencing assumes an important meaning: working in this way we force the system of geographical coordinates in which are located the points we have moved manually on the map. We use a command that has already another specific function, that belongs to a logical system completely different. The points have a position in the space, as well as physical objects have a shape, but there is a big difference between the position detected by instruments and the position that is perceived by the people, and it s the same for the shape. The GIS is an instrument designed to represent and calculate points and coordinates referred to a geometric grid recognized globally as valid, so doesn t have tools that allow to track other types of representation.
We can interpret the use of geo-referencing as a tool for "deny" the officially recognized position of each point in different ways: it s a forcing, denoting the need to further d the instrument; it s also an innovation to enable GIS to contain more cartographic records, to make GIS a multidimensional instrument; Finally, it s a provocation, finalis the ethical question related to the choice of a single system of representation and to the consequent exclusion of other systems that could instead be recognized as equally valid.
The disciplines involved in this work are at least three: Planning, Social Sciences and Geomatic. For the Social sciences the topic more interesting to develop is the social justice, which concerns the democratic nature of the instruments of government (in this territorial governance), the transparency of operations carried out (the accessibility of web platforms encourages the social control on policies that are implemented by decision makers) and the inclusion of all elements of society in the territorial context. The social justice encourages a dialogue, moderates the conflicting, takes account of the needs, expectations, collective wishes without discrimination or marginalization. To do this it is clear that the digital tools are not enough, because Internet and ICT have limitations related C: however PPGIS can be a valuable support to the participatory process, properly used and integrated with the traditional practices of participation offline.

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# TECHNOLOGY, INFORMATION AND ACTORS: CONNECTING THE SMART CITY PARTS

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## Abstract:

*Smart City is the sum of the parts that involve technologies, information and actors. Information and Communication Technologies (ICTs) are given great prominence, but are only one of the parties to the smart cities development (non-exclusive, nor the most relevant). The information needs to be dynamic, available, with quality and organized, to be better offered and demanded. Finally, the actors, whether government, private or civil society are extremely importance for the realization of smart city.*

*ICTs are essential, but the investment in human capital must occur for the smart city success. Perhaps this is a gap in the literature (and in practice) of smart cities, since, for the actor to act properly, this should be trained and encouraged in the actors relationship, with trust a unpreparedness, ignorance and discouraging of the actors involved can lead to a negative scenario of disinterest, discontinuity and, finally, make every project "smart city" lose its ability to integrate, to act and to contribute.*

*The aim of this study is to analyze the smart cities as the result of the group from different parts: technology, information and actors, because, above all, the latter is often "placed in the background" when talking about smart city.*

**Keywords:** smart city, technology, actors.

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## 1) Introduction

Characterized as complex, heterogeneous, with predominantly unplanned infrastructure and, in general, with short-term public policies, cities attended the worsening of their urban problems in mobility, pollution and public safety, resulting in reduced quality of life.

The challenges in urbe involve both governments, who are under pressure by increasing demands (versus tight budgets), as the society, that need to learn to live in the fiercest urban areas, whose public services are far from adequate.

Taurion (2011) points out that the expansion of urban problems requires a new attitude of the public administration, both in planning and acting, as in partnerships (between different government levels and with the private sector) and in the citizen empowerment.

The cities are dynamic, offer and demand information, and the adoption of technology for their management is not something new. Concepts such as Informational City (CASTELLS, 2003), Augmented City (FIRMINO, 2004), Cybercity (LEMOS, 2005) are already established in the literature.

Against the backdrop of urban difficulties, the relationship between city and technology can be a way to improve the cities responsiveness and resilience. This relationship materializes in the phenomenon "informational city", whose emphasis is on the use of Information and Communications Technology (ICTs) for urban management.

Currently seeking to expand the use of these technologies in urbe, in an attempt to improve the decision making process. Therefore, it is vital to be fast, accurate and be connected. Thus, the discourse of "smart city", which involves more than just the adoption of digital technologies, arises, but the perception of "smart" as vigilant, snapshot, efficient, connected, integrated, etc.

In the smart city each part is relevant and interferes with each other. Technology should be modern, connected and interconnected; information needs to be available, with quality and organized. Finally, the man, whether governmental actor, private or connected to the society (offering or demanding information and services) should be included in the process, getting attention for improving their integration and their role in the set. Thus, all parts are extremely importance for the realization of intelligence in the city.

The aim of this work is to show the smart cities as the result of a set of different parts: technology, information and actors. However, these actors are often left in the background when i about smart cities.

Besides this introduction, the paper presents four items: the second part details the smart city; the third text component addresses the technology and information; the fourth item highlights the actors and the relevance of their activities in this context. The fifth text component characterizes the relationship of parts to the whole in smart city and finally presents the conclusions.

## 2) Smart City

The term smart city is comprehensive and abstract, and in the literature presents different descriptions for smart city, which often play concepts such as: digital city, information city, connected city, teletopia , cybercity, city knowledge-based, smart communities, electronic community, e-commun space, etc. Smart city is a concept closely connected with technology and information, but there is no single definition that clearly establish what is and what are its characteristics (QUESADA and PULIDO, 2012).

Sometimes the term digital city is used as "first step" in the direction of being a smart city, as part of a new way of flow distribution of people and information on the city. The digital city is not necessarily intelligent, but all the "smart cities" have the digital associated with them (FERNANDES & GAMA, 2005/2006).

In the 2000s, the term "smart city" came to be used widely by private technology companies such as IBM, Cisco and Siemens, associating this product as a solution to the cities. Their packages "pre-drawn" are offered to local governments with the "promise" that "technology will solve their problems" and it is sold as the 'future of the city' (LAZAROIU & ROSCIA, 2002) e (CÂMARA et al., 2012).

Under private influence (and in attempt to minimize their problems), various cities around the world have adopted the discourse of informational city, specifically the "smart city" as something by itself "solve" all the problems of the city (mobility, connection information, monitoring and surveillance, public safety, among others). There is a wide range of characterizations in the literature about smart city projects, can be found projects who call themselves smart cities, with approaches such as: governance, environmental, economics, citizenship, Wi-Fi, smart energy, information and services on the Internet, monitoring and surveillance, etc.

To facilitate the understanding, adopts the concept of smart city :

> "... The city is smart when investments in human and social capital (smart people), transport (smart mobility), digital infrastructure (ICTs), sustainable economy (smart economy) and a high quality of life (intelligent life), adding the sound management of natural resources (intelligent environment), through a participatory governance (intelligent governance)" (STEENBRUGGEN, 2014, pp. 3).

The smart city should be viewed as a system where the parties (transport, energy, education, health, water, public safety, etc.) are inseparable, forming an interconnected system. In practice, attempts to generate a balance to improve the efficiency of the systems that make up the city, and the planning can

be based on information separated by sectors (problematic or not) or by geographical area (QUESADA & PULIDO, 2012).

The literature is imprecise, but commonly stands as relevant points for the smart cities organization the integration of different systems and public policies, as well as factors related to (CÂMARA et al, 2012, pp. 6; LAZAROIU & ROSCIA, 2012):

- Smart economy**:** innovative spirit, entrepreneurship, productivity and flexibility in the labor market, international insertion, ability to turn, etc.;
- **Smart people:** skills, creativity, participation, social and ethnic pluralism, adaptation to cosmopolitan, participation in the collective, etc.;
- **Smart governance**: encouraging to social participation, quality of public services, government transparency, strategies and long-term planning, etc.;
- **Smart mobility:** accessibility, sustainable transport systems, ICTs available on infrastructure, innovation and safety in sustainable transport system, etc.;
- **Smart environment:** stimulus to urban sustainability, combating pollution, environmental protection, natural resource management, etc.;
- **Smart live:** life quality for citizens, cultural and educational facilities, health, security, tourist attractions, social cohesion, etc.

Taurion (2011) states that two points are needed in order to become a "smart" city. The first is the long-term planning, define how wants the city to in 15 or 20 years in terms of: infrastructure, attractiveness for business, efficient management, quality of life, etc.

The second point is the organization of the stages of implementation of the smart city project: I) determine the most relevant systems; identify the most problematic and the most impact; II) quantify the inefficiencies; III) analyze the inefficiencies causes and who are the stakeholders for the solutions definition; IV) identify and estimate the benefits and the role of each actor; and, finally, V) implement the solution, and the vast majority of the solutions involve more than one actor. For this, the empowerment, trust and cooperation should be seen as essential.

A smart city can be designed as an environment that integrates ICTs, information, physical infrastructure, government and society, seeking to improve the efficiency in the management of the urbe, and the city can be considered smart when ICTs become "invisible" (as these are embedded in the physical artifacts and day to day environments). Thus, the society shall not see the technology in their daily lives, just feel your benefit.

## 3) Technology and the information on the Smart City

The technology now allows to measure and control things previously unimaginable, as well as providing connections between different objects (eg, the Internet of Things), enabling the exchange of information with each other and may result in autonomous, preventive and corrective actions.

Data are relevant to the development of diagnosis and prognosis. These, when aggregates value are transformed into information which, in turn, can result in knowledge benefiting urban management faster, accurate and appropriate (KLAUSER & ALBRECHTSLUND, 2014; KANASHIRO, 2013).

Modern cities offer many data: people, mobile, public and private vehicles, displacements, offered and demanded public services, etc. Mostly, are available data, but their collection and organization are not simple. However, with the available technology it is extremely feasible and accessible. The information s analysis can help municipal urban management to know more and to identify patterns and relationships that help in the search for solutions to urban problems.

Lemos (2013 & 2010) emphasizes that people produce and use information. With Big Data, people can offer and have access to information more broadly, which, by the government side, improves the management of the city, and, on the citizen side, not only improves the use of urban structure, but its empowerment on the urbe.

Remember that "knowledge is power" and not all actors are willing to share their power. Thus, often ends up predominating the individual rather than the collective (STRAUHS, 2012).

## 4) An actor prepared for a smart city

Smart city is more than just the sum of technologies to the available information, but involves decision making, which must be fast and accurate, based on information. Therefore, this circuit is complete only with people (governmental, private and society).

Strauhs (2012) corroborates the argument that smart city necessarily involves the actors in the organization of information and training of knowledge, because it is generated by people and the human being plays a key role, since the most important inputs are not the tangible elements, but intangible. Cardoso (2013, pp. 15) points out that people are not only essential to the functioning of the systems (be "smart" or not), but are, in imbricated form, the elements of the system itself.

Here is possible observe a gap in the literature (and practice) of smart cities, regarding the actors training to act in a more appropriate manner, including by, encouraging trust and cooperation.

## 4.1) Human capital

Anderle and Freitas Jr. (2013) highlighted that ICTs are important to the existence of the smartest cities, but the investment in human capital is essential. Fernandes and Gamma (2005/2006) argues that to a location being intelligent, beyond physical infrastructure that must go in this direction, the human and intellectual capital by education and culture systems are essential to encourage the "intelligence" of the actors and institutions, facilitating the adjustments facing the challenges.

Strauhs (2012) points out that in the knowledge society, education and social relations acquire great importance, because institutions require much more than technology, require people in permanent sharing ideas.

## 4.2) Trust

Another important point connected to the actors relationship is trust, which involves processes mutually developed face positive signs, the interactions, relationships and engagement between them. These positive signs encourage better attitudes and these, in turn, tend to favor better results (a virtuous cycle). Nascimento and Labiak Jr. (2011) argues that trust involves a set of actions established by actors, aiming gains and mutual security, in the present and for the future.

The trust can originate the relationship between ordinary people or professional relationships based on contracts. It is worth noting that confidence is influenced by three groups: 1) processes (long time relationship that proved to be stable, which is done in belief that the other will keep their usual behavior); 2) characteristics in common (family, religion, ethnicity); 3) institutional: the existence of formal structures in society (legal system, government, organizations) (NASCIMENTO & LABIAK, 2011).

Regardless of the nature and context, the decision of an actor trust the other requires a positive assessment of points, such as: interpretation of the intention and the possible behavior of the other actor; the belief that the other will act to improve the current situation of those involved (and not deteriorate it); and, finally, the most important, which is to know the other's behavior front of situations is expected from it acceptable behavior in unforeseen circumstances.

Trust relates to cooperation (virtuous circle), since before "positive signs" the actor engages more and it raises the relations level. In a second moment, ensures better attitudes that will end up favoring better results (NASCIMENTO & LABIAK, 2011, pp. 18).

## 4.3) Cooperation and collaboration

Trust exists as a function of the sum of institutional factors, skills, cultural proximity and favorable assessment of the intention of the different actors, and may result in the establishment of cooperation.

Thus, every actor (individual or organization, consciously or not), is a node of a cooperation network which, to a greater or lesser degree, has an impact or is impacted by other (NASCIMENTO & LABIAK, 2011).

Komninos (2007, pp. 1) extends the argument about the smart cities regarding people:

> [ ] the smart city must be the result of combinations of human capacities, educational institutions and digital technology (this sum results in new city functions, such as strategic intelligence, technology transfer, obtaining innovation through collaboration and the provision of digital services).

Cooperation involves actions established by actors who have a common interest and, therefore, trust each other, aim at some future gain (shared or individual), which strengthens cooperation as a dynamic and interactive process, because it cooperates to survive, to win, to overcome. The cooperation involves interest and this may be based on: need (alone do not get what I want or the law does not allow me); safety (lowers the risk, increases control, reduces the failures possibility); ease (cooperating is easier); and, finally, cooperates for pleasure (alone is not pleasant) (NASCIMENTO & LABIAK, 2011).

## 5) Connecting smart parts of town

Worth emphasizing the difficulty of conceptualizing what is a smart city in a "single recipe". But, in this scenario it is clear that technology is just one of the catalysts tools that solves (or softens) some points of urban problems, impacting positively on the citizens life quality.

Of the parties to the smart city, the man is one of the most relevant points and perhaps the least worked, because it gives great prominence to the millions spent on the purchase of a given technology, but little emphasis to training, involvement, and to man motivation in this process. The unpreparedness, ignorance and discouraging can lead to disinterest, the discontinuity and, finally, make all "smart city" coming down soon.

Specifically, considering management of Brazilian cities, is even clearer that relevance of actors, due to problems with the public low-quality services (and the lack of capacity to reverse this scenario), because public institutions have chronic cases of inefficiency, legal rigidity, excessive bureaucracy, credibility issues, limited budgets, meager investment capacity and absence of long-term planning, which reflects in fall of citizens' well-being (BATISTA, 2013).

The human capital involved in the management of Brazilian cities, in addition to presenting quality difficulties, has shortage in professional s number, training problems, func institutional overlapping (two or more institutions provide the same public service), creating power and resources contention problems for investments (BATISTA, 2013).

The prevailing view in the smart cities literature is that the technology and information are the smart city supporting components and this view is reinforced by Mitchell (2007), whose emphasis is given on the new intelligence of cities, supported on the combination of telecommunication, sensors and software:

> [ ] digital telecommunication networks (nerves), integrated intellige
> (brains), sensors and indicators (are the sensory organs) and the
> knowledge and cognitive competence) (MITCHELL, 2007, pp. 4).

Make even smarter cities through new uses of information and communication technologies, can lead to offer more knowledge for and by the people. Technological development is only part of the smart city process. Still must take into account that actors are the key parts, which must be trained and receive due attention and encouragement, to no longer be the faint rings of the smart city system.

## 6) Conclusion

The text ventures out in getting the idea that the discourse of smart cities is relevant to the cities towards their problems and challenges. Governments have stepped in order to understand that investment in technology and information can generate increasing scale gains before the deficiencies and, in turn, the society is already realizing that with the technology can even live better.

Technology presents a far from simple linear relationship with the municipal administration: the technology evolves and changes very fast, which requires public administration afford dynamic and streamlined way. However, the widespread practice of public management is to be slow and bureaucratic, hindering the city s relationship with what is latest in technolo good projects are implemented incompletely, if not reduced (cutting some parts initially planned) or simply abandoned.

The information must not only be fast, accurate and affordable, as should feed the communication channel between the government (among actors) and society. ICTs are a reality that help empower the society to be more present in public administration and assist in the inspection, as in the case of mobile application (APP for mobile) COLAB.RE (http://www.colab.re/), which allows citizens to post city's problems and track the resolution thereof.

Smart cities are a mix of human capital, technology and information and their practice involves cities with very different realities to each other, which prevents think of standards or rigid models. In developing countries is stark and urgent need to improve the training of actors, because the inefficiency, lack of long-term planning and the discontinuity of public policies prevail in everyday life of cities. Strengthen training, collaboration and cooperation between actors is vital to improve the engagement of them, the continuity and increasing efficiency of projects and their public policies.

A smart city project without attention to the actors can result in very expensive technological tools of city management, which will be underutilized or even abandoned by political pressure, economic,

institutional or impossibility of building partnerships, resulting in a large expenditure of scarce resources public and little or no benefit being created for citizens.

After visiting smart cities experiences in Brazil, the author of this paper would like to leave as text contribution some points not found in the literature, but widely discussed among actors in charge of projects:

1) Need for good protocols: the creation of detailed work protocols helps determine who does what and what should be done in each action, taking into account the specific features of each reality. Having good described protocols help in the performance of the institutions and actors, reduces conflict and even is a developer factor of trust and cooperation. But, in practice, have these good protocols is not the rule, is the exception

2) Training and education: the actors should receive training, good and proper, but sometimes the training is flawed. For example, in the case of an institution that operates in conjunction with other institutions at a given smart city project. This institution receives training by their professional A, but for some reason, the department has just selecting another professional to act on the spot, i.e, this new professional B will act in smart city, but did not receive adequate information and will have to interact, often unprepared, generating delays, losses and wear.

3) How to reconcile on the smart city the use of tacit knowledge (experience, habits and customs). Despite the tacit knowledge escape the formal knowledge, its use should be recognized as an important point in the management of smart cities

4) In places that have public services provided by private companies (concession or public private partnership - PPP), private institutions often are afraid to expose their data and information for fear of prejudice or punishment. However, when private institutions collaborate offering their data, it helps to increase the management capacity of the actors. The partnership process between the public and private should be one focus-base to strengthen the smart city.

5) The governance of large cities in developing countries (eg, São Paulo - Brazil) is a great challenge because the public structures doesn t realize the problems, and the actors face diff from the point of view of the ability of reversal of urban problems. In this scenario, the smart city can be a hope because it costs much less to invest in technology than destroy and rebuild the whole city.

6) Smart city projects can be opportunity for a common cultural change in the Brazilian public management: is traditional Brazilian public management "deny the problem" or "postpone the problem." It should pass to go against the problem, confront and seek ways and alternatives to solve it.

7) Finally, it is important to make a placement of an employee of the Rio de Janeiro City Hall (involved in the smart city project), when asked about the use of technology in urban management: "... the city has the equipment, Big Data, employees and projects, but it all depends

on the citizen! Both in behavior, "no littering", as in "participate". Every citizen today has a cell phone pocket, then must close the gap between the government and society (by technology that's possible). We must participate in the problem and take part of the solution! By technology, the solution of the city is the citizen 'hand', which is a major player in this system!

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# MAKING SMART CITIES SUSTAINABLE: EXPLORING ATTITUDES OF SOUTH KOREA S SMART CITY PRACTITIONERS USING Q METHODOLOGY

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*With regard to the applications of intelligent technologies in urban development, the concept of smart cities has spread widely and been applied to many empirical projects around the globe. In recent years, smart cities have employed the notions of the sustainable urban development with a great concern on global climate change. Although the current smart sustainable city model has particularly emphasised on energy optimisation and low-carbon management, the sustainability strategy of smart cities should go beyond the technological aspects of intelligent solutions. In order to address this emerging issue, planners have faced the complex challenge of how to develop smart cities in a wider sustainability context considering the city s economic dynamics, social di complexity. This research draws attention to perspectives and attitudes of the practitioners in association with sustainable strategies in the development process of smart cities, and Q methodology has been used for this purpose. To define the wider range of issues under study, the research explores lessons-learnt from the context of long-standing debates around collaborative planning practice towards sustainable urban development. Relevant stakeholders for Q analysis have been identified using author s earlier contacts and snowball-sampling technique. The research aims to demonstrate an overview of the subjective perspectives and attitudes on sustainability in the smart city development, especially from the standing point of the observed practitioners. The results may show how the smart city practitioners interact with very controversial and complex issues on environmentally-sustainable development in South Korea and around the world.*

## 1. Introduction

New patterns of urban development with the uses of ICT (information and communication technology) have often described as smart cities . The concept of smart cities has be to urban development and management practices around the globe. Urban planners have also recognised smart cities as a potential tool to solve urban problems using innovative solutions, which might differ from the traditional methods of urban planning and development. There is a wider acknowledgement that smart cities can add value to urban environments and improve the quality of life of the city s inhabitants. In many urban development projects, the smart city model has been increasingly applied in order to optimise resource management and improve public services by integrating different urban systems, such as urban infrastructure, environment, transport, energy, healthcare, security, e-government, and so on.

In recent years, smart cities have employed the concept of sustainability. The combination of green and smart technology is notable in the contemporary eco-city developments (Joss et. al. development of smart cities has been seen as a catalyst to transform economic and social environments of the city to be more knowledge-based and eco-friendly (Kim and Wang, 2014). This new development style has been also considered as a valuable tool to reform the city s industrial network by attracting diverse ICT industries that could enable a low-carbon economy, and ultimately drive the city s sustainable growth (Steinert, et al., 2011). Although the adoption of intelligent technologies is now commonly accepted in sustainable urbanisation projects, there is a widely held view that this new practice has operational difficulties. One criticism of much of the literature on sustainability in the development of smart cities is that the current practice is narrowly focused on technological innovation on energy optimisation and renewable energy generation (Joss, et al., 2013). According to Kramers et al. (2014), the concept of a smart city does not fully involve issues of sustainability, and there is a lack of a connection between the notions of a smart city and sustainable development. The key argument here is that the existing accounts fail to achieve sustainability in a wider context of the

city s economic dynamics, social diversity and spatial complexity. Although there is little analys evaluation on how smart cities can be developed sustainably in practice, many smart city projects around the world have been keen to closely associate with the city s sustainability v environmental concerns. This is because the language of smart and sustainability was appealin politicians and developers for a self-promotion purpose by creating positive place branding of the technology-led innovation in a sustainable way.

This research, therefore, draws attention to the practical consideration in the development process of smart sustainable cities. This article aims to investigate the practitioner s perspective and attitude in dealing with sustainability aspects in the smart city development, and highlight lessons from their experience. The study of practitioner s attitudes is important because the attitu policy makers and researchers may have an impact on the development strategies and directions of smart sustainable cities, especially when there is no clear consensus built on this emerging issue. Barry and Proops (1999) also argue that identifying how individuals think about environmen significant element to judge whether relevant environmental policies are socially acceptable, and therefore able to be implemented. Similarly, unravelling subjective opinions of professionals in delivering the sustainability goal in the smart city practice requires data experiences and practices. The research uses Q methodology to measure attitudes and subjective opinions of practitioners. Q methodology is one of most effective tools of investigating perspectives, attitudes and subjective structures from the standing point of the person, in this case, observed practitioners (Peritore, 1989; Zraick and Boone, 1991; Brown, 1996).

In the following section, firstly, the principles and implementation process of Q methodology will be introduced. This is to provide an overview of the research structure and process, because the research methodology used in this study, Q methodology, is little known in the field of social science and urban planning (Barry and Proops, 1999; Previte, J. et al., 2007). Secondly, the next section will move on to conceptualising smart sustainable cities by bringing the notions of smart cities and sustainability together. The major concern here is that the current practice of smart and sustainable cities is limited on the energy-related issues, and it is, therefore, important to explore the sustainability issues in a wider context. For this purpose, lessons-learnt from the long-standing collaborative planning debates in delivering the city s sustainable vision will be discussed. A key task in this section is to iden common structures (so called Q statements ) of the smart city practitioner s att sustainability issues. Thirdly, by analysing the participant s responds on Q statements, the findings and the principal issues which have arisen in this Q analysis will be provided. This paper will be concluded by proposing a strategic direction for the development of smart sustainable cities based on the analysis results drawn from the practitioner s perspectives.

## 2. Understanding Q methodology

Q methodology was originally developed by a psychologist, William Stephenson, in 1935 in order to examine individuals subjectivity systematically in a scientific way (Stephenson, 1935; Brown, 1996). This research method has been developed further based on factor analytic theory, although there was a considerable peer criticism on Q methodology (Brown, 1997). However, it is now widely accepted as a scientific research method (Cross, 2005), and most frequently used method in studying attitudes (Petit dit Dariel et al., 2010). While the method was initially applied to the academic field of psychology, it has recently been used in a wide range of disciplines, such as agriculture (Brodt et al. 2006; Davies and Hodge, 2012), public health (Kraak et al., 2014), rural planning (Previte et al., 2007), transportation (Rajé, 2007; Van Exel et al., 2011), e-learning (Petit dit Dariel et al., 2013), tourism (Stergiou and Airey, 2011), sustainability (Barry and Proops, 1999), and energy (Cuppen et al., 2010), to list a few. Despite the fact that Q methodology is little used in the field of urban planning, it is a well-structured and increasingly-used research method of measuring the different perspectives, attitudes or subjective opinions (Cross, 2005; Watts and Stenner, 2012; Zabala, 2014), and developing new ideas with a capturing of the human practice (Simons, 2013). Therefore, this research method has a potential in the investigation of planning practice by identifying planning

professionals particular perspectives that could pass on to relevant planning actions, such as the development of strategies, plans, and guidelines, in response to the real-life practice.

Q methodology is recognised as a combination of the qualitative and quantitative research techniques (Stenner et al., 2008). From the qualitative point of view, this emphasises on the subjective opinions and understandings of individuals. In contrast, this method employs quantitative tool of factor analysis in order to examine the statistical correlation between the different views of individuals. This can be explained in the following five stages of the Q methodology implementation (for more extensive information, see Barry and Proops, 1999; Davis and Michelle, 2011; Simons, 2013):

- *Identification* of the concourse : this stage is to develop a wide range of discussion and discourse under investigation. The concourse is commonly described as a set of views, ideas, values, opinions, or beliefs that shared by a population under study in relation to the research question. In order to collect the concourse, many researchers have generally used the multiple survey methods of interviews, focus groups, or literature and media reviews.
- *Definition of Q statements*: the broader discourse collected from the above stage needs to be summarised and reduced to a manageable number of the concourse, which is often referred to Q statements. The number of Q statements is usually no more than sixty, although it varies in different studies. The most important of this stage is that Q statements should reflect the full range of the concourse.
- *Implementation of Q sorting*: this stage involves the survey participants to ask them to rank all Q statements on a scale from disagree (-4) to agree (+4) using a Q table (Figure 1). The range, such as -4 to +4, will be used to sort the statements in the later stages.
- *Factor analysis*: when Q sorting is completed, the correlations between Q sorts are calculated by using the factor analysis methods. This statistical analysis is to identify and classify a distinctive group of Q sorts that shares a similar subjective opinion or position.
- *Interpretation of the factors*: the final stage is to interpret the results of the factor analysis. Typically, the researcher gives a name to the statistically calculated factors in order to describe the meaning of factors. Those categorised Q sorts can represent distinct characteristics of shared perspectives in the study topic.

DISAGREE AGREE

| -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Figure 1. Example of a Q table

The qualitative and quantitative features of Q methodology provide an empirical framework to translate a particular individual s dialogue into a systematic analysis. methodology are emerged from that fact that the sorting activities are self-organised by participants, therefore, no built-in assumption has been applied into the method. This enables the results of Q sorting to be formative and emergent, and consequently, the method has the power to surprise (Cross,

2005). The greatest concern over the disadvantages of Q methodology is perhaps the lack of reliability that may provide little basis for systematic generalisation. The primary argument is that the results of Q sorting may not be the same even if it is repeated on the same individual. Taking this into account, Cross (2005) emphasises the importance the participant s responses in the limited ac determined statements. In order to represent the view on the research subject more accurately, it is necessary to derive Q statements from various sources and employ a number of different data collection techniques. Moreover, the wording of statements should be carefully designed to allow participants to think about the issue, rather than make them confused (Simons, 2013). Given the importance of defining Q statements, the following section will conceptualise smart sustainable cities in a wider context. As explained earlier, the current practice is narrowly focused on energy-related perspectives. Therefore, before proceeding to collect concourses, it will be necessary to develop a framework to capture the full range of views involved in the issues of smart sustainable cities.

## 3. Conceptualising smart sustainable cities

The city is at the heart of both carbon emission problems and solutions. The mitigating problems associated with climate change given the critical mass of people and resources at the city s disposal. New innovative technology is already used to make the city s living environme more convenient and comfortable. Ironically, these new comforts can requir produce more carbon emissions than the older ways of living. Bearing in mind that there is a potential conflict between the two concepts, smart cities and sustainability, this section addresses the key aspects of sustainability delivery in the development process of smart sustainable cities, by reflecting lessons-learnt from the collaborative planning practice.

### *3.1 Definition of a smart sustainable city*

There is no single model for the correct form of smart cities, and many cities around the world have translated the concept of smart cities differently in order to mirror their particular economic, political and cultural environments (Neirotti, et al., 2014; Kim, forthcoming). It has commonly been assumed that not all elements of smart cities have equal weighting in the planning and development processes of smart cities (Hollands, 2008). Not surprisingly, the same principle might be applied to when smart cities adapt the concept of sustainability. For example, the concept of smart cities in South Korea has been transformed to the idea of U-Eco City (Ubiquitous-Eco City) by mirroring the national of Low Carbon Green Growth (Kim et al., 2012). Chinese government has launched its national low carbon pilot programme based on the National 12th Five Year Plan, which emphasises a great importance of low-carbon city construction. This influences the recent development of the term low carbon smart cities in China. The language of green smart city has been collaboration on the development of smart cities between Chinese government and European Commission (Yanrong et al., 2014). In an international context, International Telecommunication Union, which is the United Nations specialized agency, defined a smart sustainable city as:

> "an innovative city that uses information and communication technologies (ICTs) and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social and environmental aspects (ITU-T Focus Group on Smart Sustainable Cities, 2014:13) ."

Although there is a degree of uncertainty around the terminology in this area, the term smart sustainable city is used here. The primary concern on the definition of smart sustainable cities is the capability of coving wider-ranging sustainability issues. While the current practice has not tackled a wider range of issues than merely energy-related aspects, this research aims to address the complexity of smart sustainable cities which is impossible to separate from the economic, social, environmental and political contexts. This raises questions about the conflict interests and issues involved in smart sustainable cities which will be discussed in the next section.

*3.2 Smart city implementation and sustainability delivery*

Although sustainability issues are emphasised in the field of smart cities, little is known about its implementation in a real-life context. The apparent nature of smart sustainable cities must be seen in line with the dynamics in political, economic and social environments in the development process. There are two arguable issues in applying the sustainability concept to the smart city practice, and vice versa.

Firstly, sustainability issues are not the top priority of all key stakeholders involved in the smart city development. As sustainability issues are related to the global concerns on climate change, the shared consensus on sustainability can be readily built between smart city stakeholders. However, the implementation issue is another potential concern. Although most stakeholders may understand the importance of sustainability in smart cities, it is difficult to generate tangible commitments from stakeholders. There is also a concern that the most polluted cities are located in developing countries where the smart city concept is not fully established (Neirotti et al., 2014). The issues of sustainability may create a consensus on the need of comprehensive interactions between participants in the development process of smart cities. However, sustainability does not generate obvious tensions between players to compete for limited resources for the immediate gains. The high costs of taking no action can be the incentive to collaborate (Gary, 1989), but sustainability may not stress threat or scarcity of resource loss among participants. This lack of tension between stakeholders around smart sustainable cities makes it difficult to encourage them to put their extra time, money and effort into the project. Barry and Proops (1999) also argue that there is a shared perception that environmental problems have not been very important comparing with other social ills, such as unemployment, being far more prioritized. Moreover, comparing with other urban problems, such as housing supply and basic infrastructure, smart cities have been seen as an added-value and not been a top priority for all interest groups. Kim (forthcoming) has reported that developers have seemed uninterested in implementing the task of smart cities in meaningful ways once the initial excitement of smart cities has died away after being used for marketing and publicity purposes at the early stage of the urban development project.

Secondly, compartmental approach to the development of smart sustainable cities may be another obstacle to achieve effective collaborative efforts in delivering smart and sustainable goals for the project. While the core concept of smart cities emphasises the integration of a cit
(Ebrahim and Irani, 2005; Dirks and Keeling, 2009; Kitchin and Dodge, 2011), it is evident that smart city practitioners have faced practical difficulties in an effort to incorporate the fragmented working process with the engagement of many organisations and individuals not directly connected each other previously (Kim, forthcoming). This becomes more problematic when sustainability issues are involved. The wide-ranging sustainability challenges cannot be tackled by any single organisations, and should allow open, collaborative and innovative approaches (Steinert, et al., 2011). The complex and compartmental operations in the practice of smart sustainable cities have become a barrier to facilitating active involvement from all actors to achieve the sustainability vison of a smart city in practice.

Despite the arguments above, there is also an advantage in engaging the concept of sustainability to smart city practice. A certain work scope of smart cities, such as tasks related to intelligent technology, may promote more focused efforts, comparting with wide-ranging sustainability issues in the general urban development projects. However, it is necessary to overview the existing practice of smart sustainable cities in order to develop an overarching framework to evaluate wider-ranging sustainability issues in the practice of smart sustainable cities.

*3.3 Evaluation framework for smart sustainable cities*

A smart sustainable city is a relatively new concept and its theoretical and empirical frameworks have not been clearly developed. Consequently, some operational problems have been identified with particular reference to the idealism of smart sustainable cities itself. However, the arguments on how

to accommodate multiple processes in planning practice to draw those complexities and dynamics of delivering sustainability are not new. Viewed from a collaborative planning perspective, there has been a concerted effort among planning professionals and academics to achieve benefits for sustainability by means of collaborative actions for the last three decades (Forester, 1989; Healey, 1997; Susskind, et al., 1999). There are relatively extensive literatures on collaborative planning for sustainability. In a systematic approach to explaining an empirical framework of delivering collaborative actions in planning practice, Kim (2002) has identified three key aspects of sustainability delivery based on the notion of collaborative planning: consensus building, facilitation and open participation.

- *Consensus building* (Let s work together): consensus building has been recognised as a primary tool for implementing collaborative efforts. This focuses on a process of face-to-face dialogue to seek agreed outcomes, such as policies and action plans. The consensus building process would be able to make stakeholders reach shared statements for common goals on sustainability.
- *Facilitation* (Let s make it work): this emphasises a way of collaborative working by encouraging individual stakeholders to deliver the sustainability vision by taking action for themselves. Facilitation is to encourage participants to implement focused issues or projects on sustainability.
- *Open participation* (Let s bring all): this is a broad definition of involvement to consider a wider range of alternatives including multi-level co-operations. This would allow wider involvement of all interest groups willing to participate various aspects of sustainability delivery.

In a similar way, smart sustainable cities require a multiplicity of implementation processes in order to deal with complexity and dynamics of multiple issues involved in sustainability. Some processes such as providing supporting regulations for the development demand continuity of leadership from the public sector, but others require community participation approaches. This is because smart sustainable cities need collaborative working processes that emphasise both top-down and bottom-up approaches.

## 4. Implementation of Q methodology

This research explores smart city practitioners perception towards sustainability, and Q meth is used to examine the subjectivity of interests, especially from the standing point of the observed participants. The results of Q analysis presented here are derived from an on-going research of investigating the subjective perspectives and attitudes on sustainability in the smart city development around the world. In this paper, participants of Q sorting are mainly from ICT firms in South Korea. Although some of them have international experience working in multiple countries, the particular participant group here may hold a different view from the global professional population at large. The unravelled perspectives of smart city practitioners in this paper cannot be translated as a general discourse, as there are great differences among the political traditions and economic conditions in different countries. However, the results may provide representative features and critical arguments in the current practice around the world, as South Korea is one of countries in which the smart city practice is firmly developed in urban development process.

### *4.1* Identification of the concourse

As the first step of implementing Q methodology in this research, the existing discourses in the relevant areas of smart sustainable cities have been explored using a number of different research techniques. The initial concourses have been identified based on the insights of th experience as a smart city practitioner in Asia and the Middle East. In order to represent the views on the study subject more accurately and widely, a series of interviews with three smart city professionals were conducted. Even broader subject issues were collected from academic literatures and media publications such as internet news and blogs. Stainton Rogers (1995) reports that the number of

concourses at this stage could be usually around three times more than the size of the final number of Q statements.

*4.2 Definition of Q statements*

The next stage in the Q methodology process is to select a manageable numbers of statements for Q sorting, derived from over one hundred concourses identified in the previous stage. There is variation in the size of the final Q statements in the literature, although the typical number of Q statements seems to be in between 30 and 60. Drawn from initial tests and pilot Q sorting, the research has found that 33 statements are suitable for this study. In this selection process of the final statements, a concourse matrix has been used. The previous studies (Dryzek, J. S. and Berejikian, 1993; Barry and Proops, 1999) reported that this matrix could be useful in several ways:

- the matrix could filter the statements to reflect more precise and essential arguments in the subject area; and,
- it could also enable an independent selection process by minimising the investigator s influence.

The concourse matrix was necessary in this research because Q statements should: (1) represent wider perspectives of sustainability, rather than energy-related issues; and, (2) mirror the quintessential discourse from the broader practice of smart and sustainable cities, rather than solely from the researcher s insights gained from one s empirical experience. Applying the three key a delivering collaborative actions for sustainability (consensus building, facilitation and open participation), this research developed and employed a concourse matrix illustrated in Table 1. In order to echo multiple processes of delivering the smart sustainable city practice, the categories of two different project types, strategy making and project implementation, were also applied. The use of this matrix may allow collecting much richer and more widely shared views and attitudes of the smart city practitioners towards sustainability. Based on this concourse matrix, thirty-three Q statements of the smart city practitioner s perception towards the sustainability issues were statements have been allocated in each cell of the matrix (9 cells in total), and the full set of Q statements is listed in Table 4.

Table 1. Concourse Matrix of Smart Sustainable Cities

| Key Aspects of Sustainability Delivery | Project Types | |
|---|---|---|
| | [Strategy Making] *Vision and Strategy* | [Project Implementation] *Development Project* |
| [Consensus Building] Let s work together | *Q Statement No.1 to No.6* | *Q Statement No.7 to No.12* |
| [Facilitation] Let s make it work | *Q Statement No.13 to No.18* | *Q Statement No.19 to No.24* |
| [Open Participation] Let s bring all | *Q Statement No.25 to No.29* | *Q Statement No.30 to No.33* |

* For the full sentences of Q statements, see Table 4.

*4.3 Implementation of Q sorting*

This stage of Q methodology involves the survey participants for Q sorting. Participants were asked to use an inverted pyramidal table (Figure 1) in order to rank the 33 statements in a nine-relative scale (-4, -3, -2, -1, 0, +1, +2, +3, +4), based on how strongly they agree or disagree with the particular statement. Whether or not participants may agree or disagree on all statements, they are forced to rank the statements in the given structure. This process (so called, forced choice method) enables participants to consider the sorting process more carefully, and consequently, reveal their true feelings in response (Prasad, 2001).

In order to conduct Q sorting survey, an online survey tool has been established. The research used FlashQ (Rick Hoodenpyle s version, available at http://qmethod.org/links), which is a free application originally developed by Christian Hackert and Gernot Braehler (2007). The online version of FlashQ was set up on a HTTP server with PHP by modifying FlashQ s XML and the PHP-bac codes (available at http://qmethod.org/links and http://www.hackert.biz/flashq/downloads/). When participants start Q sorting using this online tool, firstly, FlashQ displays 33 Q statements one by one randomly and asks the participant to split them up into three categories: disagree; agree; and, neutral. Then, the participant is required to place all statements into the Q table in a ranked-order according to the forced distribution. At the last stage of Q sorting, the participants are required to complete an online questionnaire for their personal details.

For this survey, relevant stakeholders in the field of smart sustainable cities have been identified using author s earlier contacts and snowball-sampling technique. However, due to the complexity and time-consuming process of Q sorting, it was difficult to attract many voluntary participants to get involved in the survey. Therefore, the personal contact of the author in South Korea was useful at the earlier stage of the survey. There were 10 participants in this analysis. As Akhtar-Danesh et al. (2008) pointed out, it is more important to represent different opinions in the study subject precisely in Q methodology, rather than the number of the participants. Although most participants are in the private sector of ICT industries, the participants were selected on the basis of their work experiences and the areas of their expertise. This may mirror different viewpoints in the practice of smart sustainable cities. The details of the participants background can be shown in Table 2. Among 10 part participants have worked in the field of smart sustainable cities for more than 9 years, and four of them have work experience less than five years. There are five consultants and two marketing professionals in the participant pool, but the rest varies. Six participants have worked solely in South Korea, but four of them have the international work experiences in different counties.

Table 2. Participants Background for Q sorting

| Q Sort ID | | Work Period | Affiliation | Job Description* | Work Location |
|---|---|---|---|---|---|
| 1 | 9ITCsK | More than 9 years | ICT | Consultancy | South Korea |
| 2 | 7ELCsK | 6-8 years | Manufacturing | Consultancy | South Korea |
| 3 | 4ITPMK | 3-5 years | ICT | Management | South Korea |
| 4 | 4ITCsK1 | 3-5 years | ICT | Consultancy | South Korea |
| 5 | 4ITCsK2 | 3-5 years | ICT | Consultancy | South Korea |
| 6 | 9ITEgK | More than 9 years | ICT | ICT Engineering | South Korea |
| 7 | 9ITMaMt | More than 9 years | ICT | Marketing | South Korea, China, Middle East, Europe |
| 8 | 4ITMaKC | 3-5 years | ICT | Marketing | South Korea, China |
| 9 | 9ITCsKC | More than 9 years | ICT | Consultancy | South Korea, China |
| 10 | 9ITCnMt | More than 9 years | ICT | Urban Development | South Korea, Middle East |

## 5. Q analysis and research findings

### *5.1 Factor analysis*

The PQMethod software (Schmolck, 2014) has been used in analysing the data of Q sorting, which is available online freely. PQMethod has been seen as one of the most frequently used statistical programmes, which is customised particularly for Q analysis (Simons, 2013). Using the Q sorting data provided by participants, the software created a correlation matrix from Q sorts, and then factor-analysed. For this purpose, Principal Component Analysis (QPCA), which is the most popular method of factor extraction, was used. In this factor analysis process, three factors with eigenvalues greater than 1.00 have been considered significant statistically. After a varimax rotation (QVARIMAX) on the factors, QANALYSIS was performed in order to differentiate the factors based on the participants Q sorting. The results of factor analysis are shown in Table 3.

Table 3. The Results of Factor Analysis (Factor Matrix)

| Q Sort ID | | [Factor 1] *Korea-specific Perspectives* | [Factor 2] *Marketing-specific Perspectives* | [Factor 3] *Conflicted Views* |
|---|---|---|---|---|
| 1 | 9ITCsK | **0.7848X** | -0.2255 | -0.0405 |
| 2 | 7ELCsK | **0.6915X** | -0.0191 | -0.4547 |
| 3 | 4ITPMK | **0.5605X** | 0.1365 | 0.3376 |
| 4 | 4ITCsK1 | **0.5805X** | 0.1746 | 0.3298 |
| 5 | 4ITCsK2 | **0.7413X** | -0.1932 | -0.0707 |
| 6 | 9ITEgK | **0.7726X** | -0.5481 | 0.3501 |
| 7 | 9ITMaMt | 0.2986 | **0.5474X** | -0.0357 |
| 8 | 4ITMaKC | -0.2216 | **0.8674X** | 0.1137 |
| 9 | 9ITCsKC | 0.1611 | 0.0300 | **-0.6937X** |
| 10 | 9ITCnMt | 0.2714 | 0.0177 | **0.6620X** |

X indicates a defining sort (resulted from automatic pre-flagging of PQROT)

Six of the participants are identified as significant relations on Factor 1; two on Factor 2; and, two on Factor 3. Considering the participants profile backgrounds, Factor 1 can be described a specific perspectives , because the factor analysis result shows a strong distinction on t work locations. All six participants who are loaded on Factor 1 have mainly worked in South Korea and the rest participants have work experiences internationally in different countries. Based on the participants profile information, Factor 2 may be related to the participants jo participants loaded in Factor 2 are working in the area of marketing and sales in the development of smart sustainable cities. Therefore, Factor 2 is named as Marketing-specific perspectives . W Factor 1 and 2 seem to have profile-based relations, Factor 3 is rather related to the personal viewpoints of the two participants. Factor 3 shows conflicted views between two particular respondents on the domain of smart sustainable cities, although both participants have worked in the field of smart cities more than 9 years and internationally. It was found that the only difference on the participants profile is the job description as one has a consultancy background, but th urban development (construction) background.

*5.2 Interpretation of the factors*

Drawn from the factorised analysis, the detailed discourses will be investigated in this section in order to explore the subjective landscape of the ten practitioners in the development of smart sustainable cities. For this purpose, the above three factors have been represented by the four operant types of discourses: Discourse A (Korea-specific perspectives, Factor 1); Discourse B (Marketing-specific perspectives, Factor 2); and, Discourse C (Conflict views, Factor 3). Table 4 shows each discourse representing the distinct perspectives and attitudes from the standing point of the practitioners in the field of smart sustainable cities. For Discourse A and B, factor arrays that were produced by PQMethod are used. This is because a set of factor arrays represents ideal type Q sorts by calculating a weighted average of the scores (Barry and Proops, 1999; Addams and Proops, 2000). However, Discourse C employs actual Q sort scores from the two particular participants (C1 and C2) in order to compare their conflict views on each statement.

Table 4. Q Statements and Scores on the Four Extracted Discourses

| | Q Statements | Discourses | | | |
|---|---|---|---|---|---|
| | | A | B | C1 | C2 |
| 1 | Government should lead the development of smart sustainable cities. | -1 | -1 | -3 | 3 |
| 2 | Smart sustainable cities should build up a city s resilience to natural disasters, all linked to climate change. | -1 | 0 | 0 | 1 |
| 3 | Green and renewable energy technologies are at the heart of many smart sustainable city developments. | -1 | -3 | -2 | 3 |
| 4 | Generally speaking, smart cities are not sustainable because they use more energy than before. | -4 | -2 | -2 | -3 |
| 5 | A key aspect of smart cities should be a new way of living sustainably, rather than conveniently. | -2 | 3 | -1 | -1 |
| 6 | There is the lack of an understanding of stakeholders roles and responsibilities in the development of smart sustainable cities. | -1 | -1 | -1 | 2 |
| 7 | Smart city projects should be implemented under the sustainability vision. | | 2 | 3 | -4 1 |
| 8 | The majority of people on smart cities prioritise the sustainability issues. | -1 | -2 | -3 | 1 |
| 9 | It is necessary to organise a steering body involving wider stakeholders in the development of smart sustainable cities. | 4 | 1 | 1 | 2 |
| 10 | Making smart cities more sustainable needs more resources and therefore money. | -2 | 2 | 1 | 2 |
| 11 | There is no dominant model for smart sustainable cities. | 0 | 4 | 2 | 0 |
| 12 | I am not very concerned about the sustainable development in smart cities. | -4 | -2 | -2 | -3 |
| 13 | Technical specifications for smart sustainable cities can be standardized. | 1 | -1 | -2 | -1 |
| 14 | It is necessary to develop an evaluation framework related to the sustainability impacts of ICTs in smart sustainable cities. | 0 | 0 | -4 | 1 |
| 15 | For a successful smart sustainable city, the integration of the city s diverse systems i essential. | -1 | -4 | 4 | -2 |
| 16 | The notion of cyber-security (risk of hack) is becoming extremely important in a smart sustainable city context. | 3 | 2 | -1 | 1 |
| 17 | The development of smart sustainable cities must be able to contribute to the city s economy e.g. jobs, growth, and finance. | 2 | 0 | -1 | 2 |
| 18 | A smart sustainable city needs a wow factor : it should show something new and innovative. | -3 | -1 | 0 | -3 |
| 19 | A lack of legislation framework on smart sustainable cities is one of significant obstacles in its implementation process. | 1 | 2 | -1 | 4 |
| 20 | It is difficult to secure full benefits of smart sustainable cities if there are robust regulations on privacy and data protection. | -2 | -2 | 0 | -2 |
| 21 | I think most future environmental problems can be solved by intelligent technology. | -2 | -3 | 2 | -4 |
| 22 | I believe intelligent technology can be used to change people s behaviour to be more sustainable in their everyday lives. | 2 | 0 | 3 | 1 |
| 23 | Wireless network infrastructure is more vital in the development of smart sustainable cities than one of smart cities. | 0 | -2 | 4 | 4 |
| 24 | People would not be willing to pay extra money for intelligent services making their lives more sustainable. | -3 | 4 | 2 | 0 |
| 25 | The current practice of smart sustainable cities does not involve public participation as much as it should. | 2 | 2 | 1 | -2 |
| 26 | The users of smart sustainable cities are not only municipal governments, but also enterprises and citizens. | 4 | 2 | -3 | 0 |
| 27 | The sustainability strategy of smart cities should go beyond the technological aspects of intelligent solutions. | 3 | 0 | 2 | -1 |
| 28 | Smart sustainable cities should act as a platform to learn sustainable practices. | | | 3 | -3 0 0 |
| 29 | A smart sustainable city is a very good instrument to link people, and therefore increase local democracy participation. | 0 | -4 | 3 | -4 |
| 30 | Smart sustainable cities can strengthen community engagements by recognizing the citizen as a sensor. | 0 | -1 | 1 | 0 |
| 31 | I see smart cities as a development tool of putting sustainable ideas into practice. | 1 | 0 | 3 | 3 |
| 32 | It is difficult to cooperate with private sectors in developing smart sustainable cities, as they take a short-term view. | -3 | 1 | 1 | -1 |
| 33 | Smart sustainable cities should make a great amount of public data available to users and software developers. | 1 | 1 | 0 | -2 |

*5.2.1 Discourse A: Korea-specific perspectives*

Drawn from the results of the statistical analysis, the respondents in this discourse have particularly: agreed on Statement [9], [16], [26], [27], and [28]; however, disagreed on Statement [4], [10], [12], [18], [24], and [32]. In analysing the Q sorts, this discourse expresses a primary concern on collaborative efforts in the development of smart sustainable cities. This discourse emphasises strongly on the need of: an institutional arrangement for the wider stakeholder involvement (+4 for Statement [9]); and a consideration for wider users including public, private and community sectors (+4 for Statement [26]). The importance of integration shared by the respondents in this dis may reflect the particular interests in the South Korea s practice of smart sustainable cities because the evidence from the participants profile suggests that all six participants in had solely worked in South Korea without international work experiences in the other countries. Kim (forthcoming) reported that South Korea has developed in a standardised form of the smart city development as a series of U-City projects. While U-City projects focuses on the system in of public services provided by local authorities, the practice of smart cities in South Korea experiences a complicated challenge in managing diverse and conflicted interested involved in the development of U-City projects. This echoes a strong support in this discourse for the idea that smart sustainable cities can only be achievable by collaborative efforts from diverse stakeholders and the urban system integration is critical in the development of smart sustainable cities. This shared view on the integration of the city s core systems can have an effect on Statement [16] that is also highly-ranke this discourse, by emphasising the importance of the cyber-security in the development of smart sustainable cities. Additionally, because the Korea s smart city practice is mainly focused on p sector services and systems, it seems possible that this discourse expresses disagreement (scored -3) on the need of a wow factor to show something new and innovative in the deve sustainable cities [18], comparing with other discourses.

Another strong agreement of Discourse A is that the sustainability issues in smart cities must be considered from wider perspectives, rather than focused narrowly on the technology-led solutions. The respondents have strongly agreed (scored +3) that a smart sustainable city should: go beyond the technological aspects of intelligent solutions [27]; and, act as a platform sustainable practice [28]. The respondents in this discourse are very concerned about the importance of sustainability issues in the smart city practice [12], and optimistic about engaging the two concepts of smart city and sustainability in practice (see Statement [4] and [10]). The data reported here appear to show a different view on the earlier argument made by Joss, et al. (2013) that the current practice of smart sustainable cities has narrowly focused on technological aspects of energy-related issues. However, ironically, this discourse has also reported that the majority of people of smart cities may not prioritise the sustainable issues [8]. It seems that practitioners, at least in South Korea, have a clear understanding on the wider definition of sustainability, although they might feel that it would be difficult to implement sustainability in practice as it requires collaborative actions with wider stakeholders.

The findings in this discourse would seem to suggest that the practitioners in the same geographical area might have similar views on smart sustainable cities, as they are from the common political, economic, social, and cultural backgrounds. This might suggest that it would be possible to establish an area-based development strategy for smart sustainable cities, but might not be feasible to develop a common model of smart sustainable cities globally. Speaking from the South Korea s context, t development smart sustainable cities requires institutional and political instruments to facilitate collaborative efforts in practice. It seems that there is a potential to facilitate the collaborative practice in South Korea, as there are common understandings on a wider perspective of sustainability and the need of holistic approach in the development of smart sustainable cities. Those mutual understandings among practitioners may act as a catalyst in establishing a suitable institutional arrangement for further collaborations and prevent many difficulties that may arise later.

*5.2.2 Discourse B: Marketing-specific perspectives*

The statistical analysis shows that, in this discourse, the respondents have particularly: agreed on Statement [5], [7], [11], and [24]; however, disagreed on Statement [3], [15], [21], [28], and [29]. There are two respondents who have been loaded in this discourse, and they are working in the ICT business area of marketing and sales in the development of smart sustainable cities. Both respondents have global work experiences in different countries. One possible implication of this is that their views could differ from Discourse A, as the respondents in Discourse B are more business-minded and working globally. As the marketing and sales professionals often face their clients closely, this discourse may also reflect the perspectives of their clients, public and private developers of smart sustainable cities. This may explain the reason why this discourse has strongly emphasised the linkage between smart cities and the city s sustainability vision [7]. The marketing background of th respondents might be also influential in Statement [11]. This discourse has most strongly agreed that there is no dominant model for smart sustainable cities, while Discourse A has expressed a neutral view on this. This is because South Korea has developed a uniform U-City domain, although the respondents in this discourse may stress the diverse approaches for smart sustainable cities by reflecting the city s particular economic dynamic, political priority, and cultural legacy. These results would also seem to support the idea that it is possible to define a specific model of smart sustainable cities in a domestic practice, however, impossible to create a worldwide standardised model. However, this discourse also shares the same view with Discourse A that green and renewable energy technologies may not be at the heart of many smart sustainable city developments [3].

Comparing with Discourse A, this discourse shows different opinions in the following five statements in particular ([5], [15], [24], [28], and [29]). Although Discourse A disagrees (scored -2) on Statement [5], A key aspect of smart cities should be a new way of living sustainably, rather than conveniently , Discourse B agrees (scored +3) on this. This may mirror the global trend on smart sustainable cities emphasising more on sustainability in everyday life, although the South Korea s practice may prioritise on the aspect of people s convenience. Similarly, Statement [15] for a succe sustainable city, the integration of the city s diverse systems is essential is agreed b respondents in Discourse A, while Discourse B expresses strong disagreement on this statement (scored -4). As discussed earlier, despite the fact that South Korea has developed the integration-oriented approach in the development of smart sustainable cities, it seems South Korea s U-City model is not applicable to many other countries. Another strong disagreement (scored -4) in this discourse is on Statement [29], a smart sustainable city is a very good instrument to link people, an therefore increase local democracy participation . Considering this discourse marketing-specific perspectives, the local democracy participation issues may not be seen as an important value in promoting smart sustainable cities comparing with other values such as improving sustainable living environments [5] and delivering the city s sustainable visi interesting view on the people s willingness of paying for the smart sustainable services. discourse has strongly agreed (scored +4) on Statement [24], people would not be willing to pay extra money for intelligent services making their lives more sustainable , while Disco (scored -3). A possible explanation for this might be that citizens in South Korea are more willing to pay for the smart sustainable services, than those in other countries. However, from the marketing professionals point of view, the paid-services may not be easy to implement in practice.

*5.2.3 Discourse C: Conflict views*

Unlike the previous discourses, the statistical analysis of Q sorts has identified that there are two respondents who expresses conflicted views distinctively on the statements presented. The analysis result on this discourse shows that the conflict opinions between the two respondents are stressed particularly on Statement [1], [3], [6], [8], [14], and [25]. Those are related to the issues of: the government leadership [1]; primary work scope [3]; stakeholder s roles [6]; priority on su [8]; outcome evaluation [14]; and public participation [25]. As Q methodology deals with the subjectivity of individual s perspectives, it is expected that people may have statements. However, what stands out from this discourse is that the conflicted views of the two

respondents are mainly from the consensus building aspect in the development of smart sustainable cities. As explained earlier, this research developed a concourse matrix (Table 1) to reflect wider perspectives of smart sustainable cities using the three key aspects of sustainability delivery: consensus building; facilitation; and open participation. Four out of the above six statements are mapped on the consensus building aspect (Statements [1] to [12]), and the three are particularly on the strategic making category of the consensus building aspect (Statements [1] to [6]). This result may show that there are more significant conflicts and tensions between stakeholders in building consensus in the strategy making process, particularly on the issues of: who should lead; what should be prioritised; and who should do what.

## 6. Conclusion

Learning from the participants in this research, the practitioners on smart sustainable cities have shown particular attitudes and perspectives based on their work backgrounds. It seems that the practitioners share common views if they work in the same geographical or business areas. This subjective landscape on smart sustainable cities can be valuable to understand the existing debates in practice and implement projects more efficiently by mapping possible conflicts in advance. Initial observations in this study suggest that it would be practically difficult to define a dominant model for smart sustainable cities. There would therefore seem to be a definite need for an area-based approach in the development of smart sustainable cities by reflecting local political landscapes, economic dynamics, and cultural identities. The evidence of this can be clearly seen in the case of South Korea. The results of Q analysis suggest that the development strategies of smart sustainable cities in South Korea should pay more attention to the institutional arrangement for collaborative efforts in order to integrate not only the city s core systems but also wider stakeholders involvements research may have limitations in terms of a narrowed range of the participants, Q methodology has demonstrated great potentials in investigating the views and attitudes of the practitioners that may influence on the implementation of smart sustainable cities significantly. However, the results of Q analysis must be interpreted with caution because the methodology is to measure the individuals subjective opinions and attitudes from the particular standing point of the observed participants, rather than generalise the results of the statistical aggregation from the anonymous data.

## 7. References


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# Eco-intelligent Technology Integrated Planning—Application of ZZAEPZ General Planning

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## 1. The integration of Eco- intellegent technology to meet the challenge of urban planning

According to the system theory put forward by Qian Xuesen, the city is a typical open complex giant system. The system has exchange of material, energy and information, etc. with the surrounding environment, at the same time includes a large number of subsystems[1]. Smart city and ecological city achieve efficient and reasonable operation of the whole urban in the aspect of the exchange of information, material and energy.

### *1.1. From ecological city[2] to positive ecological city[3] and to the urban metabolism*

Since Ecological City was clearly put forward by UNESCO in the "Man and the Biosphere" plan in 1971, the thought of harmonious development of man and environment has gradually won support among the people. The countries of the world are carrying out Ecological City planning and construction practice one after another.

However, "Ecology" was defined as minimum damage to nature (Register, 1982) in the 20th century, which was far from enough for the future development of city. An ecological city in the future will not be the enemy of the nature, instead it should be blessed by the nature and become the doctor and friend of the destroyed nature. The ecological city in the future is a positive ecological city, which is not to consume the ecology but to supply the ecology. In the city level, it includes such concepts as increasing green area, cold islands, capacity and water purification (Wu Zhiqiang, 2004). The positive ecological city is supported by green and ecological technology.

The theory of urban metabolism turns from the ecological-system perspective to research perspective centering on human activities. The theory of urban metabolism researches urban social economic activities, and the flow of material and energy in the regional and global biogeochemical process. The

characteristic of the material and energy flow and the relationship between the urban activities and natural process define the production and consumption behaviors in the city. Therefore, the urban metabolism system becomes a multi-disciplinary research field, and in order to realize the mutual response between human and ecology in the future, it focuses on analyzing all kinds of human behavior and material flow in the city. In *The Changing Urban Metabolism*, C. Kennedy points out that urban metabolism is that all social economic and technological process synthesize in the city. It should bring the growth and production of energy and the reduction of waste (C. Kennedy, 2007). [4]With the climate change and the atmospheric degeneration, the urban metabolism system model has increasingly become a key element for sustainability and human health. The urban metabolism system helps to integrate all the activities of the city in a model.

### *1.2. Intelligent City*

The Intelligent City has become the new idea and new practice of future urban development expanded in the global since the beginning of the 21st century, which mix together numerous concepts such as smart city, digital city and information city, etc. The smart city is based on the information and communication technology (ICT). The integration and development of ICT promote the formation and development of information society and knowledge society, profoundly changing people's living and working way, organization form, social formation and innovation pattern. Until the beginning of 2013, several cities in the world have carried out a variety of smart city practices. Dozens of cities in China as well enter this rank and put forward to build smart city. "Creating the future-oriented smart city" has become the strategic measure of future innovation drive and transformation development for the city. [5]

### *1.3. The integration of Eco-Smart technology to optimize urban metabolism process*

At the present stage, when planning the urban metabolism system, a major challenge is the problem of incomplete information. In the urban planning and management, the planners and planning governors don't know the data such as how many energies are consumed in the city, how many water resources, how much sewage is discharged, and how much waste is produced, etc. And they don't clearly know how large the land area those resources and energy can support and how many human activities it can bear, etc. When the planners cannot judge objective problems of the city, the planning and compiling work are lack of logic supports. Changing the status quo needs ability of information acquisition, information understanding and information response.

Therefore, the planning and construction of Eco-Smart city should be integrated. Three core steps of construction of Eco-Smart city are perception, judgment and response. In ecological city, the construction of intelligent technology and intelligent system can make ecological city become measurable and more acute. The first step is to perceive, that is to know the changes of the city. The second step is to identify and judge the data information through reasonable analysis model. The third step is to forewarn, respond and give feedback to the emerging condition according to reasonable standard.

According to the statistic analysis of 225 smart city projects carried out in Europe, 153 smart city projects take up a proportion of 68 percent (others are architecture, block, regional scale) in respect of urban scale; 83 projects target the energy conservation and emission reduction, and 83 projects are focused on people's livelihood, occupying a proportion of 76 percent (the other projects are focused on justice & clarity, resource intensivism, development transformation, and advertising and marketing). This shows that the planning and construction of smart city are very suitable for ecological goals of urban scale. [6]

The synthesis of ecological city and the smart city concept as well as the integration of ecological and intelligent technology will contribute to raising the qualitative problems of ecological city to quantitative level. Meanwhile, it also helps to track the material and energy flow in urban complex system in form of information and give feedback so as to provide information support for planning formulation and plan implementation,.

## 2. Eco-intelligent technology integrated planning framework based on UM&MFA

### *2.1 Urban metabolic system and material flow analysis*[7]

The urban ecological study divides ecological factors into abiotic factors and biological factors. The abiotic factors include: solar radiation, temperature, wind, atmospheric moisture, soil, rainfall and hydrology of the city. In urban planning in recent years, the analysis and research for abiotic factors gradually increased, but few were involved with biological factors and biological diversity. [8]

Compared with the theory of ecological city, the emergence of urban metabolism (UM) theory further focuses on the research on all kinds of energy and material flows in urban artificial material environment and it is more suitable for urban planning. The theory of urban metabolism considers the main flow system in urban environment as: energy, water circulation, land resources, atmosphere, matter, pollution and traffic flow, etc. (Paulo, 2013).

Material flow analysis (MFA, Baccinni and Brunner in the 1990's) 9 is the analysis method of urban metabolism. It's used to measure how matter enter the city system, flow and gather in the city and ultimately discharge from the urban system in the form of pollutants, wastes and output. Material flow analysis provides a framework for researching the metabolism between nature and artificial system.

Urban planners and design use UM and MFA in the following four aspects: 1. Sustainable assessment report; 2. Emission measurements of urban greenhouse gas; 3. Mechanism modeling used for policy analysis and urban design; 4. Design tool: design tool is on the basis of the previous three. Urban metabolism analysis also can be used as a design tool to create more green and sustainable infrastructures. It is not end treatment but starts from the preliminary planning and design. Designing a closed-loop, recycling the resources and reducing the amount of the final wastes by tracking the urban energy, material and waste in the whole process of the urban system. Now they are using all kinds of technologies to make it easier for green buildings to reach their goals. Model use is not limited to functional analysis. It can also be used to examine and weigh the relationship between humans and infrastructures. [10]

### *2.2 Eco-intelligent technology integrated planning framework*

The overall conceptual planning scheme of ZZAEPZ plans and formulates by using the planning framework of comprehensive integration of Eco-Smart.

As the fifth shock wave of transportation technology development, the air transport industry promotes the growth of new urban form -- aerotropolis (John Kasarda, 1992)[11], and it is the projection of global economic integration trend in the city. In spatial form, aerotropolis is shown as: a large complex centered on the airport, and integrated with multiple functions such as air transportation, logistics, commerce&trade, shopping, travel and leisure and industrial development, etc. (Mckinley Conway, 1993)[12]. On March 7th, 2013, the State Council formally approved T*he Development Planning of Zhengzhou Economic Practice Zone (2013-2025)*, proposed to construct the Zhengzhou airport area to

be the going-first area of economic development of the national aerial port (hereinafter referred to as "aerial port zone"), which covers an area of 415 sq. km.. The scale of the core area of aerial port (hereinafter referred to as "aerial port") is 27.6 sq. km. The annual cargo throughput in near term is 3 million tons and the reserved is 5 million tons. The annual passenger transportation is 50 million and will reach 70 million in the near future. On the basis of *Development Planning*, the formulation of conceptual planning is made. We put forward and use the planning framework of comprehensive integration of Eco-Smart in the formulation. In the meantime, we think and explore the specific ecological characteristics and characteristics of information enrichment of the aerotropolis.

The horizontal direction of this planning framework consists of four steps: the definition of urban metabolism subsystem, the setting of ecological intelligent target, ecological simulation and planning response layer, intelligence platform building. In the analysis and planning response of each vertical subsystem, in order to reach ecological goal of urban development, we use material flow analysis through integration of smart technology in planning such as simulation technique, intelligent platform construction and the overall arrangement of intelligent infrastructure, etc.

The first step is the definition of urban metabolism subsystem. Through analyzing the urban metabolism of aerotropolis economic practice zone, we confirm the integrated planning consists of the following 6 subsystems: energy, transportation, solid waste, noise, hydrographic net and vegetation.[13]

The second step is the setting of ecological objective and index. The planning establishes the basic index of six dimensionalities to establish the direction for planning.

The third step is ecological simulation and planning response. We carry out the modeling and simulation of the system input and output for the ecological elements previously confirmed. The special aspects of aerial port are noise and restricted space, so this time we simulate the noise and restricted space. The planning response is to put forward the corresponding solutions for six subsystems such as energy, transportation and solid waste, etc. after the system simulation.

The fourth step is the intelligent platform building. It consists of perception, transmission and WEB-based 3DGIS system. Aiming at a variety of ecological technologies used by ecological elements, we carry through integrated systematic planning and design and we reach the intelligent monitoring of ecological goals through equipment system construction of three steps of perception, judgment as well as response.

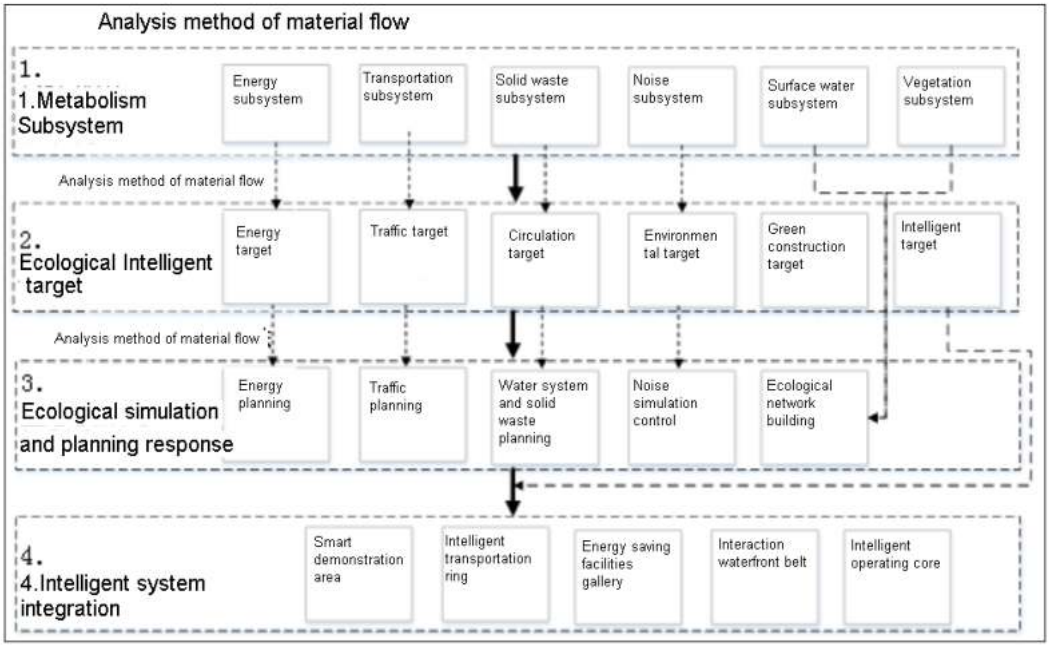


Figure 1 the planning framework of Eco-Smart technology integration of ZZAEPZ

## 3. Conceptual overall planning of ESIP applied to Zhengzhou airport zone

Based on the above framework of Eco-Smart Technology Integrated Planning (ESIP), we have finished the planning research of Eco-Smart integration in conceptual planning of ZZAEPZ. Now, we combine the second, third and fourth steps in the frame to briefly introduce six parts of the planning research achievement: objectives and indicators, noise simulation and control, energy planning, ecological network building, intelligent transportation system planning and intelligent inspection system.

### *3.1 Ecological intelligent goal and index*

Figure 2 Ecological intelligent goal and index system of five dimensions and one core

The setting of ecological intelligent target system of the aerial port zone learns from the intelligent city evaluation system in European Union [14] put forward by Giffinger and the *Eco-City Index System* [15] formulated by Chinese Society for Urban Studies. Integrating the main content of the goal level and combining the actual demand of Zhengzhou aerial port zone, it puts forward the ecological intelligent target system of one core and five dimensions through the target of five ecological dimensions of energy, transportation, circulation, environment and building as well as various types of control center to realize the intelligent integrated monitoring operations of ecological goals.

We set an index respectively for target of five dimensions and one core on the basis of target, a total of six groups of indexes to monitor and implement easily. Energy index: the proportion of clean energy saving shall reach 30 percent in 2020 and 70 percent in 2040. Transportation index: the proportion of transit trip shall reach 20 percent in 2020 and 60 percent in 2040. Circulation index: the consumption of tap water shall reduce by 40 percent in 2040 and the reuse rate of recycled water shall reach 60 percent; in solid waste treatment, the proportion of waste recycling, composting and electricity generation shall be maximized and the proportion of landfill shall reach 3 percent. Environment index: the proportion of carbon emission per GDP shall reduce 25 percent in 2020 and 55 percent in 2040 and the urban noise shall be up to standard. Construction index: the energy-saving standard of all new buildings shall reach 50 percent in 2040. Intelligent operation index: the coverage rate of intelligent facilities shall reach 20 percent in 2020 and 60 percent in 2040.

## *3.2 The simulation and control of noise*

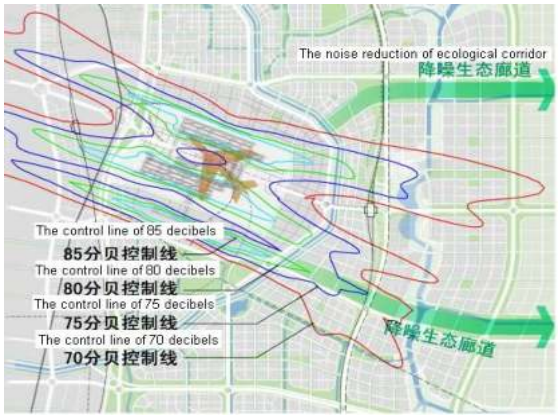


Figure 3 The noise simulation of aerial port

Noise impact is a specific ecological environment factor in aerotropolis and we plan to simulate the noise that 5 tracks do to airport space. According to the simulation, the noise in most of the land within the planning scope is lower than 70dB. The planning takes a full consideration of the influence of airport noise and arranges production land near the two sides of the airport and settles all kinds of living, culture and education, health, services, commercial and recreational activities in the distance of the airport, and sets noise reduction green corridor in the direction of freight runway.[1]

### *3.3 The ecological network construction*

Currently, the planning area is mainly the cultivated and woody land, featured with about 23 sq. km of jujube orchards,, with high greening rate and good ecological benefits. The middle line of the south-to-north water transfer project passes through the planning region. The blue line of control is 90 meters. There are green belts of 200 meters left along the SNWD Main Canal. The river systems in the planning region are rich. Many rivers flow through the planning region, such as Zhangba River, Xiaoqing River, Mei He, Gaolu River, Liming River and Zhelong River, etc. Some parts of the rivers have flow cutoff.

Plan to construct the basic ecological network of ecological city by using water system and linear green buffer. The basic function units of urban development are just like cells inlaid in the ecological network, inarching natural water system and green space and forming the ecological network pattern of **ecological wet formation** and **cell inlay**.

The planning reserves the existing river system and dredges parts of dried-up rivers and enhances the mutual connection between the rivers, reinforces the ecological effects of rivers in the city and retains the ecological embankment and original vegetation. Meanwhile, the planning combines with urban rivers and ponds to build artificial lake to form the main park node of the city. The plan integrates the south-to-north water diversion canal and Xiaoqing River to form X type surface drainage of aerotropolis, on the basis of which the rest of the north-south water systems are cleared and connected in network.

The ecological green space of planning can be divided into two levels: urban green space and ecological green land; the ecological vegetation consists of various of elements such as forest ring corridor, ecological water system, waterfront shoreline and urban farmland, etc. with a total planning area of about 44.7 sq. km; urban green space includes urban public green area and road green buffer, etc. with a total area of 56.9 sq. km and the per capita public green land area is 21.9 square meters per person. Two levels of ecological elements system get rid of the drawback of simple controlling over the urban internal greening system indicators, and highlight the important role that the city peripheral ecosystem plays in ecological city construction.

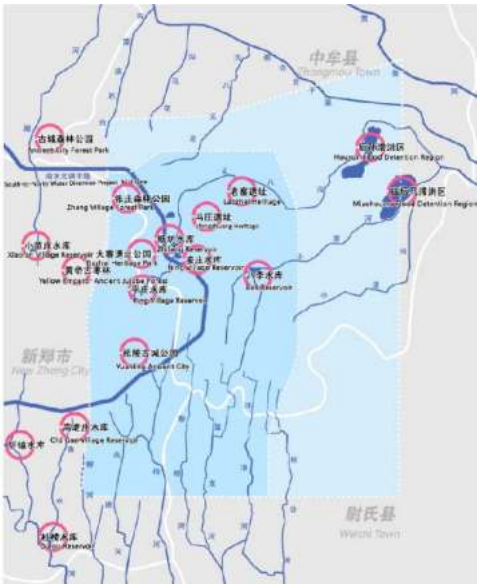

Figure 4 The current situation and planning of ecological system in aerotropolis

### *3.4 Energy planning*

In the aspects of new energy and clean energy, by using six kinds of new energy such as natural gas, solar energy, biological energy source, wind energy, geothermal energy and solid waste power generation in the planning area, the proportion of clean energy reaches 70 percent, the use of electric power reaches 30 percent and the carbon emission reduces by 55 percent in the year of 2040.

In the aspect of energy intelligent management system, set energy monitoring center in major public buildings and establish a city level energy center to implement networking and monitor and allocate the energy consumption of the city, building and municipal administration. By using WEB -based 3DGIS, realize the real-time monitoring of energy consumption of all departments and the condition of underground energy facilities and early warning of equipment accidents through the pipe sensors and equipment management systems lying underground.

Figure 5 Intelligent energy management system planning in the aerotropolis

### *3.5 Transportation system planning*

Transportation planning is divided into three levels: the first is passenger transport - how to ship out 3 million tons per year; the second is freight transport - how to transport 50 million people; the third is the transportation inside the aerotropolis.

Relying on airport, the planning area builds the multi-modal transport system with high speed rail, interurban railway, rail transit, expressway and fast road as the backbones. Passenger traffic system planning: in the core area of Zhengzhou Xinzheng International Airport, using the join of interurban

railway, rail transit, BRT and conventional public traffic to form three-dimensional seamless transfer hub. Freight system building: in Zhengzhou urban area, realize the joint of three ports - the logistic harbor of arterial road as road port, the international multi-modal transportation center as rail port and the airport logistic park as aerial port, efficiently connected through the interlaced rapid commodity transport passage.

Plan an airport logistic zone around airport, build a set of intelligent logistics management system through the construction and integration of intelligent settings in seven aspects such as security airport, E-port, rapid logistics, seamless outsourcing, efficient commerce, intuitive information and safe farm, realizing the transfer of aerial port from logistics center to information center.

Figure 6 Intelligent logistic park planning in the airport

In the airport economic zone, as a demonstration project, plan an intelligent transportation ring road with a length of 43 kilometers, set 18 base stations covering a width of 1 kilometer on both sides of the road respectively. The traffic replacement is composed by information indicating, intelligent monitoring and integrated control center, providing information such as route guidance, parking guidance, deceleration prompt, peccancy detection, accident pretreatment, bus information, real-time control of traffic signals and emergency rescue, etc.

Figure 7 Intelligent road system planning in the aerotropolis

*3.6 Intelligent monitoring system planning*

Figure8 Intelligent monitoring and control system planning in the aerotropolis

At last, the intelligent integrated planning integrates such subsystems of urban metabolism as energy, transportation, building energy efficiency, noise control, atmospheric monitoring and water quality monitoring with the intellectual technology used in environmental ecological factors, making the information acquired can be connected and integrated to reach the ultimate goal of ecological city through intelligent integration. The planning integration forms one area, one ring, one region, four galleries and four cores, all of which act as the outcomes of intelligent integration. One area: one airport intelligent demonstration area. It manages the aviation, passenger flow and logistics through intelligent technology, stores and analyzes the laden huge amounts of high-grade passenger flow logistics information to make airport transfer from logistic harbor to information port. One ring: intelligent transportation ring. One belt: dynamically monitoring the water quality of Xiaoqing River, and setting a large number of interactive experience devices in the waterfront belt, making it a demonstration area of water ecological education, exhibition and recreation. Four galleries: setting energy saving facilities galleries along Yingbin road, connecting line of Daguang expressway, Wansan road and S102, using solar street lamp and breeze electric generator to supply electricity for urban lighting, adopting moderate LED nightscape lighting. Four cores: setting an intelligent integrated operation monitoring center in airport, northern, eastern and southern area respectively, monitoring and evaluating the ecological efficiency in the overall urban operations to make ecology and intelligence predictable, evaluable and adjustable.

## 4. Conclusion

Regarding the ecological environmental impact probably caused in the large-scale and rapid development and construction of ZZAEPZ and problems such as incomplete information and the inter-departmental information isolated island existing in each subsystem of urban metabolism, the

research uses MFA to build an ecological intelligent integrated planning framework and apply it to overall planning of experimental area, which achieves preliminary planning results.

Through the planning formulation process we can see that about the six subsystems defined in this planning, the research and planning for transportation, light green subsystem and noise factors are sufficient. The coordination of department is relatively successful because the planners have a certain stock of knowledge on these aspects. However, energy subsystem is a new problem emerging in recent years, so there are several attempts, but cross-functional coordination is not very successful. For recycling, because of absence of communication mechanism among planners, environmental protection, and sanitation departments, the planning result is difficult to implement.

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# Environmental Friendly Planning Practices Implemented in China's Ultra High-Rise Structures——Planning & Implemental Process of "606meters" Wuhan Greenland Centre, China

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**Keywords: Planning Practices, Ultra High-rise Structures, Environmental Friendly**

## Abstract

With China's fast economic development in the past decade, China now has more than 350 ov er 200 meters high-rise buildings and seven of them are in the present highest skyscrapers. Ult ra high-rise building projects plays an important role in economic growth of China as the urban area development space is becoming more limited and also other resources. Ultra high rise buildings are the substantial and spiritual symbol for the region which can push forward development of different areas.

Therefore, with the development of information technologies used in fields in urban planning, architectural design and property management, problems like safety, cost,energy saving, and optimization of the structure have been continually thrown out and focused by world's leading experts.

Wuhan Greenland Center (606 meters height) ,the 2nd tallest structure in China and 4th in the world. The 300,000 m2 urban complex consists of cultural spots, residential apartment, hotel, offices, shopping center and tertiary sectors like finance, creative studio, etc. The project aim to generate a new city sub-centre as well as the revitalization of this area. And Being a key participant in the Wuhan Greenland Center project, this article will share details during the pre-stages of decision making, site selection, environmental evaluation and social economic effects, functional compound, etc. By the means of modern information technologies and cutting edge tools, which benefits in settle the public needs and shorten the processing period.

## 1. Introduction

In the past decades, hundreds of ultra high rise buildings have arise China. It s not only the spiritual symbol of a city but also beco economics and revitalizing some downgrading region.

Being one of the world s ultra high rises building properties owner, July 18th 1992 with its headquarters in Shanghai China, Greenland enterprise tenet of Greenland, create better life in the past 22 years and f government advocates and what the market calls for, forming the curren which features highlight on the real estate, integrated development of rele including business, finance and metro through a two pronged development meth management and capital management and ranking the 268th place in 2014 the 40th place of the Chinese mainland enterprises on the list. In income amounted to 402.1 billion RMB(1USD=6.1RMB), total pre tax profit total assets 478.4 billion RMB at the year end, of which the real area of 21.15 million square meters and a sum of 240.8 billion RMB industry champion.

The real estate business of Greenland Group is taking the lead natio development scale, product type, quality and brand. It is also far ah rise buildings, large urban complex projects, high speed rail station industrial park development. Of the present 23 ultra high rise urban still under construction), 4 enters the world top ten in terms of development projects have covered 29 provinces and 80 odd cities with construction up to 82.33 million square meters. Closely following t globalization, Greenland Group expands its business overseas in a st covering 4 continents, 9 countries including USA, Canada, UK and Aust becoming the top runner of global operations of China s real estate industry.

In addition to ensuring its leading position in the real estate indu develops secondary pillar industries including finance, business, hot investment and energy resource, acquires Greenland Hong Kong Holdings (00337) company in Hong Kong Stock Exchange, and fulfils its strategic layout resources. It accelerates the overall pace of going public, propelli internationalization of itself.

Greenland Group will drive growth at a higher starting point, strive t operating income and over 50 billion profit by 2020, ranking among the Meanwhile, Greenland Group will build itself into a respectable transna sustainable development, outstanding benefit, global operation, pluralis continuous innovation, and complete the significant transformation from China s the World s Greenland .

Well experienced in building ultra high rises and leading in project s Greenland Group constantly refreshes the city skyline with its corporat leading operator in developing ultra high rises in China. There are buildings completed or under construction by Greenland, four of which highest buildings in the world. All of them have become the new la around the world.

| Name | Native name | City | Height | Floors | Year | Pinnacle height | Roof height |
|---|---|---|---|---|---|---|---|
| Shanghai Tower | 上海中心大厦 | Shanghai | 632 m (2,073 ft) (topped out) | 121 | 2014 | 632 m (2,073 ft) | |
| Shanghai World Financial Center | 上海国际金融中心 | Shanghai | 492 m (1,614 ft) | 101 | 2008 | 492 m (1,614 ft) | 492 m (1,614 ft) |
| International Commerce Centre | 環球貿易廣場 | Hong Kong | 484 m (1,588 ft) | 118 | 2010 | 484 m (1,588 ft) | 484 m (1,588 ft) |
| Greenland Center-Zifeng Tower[3] | 绿地广场·紫峰大厦 | Nanjing | 450 m (1,480 ft) | 89 | 2010 | 450 m (1,480 ft) | 381 m (1,250 ft) |
| Kingkey 100 | 京基100 | Shenzhen | 441.8 m (1,449 ft) | 100 | 2011 | 441.8 m (1,449 ft) | 441.8 m (1,449 ft) |
| Guangzhou International Finance Center | 广州国际金融中心 | Guangzhou | 440.5 m (1,445 ft) | 103 | 2010 | 437.5 m (1,435 ft) | 432.0 m (1,417.3 ft) |
| Jin Mao Tower | 金茂大厦 | Shanghai | 421 m (1,381 ft) | 88 | 1998 | 421 m (1,381 ft) | 370 m (1,210 ft) |
| Two International Finance Centre | 國際金融中心二期 | Hong Kong | 416 m (1,365 ft) | 88 | 2003 | 416 m (1,365 ft) | 392 m (1,286 ft) |
| CITIC Plaza | 中信广场 | Guangzhou | 391 m (1,283 ft) | 80 | 1997 | 391 m (1,283 ft) | 323 m (1,060 ft) |
| Shun Hing Square | 信兴广场 | Shenzhen | 384 m (1,260 ft) | 69 | 1996 | 384 m (1,260 ft) | 325 m (1,066 ft) |
| Central Plaza | 中環廣場 | Hong Kong | 374 m (1,227 ft) | 78 | 1992 | 374 m (1,227 ft) | 309 m (1,014 ft) |
| Bank of China Tower | 中銀大廈 | Hong Kong | 367 m (1,204 ft) | 72 | 1990 | 367 m (1,204 ft) | 305 m (1,001 ft) |
| The Pinnacle | 广晟国际大厦 | Guangzhou | 360 m (1,180 ft) | 60 | 2011 | 360 m (1,180 ft) | 311.9 m (1,023 ft) |
| The Center | 中環中心 | Hong Kong | 346 m (1,135 ft) | 73 | 1998 | 346 m (1,135 ft) | 292 m (958 ft) |
| Tianjin World Financial Center[4] | 津塔 | Tianjin | 337 m (1,106 ft) | 76 | 2011 | 337 m (1,106 ft) | 337 m (1,106 ft) |
| Shimao International Plaza | 上海世茂国际广场 | Shanghai | 333 m (1,093 ft) | 66 | 2005 | 333 m (1,093 ft) | 247 m (810 ft) |
| Minsheng Bank Building | 民生银行大厦/武汉国际证券大厦 | Wuhan | 331 m (1,086 ft) | 68 | 2007 | 336 m (1,102 ft) | 290 m (950 ft) |
| China World Trade Center Tower III | 国贸3期/国际贸易中心3期 | Beijing | 330 m (1,080 ft) | 74 | 2009 | 330 m (1,080 ft) | 330 m (1,080 ft) |
| Nanqing Village of Huaxi | 空中华西村 | Wuxi | 328 m (1,076 ft) | 74 | 2011 | 328 m (1,076 ft) | 328 m (1,076 ft) |
| Deji Plaza Phase 2 | 德基广场二期 | Nanjing | 324 m (1,063 ft) | 62 | 2014 | 324 m (1,063 ft) | 324 m (1,063 ft) |
| Wenzhou World Trade Center | 温州世贸中心大厦 | Wenzhou | 322 m (1,056 ft) | 72 | 2010 | 322 m (1,056 ft) | |
| Nina Tower | 如心廣場 | Hong Kong | 319 m (1,047 ft) | 80 | 2007 | 319 m (1,047 ft) | 319 m (1,047 ft) |
| One Island East | 港島東中心 | Hong Kong | 308 m (1,010 ft) | 70 | 2008 | 308 m (1,010 ft) | 308 m (1,010 ft) |
| Gate to the East | 东方之门 | Suzhou | 302 m (991 ft) | 74 | 2014 | 302 m (991 ft) | 282 m (925 ft) |

Figure 1. China Current Ultra-High Rise Building
Source: Wikipedia

Under construction [edit]

| Name | Pinnacle height | Floors | Completion | City |
|---|---|---|---|---|
| Suzhou Zhongnan Center | 729 m (2,392 ft) | 137 | 2020 | Suzhou |
| Ping An Finance Centre | 660 m (2,170 ft) | 115 | 2016 | Shenzhen |
| Wuhan Greenland Center[6] | 636 m (2,087 ft) | 125 | 2017 | Wuhan |
| Shanghai Tower | 632 m (2,073 ft) | 128 | 2014 | Shanghai |
| Goldin Finance 117 | 597 m (1,959 ft) | 117 | 2015 | Tianjin |
| Tianjin Chow Tai Fook Binhai Center | 588 m (1,929 ft) | 98 | 2015 | Tianjin |
| Baoneng Shenyang Global Financial Center | 565 m (1,854 ft) | 114 | 2018 | Shenyang |
| Chow Tai Fook Centre | 530 m (1,740 ft) | 116 | 2016 | Guangzhou |
| Rose Rock IFC | 530 m (1,740 ft) | 100 | 2015 | Tianjin |
| China Zun | 520 m (1,710 ft) | 108 | 2016 | Beijing |
| Kaisa Feng Long Center | 518 m (1,699 ft) | 92 | 2015 | Shenzhen |
| Dalian Greenland Center | 518 m (1,699 ft) | 88 | 2016 | Dalian |
| Hengqin Headquarters Tower 2 | 490 m (1,610 ft) | 106 | 2017 | Zhuhai |
| Tianjin R&F Guangdong Tower | 468 m (1,535 ft) | 91 | 2016 | Tianjin |
| International Commerce Center 1 | 468 m (1,535 ft) | 100 | 2016 | Chongqing |
| Changsha IFS Tower T1 | 452 m (1,483 ft) | 88 | 2017 | Changsha |
| Wuhan Center | 438 m (1,437 ft) | 88 | 2015 | Wuhan |
| Wuhan Tiandi A1 | 435 m (1,427 ft) | 76 | 2016 | Wuhan |
| JW Marriott International Finance Centre | 431 m (1,414 ft) | 102 | 2014 | Chongqing |
| China Resources Headquarters | 392 m (1,286 ft) | 100 | 2017 | Shenzhen |
| Dalian Eton Center[7] | 384 m (1,260 ft) | 81 | 2013 | Dalian |
| Forum 66 Tower 1[8][9] | 384 m (1,260 ft) | 76 | 2013 | Shenyang |
| Sino Steel Tower | 358 m (1,175 ft) | 80 | 2015 | Tianjin |
| Forum 66 Tower 2 | 351 m (1,152 ft) | 68 | 2013 | Shenyang |
| Gezhouba International Plaza | 350 m (1,150 ft) | 69 | - | Wuhan |

Figure 2. China in progress Ultra High Rise Builings
Source: Wikipedia

## 2. Development overview of Greenland Wuhan 606Center

Wuhan City, locates in the mid of China with the 2nd longest river

millions people, which is the largest city in mid of China. The proj

Figure 3. Spatial distribution of Wuhan City
Source: Baidu Map

Greenland Center is a 119 floor 606m mixed use tower under construct
June 2011, Adrian Smith + Gordon Gill Architects in conjunction wi
Engineers won the design competition to build the tower for Greenland
many energy saving features. The expected completion date is 2014.

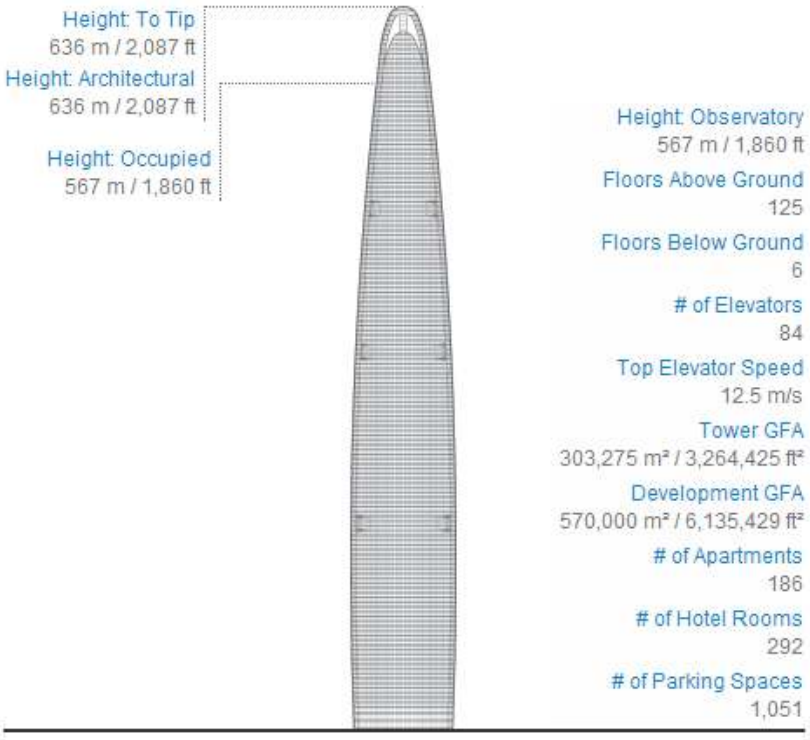


Figure 4. China in progress Ultra High Rise Builings

Source: Wikipedia

Figure 5. ChinaWuhan Greenland Center

**3. Planning Practices**

Spatial planning has now become a phrase that resonates throughout m
across the globe. Theoretically, though ambiguous and with no consensus
described as an ongoing, enduring process of managing change by a
interests of sustainable development. In the EU discourse, however, the
system and legally binding setting for formalising and implementing s
Rather, it can be seen as a meta narrative of the EU political
paradigmatic influence and to shape the shared mental models in the
towards more sustainable and spatially balanced economy within the EU
evidence shows that whilst there is a weak convergence at the nati
member states, regional imbalance within the member states is increas
decades. This is arguably due to the lack of legally binding tools o
policy which made no obligations to the hierarchically structured gove
strategic goals of spatial development in the national, regional and lo

## 4. Conclusion

With the means of various methods in different stages of the proje
Center illustrates ways that collaboration between local government, r
urban planner, architect, environmental experts and also local residents
in different process from the decision making, environmental assessm
construction stages and also the operating and administration of the a

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# A Spatial Study on Creative Community around Tongji University in Shanghai Based on the Data Analysis of Professional Social Network

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## Abstract

*Creative city is the current hotspot in urban planning against the background of urbanization and economic transition in China. The urban zone around Tongji University in Shanghai is a typical creative community, which has undergone more than 20 years of development, from the spontaneous clustering of creative industries to organized planning and managing led by local authorities.*

*This study focuses on the history and future trend of this community. People, as the element of a creative city, for that University and Company would function. University is the institution for educating people, while Company provides for the working of People. Consequently, the links among People, University, Company reflect the creativity performance of a community. This study visualizes this relevance with methods of data analysis. The famous international professional social network LinkedIn is taken as the data source, and the general information of personal identity, education and employment of individuals in creative industries within Tongji Rim are collected from users homepages. Through analysis of the intrinsic link between the research objects by data quantification and statistical distribution observation, characteristics and internal factors of development of a university-oriented creative industries area has been observed.*

**Keywords:** Creative community, Career track, Professional social network

## 1. Introduction

### 1.1 *Tongji Rim: A University-oriented Creative Community in A Creative City*

Tongji economic zone is a collection of neighborhoods surrounding Tongji University (Figure 1), as the concept of an economic geography, it has nearly 10 years of history, and its development process is almost 30 years. According to the 2007 "Overall Plan of Tongji Economic Zone in Yangpu District", Tongji Rim is defined as "a economic activity circle with knowledge service as a link, and a creativity industrial cluster with creativity, innovation and entrepreneurship as feature". As a famous Chinese Engineering University, Tongji University has strong strength in architectural design, urban planning, landscape gardens, civil engineering, art and design and other disciplines.

From the early 1980s, inside and outside Tongji University have been a few design business and technology consulting services company (such as Tongji Urban Planning and Architecture Research Institute established in 1982). In the early 1990s, with a large-scale urban construction of Shanghai Pudong New Area, and the first real estate development boom in China, market demand of design industry increases, in Tongji University, teachers and graduates with relevant professional backgrounds opened a large number of design studios or companies in and outside the campus. And the emergence of these companies has prompted the gathering of downstream service industries such as computer renderings companies, models production companies, printing companies. By 2002, on the 860 meters long, 20 meters wide Chifeng Road on the south side of the campus has accumulated spontaneously more than 500 design and construction-related businesses. And Chifeng Road "street of architectural design" is formed in 2004. Around campus and this street preliminarily constitutes a complete design-oriented industrial chain supported with the graphic production, architectural models, decoration, design and consulting enterprises, which forms industrial clusters of design and plays a role as a venture incubator as well.

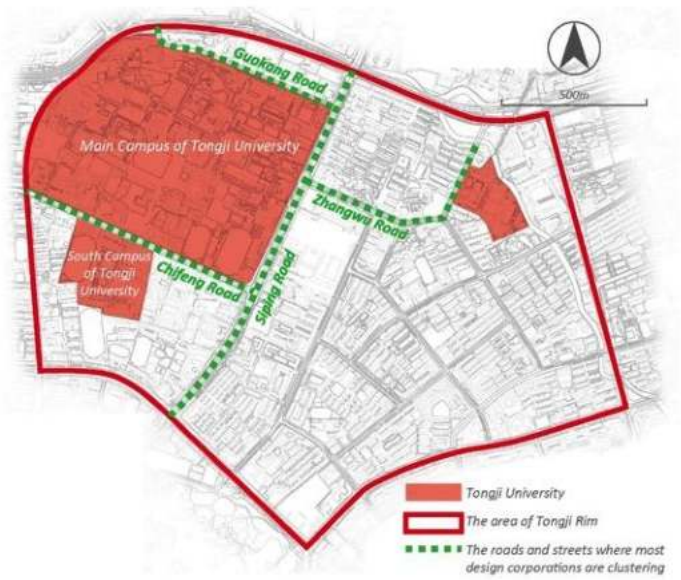



Figure 1. The area of Tongji Rim

By 2014, a total of 2,200 design firms and creative agencies have settled in the surrounding communities around Tongji University, employment ups to nearly 30,000, the annual output value nearly ups to 30 billion yuan that is over 20 times to $ 1 billion of 2002 (Figure 2). In terms of Yangpu District that Tongji University is located in, 95% of design firms accumulate in this region. As a result, Tongji Rim becomes one of the first modern service-oriented industrial base and the most influential gathering area design industry in China.

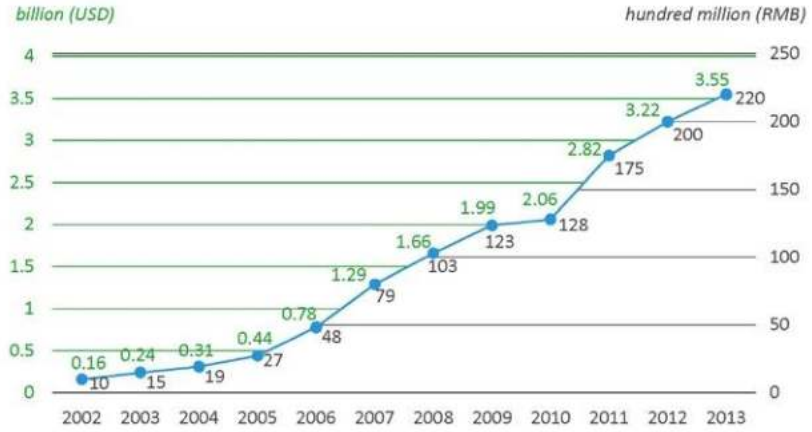



Figure 2. Total Value of Out-put of Tongji Rim from 2002-2013

Shown in Figure 1, the core area of Tongji Rim covers about 2.6 km$^2$ (area of Tongji University covers about 0.7 km$^2$, accounting for about 27% of its total area). In this region, most entrepreneurs and employees of design industry-related companies have close relation with Tongji University (faculty or graduate), while the names of these companies often contains the "Tong", as if to prove their links with Tongji University. Therefore, Tongji Rim is a typical university-led and oriented creative community. It has many similarities to the other university-oriented creative community such as Stanford University-oriented California's Silicon Valley, Harvard and MIT-oriented Massachusetts Route 128, and Tsinghua University-oriented Beijing's Zhong Guan Cun, etc.. As Edward Roberts (2009) points out, the estimated 6,900 MIT alumni firms headquartered in Massachusetts generate worldwide sales of about $ 164 billion. More than 38 percent of the software, biotech, and electronics companies founded by MIT graduates are located in Massachusetts. And these industries are precisely the leading disciplines in MIT. Thus, the spillover of leading discipline of a university often bring about a high accumulation of related people and businesses, and the formation of these disciplines-led industries cluster, to burst out an amazing innovation. Therefore, we hope to explore the main features of university-oriented creative community and the gathering track of business and people through the analysis of Tongji Rim.

### *1.2 People, University and Company, Three key elements of Creative Community*

The direct characterization of Tongji Rim is the continuous gathering of design industry-related businesses around Tongji University, resulting in huge economic benefits. As Paul Krugman (1991) points out, remarkable concentration of production in the space is the most striking feature of the geography of economic activity. As a University-oriented creative industries area such as Tongji Rim performs is the phenomenon that a large number of leading discipline and university-related industries and enterprises gather around the campus and bring about creative production activities.

Company settle near the university in order to transfer and take advantage of resources generated in the university more easily, but the university itself does not have the resources

company need, instead, the real source is the "people" and what they carry, Maryann P. Feldman (2014) states, "Person" (human agency who construct system and make all kinds of decisions in the public and private sectors) is the decisive factor for the success of a place. Therefore, people related to the university (teachers, researchers, graduates or students) are the carrier of resource shift and energy exchange between university and company. Zhang Xisheng et al. (2009) points out that human resource (trained talent, its own teachers, introduced talent, etc.) is overflowed from the university, and directly participates in the company s development process, while improving company s culture. Among these people, some may set up new creative enterprises with their own knowledge and skills; some may become a partner or employee in other companies. They are the joints linking company and university organically, and gather in a relatively concentrated space and produce a large number of innovative products, so as to form the city's creative industries area.

In other words, a university with unique leading discipline is the material premise of rapid development of such creative industries areas in urban, and gathering of large numbers of creative enterprises is a direct promoter of creative industries, and people active between universities and company is not only the necessary carrier of realizing technology resource shift from university to company, but also the key ring linking university and company. People, university and company constitute the three core elements of university-oriented creative industries area, and "people" are the most core element.

Although the people, university and company are the three core elements of university-oriented creative industry area, but it is not to say that the presence of these three elements will be able to nurture the creative industry area in the city. They might form a sustainable "creative ecosystem" due to coupling of features under certain conditions and trigger coordination and interaction as "chemistry" university continuously develop cutting-edge theoretical knowledge and technological achievements, and cultivate entrepreneurial and innovative talent, while a lot of companies gather and incubate, and finally the "creative production " is formed in a large-scale, resulting in considerable economic benefits.

In this paper, Tongji Rim is taken as example, the three core elements "people", "university", "company" is listed as three sources of indicators of university-oriented creative industries urban area. By collecting open data from the "LinkedIn" a professional social network, the coupling relationship between the three sources indicators is analyzed to reveal the main features of coordination between them, and quantify these characteristics to each sub-index for further research.

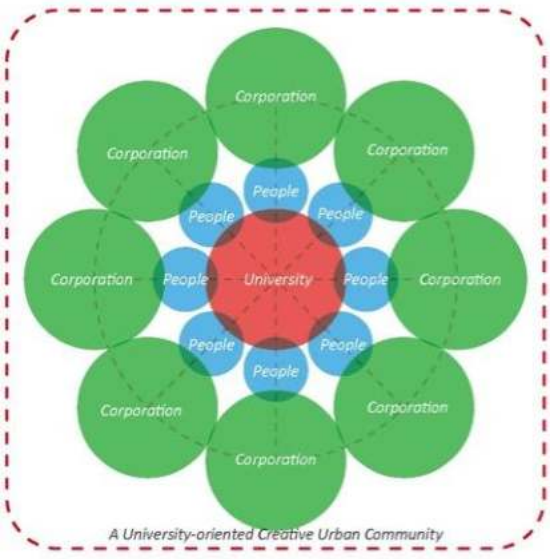



Figure 3. Three key elements of a university-oriented creative urban community

### *1.3 To Informationize the Relevance between Three Elements*

How to define the relationship between "People", "university" and "company"? As mentioned above, "people" is the most core element of the university-oriented urban creative industries area. The coupling relationship between "university" and "company" is realized through every independent "person". As Torsten Hägerstrand (1969) proposed two concepts: (1) the study of the individual can understand the development of social and groups; (2) A link between space and time should be developed.

Therefore, in this paper, people who are related to those companies in Tongji Rim are defined as the research object to analyze their correlation with Tongji University and its surrounding companies. This correlation can be displayed by certain information of individual characteristics. Among them, the correlation between "university" and people can be reflected through individual educational information (graduate schools, academic, major, etc.); and the one between company" and "people" can be done through individual work background information (work units, headline, projects, etc.). These two aspects of a person's information constitute the individual complete career information library under definition of two dimensions time (age, school year, working years) and space (location). With this information base, the relationship between "people", "university" and "enterprise" is transformed into information.

Therefore, by collecting and analyzing personal career information database of "creative people" in Tongji Rim, some characteristics of a personal career information can be found, which might be reflect the comprehensive feature of Tongji Rim.

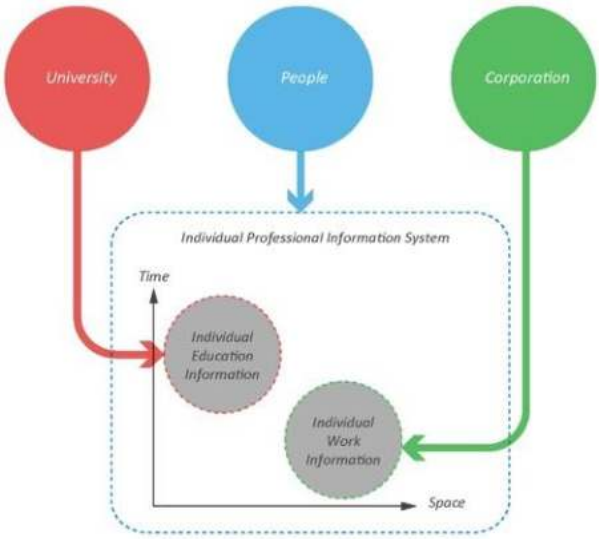



Figure 4. To Informationize the Relevance between Three Elements by the individual professional information system

### *1.4 LinkedIn s Database*

LinkedIn offers the possibility of observing "university" and "enterprise" two dependent variables through "people" as independent variables. Firstly, as a global, wide-used professional social network tools, LinkedIn has a large number of individual users, each individual user has a comprehensive education information and work background information; secondly, as a semi-open social platform, most information of the users is public and available easily to some extent; LinkedIn also has considerable business users, the overall information associated with these businesses crowd can be found. Therefore, by the collection sorting and visualization of user information on LinkedIn, it is possible to describe group career information for further description of features of university-oriented creative industries area.

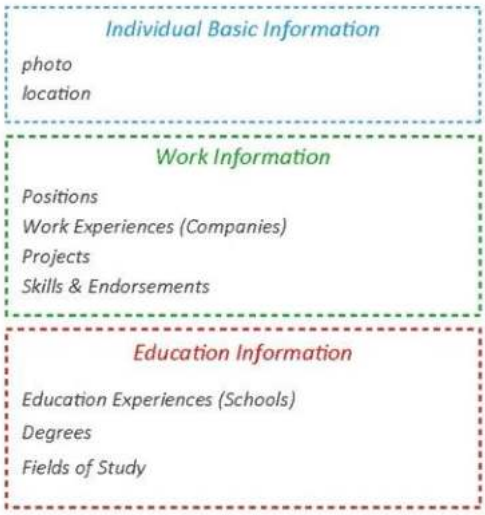



Figure 5. The basic structure of an individual user s profile

## 2 Methodology

### *2.1 Quantification and Graph of People, University and Company*

Based on every user profile on LinkedIn, a single individual is described and defined by classification of the three categories that profession, contacts and education, and which respectively involves a total of eight tags that company, previous company, experience, industry (profession), connections (contacts) and education, major, skills (education), the following is formula:

$$Person_n = \{I_{an}, I_{bn}, I_{cn}, I_{dn}, I_{xn}, I_{mn}, I_{nn}, I_{on}\}$$

$Person_n$ represents the n individual (Figure 6);

$I_{an}, I_{bn}, I_{cn}, I_{dn}$ belong to profession category, respectively represents company, previous company, experience and industry of the n individual (Figure 7);

$I_{xn}$ belongs to contact category, represents connections of the n individual (Figure 8);

$I_{mn}, I_{nn}, I_{on}$ belong education category, respectively represents education, major, skills of the n individual (Figure 9).

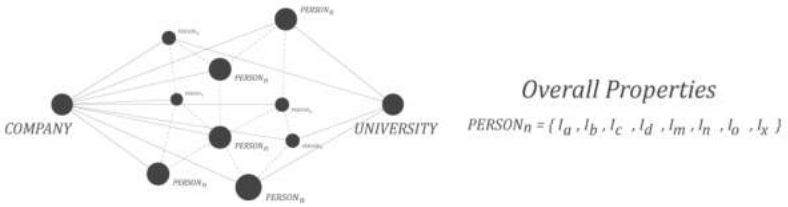



Figure 6. The graph of Personal Properties

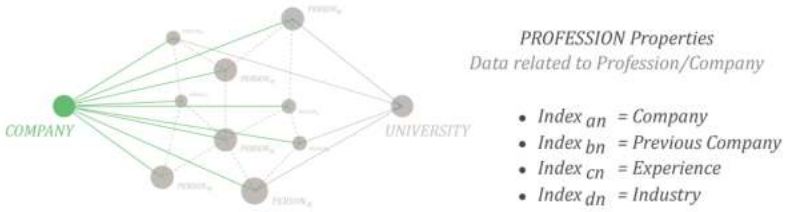



Figure 7. The graph of Professional Properties

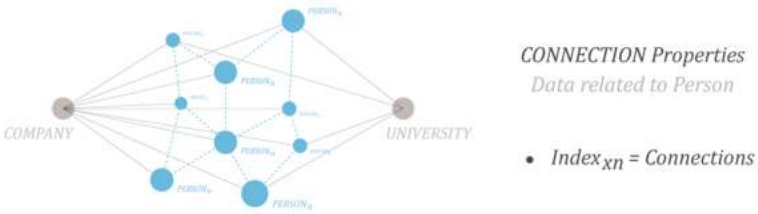



Figure 8. The graph of Connection Properties

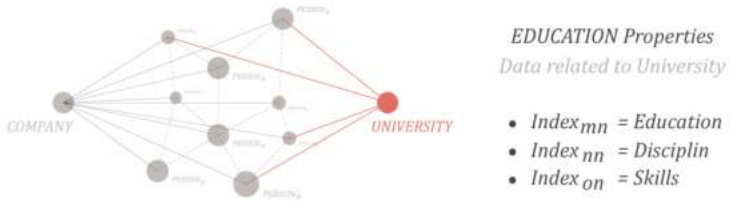



Figure 9. The graph of Education Properties

For a research on a university-oriented creative industry cluster, the object are the companies, people and university, and personal information contains companies and university, so it is the first thing to do that filtering and determining the study sample people active in the region, obviously, "in the region" is the qualification, and only $I_{an}$ (company) has spatial attributes in the eight individual tags, so $I_{an}$ is defined as the qualification to filter out all the people information which contains $I_{an}$ in use of Advanced Search on LinkedIn (the features include keyword, name, title, company, graduate schools, location and many other information) (Figure 10). It needs to be emphasized that the company information (company's name used in this research) as the filter keyword is not to limit its timing, which means both cases that the company is the one people currently or once work in. Taking such a filter condition is to remain the dynamic attributes on time-line of personal data, so as to analyze the track of creative talent more completely.

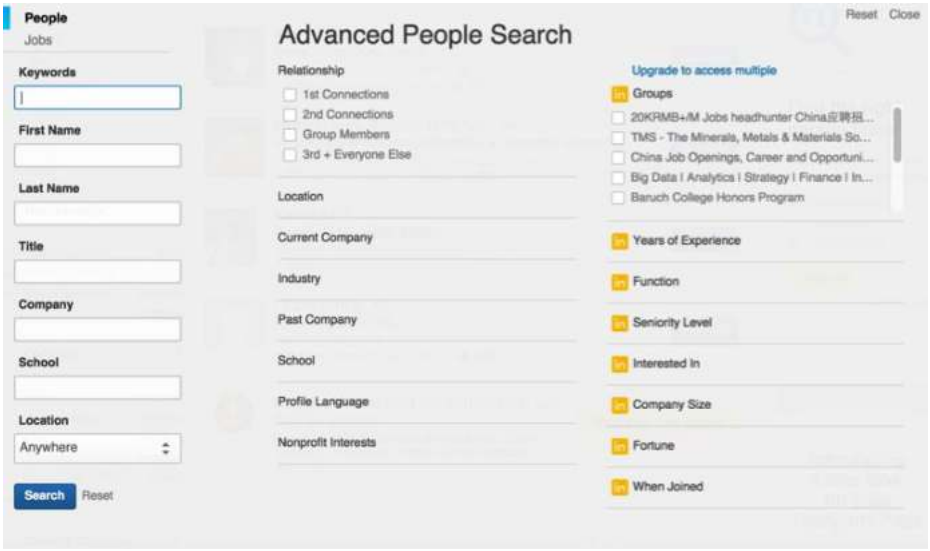



Figure 10. The advanced people search panel on LinkedIn

A user list that meets the condition will be shown after filter, each of the personal information contains three categories of information, career, contacts and education. When data is adequate and objective, after classification and statistics, it can be the quantized evidence to analyze the intrinsic relationship between company and the university (Figure 11). So analyzing the intrinsic link between the research objects by data quantification and statistical distribution observation is the core methods in this study.

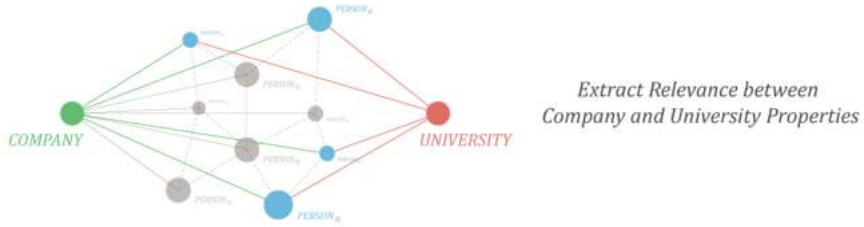



Figure 11. The graph of relation to be extracted between company, people and college

*2.2 The Framework and Flow of Research Method*

In this paper, the research object is Tongji Rim. On the basis of statistical methodology described in Section 2.1 above, the feasibility of data collection is evaluated in advanced to ensure a certain scale of users who relate to the company in LinkedIn database (> 100, based on consideration of a single company size, constraints on LinkedIn site, user incomplete information and other factors). The final selection are the following four companies in Tongji Rim as the qualification $I_a$: a. Architecture Design & Research Institute of Tongji University, sample size is 170; b. Shanghai Municipal Engineering Design Institute (Group), sample size is 115; c. Tongji urban planning & design research institute, sample size is 115; d. CCDI GROUP, sample size is 177. After collection, the corresponding personal data is classified into eight tags for mass distribution statistics respectively

This paper focuses on the following four data Stats: 1. Statistics of $I_{nn}$ education situation of users who relate to $I_a$ company; 2 Statistics of $_{dn}I$industry situation of users who relate to $_a I$ company; 3 Statistics of annual number change of related people who work in $I_a$ company as graduation (the data comes from experience $_{cn}I$the earliest years of employment with the company information); 4. Statistics of annual number change of related people who transfer in $I_a$ company (the data comes from experience $_{cn}I$the years of transferring with the company information).

From statistics of the four companies (a,b,c,d), the resulting mass distribution (histogram) and their distribution characteristic come to determine analysis of relations between company, people and university in Tongji Rim as well as the cause of development of a university-oriented creative industry cluster. The following is the specific research method flow (Figure 12):

Figure 12. The framework and flow of research method

## 3 Results and Discussions

### *3.1 The Results of Statistic*

After the statistics of related groups in four companies, based on four focus mentioned in Section 2.2, the four mass distributions (histogram) are obtained.

(1) Mass distribution of education situation of people who relate to the four companies:

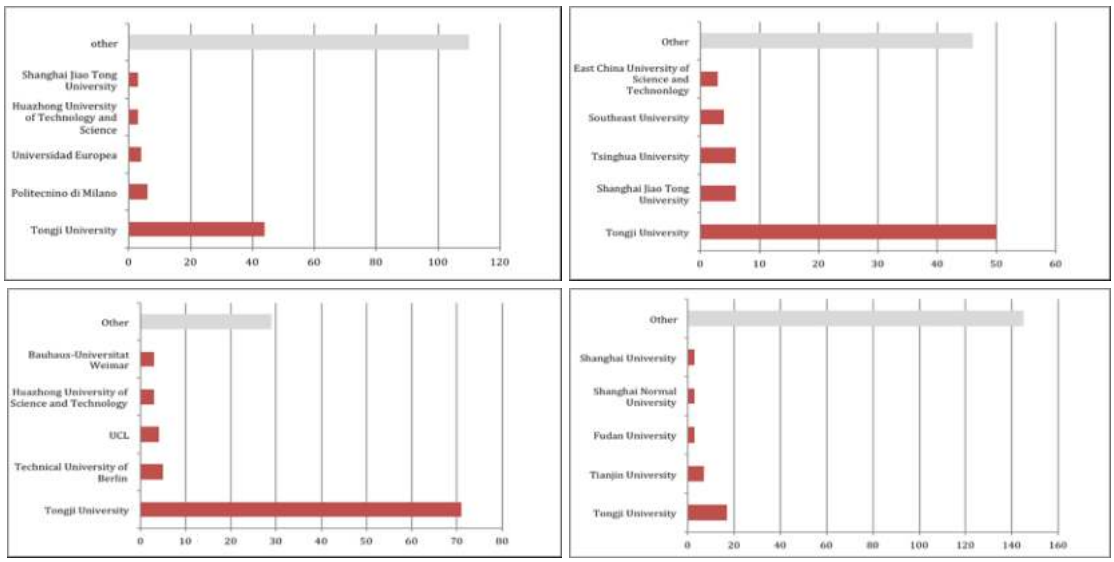



Figure 13. Mass distribution of education situation of people who relate to the four companies

The figure shows that Tongji University (among other things) has the highest occupation in education situation in all of the four companies, which accounts for 73%, 72%, 83%, 52%, respectively in a, b, c, d company, its average occupation ups to 70%, which means that 70 percent of the related people of the four companies in Tongji Rim graduated from Tongji University.

(2) Mass distribution of industry situation of people who relate to the four companies:

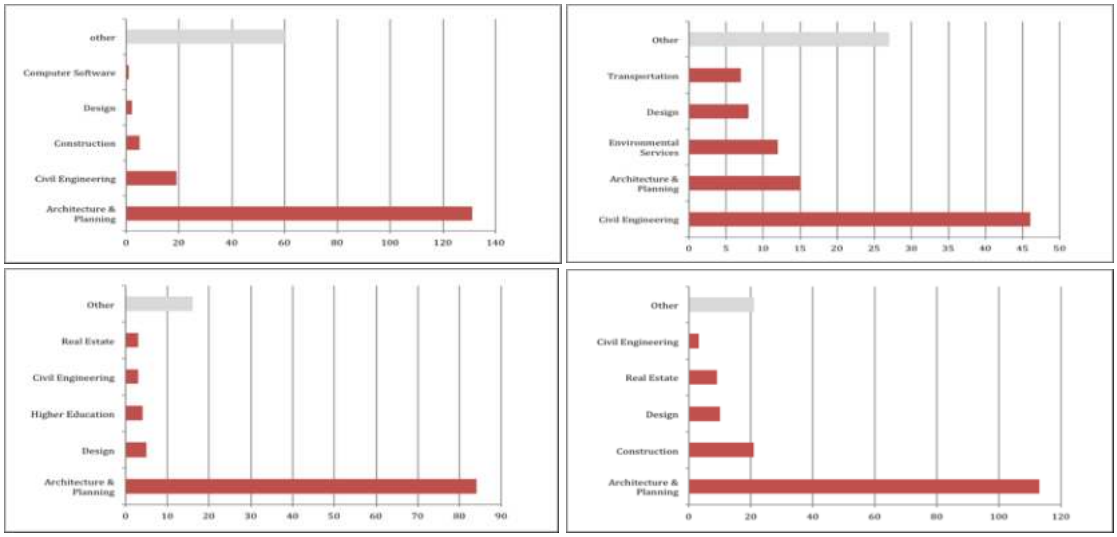
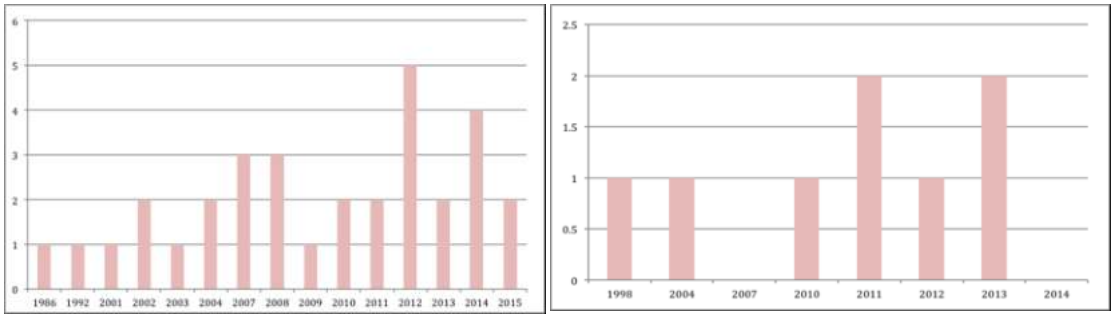



Figure 14. Mass distribution of industry situation of people who relate to the four companies

The figure shows that the industry of people who relate to the four companies are involved in the following three areas: architecture and planning, civil engineering, design. In a, b, c, d companies, architecture and planning (among other things) accounts for 83%, 17%, 85%, 72% respectively, and 64.25% on average; civil engineering (among other things) accounts for 12%, 52%, 3%, 2% respectively, and 17.25% on average; design (among other things) accounts for 1%, 6%, 5%, 6%, and 4.5% on average. The three industry average occupation reaches 86% in sum, which means that an average 86% of people in any one of the four companies come from architecture and planning, civil engineering or design, and the most come from architecture and planning.

(3) Mass distribution of annual number change of related people who work in $I_a$ company as graduation:



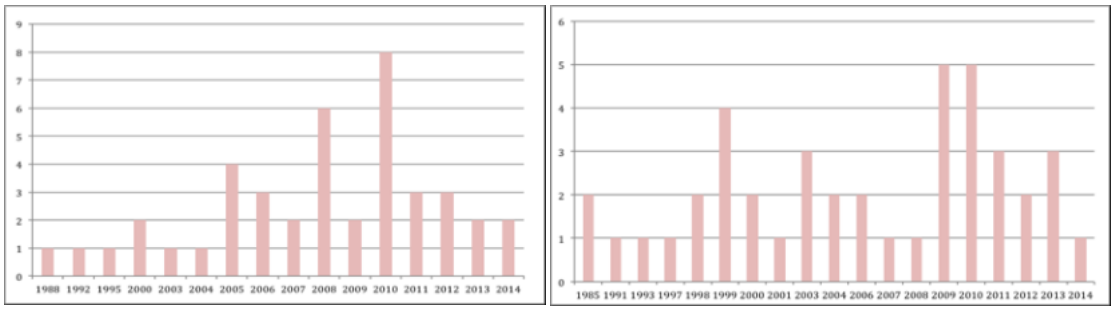



Figure 15. Mass distribution of annual number change of related people who work in $I_a$ company as graduation

The figure shows that the number of people who work directly in the four companies as graduation has fluctuate growth in 2000-2014. The peak respectively appears in 2012, 2010, 2011 and 2010. For further analysis of number change of talents the four companies attract between the 15 years (2000-2015), it is necessary that statistical analysis of annual number change of related people who transfer in the four companies.

(4) Mass distribution of annual number change of related people who transfer in the four companies:

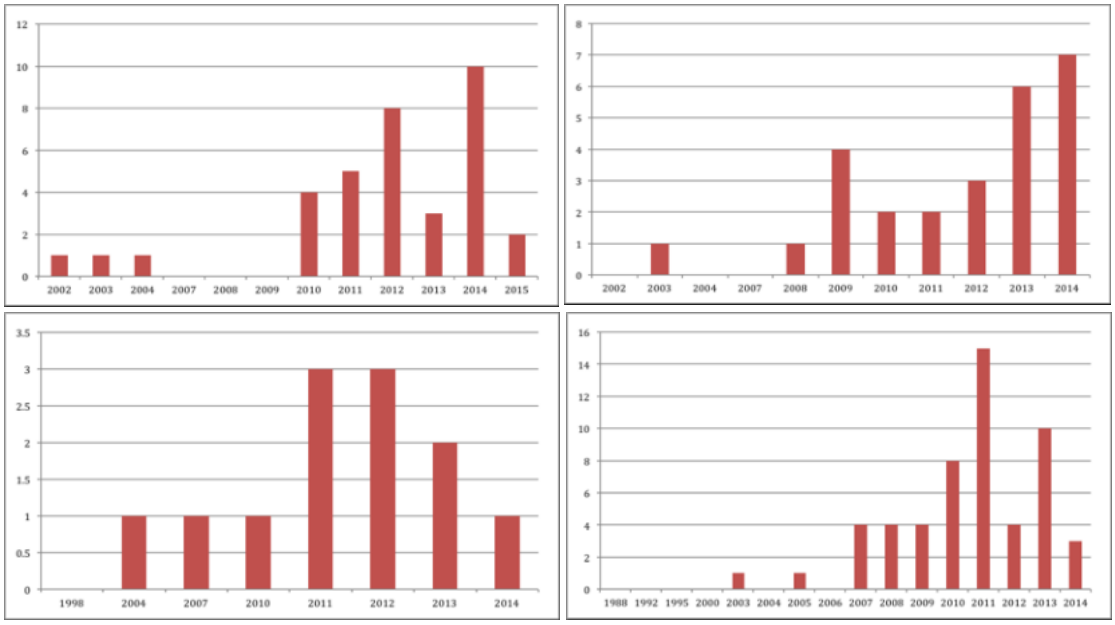



Figure 16. Mass distribution of annual number change of related people who transfer in the four companies

The figure shows that the number of people who transfer in the four companies also has fluctuate growth in 2000-2014. The peak respectively appears in 2014, 2014, 2012 and 2011. By accumulation of the (3) and (4) mass distribution, annual overall distribution of people who relate to the four companies will be obtained for the next discussion on internal factors of development of a university-oriented creative industry cluster. The mass distribution of overall

number of people who relate to the four companies is as follows:

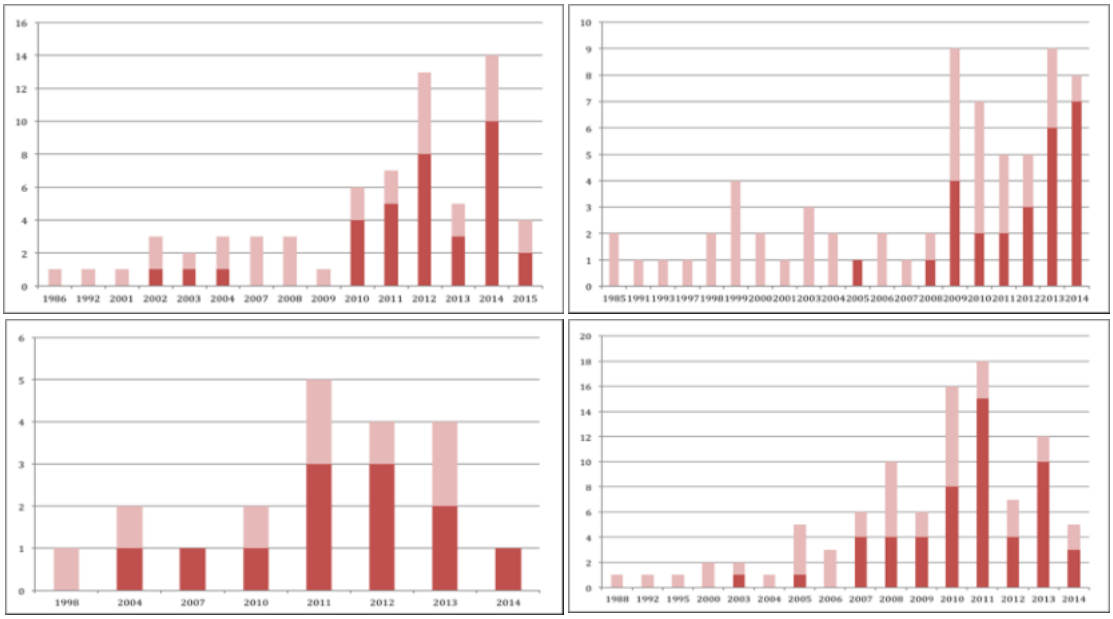


Figure 17. Mass distribution of overall number of people who relate to the four companies

The figure shows that the overall number of people who relate to the four companies still has fluctuate growth in 2000-2014, while it has a greatly increase between 2009 and 2011. The peak respectively appears in 2014, 2009, 2011 and 2011.

### *3.2 The Sustainable forces for A University-oriented Community Development*

According to the result of 3.1 (1) statistics, it shows that spillover university talents provides a stable of human and intellectual resources for industrial concentration and development around the university; according to the result of 3.1 (2), it shows that the overflow of a university s leading disciplines forms characteristics of its surrounding industry (in the 2012 National Assessment of Universities Leading Discipline, Tongji University s architecture and planning, civil engineering, design ranks second, first, sixth respectively of all universities in China); according to the result of 3.1 (3) (4) statistics, it shows that once industrial clusters with characteristics and advantages forms, it will be able to attract more relevant people, including graduates and transfer talent, and gradually forms internal productivity and external attractive force for sustainable development.

From this paper, the research results achieved by means of LinkedIn database and conclusion mentioned above, to some extended, coincide the points purposed by Reid Hoffman (2013), the CEO of LinkedIn: (1) Evaluation of a group depends on the individuals that make up this group; (2) Each group has some common characteristics; (3) Geographic density is also very important. Cooperation would be maximized when information and ideas spread among all groups which have common interest, if which happens in the same geographic region.

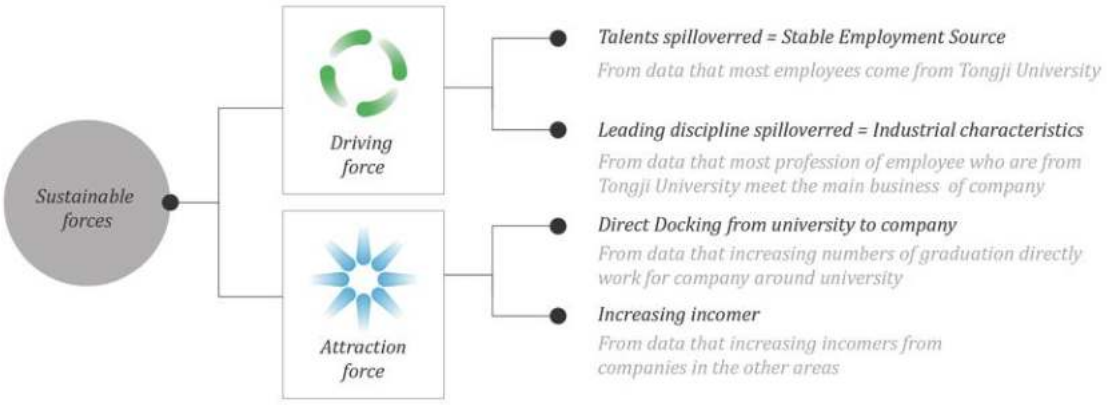



Figure 18. The Sustainable forces for A University-oriented Community Development

### *3.3 Future Application*

In summary, by LinkedIn s user information statistics and analysis, certain characteristics in a university-oriented creative industries area has been observed from the perspective of social networks. These features are shown through the quantitative relationship between people, university and company, which in turn is based on each individual education and profession background. In this study, the relevant conclusion is drawn after preliminary exploration to Tongji Rim as a study case. Studies have shown that in result of directly or indirectly talent output, the spillover leading disciplines and professional technology and attraction from the outside, a university-oriented creative industry cluster can be able to gather a lot of talent, and these talent is the driving force behind the development of this kind of creative industries cluster. Therefore, this study provides empirical evidence of creative function layout and element configuration to urban managers and planners. Meanwhile, thanks to LinkedIn s wide application and huge amount of users in various regions and industries, based on preliminary results of this study, the quantitative analysis can be applied in other similar cities and regions for further analysis and follow-up survey, such as Beijing Zhong Guan Cun, Route 128 in Boston and San Francisco Bay Area and other places. As the amount of data on the LinkedIn platform increases, the accuracy of quantitative analysis will be greatly enhanced, and it is possible to combine with geographic information systems for more accurate visual expression of space gathering of creative industries and people.

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# MAPPING GLOBAL URBAN INTERCONNECTEDNESS THROUGH GOOGLE TREND: A NEW WORLD CITY NETWORK

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Keywords: Global Urban Network, Information Flow, Google Trends

*Abstract:*
*Network of City under the impact of globalization and information technology is an active direction for the last decade of Urban and Regional Studies. Based upon the search interest statistics provided by Google Trends, this article gets* people s online attention *data among cities in 2012, maps the main linkage among world cities, and ranks cities according to their international connectedness. Main results confirm that 1) Europe has the largest number of higher-ranking cities in the new global urban network, the next is North America, and the least is South America as well as Africa; 2) Southeast Asian cities except Singapore and Hong Kong all perform poorly under the new criteria; 3) Two types of cities, info-flow-in and info-flow-out, nearly distribute evenly across the main continents; 4) Connection within and between Europe and North America is of the most density and frequency among other intercontinental links. Overall, significant differences exist between the new networks based upon inter-city concern on the Internet and the traditional urban system based on the producer service firms. Interconnectedness of cities to a large extent is influenced by the real geographic location and distance. The research does a beneficial attempt on mining information flow data and provides new insights into city network studies.*

## 1. Introduction

World Cities is always a key issue in the field of urban and regional studies. A series of changes have taken place over time in the research methods and ideas. Generally, the mainstream researches can be divided into three stages: stage of world cities with attributes but without relations, stage of world cities in network society, new stage of world city network in global environment (Yang, 2011).

In the first stage (1960s-1990s), most research literatures are about the comparison of the city's comprehensive index (e.g. the concentration of headquarters of multinational companies, controlling rate of financial assets, etc.). The cities ranking in front according to these attributes are defined as world cities. In this period, World Cities study has obtained a great deal of information about urban nodes, but mainly focused on characteristics of cities in and by themselves, n among world cities. (Hall, 1966; Friedmann s world city hypotheses , 1986; Sassen's triad of world cities, 1991; 1994; 1996)

In the second stage (1990s), the development of information technology had a more and more profound impact on the global urban system organized by world cities. Cities were involved into global urban system through the information network, and their operation is increasingly affected by globalization. Castells (1996) proposed the famous theory of "space of flows", revolutionarily distinguished from the traditional "space of place", and defined the concept of nodes and hubs. Manuel Castells' *Global Spaces of Flows* describes the world city from the spatial perspective of global flows as the nodes and hubs with the "most direct influence" on a global scale. He believes that global city s concept is not a static place, but a process of connecting. Global city in world network is the centre in the connecting process of advanced services production and consumption. Castells has built a research framework based on relations of world cities, but the empirical data is lacking at that time. So it s necessary to strengthen the collecting of the relation dat system.

In the third stage (Since 2000), academic studies of world cities has changed from the traditional approaches to a new empirical phase. In this period, there are two main types in the analysis of relational data between cities: two-mode dataset and one-mode dataset:

For the two-mode dataset, researches mainly analyse producer services from the diversity of urban serving function and make use of hierarchical information flow between multinationals instead of the real connection between cities. Liu and Derudder (2013) systematically summarized three existing calculating approaches of urban network (the ownership linkage model, the interlocking network model, and the two-mode city-by-firm network model). By interlocking network model method, Taylor (2001) measured the strength of the force in global urban network through a large number of case studies, pointed out the key elements in the formation process of global urban system, and built the bridge from enterprise s linkage to cities linkage, which has become the theo foundation stone of global urban network studies by corporation. Nevertheless, the relational data of Taylor s interlocking network model is unable to express directional link betwee different connecting characteristics resulted from enterprise s various industries, sizes and strategies might bring biases. To solve this problem, the two-mode city-by-firm network model is applied to evaluate firms and cities positions in corporate networks simultaneously. But t approach and the associated computational burden deters urban scholars from using it.

For the one-mode dataset, researches reflect urban network from some measurable aspects of economic activity between cities, such as the infrastructure s connections, e.g. air flow (Derudder and Witlox, 2008; Smith and Timberlake, 1995; 2001), telecommunications streaming, internet connections etc. (Malecki, 2002; Tranos and Gillespie, 2009), the number of co-author papers and patents (Maggioni et al., 2007; Sonn and Storper, 2008; Matthiessen and Schwarz, 2010), the population of international migration (usually the business elite and senior) (Beaverstock et al., 2000), etc., and then builds a world city network system with the tools of graph theory and social network analysis method. However, nearly all the researchers acknowledged that the limitations of statistical data directly affected the accuracy and depth of the study.

In general, the two-mode dataset is characterized by connections between two separate sets of nodes (cities and firms, respectively) while actors in the one-mode dataset are directly interlinked. The essence of all corporate-based analyses of urban networks is a city-by-firm data matrix rather than a city-to-city adjacency matrix. Such researches have to face the transformation of the two-mode data into a one-mode data, and the transforming almost inevitably leads to a loss of information because certain network structures disappear after transforming.

Nowadays, the Internet has become an integral part of human economic and social life. The popularity of the Internet has made it possible to collect more detailed data, and greatly reduced the cost of data collection. With the arrival of the eras of cloud computing and big data, theoretical research about global urban network will break the past constraint of lacking connecting data, and embrace the new time where we have the ability to pay attention to each indivic microscopically.

In the Internet era, people s online searching interest data of cities, to a certain extent, ca comprehensively reflect the economy, image, openness, creativity and social vitality of cities., and has generated a growing impact on economic and social development. As a start for most users surfing online, web searching engine can find the desired content on the internet through a keyword. Therefore, the total number and frequency of keywords in the search engine can be a direct indicator of the degree of the concerned word.

In this paper, we take the one-mode dataset method and utilize the users concern data based on the world s largest search engine, Google, to characterize and reflect the mutual att We expect to build a directed-weighted network of global cities based on the online inter-concern

data, and compare the final results with GaWC in order to reveal new features of urban network in the Information Age, also provide guidance for promoting the development of urban network.

## 2. Design of research methods

### *2.1 Data acquisition*

To make it easier to compare our outcomes of with the predecessors' research achievements we take the 182 cities of three levels (Alpha, Beta, Gamma) according to GaWC 2012 as study subjects. With the key words index tool provided by Google Trends (Figure 1), we get the Google users search interest data of year 2012 among all 182 cities. Google Trends analyses a percentage of Google web searches to determine how many searches have been done for the terms users entered compared to the total number of Google searches done during that time. Trends results are normalized by the total searches from each region so that data from two regions with significant differences in search volumes can be compared equally. By writing scripts for batch query and file analysis, we build up an intercity concern matrix formed by 32,942 Trends data (see Table 1).

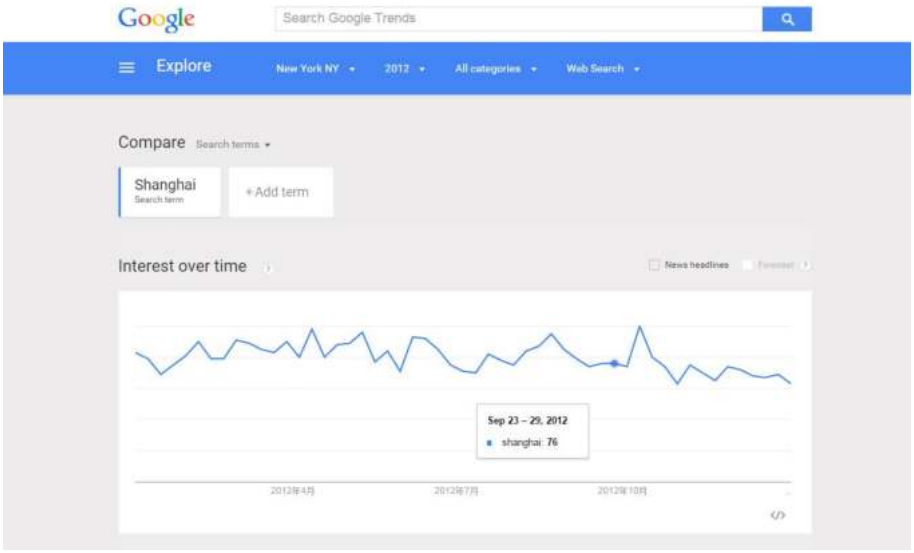


Figure 1. The screenshot of Google Trends page

Table 1. Pedagogical Matrix of Google Intra-searching Interest for Major World Cities

| | City A | City B | City C | City D | Outdegree |
|---|---|---|---|---|---|
| City A | | $W_{AB}$ | $W_{AC}$ | $W_{AD}$ | $OD_A$ |
| City B | $W_{BA}$ | | $W_{BC}$ | $W_{BD}$ | $OD_B$ |
| City C | $W_{CA}$ | $W_{CB}$ | | $W_{CD}$ | $OD_C$ |
| City D | $W_{DA}$ | $W_{DB}$ | $W_{DC}$ | | $OD_D$ |
| Indegree | $ID_A$ | $ID_B$ | $ID_C$ | $ID_D$ | |

To demonstrate the matrix, we take four cities A, B, C and D as an example (see Figure 2). There are two pieces of information link between each two cities. is the interest index of searching terms "city B" from users in city A. reflects to what extent people in city A concern about city B. Analogously, is the interest index of searching terms "city A" from users in city B. shows city A s popularity in city B. Thus, the matrix actually corresponds to the giant network of mutual searching links among world cities.

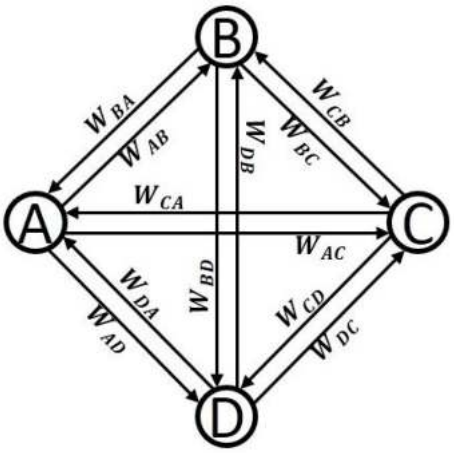


Figure 2. The Graphical Representation of Intra-searching Network

*2.2 Data processing*

Global urban network system can be studied from three aspects--**city nodes, information links, and urban networks.** This study starts from the data capture of the information links. Evaluation of the city nodes and the urban networks is conducted after processing the links.

*2.2.1 Link*

*(1) Link strength*

Each two cities has two reversed links between them (city A to city B and city B to city A). Using Taylor (2001) s model for reference, we define the strength of the link betwee multiplication of the two directional links. It is measured as follows:

$$= \quad = \tag{1}$$

The link strength index indicates the mutual concern degree between two cities. It is a comprehensive reflection of the strength of connectedness between the two cities. However, there is a problem with this algorithm: when the value of or is 0, the link strength index therefore equals 0, which is not consistent with the reality that there exists a one-way link between the two cities. To solve the problem, we learn from the method of calculating geometric mean, and improved the equation as follows:

$$= \quad = \quad \sqrt{(\quad)^2 + (\quad)^2} \tag{2}$$

*(2) Link symmetry*

At present, the majority of the existing research literature of the global urban network focus on the non-directional weighted network. The importance of node and the directionality of flow are less clear and need to be taken into account. In this regard, Limtanakool et al. (2007) sets up a three S-dimensions framework for identifying and classifying the pattern of the urban systems from an interaction perspective. Limtanakool brings forward the concept of link symmetry index LSI to describe the degree of difference in both directions of the flow. For the link between cities A and B, LSI is measured as follows:

$$LSI_{AB} = \quad LSI_{BA} = \quad [\frac{f \ \ln(f\ ) \quad f \ln(f\ )}{\ln 2}] \tag{3}$$

$$_{AB} = \frac{W}{W \quad W} \tag{4}$$

$$_{BA} = \frac{W}{W \quad W} \tag{5}$$

Here, $_{AB}$ is the proportion of flow volume from nodes A to B in relation to the sum of volumes on links A to B and B to A. Similarly; $_{BA}$ is the proportion of flow volume from nodes B to A in relation to the sum of volumes on link A to B and B to A. When the value of $LST_{AB}$ is 0, the link between nodes A and B is a one-way flow which means completely asymmetric. When the value of $LST_{AB}$ is 1, the link between nodes A and B is an equivalent bi-directional flow, which means completely symmetric. Liu et al. (2013) thinks that Limtanakool s formula is inadequate in describing the vector nature of network links, because the index LST itself does not have directionality. LST is just limited to quantifying the symmetry level of the whole network. Furthermore, in the vicinity of 0.5 (where links A to B and B to A are close) LST does not have the sensitivity to reflect differences of the vectors. In order to realize the visual quantitative measurement of the symmetry of the two-way flow, Liu et al. make additions to the formula that when the volumes in both directions of the link have non-magnitude differences, the following formula can be used:

$$LST_{AB} = \frac{W \quad W}{W \quad W} \tag{6}$$

With Eq. (4), the formula can be evolved as follows

$$LST_{AB} = \quad _{AB} \quad 1 \tag{7}$$

When $LST_{AB} < 0$, $_{AB} < \quad _{BA}$, which means that node A s inflows are greater than outflows while node B s inflows are less than outflows. In the same way, when $LST_{AB} > 0$, $_{AB} > \quad _{BA}$, which means that node A s inflows are less than outflows while node B s inflows are greater than outflows. LST can distinguish the directionality of the flow by the positive and negative signs of the value, but the result is contrary to conventional understanding. Therefore, we further improve the formula as:

$$RLST_{AB} = 1 \quad _{AB} \tag{8}$$

When $RLST_{AB} = \quad 1$, flows completely goes towards node B from node A. When $RLST_{AB} = 0$, flows are equivalent on both directions between nodes A and B.

According to Eq. (2), (6) and (7), function diagrams are drawn to illustrate the relations of $LSI_{AB}$, $LST_{AB}$, $RLST_{AB}$ along with $_{AB}$ so that their differences in measuring city links are seen directly.

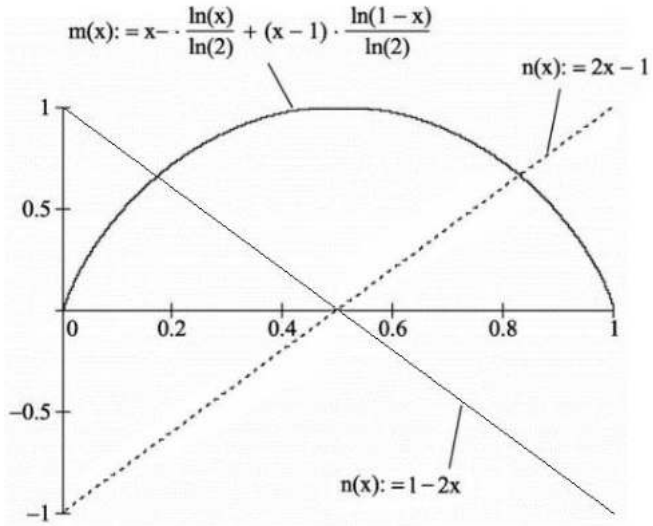


Figure 3. The Comparison of LSI, LST and revised LST index

*2.2.2 Node*

*(1) Node strength*

Node strength describes the sum of all link strength connected with a node. On the basis of Eq. (1), the node strength index of city A is measured as follows:

$$= \quad + \quad + \quad +$$
$$= \quad + \quad + \quad + \tag{9}$$

reflects city A s total amount of information flow in the global urban network.

*(2) Node degree--indegree & outdegree*

The node indegree index describes the total amount of information flowing into a node to a certain extent reflects the centrality of a city node. The node outdegree index describes the total amount of information flowing out of a node. to a certain extent reflects the radioactivity of a city node. For city A, its node indegree index and outdegree index are measured as follows:

= + + + (10)

= + + + (11)

*(3) Node symmetry*

We carry on the concept of node symmetry index NSI proposed by Limtanakool et al. (2007) to describe the degree of differences between node indegree and outdegree in the directional network. For node A, its node symmetry is measured as follows:

$$NSI_A = \frac{\circ}{\circ} \quad (12)$$

When $NSI_A$ = 1, flows are completely going out of node A. When $NSI_A$ = 0, inflows and outflows of node A is equivalent. When $NSI_A$ = 1, flows are completely going into node A.

*(4) Node Clustering Analysis*

To compare with GaWC s study results, and identify differences and similarities of the world city hierarchies in various networks, this paper divides the 182 global cities into 3 classes and 10 sub-classes by K-means clustering taking the node strength index as variations. K-means clustering method is applicable to the case given a known number of categories. Its calculation principles are not discussed in this paper.

## 3. Empirical test

In this section, the proposed theoretical framework is illustrated by empirical data. The pattern of spatial interaction among 182 cities as constituted by Google Trends is characterized for a new world city network. Carrying out the test of these 182 cities enables us to assess whether our approach is feasible and effective.

*3.1 Calculation of the link and node indices*

Following the research methods above, we compute the values of all node and link indices of the network consisted of 182 world cities and their online inter-concern. Due to space limitations, detailed procedures are not included in this paper.

*3.2 Comparison of Google Trends network and GaWC network*

Does the new network based upon the web concern follow the old urban system? We make clustering analysis of the 182 cities, tabulate the outcomes along with GaWC s results (Table 2), and mark cities by classes on the world map (Figure 4).

Table 2. Values of Node Strength, Degree, Symmetry, Entropy and Class

| Class | | GaWC | Google Trends |
|---|---|---|---|
| | ++ | London; New York | Paris |
| | + | Hong Kong; Paris; Singapore; Shanghai; Tokyo; Beijing; Sydney; Dubai | Los Angeles; Chicago |

| | | | |
|---|---|---|---|
| | | Chicago; Mumbai; Milan; Moscow; Sao Paulo; Frankfurt; Toronto; Los Angeles; Madrid; Mexico; Amsterdam; Kuala Lumpur; Brussels | Singapore; Toronto; Amsterdam; San Francisco; Frankfurt; Berlin; San Diego; Boston; Bristol; Birmingham(UK) |
| | - | Seoul; Johannesburg; Buenos Aires; Vienna; San Francisco; Istanbul; Jakarta; Zurich; Warsaw; Washington; Melbourne; New Delhi; Miami; Barcelona; Bangkok; Boston; Dublin; Taipei; Munich; Stockholm; Prague; Atlanta | Phoenix; Hong Kong; Charlotte; Atlanta; Vancouver; Dublin; Philadelphia; Edinburgh; Manchester; Washington; Dubai; Montreal; Rome; Zurich; Glasgow |
| | + | Bangalore; Lisbon; Copenhagen; Santiago; Guangzhou; Rome; Cairo; Dallas; Hamburg; Dusseldorf; Athens; Manila; Montreal; Philadelphia; Tel Aviv; Lima; Budapest; Berlin; Cape Town; Luxembourg; Houston; Kiev; Bucharest; Beirut | Seattle; Sydney; Vienna; Cleveland; Mumbai; Melbourne; Bangkok; Dallas; Stockholm; Istanbul; Copenhagen; Brussels; San Jose(US); Lyon |
| | | Ho Chi Minh City; Bogota; Auckland; Montevideo; Caracas; Riyadh; Vancouver; Chennai; Manchester; Oslo; Brisbane; Helsinki; Karachi; Doha; Casablanca; Stuttgart; Rio De Janeiro; Geneva | Hamburg; Orlando; Leeds; Tampa; Portland; Calgary; New York; Oslo; Athens; Brisbane; Mexico; Bangalore; Manila; Sao Paulo; Seoul; Stuttgart; Cologne; Baltimore; Kuala Lumpur; Prague; Budapest; Moscow; Milan; Buenos Aires |
| | - | Guatemala City; Lyon; Monterrey; Panama City; San Jose(CR); Bratislava; Minneapolis; Tunis; Nairobi; Cleveland; Lagos; Abu Dhabi; Seattle; Hanoi; Sofia; Riga; Port Louis; Detroit; Calgary; Denver; Perth; Kolkata; San Diego; Amman; Antwerp; Manama; Birmingham(UK); Nicosia; Quito; Rotterdam; Belgrade; Almaty; Shenzhen; Kuwait; Hyderabad(IN); Edinburgh | Jakarta; Miami; Detroit; Chennai; Auckland; Pune; Hyderabad(IN); Dusseldorf; Rotterdam; Santiago; New Delhi; Perth; Marseille; Taipei; Milwaukee; Munich; Denver Johannesburg; Cape Town; Tel Aviv; Raleigh; Cairo; Geneva; Doha; Warsaw; Madrid; Adelaide; Lisbon; London; Columbus; Barcelona; Minneapolis; Belfast |
| | + | Zagreb; Lahore; St Petersburg; Jeddah; Durban; Santo Domingo; Baltimore; Islamabad; Guayaquil; St Louis; San Salvador; Cologne; Phoenix; Adelaide; Bristol; Charlotte; George Town(CI); Osaka; Tampa | St Louis; Rio De Janeiro; Riyadh; Kuwait; Lima; Utrecht; Seville; Shanghai; Colombo; Ankara; Beirut; Nairobi; Sofia; Karachi; Kolkata; Zagreb; Porto; Cincinnati; Antwerp; Lahore; Bucharest; Nantes; Krakow; Belgrade; Luxembourg; Leipzig; Turin; Hanoi; Bratislava; Jeddah; Lagos |
| | | Glasgow; San Juan; Marseille; Guadalajara; Leeds; Baku; Vilnius; Tallinn; Raleigh; Ankara; Belfast; San Jose(US); Colombo; Valencia(SP); Cincinnati; Milwaukee; Muscat; Ljubljana | Casablanca; San Juan; Caracas; Abu Dhabi; San Jose(CR); Guadalajara; Ahmedabad; Kiev; Shenzhen; Kansas City; Guangzhou; Tunis; Beijing; Accra; Santo Domingo; Ljubljana; Monterrey; Quito; St Petersburg; Montevideo; Durban; Islamabad; Osaka; Panama City; Gothenburg; Ho Chi Minh City; San Salvador; Vilnius; Malmo |

| | | |
|---|---|---|
| - | Nantes; Tianjin; Accra; Algiers; Gothenburg; Porto; Columbus; Utrecht; Orlando; Ahmedabad; Asuncion; Kansas City; Seville; Turin; Dar Es Salaam; Portland; Krakow; Managua; Pune; Leipzig; Malmo; La Paz | La Paz; Guayaquil; Houston; Baku; Tokyo; Managua; Nicosia; Tallinn; Guatemala City; Asuncion; Dar Es Salaam; Almaty; Algiers; Manama; George Town(CI); Helsinki Muscat; Valencia(SP); Bogota Amman; Riga; Tianjin; Port Louis |

From Table 3, we can see that:

1) In Class , 15 cities remain the same and 13 cities rank up compared with GaWC. Among them, the cities moving drastically up are Bristol, Charlotte, Phoenix, Glasgow, Edinburgh, Birmingham (UK) and San Diego. In addition, 4 cities--Paris, Singapore, Toronto and Hong Kong keep taking higher-ranking place in both two networks. Still more impressive, Paris climbs to the top from the 4th, Los Angeles soars to second from 18th, and Chicago leaps to third from 11th.

2) In Class , 30 cities remain the same; 14 cities rank up; 27 cities rank down. Among them, the cities moving drastically up are Portland, Orlando, San Jose (US), Pune, Leeds and Tampa, and the cities going largely down are London, Madrid, Barcelona, Johannesburg and Warsaw. Strikingly, London falls to 95th from the summit, and Madrid drops to 92th from 19th.

3) In Class , 14 cities remain the same and 42 cities rank down. Among them, the cities going largely down are Tokyo, Beijing, Bogota, Shanghai, Houston, Helsinki, Guangzhou and Ho Chi Minh City, most of which are located in the Asian regions. More prominently, Tokyo falls to 164th from 17th, Beijing drops to 143th from 8th and Shanghai slips to 107th from the 6th, which are the sharpest drop in all declines.

Thus, there exit significant differences between the new networks based upon inter-city concern on the Internet and the old urban system based on the producer service firms in cities.

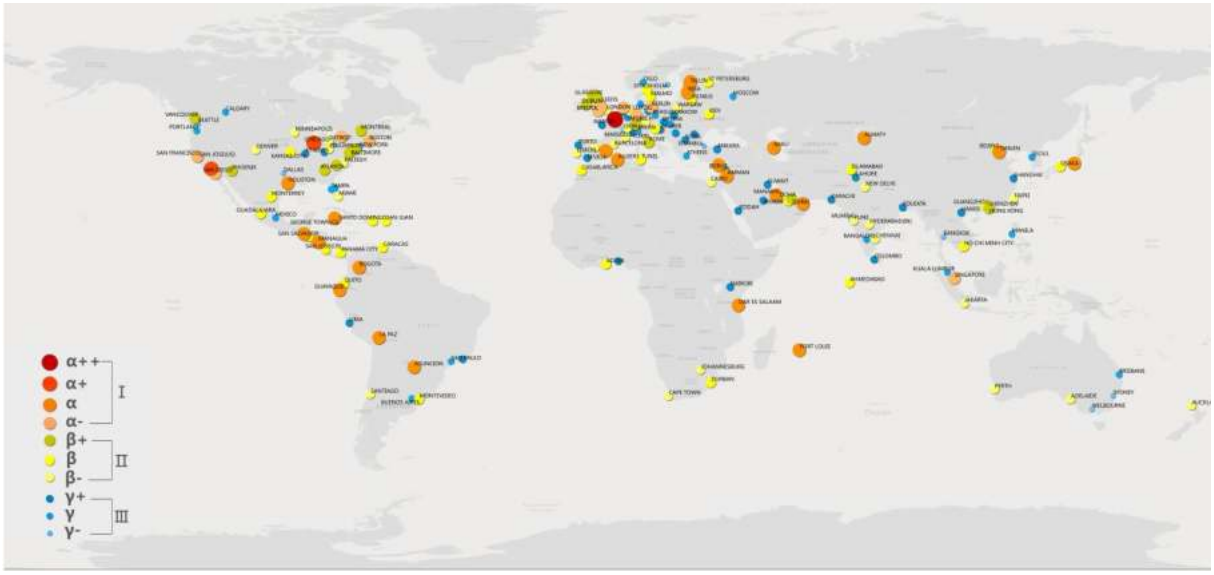


Figure 4. World cities in 3 classes and 10 subclasses according to web concern

*3.3 Visualization*

This study involves massive data with non-uniform structures, so the visual data analysis tools (ArcGIS) is employed to map out the directional weighted urban networks formed by 182 city nodes and their inter-connected links (Figure 5).

In Figure 6, the size of city node responds to the value of the node strength index , indicating the city s sum volumes of searching and being searched. The lines correspond to the in the network where the value of the link strength index is shown by the line thickness. Nodes are divided into two types distinguished by colour: the red nodes are info-flow-in cities ( NSI < 0 ) and the blue nodes are info-flow-out cities ( NSI > 0 ). Arrows indicate the direction of flow.

According to the node symmetry index NSI, the 182 cities can be divided into two types: concerned-city type and concerning-city type. Concerned-city type refers to cities whose indegree is bigger than outdegree, which means the volume of searching for other cities is smaller than that of being searched. On the other hand, concerning-city type refers to cities whose outdegree is bigger than indegree, which means the volume of searching for other cities is bigger than that of being searched. In this study, the volume of being searched and that of searching for other cities are nearly equal in the case of most cities (where the value of NSI hovers near 0). A minority of cities manifest obvious directionality: the indegree of Helsinki, Riga, Muscat, La Paz and George Town (CI) is much bigger than outdegree so these cities obviously belong to the concerned-city type, while the indegree of Manama, Tokyo and Houston is much smaller than outdegree so these cities apparently belong to the other type. Very few cities present an extreme directionality: Bogota, Amman, Tianjin and Port Louis have a net inflow while Valencia (SP) has a net outflow. All cities showing obvious or extreme directionality belong to those whose total number of information flows are small and rank in the lowest class.

We sort every link between all the cities according to the flow volume and draw the results as a scatter plot (Figure 6). As can be seen clearly from figure 7, the values of the link strength index vary continuously from the minimum to the maximum, and there are 4 obvious stages throughout the function curve: 1) the value of is 0 where no connection happens among cities; 2) the value of rises rapidly from 0 to about 50; 3) the growth of slows down and forms a long gradual slope, where the majority of links are within this range; 4) the increase of accelerates again and tends to climb straightly, where the most important links with large volume of inter-concern are located. They are backbones of the whole urban network.

In order to more clearly understand the network structure, we display the map separately by setting top 5%, 10% and 20% of the biggest flow volume as threshold (Figure 7, 8 and 9).

When the threshold is set to top 5%, 10 core links appear in the world map. Among them, Birmingham (UK), Bristol and Manchester together form a strong inter-concern circle in Britain. Besides, the links Edinburgh-Glasgow, Nantes-Paris and Dusseldorf-Gothenburg further establish the heart position of Europe in the world cities network. For North America, two links, Cleveland-Cincinnati in the middle area and San Jose (US)-Francisco in the west coast, make America the second active region in the core network. For Southeast Asia, there is just one link from Hong Kong to Singapore visible. For Inter-continental connection, only one link from Zagreb to Calgary is visible.

When the threshold is set to top 10%, 49 links appear in the world map (including 10 core links). Compared with the situation of top 5% threshold described above, there are 6 more links turning up within the British Isles (Leeds-Bristol, Leeds-Birmingham, Leeds-Manchester, Glasgow-Belfast, Edinburgh-Belfast and Bristol-Dublin), 3 more links coming forth among other European cities (Paris-Berlin, Rotterdam-Amsterdam and Birmingham (UK)-Prague), 6 more links springing up in North America (San Jose (US)-San Diego (US), Washington-Baltimore, Columbus-Cleveland, Raleigh-Charlotte, Charlotte-Cleveland and Charlotte-Los Angeles, San Jose (CR)-San Jose (US)), 3 more links showing up in India (Pune-Mumbai, Ahmedabad-Pune and Hyderabad-Bangalore) and 2 more links showing up among other Southeast Asian (Singapore-Jakarta and Mumbai-Singapore)

When the threshold is set to top 20%, more than 800 links emerge in the world map. The embryonic framework has formed and is very close to the fully formed global urban network (Figure 5).

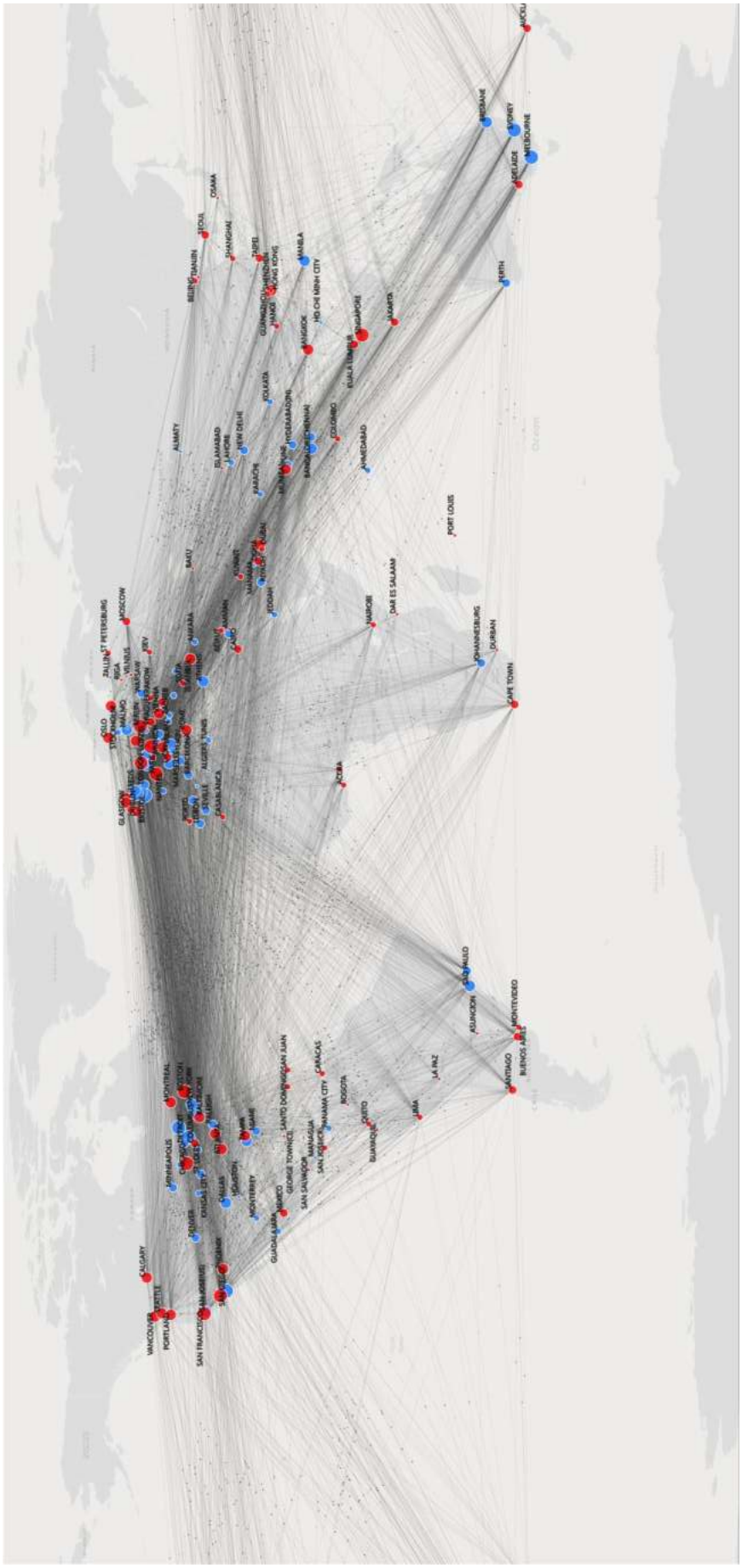


Figure 5. Map of the Global Urban Interconnectedness based on Google Trends

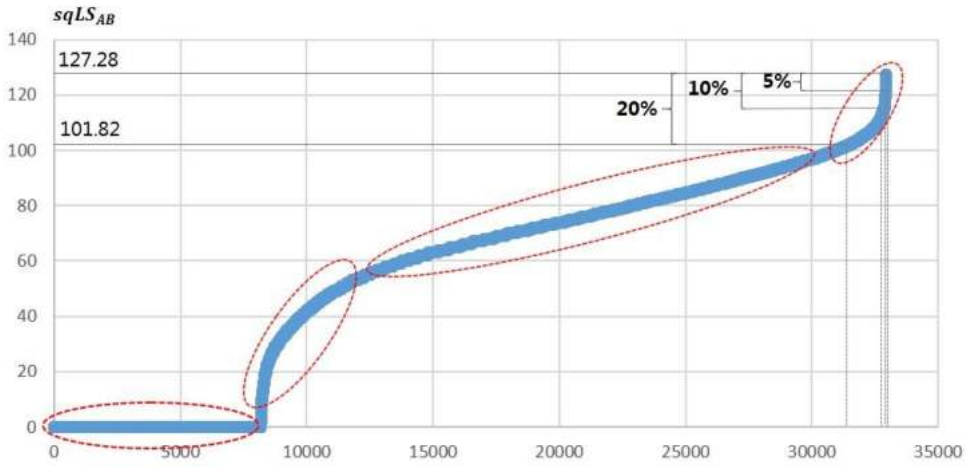


Figure 6. The scatter plot of

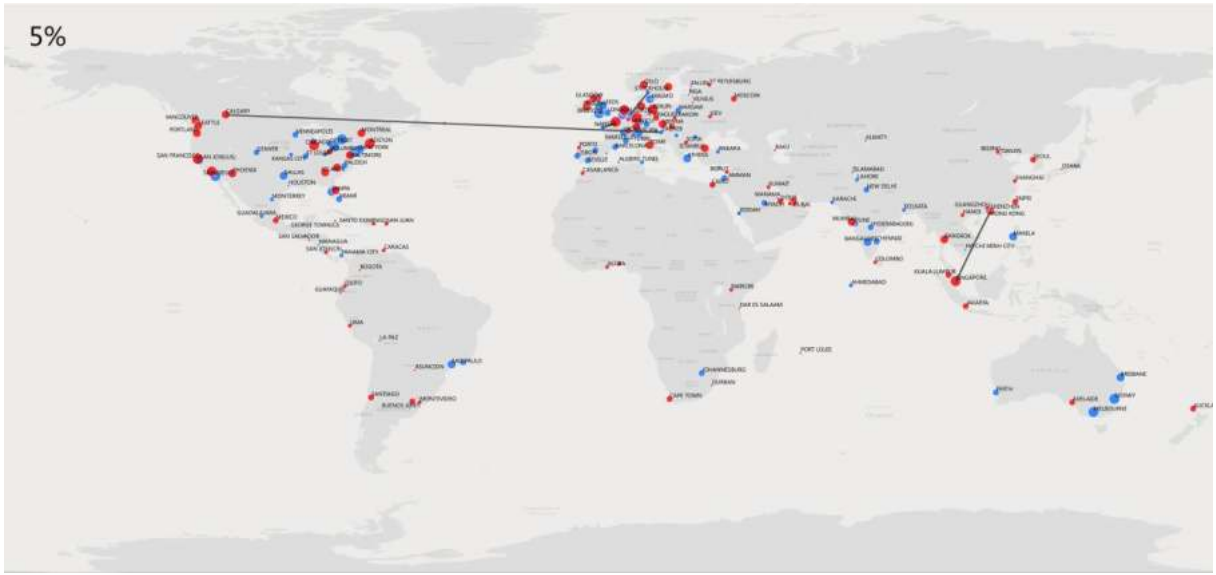


Figure 7. Intercity concern networks at threshold of top 5%

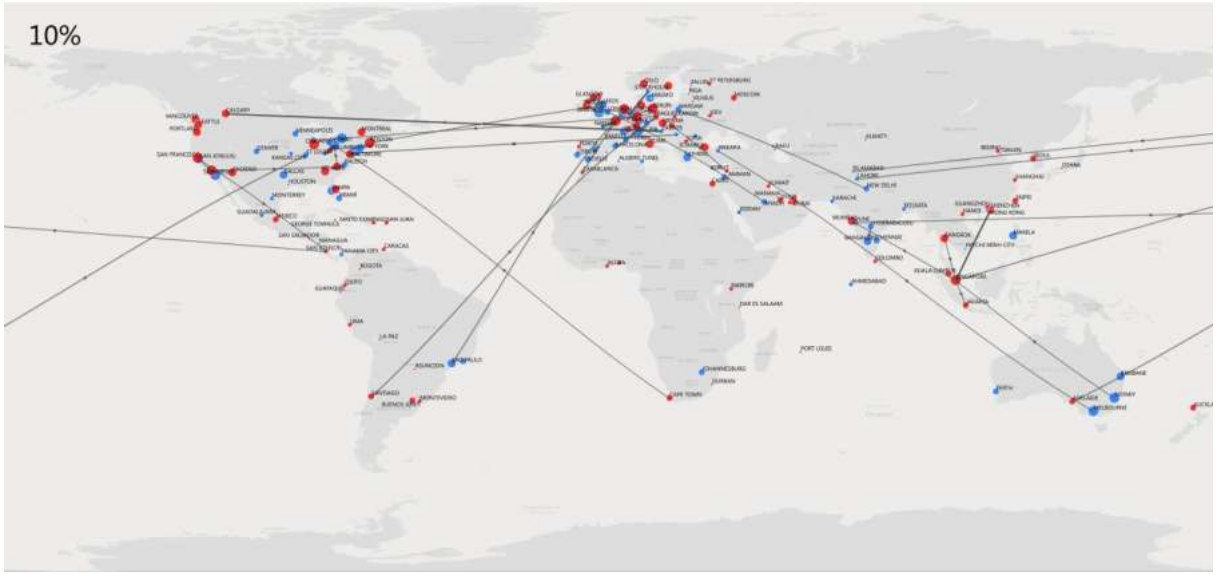


Figure 8. Intercity concern networks at threshold of top 10%

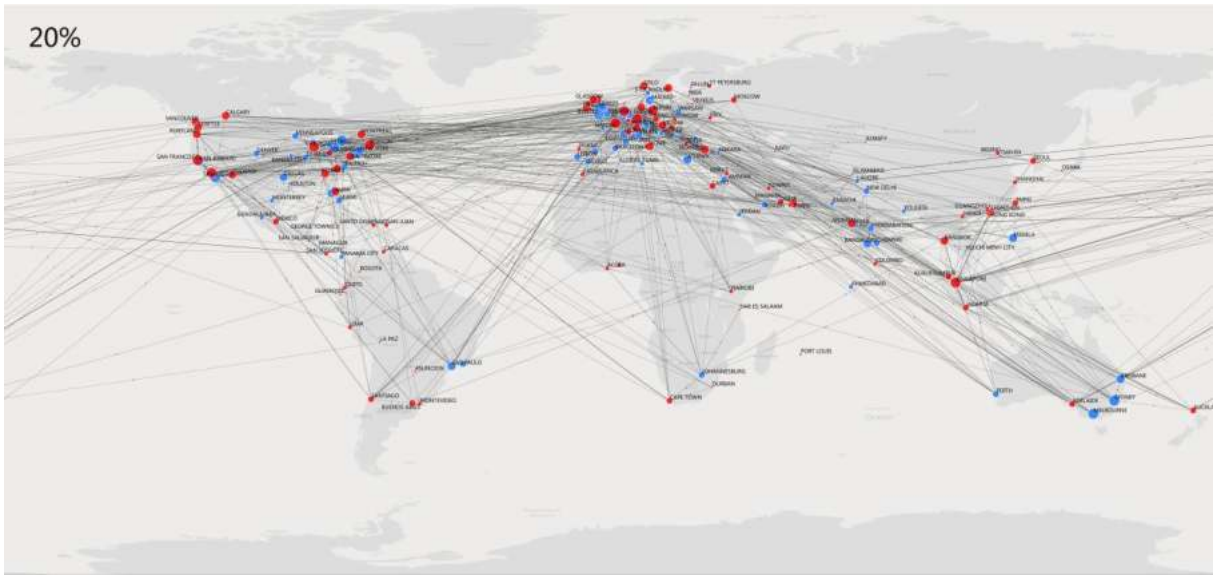


Figure 9. Intercity concern networks at threshold of top 20%

## 4. Conclusions and the way forward

Studies on global urban network have experienced three major phases: stage of world cities with attributes but without relations, stage of world cities in network society, overly new stage of world city network in global environment. In the third phase, analysis based upon one-mode dataset and two-mode dataset are the two main types. The well-known interlocking network model designed by Taylor (2001) for producer service firms in cities is of the two-mode dataset type. It has been widely adopted in academia, but the inherent problem of information loss caused by the projection from two-mode to one-mode makes it defective. Unlike two-mode type, one-mode dataset can directly create the city-to-city-matrix without transformation, while the persuasive and massive city-related data is needed.

In general, despite different underlying assumptions and operations, all approaches look at ways to build up the city-by- something datasets to estimate how individual cities are connected th the something networks. The rise of cloud computing and big data technologies provides us new possibilities for the something . In this context, we cast our eyes over the vast data of Internet users.

In this paper, we have (1) proposed a new framework with improved methods for analyzing the directed weighted network of city based upon one-mode dataset; (2) collected the Google users search interest data of year 2012 among 182 cities of three levels (Alpha, Beta, Gamma) according to GaWC; (3) simulated the information flow by calculating the link and node indices; (4) visualized the city network on geographical entities; (5) observed the hierarchies and patterns in the global city network; (6) made comparisons with GaWC group s outcomes.

Main results are as follows:

For **node**, 1) Europe has the largest number of higher-ranking cities in the new global urban network based on Google Trends, where the node strength is also greater, the next is North America, and the least is South America as well as Africa; 2) Southeast Asian cities except Singapore and Hong Kong all perform poorly under the new criteria; 3) Two types of cities, info-flow-in and info-flow-out, nearly distribute evenly across the main continents.

For **link**, 1) Europe still takes the heart position of the world, then North America and Asia. 2) Connection between Europe and North America is of the most density and frequency among other intercontinental links.

Overall, significant differences exist between the new networks based upon inter-city concern on the Internet and the traditional urban system based on the producer service firms. Interconnectedness of cities to a large extent is influenced by the real geographic location and distance. Cities in the same region are more likely to show concerns to their surrounding areas (the top 5% links in Figure 7 prove this). The district-crossing connection comes at the next level.

The analysing method of weighted network based on people s online attention da flaws and advantages. The deficiencies and places might be improved of this article are as follows:

1) Although people s online attention data can comprehensively reflect the openness, creativity and social vitality of a city, etc., the data s validity recognized. The relationship between cities socioeconomic development and p searching interest data still need to be verified through other inter-relational data between representative cities.

2) Trends data is relative, not absolute, which makes our map may not reflect the real scale of searching flows in the global context. Google s web page says that sets of search data are divided by a common variable, like total searches, to cancel out the variable's effect on the data. Although Google assures the comparability of Trends data, it still does not clearly explain how the raw data is normalized so that the restoration is unable to be carried.

3) English language bias. As a keyword for searching in this paper, the English names of the city may cause that the searching interest data of non-English-speaking areas cannot be truly reflected, while English-speaking world cities are highlighted in the network.

4) Although Google is the world's largest search engine, its service is limited in some countries and regions, moreover, maybe it s not the mainstream search tool widely used by loca cause that the data of Google Trends cannot fully reflect the real online attention.

5) From the perspective of graph theory, the node-related links, except the inflows and the outflows, also include the link whose source and destination nodes are the same. This kind of links, more universal and to some extent associated with city size, can indicate the contact between the various urban elements within the city. This paper focuses on the research of inter-concern network between cities, ignoring the local people s search within the city itself, which may distort the netw structures, especially the size of the nodes.

6) The specific reasons for the flow s asymmetry between cities need to be furth

7) This paper selects totally 182 cities distributed at , , three levels of the GAWC group' results as study object, which has certain limitations. Besides, the distribution of these cities also cause some bias. For example, more European cities were selected compared to other regions and the online attention between these cities is far more than two distant cities, which makes these cities behave better than the actual situation.

The advantage lies in the analytical comprehensiveness of asymmetric links between cities and the technology of data collection and data processing, which saves us a lot of time.

1) As for analysis method, directional weighted network is an important supplement to the urban network research, which allows us to simultaneously analyse the directions and quantities of the complex city network through studying flows asymmetry. This method helps us dee the asymmetric of relationship between global cities and determine the true status of the various cities in the network more accurately. In the past, the research of global urban network can hardly go deep into the analysis level of directional weighted network because the data is difficult to obtain and handle. This study has provided technical support and empirical tests to remedy this defect.

2) As for analysing material, it s innovative to employ the statistical data ba
this research, which has enlarged the studying range of original cyberspace in urban geography. The object of this study is measurable online data of bi-directional links between cities. Compared to the data of air flow, telecommunication flow, immigration flow, capital flow, etc., the online data are less expensive to obtain, easy to operate and convenient to use for urban and regional researchers. In this article only the Google Trends keyword search interest has been used, an offers other user's search-related indicators, which makes it potential for further research. Besides, with the improving of Internet data s abundance (such as commerce, education, t data), this approach may continue to enhance its own adaptability, which is also an important aspect in the follow-up studying.

**Acknowledgement**

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# Smarter Decision: an Intelligent Decision-Making Platform for City Mayor

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Abstract:
Urban managers are eager to transform from tradition Empiricism mode to Rational urbanization, a vast amount of data is collected from aspects of urban planning, management and security. However, lack of connections between and effective mana categories of data leads to the phenomenon of data islands .

An intelligent smart city decision-making platform is structured on the base of an in and supported by ICTs. The platform addresses to the new demands of intelligent production in future urban China. Within the Chinese urban decision-making syste background of urbanization, this integrated supporting system will meet the need real-time decision transmission of decision-makers at all levels.

There are eight functional modules in support to intelligent decision-making. In information of the city and the visualized data analysis will serve decision-mak urban development. Also the indicators of the evaluation system can act as a dat The city-being sustainability-oriented indicator system is established as the so computation. Key data mining and the spatial visualization of data are applying operation data mining and display are conducted through diverse visualization to Model, a basis of advanced software platform, algorithms development and the urb Furthermore, rationalism decision-making is promoted to realize the new manageme decision-making.

Keywords: ICT, Decision Making, Rational Planning

## 1. Background Overview of the Intelligent Decision Support System

Decision-making has existed with the production and activities of people throug matter national policy formulation or enterprise operation and management, even decisions cannot leave without decision-makings. Due to the importance of deci stakeholders, how to make an effective decision is always a focus of attentio decision support system makes use of the computer, software and other technol provide people with ancillary support functions in the decision-making process an effective decision. The decision support system, which focuses on solving s structural problems and emphasizes the friendliness of man-machine interactio important role in enterprise management, macroeconomic planning and disaster p long time.

Western countries' study on modern decision theory started early and emerged an scientific management theory after the industrial revolution, especially since 1 decisions have become an important research field of western public administra the economic development of western developed countries and the deepening of reforms, the study on administrative decisions have received more and more atte number of theoretical achievements have emerged. The typical theoretical achi mainly: Simon's decision making theory in 1940s; Lindblom's theory of Incrementalism and decision-making in the 1950s; Drucker's effective decision-making theory

Anderson's public decision-making theory in the 1970s; Heidenheimer and Helco' public decision-making theory in the 1980s; and Hammer and Champy's team deci theory in the 1990s.

Along with the rapid development of information technology, especially the ma application of the Internet, e-government affairs have been quickly establis become mature in the United States, United Kingdom and other western develop Foreign experts and scholars started to turn their attention to researching g making models. In the Reinventing Local Governments and the E-Government Init United States, the traditional bureaucracy model was compared with the electr model, and the Internet was considered not only to provide a powerful instrumen local governments but also promote the transformation of the government manageme the traditional bureaucracy model which emphasizes standardization, department effectiveness to the e-government model which highlights harmonizing network external cooperation and customer services. With the advent of global informati marketization and economic times, the original bureaucracy model was impac theoretical fields placed their research emphasis on how to make use of e-gove technology, to redesign the organizational decision making process so as democratization and scientization of administrative decisions.

## 2. Theoretical System of Intelligent Decision Support Systems

### 2.1 Intelligent Decision Support System

An intelligent decision support system is an auxiliary decision system that intelligence (AI) and DSS together and applies the expert system technology t better make full use of human knowledge, such as descriptive knowledge on deci procedural knowledge during decision making and inferential knowledge for solvi help solve complex decision problems through logic inferences.

The concept of IDSS was first proposed by Bonczek and other American scholars i functions are to handle both quantitative and qualitative problems. Its core ic with other relevant scientific achievements to make DSS have artificial intellig Please make sure that every reference cited in the text is also present in the versa).

### 2.2 Structure of the Intelligent Decision Support System

A relatively perfect and typical DSS structure is a four-base system structure through providing a traditional three-base DSS with a knowledge base and an i adding a natural language processing system to the man-machine dialog subsystem, problem solving system between the four bases, as seen in the figure below:

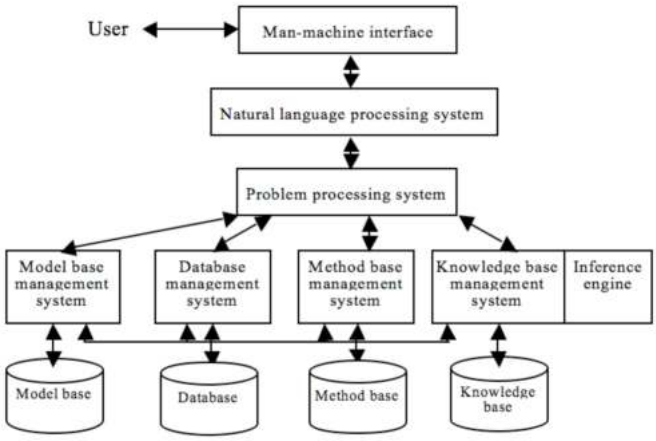


Figure 1. Structure Chart of Intelligent Decision Support System

2.3 Features of the Intelligent Decision Support System

1) Based on the mature technology, easy to construct practical systems.
2) Make full advantage of information resources at all levels.
3) Based on regular means of expression, easy for users to grasp and use.
4) Possess strong modularity characteristics, along with good reusability c development cost.
5) The system has a flexible combination of different parts, can realize a str to maintain.
6) The system can quickly adopt advanced supporting technologies, such as AI te

2.4 Operational Efficiency of the Intelligent Decision Support System

Because during the operating of IDSS, each module needs to repeatedly call the compared with the mode of directly adopting the lower-level call, its operatio However, considering that IDSS only runs when senior managers make a major operational efficiency is much lower compared with other information systems. operating environmental conditions for each run vary considerably, thus it is partial operational efficiency to get the efficiency of system maintenance in re

3. Key Problems Resolved by Intelligent Mayor Desk

As the world has entered into a critical stage of 50% urbanization rate, there challenges in terms of urban economic and social environment. Urban planning an operations management must be based on rational allocation of resources. The ke of new urbanization in China lies in changing the original extensive develo intelligent operations management and constructing a smart city. Under the sup science and technology, the positioning, planning, construction and management digitization, networking and intelligentization and critical problems like n ecological urban development.

Due to the complexity and chronicity of the large-scale construction of a smart city mayor plan the organization and implementation as a whole, which determine the mayor decision-making and command system in the smart city. However, there a barriers and challenges for the building of a command system in charge of the ci

1) Diverse sources of data. During the construction and operation of the city, departments may obtain completely different formats of data, including survey d texts, statistical figures, audio and video, real-time sensor data, etc. How to source codes of different system data formats through an integrated platform problem.

2) Unstructured data formats. Urban data volume is a massive data volume. T constructing a smart city is to complete the integration of traditional str unstructured data as well as the adding and updating of traditional yearbook d data so as to form a unified database. To transform from the traditional annuali real-time updating data processing stage is a technical difficulty for large ur academic circles try hard to tackle.

3) Secure and precise data. Large urban data involve different systems and levels of th what kind of data correspond to which urban management layer, and achieve reduc acceleration of the city mayor decision-making system while ensuring the safe decision-making system. During the application of multi-channel massive real-t safeguard the safe operation of the mayor decision-making system is a marking country s urban decision-making system.

Currently, there are giant gaps in real-time obtainment of urban data, int immediate feedback. It is a worldwide problem how to realize urban decision-mak a scientific and rational way. The smart city mayor decision-making system solv non-interoperability of urban management and delayed feedback of management inf integrating urban monitoring and management information data. Supported by logis platform and other ICT technologies, this system, specific to new demands a intelligent development of Chinese cities, realizes the analysis and expressi satisfy the urban decision makers at all levels and the real-time transmission and offers an integrated support platform for decision behaviors, in the cont decision-making system and urbanization development.

The mayor decision-making system builds a multisource, multi-scale and multi- database integrating social, cultural and economic fields based on space data database breaks through the traditional data acquisition methods and improves t acquisition to seconds. Meanwhile, it also uses for reference the data judgment for traditional data and applies them to the large data platform.

The mayor decision-making system sets up metadata exchange standards, breal traditional data processing mode, makes use of structured data to establish ex achieves precise description, rapid positioning, accurate search and value eval data.

The mayor decision-making system establishes multi-level data screening systems decision-making models. It integrates various data through all kinds of systems and pre-warns the identification and early warning of urban sustainable develop the dynamic 3D demonstration and accomplishes the automation of the whole urban decision-making process.

The above three points constitute the core technology system of the mayor deci The system, for the first time, realizes the unified data acquisition and exc overall urban level, integrates upward the information from different fields and p the method and technology support for the establishment of demonstration comprehensively, promptly and effectively copes with various demands of mayo improves the speed, level and quality of mayor decisions through using differe

resources and analytical tools, and makes urban administrator demands transform empiricism management model to the rationalism management model.

## 4. Framework of the Intelligent Decision-making Platform

Figure 2. Structure Chart of Intelligent Decision-making Platform

Intelligent decision-making platform has 4 major functions:

1) Intensive sense: to make decisions under the support of sufficient data;

2) Accurate judgment: to pre-judge the status and result;

3) Appropriate reaction: to mobilize resources for coping according to scenari minimum consumption of energies, resources, time and social mentality;

4) Continuous learning: to constantly improve the decision model and proces continuous progress.

Table 1. Smart city-leadership decision-making platform

| Serial No. | Function Module | Function Submodule |
|---|---|---|
| 1 | Development performance | Economic Subsystem |
| | | Social Subsystem |
| | | Ecological System |
| 2 | Resource pooling | Space resource pooling |
| | | Human resource pooling |
| | | Financial resource pooling |
| 3 | Bottom-up report | Document issuance |
| | | Communication with the Municipal Bureau |
| 8 | Major projects | World Expo project |
| | | Economically affordable housing |
| | | Disney project |
| 6 | Emergency responces | Natural disasters |
| | | Social security |
| | | Accident disaster |
| | | Public hygiene |
| 4 | Daily management | Schedule management |

| | | |
|---|---|---|
| | | Documents reading and commenting |
| | | Teleconference |
| 5 | Experience Study | Urban development case base |
| | | Urban encyclopedic knowledge base |
| | | Urban data knowledge base |
| 7 | Comments Summary | Citizen information feedback |
| | | Government agency feedback |
| | | Enterprise alliance feedback |

## 4.1 Development Performance Module

The execution of government programs includes various types of economic indexe protection indexes, security housing indexes and emission reduction inde performance assessment indicators are different in different provinces and citi divided into economic development, social development, environmental develop harmonization. Therefore, it is required to choose different indicators on the d of urban decision makers specific to different cities, and consult the gov evaluation weight for the comprehensive evaluation method. The module reflects part and happy livelihood part cared by urban decision makers and is the qua decomposition of the overall strategy and livelihood status.

Table 2. Framework of Development Performance

| Development Performance | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Economic System | | | Social System | | | | Environmental System | | |
| Economic Development Level | Comprehensive Economic Development Benefits | Income of Urban and Rural Residen | Basic Educatio | Urban Employment | Medica Health | Urban and Rural Cultura Life | Energy Conservati and Emissi Reduction | Resources Conservati | Science a Technology Input and Innovation |

## 4.2 Resource pooling module

Make an inventory of available resources within the city, including human resou and financial resources. Be clear available human, financial and material resou as to transform external resources and effectively use internal resources. Th overall and fractionized conditions of various resources available to urban d object of decision making.

Table 3. Framework of Resource Pooling

| Resource Pooling | | | | | | | |
|---|---|---|---|---|---|---|---|
| Human Resource | | Space Resource | | | | Financial Resour | |
| Organizat Structure | Task Assignment Status | Land Use Status | Land Planning Conditions | Land Gran Conditions | Investmen Promotion Progress | Riscal Revenuel Monitoring | Fiscal Expenditure Monitoring |

## 4.3 Bottom-up report module

An urban decision maker needs to keep up with the instructions and spirit of sup read all kinds of documents to be issued, thus making a separate module to sort the docum convenient to convey information in real time and inquire records at any time. T superior management and decision-making information of the city and is the guidi management and decision-making.

Table 4. Framework of Bottom-up Report

| Bottom-up Report | | | | | | |
|---|---|---|---|---|---|---|
| Document Issuance | | | | Communication with Departmen Bureaus | | |
| Decision Mak | Annoucement | Notice | Circula | Report | Request | Officially Re |

4.4 Major project module

An urban decision maker needs to make some major projects with highlights during office. The module includes major project objectives, implementation schedule, t accomplishment degree that an urban decision maker cares about, and can also upd in real time and control the project progress at any time. The module reflects t projects that the urban decision maker is concerned about and is the key to real goal.

Table 5. Framework of Major Projects

| Bottom-up Report | | | | | | |
|---|---|---|---|---|---|---|
| Project I | | | | | Project II | Project III |
| Goals | Implementation Schedule | Time Nodes | Completion Level | Onsite Pictures | Same as Project I | Same as Project I |

4.5 Emergency Responces module

The urban decision maker needs to make the fastest response to emergencies, and most appropriate way so as to minimize the losses of life and property of citize installed with an alarm system which directly connects to the weather bureau, pu the environmental protection agency, road transport bureau and other important d reports emergencies to the leadership at the first opportunity, and directly loc enable the whole leading group to start a contingency plan or directly hurry to issue. The modules reflects emergencies during the urban decision making process controllable methods to cope with relatively uncontrollable issues and serves as normal operation of urban management and decision making.

Table 6. Framework of Emergency Responces

| Emergency Responces | | | | | | | |
|---|---|---|---|---|---|---|---|
| Natural Disasters | | | | | Accider Disaste | Publi Hygiene | Social Security |
| Fire | Typhoon | Flood | Pollutant Leakage | | | | |

4.6 Daily management module

The module refers to the urban decision maker s daily work schedule and affairs including three parts: 1. Schedule arrangement: use Cloud calculation software t which can carry out real-time updating and facilitate to control his/her own iti upload daily important documents or conference introduction to be handled in adv Teleconferences: connected with video equipment which enables the urban decision maker

conference agenda that he cares about at the office and avoid the traffic time c
conference place and back. The module reflects the daily management work content
decision maker and pools all kinds of information to the informatization office

Table 7. Framework of Daily Management

| Daily Management | | |
|---|---|---|
| Schedule Arrangement | File Preview | Teleconferences |

4.7 Experience study module

The urban decision maker needs to follow closely the development footstep, learn
measures and practice projects by surrounding regions and benchmark cities and bring ex
enlightenment to the development of the city. It is required to set up a profess
case content of various sub-modules every day and conduct real-time update so as
decision maker see the latest events and excellent cases. The module reflects th
development of issues that the urban decision maker cares for are best practice
maker continuously learns.

Table 8. Framework of Experience Study

| Experience Study | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Economic Development Experience | | | Social Development Experience | | | Environmental Protection Experience | | | Urban Management Experience | | |
| Domesti Surround ng Cities | Domes tic Key Cities | Foreig Advanc ed Cities | Domesti Surround ng Cities | Domest ic Key Cities | Foreig Advanc ed Cities | Domesti Surround ng Cities | Domest ic Key Cities | Foreig Advanc ed Cities | Domesti Surround ng Cities | Domest ic Key Cities | Foreig Advanc ed Cities |

4.8 Comments summary module

The urban decision maker needs to keep real-time watch on the city s conditions
set of bottom-up information feedback mechanisms is required, including opinions
citizens, experts, NPC and the CPPCC and enterprise institutions, all of which s
adopted after the comprehensive study. The module reflects the pathways that mul
participate in urban management decision making and is a fast channel for the ur
hear the advices and suggestions of different parties.

Table 9. Framework of Comments Summary

| Comments Summary | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Citizen Inform Feedback | | Enterprise Institution Feed | | Organization Feedback | | | Intelligence Consultation Feedback | |
| Microbl Feedback | Urban Decisio Maker | Enterpr Alliance | Industry Associati | NPC | CPPCC | Party Committee | Indust | Agricult |

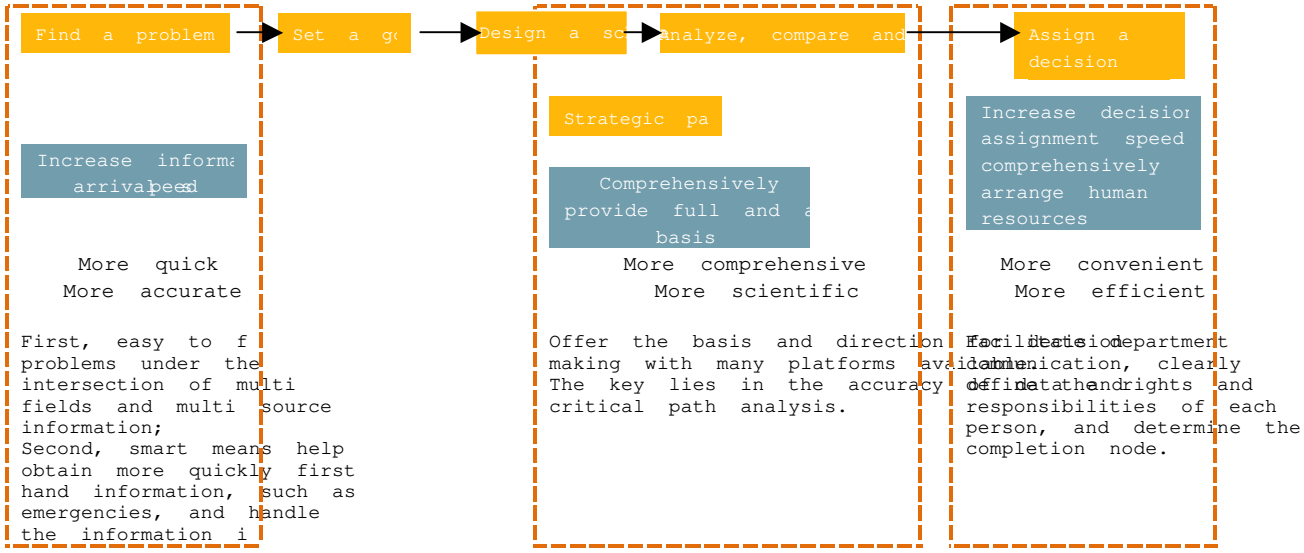


Figure 3. Decision-making Process

## 5. Development and Promotion of Intelligent Mayor Desk

Since its launch in November 2011, the Intelligent Mayor Desk project has ma network, cloud platform and other ICT technologies to exert itself to get throug barriers, realize the spring up and activation of information and enable the ma and wisely control the real time conditions of the city, thus making analysis decision response. Besides, with the help of the Intelligent Mayor Desk , the predict the future of the city and comprehensively master periodic problems duri

When a fire occurs unexpectedly in the city, the system can automatically give an alar mayor and his leading group able to start a contingency plan at the first op connects to the weather bureau, public security bureau, the environmental pro transport bureau and other important departments, directly locates the pla intelligently schedule the most appropriate disaster-relief resources and real condition of resources and the tracking and supervision of the responsible p integrates and analyzes the large data of different social media, pays close experiences of on-site citizens through the publishing of social media, and put direct train of opinion feedbacks between the mayor and citizens and restoring Besides, the system can intelligently search nearby major dangerous sources, disaste and other information, check erroneous ideas at the outset and predict and elimi

The smart city essentially features the spring up and activation of informat decisions, and serves the beautiful environment and life of the city as well a The Intelligent Mayor Desk adheres to giving play to the top-level design value makes use of information technology to achieve optimal social, economic an harmonization and minimum consumption of the city to meet the happy life of operation of the city and ecological vigor of the environment.

Figure 4. Intelligent Mayor Desk

Figure 5. Interface of Intelligent Mayor Desk

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# SENSIBLE PLANNING KNOWLEDGE NETWORK OF UK: MINING, VISUALIZING AND ANALYSING OF THE ACADEMIC OPEN SOURCE DATA

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## Abstract

Planning knowledge network, as the agglomerations of academic outputs and scholars, guides practices to make a better city, educates younger planners and to supports decision making. The research focuses on the planning knowledge network in UK, aiming at making the network more sensible by visualizing, measuring, analysing and discovering the anchor cities of this network. This would be helpful to gain a better understanding of planning intelligence, and to benefit planning schools, scholars, organizations and even navigating young planners in such a planning knowledge ocean. In a word, the most immediate purpose of this research is to make such network sensible, and that is the beginning of a range of benefits.

Regarding planning knowledge society as a cooperative network, with planning scholars contribute academic outputs (publications) in a cooperative way, this research adopted the open source data as resources. Raised conceptual models for the network and methods for visualizing, measuring and analysing the network are innovative, which makes the planning knowledge network sensible for the first time. Additionally, the anchor cities, which represent knowledge produce, exchange and store agglomerations, are also been discussed.

By achieving this, the content is organized in six major parts. The main body is followed by the introduction part, which includes the open data resources introduction, the methods and tools, the visualization and analysis this network, and then the study on anchor cities to complement a more sensible network. Finally, the research draw the conclusion according to the results of important findings.

## 1 Introduction: A Sensible Network of Planning Knowledge

### *1.1 Planning Knowledge*

Urban Planning as a discipline have developed fast in the past 100 years. Since the first planning principles generated in UK 1909, urban practice, no matter the scale, have been supported by the planning knowledge (from planners, their academic outputs and proposals), along with other disciplines like engineering, Information technologies, politics, etc.

It is high time to discover the inside of the planning knowledge world itself. Such research could be beneficial to planning schools, scholars, organizations and young planners. Without doubt, it is an attempt to make a better understanding of the principles of planning, and the knowledge structure. Meanwhile, this would be instructive to regions like China, India, Southeast Asia, Middle Asia and the Arabic World, where the planning knowledge societies are still growing.

### *1.2 A Sensible Network*

AESOP, along with other organizations has contributed to diverted exchange platforms among different planning entities. This alludes that the planning knowledge society is a network. Planning knowledge network is not only the network of members, exchange students, visiting professors, but the academic intelligence cooperation. Though hard to be visible, since millions of publications bring every scholar into such network, certain approaches could be used to make the network sensible.

As information technology today help to solve problems we couldn't have ever imagined, more and more network become sensible. Through such process, one could gain deeper understanding of the network. The questions such as how the network looks like, what is the attributes, and whether it is location oriented are to answer.

## *1.3 Major Tasks and Structure*

### *1.3.1 Task 1: Visualize and Measure the Invisible Network: A Sensible Network*

In terms of sensible network, such network shall be visualized in the first place. Secondly, the network should have access to get measured through key parameters and proper methods. According to that, having the ideology and methods of networking, the tools to visualize the network shall be adopted. This attempt could be innovative in planning knowledge research or network research field.

### *1.3.2 Task 2: Discover Physical Anchors of the Network: the Anchor Cities*

As to make the network sensible, it is innovative to discover the relationship between invisible network and physical space. Anchor Cities , as a term we used in this research to cities that are outstanding in produce, exchange and store of planning knowledge, open a gate for deepening the sense of the planning knowledge network.

### *1.3.3 Structure of the Research*

The Research are composed by six major parts. First is the concept of planning knowledge network in the instruction phase (First Part).

The next three parts are aimed to achieve the first task. Followed by the data resources (Second Part) and the methods (Third Part) introduction, the UK Sensible Planning Knowledge Network (Forth Part) presents the results of visualization and analysis of the network.

For the second task, this research analyse the relationship between knowledge network and the anchor cities, as well as the clusters of anchor cities. This could be found in the five Anchor Cities of Planning Knowledge Network part (Fifth Part).

Finally, the conclusion (Sixth Part) summarized the findings and analysed results of the Planning Knowledge Network of UK.

## *1.4 Literature Review*

### *1.4.1 Networking of Planning Knowledge*

Planning knowledge had gained its cooperation among scholars global wide. Such kind of networking trends becomes the significant symbol in planning field. In 2001, when the first world planning school congress (WPSC) was held in Shanghai, it collected 600 hundred of papers (Urban Planning Review, 2001). Most importantly, the announcement of Global Planning Education Associations Network was made to enhance the exchange of planning knowledge (Zhiqiang WU, 2001). Such kind of network is not only consisted of the invisible knowledge exchange, but also embodied by massive exchange programs (Harvey A. Goldstein 2006). The globalization promotes the network to grow, and the urban planning knowledge network are changing more global-local at the same time (YuanYUAN, etc. 2004).

Bologna Declaration 1999 had been reached the agreement within 29 European eliminate the obstacle in education resources exchange (Andrea I. Frank, etc., 2014), in that way the knowledge could be shared in an active way. Moreover, as the urban development issues become acceptable worldwide, the knowledge for better life has trans borders (Henian LIANG, 2000).

However, there are some imbalance in planning education, which could be obstacle for knowledge exchanging. Like the incomplete evaluation system (Lei PANG, etc. 2006). 2007 when the AESOP annual conference was held in Napoli, the participants are mostly from the south part of Europe (Yi HUANG, 2007), such case implies that even the trend of networking of planning knowledge, there are still long way to go.

On the other hand, it shows the importance of this research in the perspective of planning knowledge globalization and regionalization.

#### *1.4.2 Development in Visualizing and Analysing*

The other important perspective of this research is the methods of visualizing and analysing based on open source data. Until recently, a method of EDEN had been introduced to visualize the simulated geographic data (Chad A.Steed, 2013). By using Hadoop, Song Gao had achieved to visualize the flow of employees in United State. Through the way of Medoids, the data of agglomeration of space could be analysed (Deepak Paramashivan Kaundinya, 2013).

Most importantly, Gephi as a useful social network analysing tool, helped Irene Eleta to cluster twitter customs according to the usage of language (Irene Eleta, 2012). It is obvious that there are many tools to visualize the data, as well as analysing.

For this research, we adopted Gephi as the major tool along with regular data analysis software. It is the model we design and the right research path we think that matters.

## 2 Data Resources: Open Resources of UK Planning Scholars Academic Data

### *2.1 Target Group: Academic Scholars as the Main Entities*

To establish such visualized knowledge network of UK, question of what kind of target group should be considered is to answer. The target group consists of two parts. First is the academic scholars from the planning schools (main entities), along with the related scholars (complementary entities).

Planning knowledge network, as the basic academic engine that generate intelligence to support practices like the decision making and design, remains the core value of academic outputs, such as articles, books, reports, etc. According to these criteria, the research choose academic scholars as the main entity of the target group. In total, this research focuses on 6 UK planning schools (Cardiff University, University of Manchester, University of Glasgow, University of Liverpool, University College London, and Birmingham City University) from AESOP membership list, which we believe have significant positions in planning knowledge field in UK.

Besides the main entities, the complementary entities should not be ignored. This includes independent scholars and scholars from planning schools out of the list.

### *2.2 Open Sources: Data of Scholars Academic Information*

One of the innovations is to take advantage of the open sources data from the Internet, which on one hand is easy and free to access. On the other hand, the massive information could help to complete or proofread information.

Open source data in this case mainly relies on three resources from the Internet. The first one is the basic information including names, abbreviation, title, and publications from the official website of each university. The second one is google scholar, which could be helpful when some modifications are needed and also the citing information of the publications (Articles, conference papers, reports, editorials, books, book chapters, etc.). The last one is other free publication search engine such as the ResearchGate or ScienceDirect, etc.

In fact, the process of data collection is difficult, especially when some information is not complete on the official website of the planning school. Therefore, it is quite important to have massive open source data to complement each other.

### *2.3 Raw Data for Measuring the Network*

The planning knowledge network is built upon knowledge exchange among the target groups and beyond. In order to capture knowledge exchange , the observation of academic outputs cooperation is essential. Some important factors listed below (more information are captured beyond the items listed). As this research is still ongoing, some raw data is still under testing for this phase, as the research is still on going.

**Academic Outputs Cooperation.** As the most important indicator in this research, the cooperation of academic outputs contains implies the academic relationship among authors in each article.

**Location.** The location of the publication shows how the planning knowledge network has an interaction with different places around the globe. With the help of this indicator, the knowledge network would never been floated and untouchable.

**Publication Year.** The planning knowledge network is never static. Publication year reflects how the knowledge network changing through.

**Cited Value.** This indicator reflects contribute a certain publication made to the planning knowledge network. If the cited value is high, then it means such publication is more active inside the network.

## 3 Model, Methods and Tools: Data Mining, Visualizing and Analysing Principles

### *3.1 Conceptual Model*

By visualizing and analysing planning knowledge network of UK, we constructed the conceptual model to set up the rules and also organize the algorithms. Figure 1. The Conceptual Model for Planning Knowledge Network of UK, illustrates the key items.

**Scholars** (as Node in the Figure 1): Inside the model, each node represents a single scholar (no matter the scholar is main entity or the complementary entity).

**Cooperation** (as link in the Figure 1): Each link represents the cooperative relationship according to one journal article, one conference paper, one book, one report, etc. The cooperative relationship has no direction, therefore the undirected way of algorithms are chosen. As been put, each link just represent a single cooperative activity, then the model adopt multiple lines if there are more than one cooperative activities between two certain scholars. For example, Scholar 1 and Scholar 2 have 3 cooperative activities, Scholar 3 and Scholar 4 have 2 cooperative activities. Scholar 2 gains totally 9 degrees of cooperation, while scholar 6 just got 1.

**Cluster** (as modularity): As also showed in the model, the network is consists of diverted groups. However, the main focus is on the major modularity rather than those absolute isolated ones (without any link to major modularity). Furthermore, the research would analyse different groups inside the major modularity.

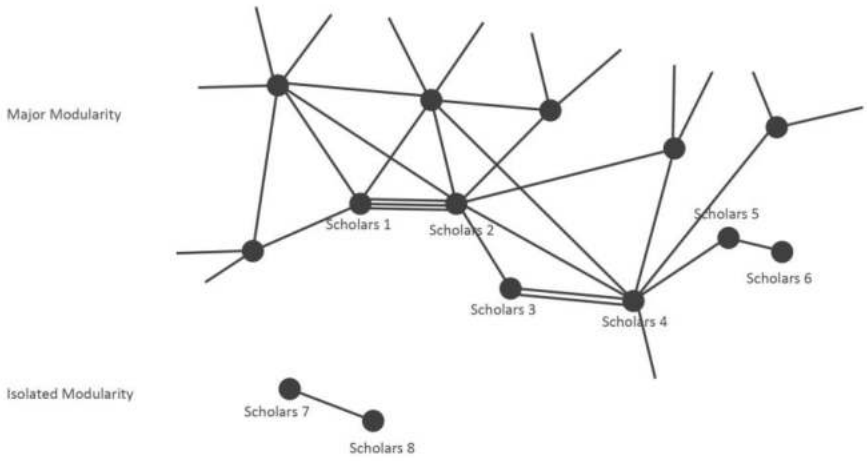


Figure 1. The Conceptual Model for Planning Knowledge Network of UK

### *3.2 Data Mining and Organizing*

During the process of data mining, we adopted a software called Bazhuayu D Machine to assist with the mining process. However, as mentioned before, due to data structural among so many official website, the programing work shall be individually created according to each site structure. Some of the structural data are easy to capture and classify, while the text data could only be filtered afterwards. The final structural of the data pool contains the key factors of each publication.

### *3.3 Visualizing*

To translate data into visualized language, the ideology is to regard each individual scholar as a node in the network, while links between nodes the cooperative academic outputs. The higher value of cooperative degree one node gets, the more cooperation a scholar earns. Similarly, if a link is bolder than others, then the academic relationship between scholars on both sides tighter.

With the help of Gephi, an open source platform of data visualizing software, the planning knowledge network could be visible. Different Force Models were tried to make the layout clearer and defined. Finally, we adopted the Force Atlas2 model which could present the hubs and the centralities of the hubs by the meantime, as showed in Figure 2. Three Stages of Force Atlas2 Models for Visualization.

Force Atlas2 Model obeys the basic algorithm of graph drawing, known as the Force-directed graph drawing. It is originally derived from the physical principle of Hooke s law as be outcome shows the multiple force balanced results among the node connections.

Figure 2. Three Stages of Force Atlas2 Models for Visualization: (a). Raw Stage, (b).Processing Stage, (c). Final Layout (Source: Graph generated through Gephi, 2015)

### *3.4 Analysing*

In this research, some vital indicators for analysis are chosen, including the average degree, the modularity of the network, the local clustering coefficient, the average path length, the graph density, and the connected components. The characteristics and principle for each indicator has been explained below.

#### *3.4.1 Average Degree*

Average Degree reflects the entire cooperative degree of each scholar. The higher the value of the average degree get, the more cooperative relationship the network get.

$$a = \frac{1}{N} \sum_{i=1..N} Degree(V_i)$$

a, value of average degree. N, the number of scholars. V, the set of scholars

### *3.4.2 Modularity*

The indicator of Modularity is raised (in 2004) and optimized (in 2006) by Newman, which is used to describe the strength of division of a network into modules (Newman, M. E. J., 2006). According to the indicator of modularity, it could be clear to measure the community structure in large scaled network. (Svr to be 1 if scholar v belongs to group r and 0 otherwise)

$$\delta(v_r, c_i) = \sum_{r} s_{vr} s_{wr}$$

$$Q = \frac{1}{2m} \sum_{vw} \sum_{r} \left[ A_{vw} - \frac{k_v k_w}{2m} \right] s_{vr} s_{wr} = \frac{1}{2m} \mathrm{Tr}(S^T B S)$$

$$B_{vw} = A_{vw} - \frac{k_v k_w}{2m}$$

Q, value of modularity of the network. S, Non-square matrix having elements Svr. B, Modularity matrix, which has elements. 2m, Total number of degree among all scholars

### *3.4.3 Average Clustering Coefficient*

This indicator measures the degree of which scholars in a network tend to cluster together. Duncan J. Watts and Steven Strogatz introduced the indicator of local clustering coefficient (both directed and undirected) to determine whether a graph is a small-world network (Duncan J. Watts and Steven Strogatz, 1998). And as for the relationship between scholars has no direction, we adopted the undirected local clustering coefficient to be calculated. Finally an average value of the overall local clustering coefficient values are studied to know the general clustering situation of the whole network.

$$C_i = \frac{2 \left| \{ e_{jk} : v_j, v_k \in N_i, e_{jk} \in E \} \right|}{k_i (k_i - 1)}$$

Ci, value of local clustering coefficient for a certain scholars. V, the set of scholars. E, the set of edges between all the scholars. Ki(Ki-1), possible links exists between all neighborhood scholars

### *3.4.4 Average Path Length*

The average path length is to calculate all paths among scholars, and then dividing by the total number of pairs. It shows the number of steps it takes to get from one scholar to another on average.

### *3.4.5 Connected Components*

This indicator describes how many scholars are strongly connected and weakly connected.

## 4 UK Planning Knowledge Network

### *4.1 Visualized Planning Knowledge Network of UK*

According to the model and the rules we set up, under the help of Gephi, we achieved the final visualizing work shows in Figure 3. Planning Knowledge Network of UK.

Figure 4. Planning Knowledge Network of UK shows the overview of the planning knowledge network based on the publication cooperation of UK. By using different colours, it is clear to distinguish major clusters. The spatial distance reflects the affinity between clusters in academic relationship, while the links between scholars explain the cooperative attractions.

Statistically, UK s planning knowledge network includes 2169 researchers, with 252 as the counted main entities of the target group. Cardiff University(56 entities scholars), University of Manchester(20), University of Glasgow(33), University of Liverpool(65), University College London(45), Birmingham City University(33).

While, 1917 scholars as the complementary part are discovered by visualizing process. Though been regarded as the complementary one, they also been unveiled in the final visualized work, which on one hand shows their strong impact and active connection in this network. On the other hand it proves that such network is quite tolerant and open.

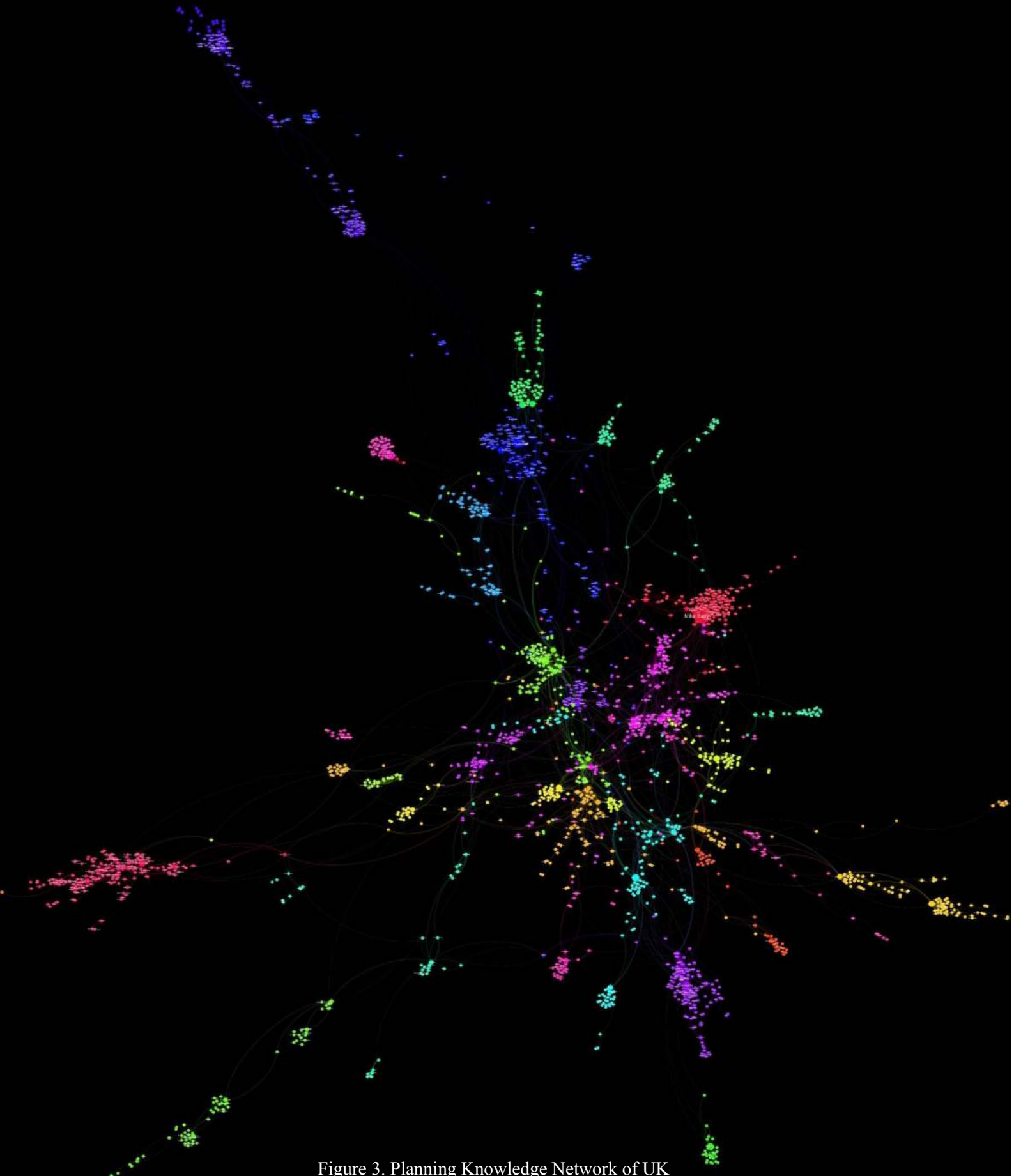

Figure 3. Planning Knowledge Network of UK
(Source: Graph generated through Gephi, 2015)

## *4.2 Analysis Results of Planning Knowledge Network of UK*

### *4.2.1 High Degree of Involvement in Network (Connected Components, Average Degree)*

The degree of involvement in the whole network could be measured according to the indicator of connected components. It implies that the 2055 scholars are highly involved in this network with a strongly connection, while only 114 nodes are less involved with weakly connection. (Robert Tarjan , 1972).

Those who are less involved in UK s planning knowledge network, with less devotion in acade cooperation, might have devoted more into urban practice, or software development, etc. Or because their majority academic outputs belongs other networks. However, this group of scholar are not belong to the 252 main entities we targeted.

### *4.2.2 Closeness of Scholars (Average Path Length)*

Scholars inside the network build the connection through cooperation on publications. While such connectivity could be sensed through the indicator of average path length. And such value for this network is 7.82 with total 1493783 shortest paths. The total diameter for the network is 19 units.

The closeness centrality distribution figure shows all the distances from a given starting node to each other scholars. 1 to 12 extra scholars are needed to build up a connection between two given targeted scholars in majority. According to the algorithms mentioned before (Ulrik Brandes, 2001).

### *4.2.3 Tendency of Clustering (Clustering Coefficient)*

The tendency to form a cluster varies from scholars. Among the relationships, 1789 triangles are created, which implies the tendency to join a cluster for each certain scholar is 0.815 (more than two thirds of total completion), according to the algorithms (Matthieu Latapy, 2008). In general, we could draw a conclusion that, a scholar is relatively close to a certain inside the cluster. On the other hand, it means scholars inside the network have less chance to fight alone.

### *4.2.4 Modularity of Whole (Modularity)*

Under the help of modularity tools, the research found out there are 143 clusters according to the modularity algorithms, while the total modularity is 0.899. Considering the modularity has the default range between [-0.5, 1), it is significantly high in modularity. In other words, it means the entire network shares the same culture of modularity in general. Technically, 4 clusters have the number of more than 150 scholars, while 9 clusters have the number of above 100 scholars.

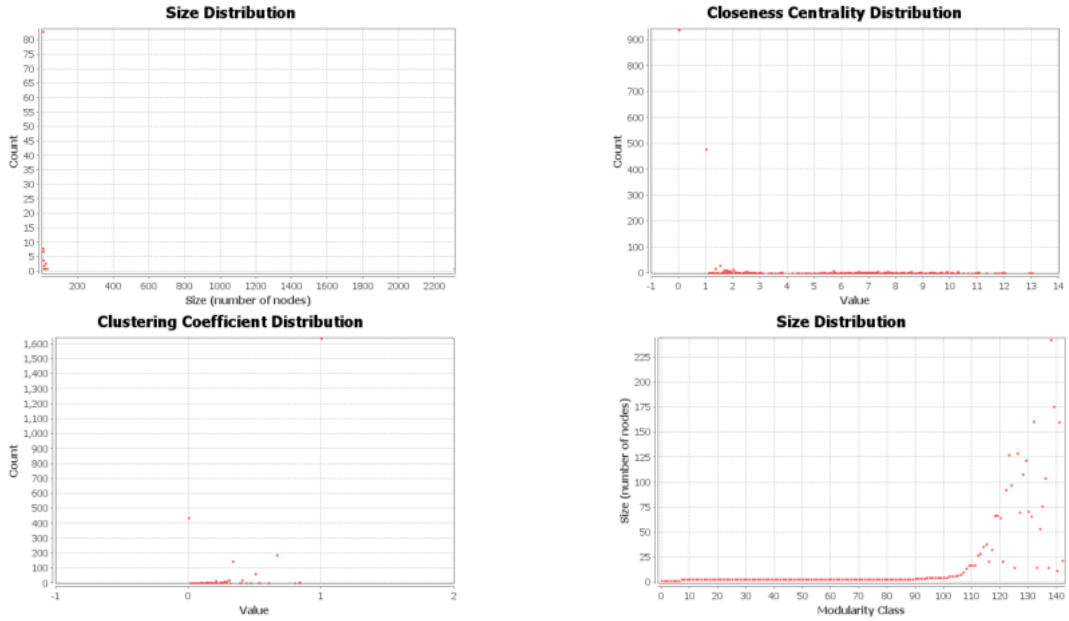


Figure 4. Results of Measuring the Network: (a).Nodes Size Distribution, (b) Closeness Centrality Distribution, (c).Clustering Coefficient Distribution, (d). Cluster Size Distribution (Source: Graph generated through Gephi, 2015)

## *4.3 Comparison*

### *4.3.1 Ten Major Clusters in UK Planning Knowledge Network*

Ten major clusters contribute over half of the cooperative degrees through the entire network, as well as they involve over half of the scholars. The Richard Chiverrell-John Boyle-Andy Plater s cluster ranks the first place, with the total degree of 974 (9.68% in proportion) and 244 scholars (8.78% in proportion).

As implies in Table 1. Ten Major Clusters in UK Planning Knowledge Network implies, all of the ten groups share higher value of degree proportion than scholars number proportion. This means i general, the scholars inside those clusters are more active in cooperation than those outside of these clusters. No matter how many pieces inside each cluster, it is always the degrees that matters.

Table 1. Ten Major Clusters in UK Planning Knowledge Network

| Rank | Gephi Code | Total Scholars | Proportion Scholars | Total Degrees | Proportion of Degree | Number of Pieces | Key Figure | Major Background |
|---|---|---|---|---|---|---|---|---|
| 1 | 138 | 244 | 8.78% | 974 | 9.68% | 4 | Richard Chiverrell, John Boyle, Andy Plater, Barbara Mauz, Janet Hooke, Neil Macdonald | University of Liverpool |
| 2 | 139 | 176 | 6.36% | 729 | 7.24% | 1 | Terry Masden, Kevin Morgan, Gillian Bristwo, Mara Miele | Cardiff University |
| 3 | 132 | 161 | 5.82% | 638 | 6.34% | 5 | Graham Haughton, Mark W Baker, Cecilia Wong,Michael Hebbert, Iain Deas, Ken Gibb | University of Manchester |
| 4 | 141 | 160 | 5.78% | 617 | 6.13% | 1 | Mike Batty, Alex Singleton | University College London |
| 5 | 126 | 130 | 4.66% | 449 | 4.46% | 4 | Mark Reed, David Adams, Peter Larkham, Alister Scott | Birmingham City University |
| 6 | 123 | 128 | 4.62% | 477 | 4.74% | 2 | Richard Bradshaw, Fabienne Marret Davies | University of Liverpool |
| 7 | 129 | 122 | 4.41% | 585 | 5.81% | 1 | Ade Kearns, Bailey,N, Hastings,A. | University of Glasgow |
| 8 | 128 | 108 | 3.90% | 449 | 4.46% | 1 | Thomas B Fischer, Sue Kidd, Olivier Sykes | University of Liverpool |
| 9 | 136 | 104 | 3.76% | 468 | 4.65% | 3 | Nick Gallent, Sir Peter hall, Robin Hickman, Stephen Marshell | University College London |
| 10 | 124 | 96 | 3.50% | 359 | 3.57% | 1 | Andy Morse | University of Liverpool |
| **Sum** | | 1429 | 51.59% | 5745 | 57.07% | | | |
| **Rest** | | 1339 | 48.41% | 4321 | 42.93% | | | |
| **Total** | | 2768 | 100.00% | 10066 | 100.00% | | | |

(Source: Dataset of UK Urban Planning Schools, 2015)

#### *4.3.2 Typical Typologies of Clusters*

To gain better understanding of the clusters that formed the whole network, we choose Mike Batty s and Richard Chiverrell-John Boyle-Andy Plate s Cluster to discuss. Representing the one typical typology of clusters, Mike Batty s shows more centrality, while the Richard Chiverrell-John Boyle-Andy Plate s represent the dispersible types. Both of them shows a higher proportion in cooperative degree and the scholar s numbers. The structures and typologies could be found i Typology of Mike Batty s and Richard Chiverrell-John Boyle-Andy Plate s Cluster.

The typology of Mike Batty s cluster implies a strong and attractive academic personality, with over 150 scholars directly owns the cooperation with him. The average degree reaches 3.86, while Batty gains his own degree of 177, which is 45 times of the average value in the cluster. On the other hand, Batty created 91 completed cooperative triangles (Mike Batty - Scholar A - Scholar B), such firm structure guaranteed Mike Batty to have a concrete first degree.

Furthermore, we believe such structure with the growing triangles contribute the development of this cluster. Beyond that, the personality and the openness of this cluster could have contributed to this without doubt.

Richard Chiverrell-John Boyle-Andy Plate s cluster, however, shows another possibility of organizing the cooperative academic relationship. The average cooperative degree among scholars is 3.99, a bit higher that Mike Batty s. While the three major figures inside degree and completed triangles of 70, 54(Richard Chiverrell), 49, 42(John Boyle), 41, 28(Andy Plate). The relative ratio of triangle cooperation among total cooperation is lower. Also the first degree is not relatively high compared with Mike Batty s. However, all the results imply that Ric Chiverrell, John Boyle and Andy Plate together plays the role of Mike Batty s in the cluste

Although the concentration is not that impressive, Richard Chiverrell-John Boyle-Andy Plate s cluster shows the attraction and stability either. The research take a close look at the topics of those two clusters, Both Mike Batty and Richard Chiverrell-John Boyle-Andy Plate are not constrained on few topics, on the contrary, they are open minded and accept different topics in cooperation.

To draw a conclusion, according to the study on the two typical cluster, it is not clear what kind of typology is more sustainable for clusters. However, two things are obviously certain. First, the completed triangle cooperation is the fundamental stabile element for a cluster. Secondly, the wider topic orientation, the more opportunities for clusters to grow, no matter in which typology they adopted.

### *4.4 Summary of Planning Knowledge Network*

In this phase, we visualized the planning knowledge network in UK, which appears the tolerance and openness to scholars knowledge. By adopting five important parameters, we measured the whole network, to have a general understanding of the entire cooperation and the modularity.

Later on, the comparison between major 10 clusters implied the diversity and modularity of the network, with some certain planning schools take the dominoes. The research discovered that the scholars belong to major clusters are more active than those who are not in general.

Finally, in order to find out the philosophy behind the typical typologies of cluster, we discussed about Mike Batty s and Richard Chiverrell-John Boyle-Andy Plate s cluster, the results for this shows no big difference, as the basic structure of completed triangle would contribute to the stability and the openness on topics could gain the development.

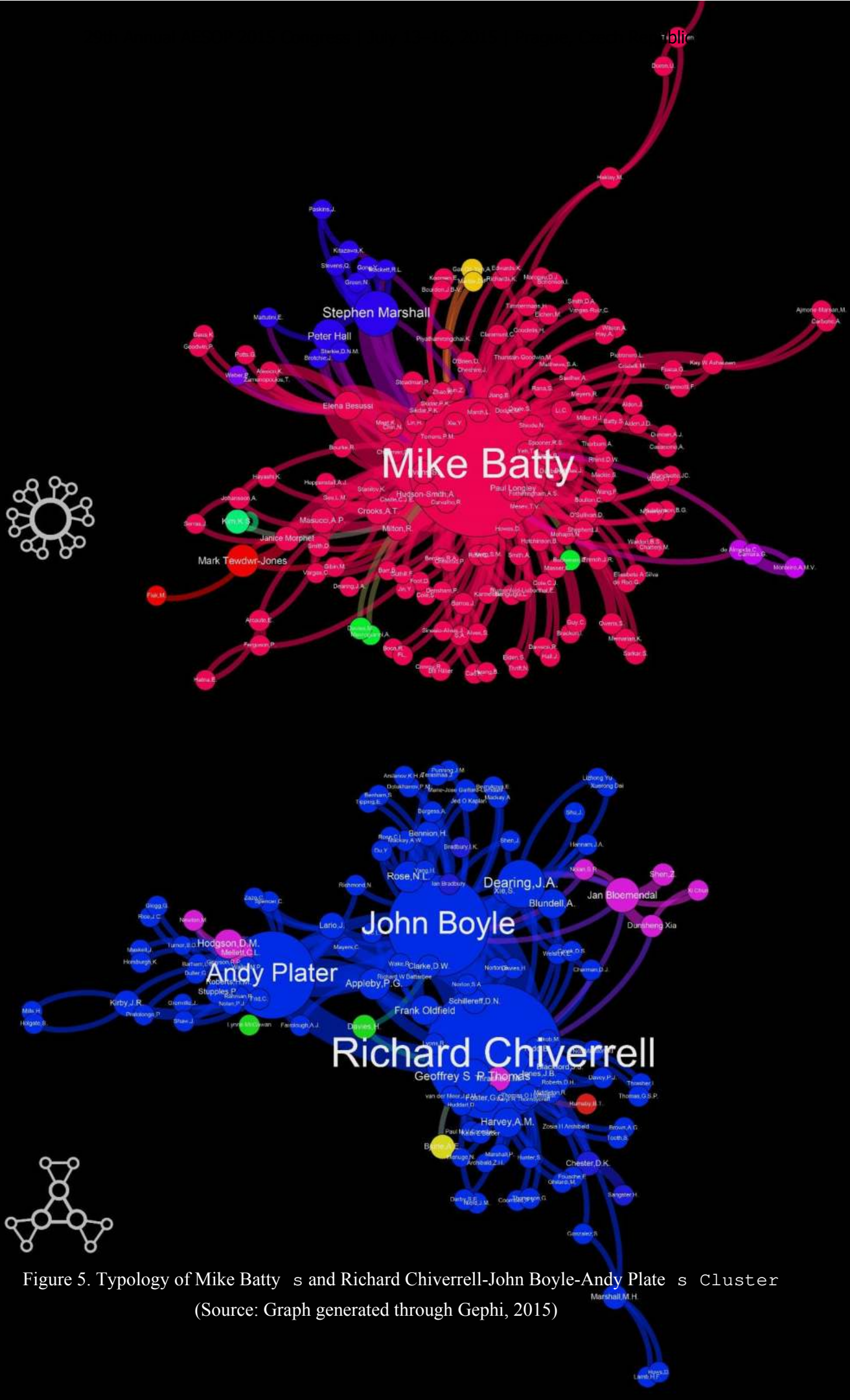


Figure 5. Typology of Mike Batty s and Richard Chiverrell-John Boyle-Andy Plate s Cluster
(Source: Graph generated through Gephi, 2015)

## 5 Anchor Cities of Planning Knowledge Network

To ensure the knowledge network has more ways to get sensed, the linkage of the network and cities should be unveiled. Anchor cities, as the term to represent such kind of planning knowledge relevant cities are the key element to be discussed in this phase.

In terms of the parameters, the data of academic outputs with location information is key. Somehow, it is possible to rank and group the planning knowledge based cities according to such data. By achieving this, the knowledge network and the cities which produce, exchange and store the knowledge would be obvious share the academic connection. So as to the closeness through the linkage of scholars. In that way, the cities could be grouped according to the closeness exchanging and storing planning knowledge .

### *5.1 Principle for Anchor Cities and the Network Connection*

The simple principle of anchor cities could be described as the relationship between cities through scholars and their academic outposts. Figure 6. Principles for Anchor Cities and the Network Connection shows how the knowledge network anchors the cities. As two main types of nodes (cities, scholars), and links (publications with location information) formed the structure, the differences between scholars and cities could also be clarified from this model.

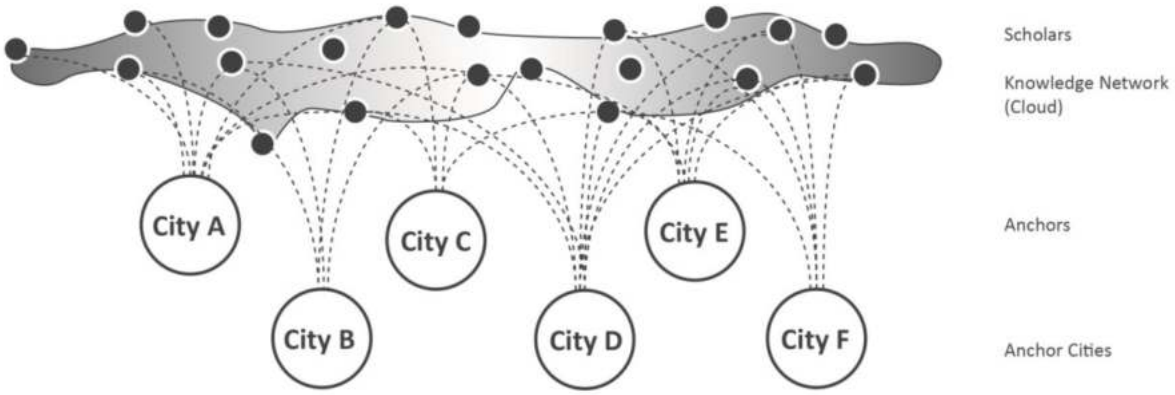


Figure 6. Principles for Anchor Cities and the Network Connection

The data resources for this phase is generate from the same database in the previous phase when analysing the knowledge network, but not all. Somehow, the publications with location information are selected. In that way, most of the conference papers, books, book chapters, reports contribute to the major part of the data source. It is according to those publications, that the anchor cities could be visualized.

As for scholars, one may build the connection between cities through only one publication, or none, or more. As for the cities, the more connection one get, especially from the scholars who have more places to be connected, it is more likely to have close relationship with other cities. In a word, the degree of connection between cities and scholars, and the closeness between each city are concerned in this phase.

### *5.2 Overview of Anchor Cities*

According to such principle, we use Gephi to visualise the anchor cities of the UK s planning knowledge network. The total number of city in such network is 303, with scholars as the links between cities. This implies that the huge knowledge network find its ancho recorded locations information. Among those anchor cities, the power of anchor (degre connections) differs. In Figure 7. Anchor Cities of UK s Planning Knowledge Network visualizing work shows the distribution and clustering of anchor cities.

We filter the less relevant cities, as showed in Table 2. Major Anchor Cities of UK s Planning Knowledge Network, there is major anchor cities. From this table, It is obvious to know that London not only have the largest number of planning scholars counted as the main entities in the network, but also the number of planning schools, scholars.

Another important finding is even the absolute value of the number of scholars is high, the cooperative degree is even higher, which means there are more related scholars that beyond these 104 scholars in London s case. Meanwhile, it could be possible that London attracts not only the local scholars but also scholars from the state. This hypothesis has been proved in the next step.

Table 2. Major Anchor Cities of UK s Planning Knowledge Network

| Rank | Anchor City | Degree of Cooperative | Key Planning Schools | Number of Targeted Planning Scholars |
|---|---|---|---|---|
| 1 | London | 468 | University College London<br>London School of Economics and Political Science<br>University of Westminster | 104 |
| 2 | Oxford | 88 | Oxford Brooks University | 31 |
| 3 | Cardiff | 75 | Cardiff University | 56 |
| 4 | Liverpool | 73 | University of Liverpool | 65 |
| 5 | Edinburgh | 69 | Heriot-Watt University | 21 |
| 6 | Bristol | 69 | University of West of England | 42 |
| 7 | Manchester | 59 | University of Manchester | 16 |
| 8 | Glasgow | 51 | University of Glasgow | 33 |

(Source: Dataset of UK Urban Planning Schools, 2015)

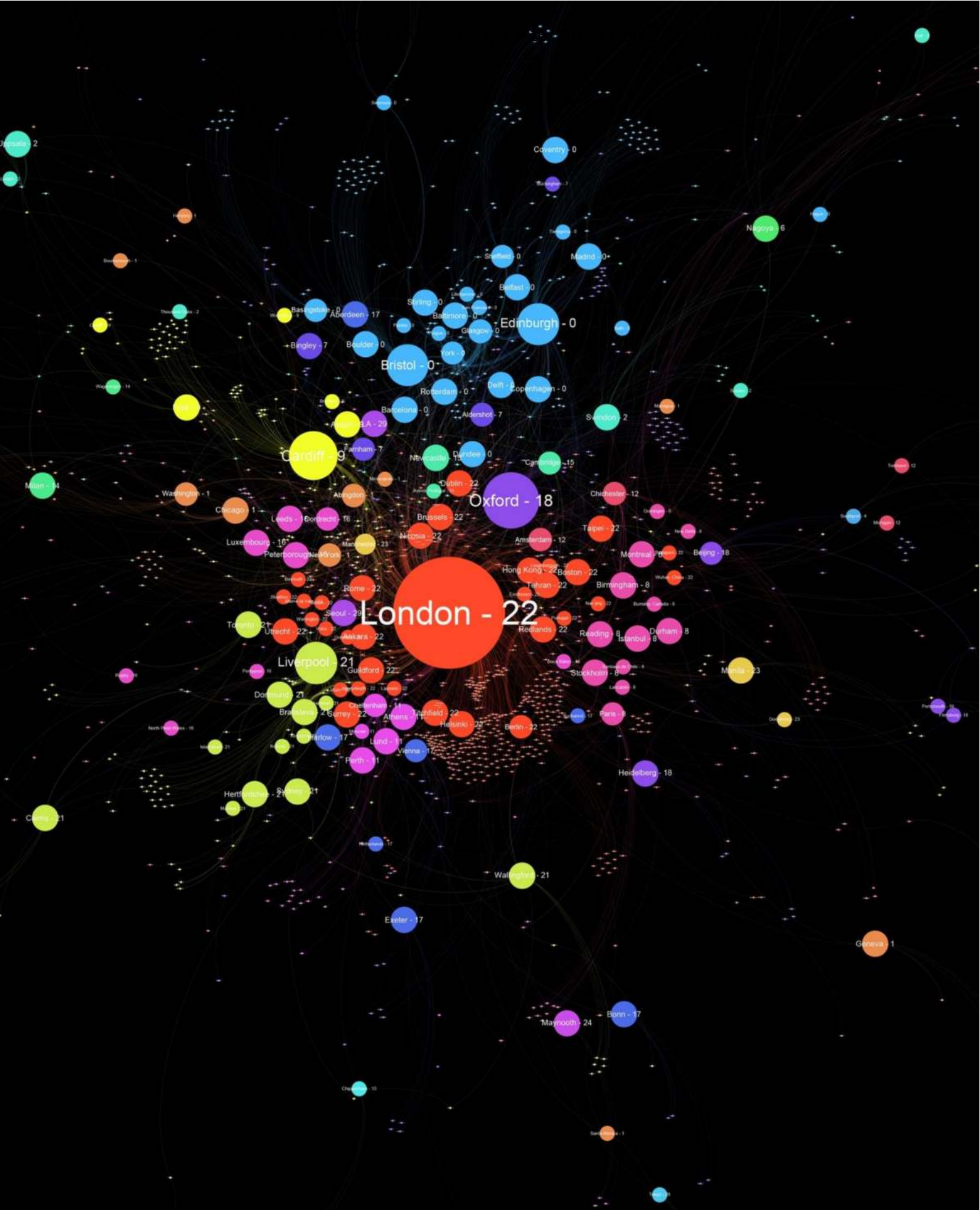


Figure 7. Anchor Cities of UK s Planning Knowledge Network

(Source: Graph generated through Gephi, 2015)

### *5.3 Clustered Anchor Cities*

According to the principle, one city build the connection with another city through common scholars who contribute the academic outputs in both cities. Hence, it is easy to understand that the more common scholars in a group of cities share, the more chance they would form a cluster together. In other words, the scholars along with their academic outputs, makes it possible for cities to be close.

In Table 3. Major Anchor Cities Clusters of UK s Planning Knowledge Network, the ma cities clusters are showed, as the top 8 clusters occupied 78.92% in total proportion of degrees, involving 70.62% of all cities.

Table 3. Major Anchor Cities Clusters of UK s Planning Knowledge Network

| Rank | Proportion of Degrees | Anchor Cities Clusters | Number of City | Members | Gephi Code |
|---|---|---|---|---|---|
| 1 | 24.04% | London Captial Group | 74 | London, Dublin, Utrecht, Brussels, Nicosia, Boston, Redlands, Berlin, Helsinki, Titchfield, Surrey, Ankara, Rome, Tehran, Hong Kong, Taipei | 22 |
| 2 | 9.62% | Edinburgh-Bristol-Glasgow Group | 30 | Edinburgh, Bristol, Glasgow, Coventry, Baltimore, Sheffield, Belfast, York, Copenhagen, Rotterdam, Delft, Madrid | 0 |
| 3 | 8.33% | Liverpool Group | 26 | Liverpool, Dortmund, Toronto, Wallingford, Sydney, Hertfordshire, Kingston | 21 |
| 4 | 6.09% | Leeds group | 19 | Leeds, Luxembourg, Peterborough, Dordrecht | 16 |
| 5 | 5.77% | Birmingham-Reading Group | 18 | Birmingham, Reading, Stockholm, Durham, Montreal, Paris, Istanbul | 8 |
| 5 | 5.77% | United State Group | 18 | Chicago, New York, Washington, Abingdon, Minneapolis | 1 |
| 7 | 4.81% | Cardiff Group | 15 | Cardiff, Assen, Frick, Woodstock | 9 |
| 8 | 4.49% | Amsterdam Group | 14 | Amsterdam, Chichester | 12 |
| Sum | 78.92% | - | 214 | | - |
| Rest | 31.08% | - | 89 | - | - |
| Total | 100% | - | 303 | | - |

(Source: Dataset of UK Urban Planning Schools, 2015)

### *5.4 Summary of Anchor Cities*

As the scholars keep creating planning knowledge in different cities, the records of such academic outputs with location information makes it possible for this research to take advantage of. Anchor cities, play the role of knowledge produce, exchange and store place, are essential to be studied in

order to make the network sensible. As been showed in the visualized work, anchor cities, through the connection by scholars, displayed differently both in degrees of academic cooperation, but also in clustering. In total, five reasons that caused the cities to form clusters, to share common scholars and to play the role of anchor in similar areas in the knowledge network.

First, geographic correlation is important. Inside most of the clusters, key cities in a region share the same cluster. Together, they formed a strong network anchor region, with the local research programs completed by intercity scholars.

Secondly, academic events brought certain types of scholars together, which, on the other hand, build the relationship to their base cities. Usually, both cities always shared certain type of planning issues.

Thirdly, London as a special case, implies not only a strong cooperative relevant with cities in the region, but also shows a relatively high involvement among the capital cities globally. For the reason of its high value of academic mobility and accessibility for planning scholars around the globe, this makes sense. On the other hand, international academic events also make London capital group the most significant and trans-continents one.

Fourthly, the importance of the scholar shall be stressed, as the United State Group shows. The certain group of scholars who are active in both United State and UK, contribute to the strong correlation between certain UK cities and United State cities.

Last but not the least, as the planning knowledge network is an open system, it is impossible to have no connection with other planning knowledge networks, like United State, etc. Once the UK cities been connected to United State cities, it is inevitable to build links with the clusters in United State. Hence, according to the clustering algorithm, a group of cities with high inter correlation but less connections exteriors is tend to be catalogued in an individual cluster, Then Abingdon, rather than London, shares the cluster of Chicago, New York, Washington, and Minneapolis.

## 6 Conclusions

### *6.1 Summary of Anchor Cities*

The major goal of this research is to gain understanding of the sensible planning knowledge network of UK. Open source data and the models, methods, tools used in the research lead us to the planning knowledge network finally. It is essential to make the network sensible by visualizing the knowledge cooperation among scholars, and also the attempt to find the anchor cities that allows the knowledge network to have physical meanings on a number of cities. By doing so, the planning knowledge network is somehow sensible.

During the process of research, some important findings are discovered. The closeness of scholars inside the network was transformed into clusters, like Mike Batty s Cluster, and Richard Boyle-Andy Plate s cluster, etc. Scholars belong to major clusters are more active in academic cooperation than those who are not, in general. Within the clusters, the typology are different, but share the same ideology that the completed triangle and openness on cooperation could contribute to the development of clusters.

Such closeness also reflect on the physical space, the anchor cities. Like showed in the case of London capital group, Edinburgh-Bristol-Glasgow Group, etc., anchor cities also have the tendency to get clustered. The reason of the anchor cities clustering is complicated. Some due to the geographical correlations, academic events, scholars individual academic activities, even the exterior network interfere the process and results of clustering anchor cities, as the United State Group case implies.

### *6.2 Inadequate and Extension*

However, some problems are still exist in the process and findings of the research. For example, to obtain the data from open sources, it is risky to regard the publications online covers all academic outputs. The same problem also remains in the incomplete UK planning schools taken into consideration, as only

six been studied, and more deep analysis should be added to the measuring part. For the anchor cities study, the results are just proper for UK, instead of even larger territories.

This research still remains a great possibility to be extended in further research. For not only more complete in coverage of knowledge network in UK, but also in depth of data visualization and analysing methods. It is believed that this research just unveiled the corner of a mine , with more applicable and instructive findings are to be discovered and discussed. The devotion on UK s case help us a lot to have meaningful adjustment and thoughts on the whole research program that has a larger horizon of the entire Europe.

## Acknowledgement

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# EU S SMART CITIES POLICIES: FROM STRATEGY TO IMPLEMENTATION

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*Abstract: In the current international situation, the European Union is facing the important issue of restructuring development. The proposal of smart city policies will be one of t measures to break through the bottleneck of economic, social and environmental development in the next decade or even longer. The concept of smart city in EU has long been proposed and gradually developed in recent years, and EU has preliminary built the complete smart cities development objectives and roadmaps. The paper shows that EU has formed the smart cities policies system from strategy to implementation. The system mainly consists of four-levels of top-down structure: respectively the strategy, research, platform and project level, to meet the requirements of different stages of smart city developments, involving a number of significant EU's development policies and research projects. The paper also found that EU needs to strengthen the cooperation between government, industries and the citizens, to develop information and communication technologies, and to accelerate smart cities and smart technologies marketization, therefore to finally meet the strategic objectives of the EU's future plan and to achieve the realization of smart cities.*

Keywords: EU, smart cities, urban development strategy

## 1. Introduction

Since the issue of Smart City being raised, it has become a research development-related issues. According to statistics, more than half of the global population lives in cities, the Earth has entered the "urban era", while the European region as one of the earliest urban areas, more than 80 percent of citizens living in the city. Every year the cities product economic cost and energy consumption that accounted for the majority of social resources. Under the aftermath of the global economic crisis, the climate and environmental issues are still very severe, European cities get into the bottleneck of development and need urgent profound restructuring and innovation to achieve a new round of development growth (Barresi and Pultrone, 2013). As the planet becomes more urban, cities need to become smarter.

Smart City is just able to combine both the EU strategies and the measures together to promote the development of European cities. The concept Smart City includes innovative, low-carbon, sustainable development and other criteria, which are the EU s strategic focus over the nex (Tregoning et al., 2002; Moraci and Fazia, 2013). Plus the use of smart technologies such as information and communication technology (ICT) is also important to achieve increasing smart growth (Santinha and Anselmo de Castro, 2010). The EU as one of the world's most important economies, having both diverse and unified city model, is able to fully integrate their resources to promote the smart cities policies, thus studying about EU-led smart cities policies has important

meanings and values.

## 2. The history of Smart City and Smart Cities Policies

### 2.1 Definition of Smart City in EU context

Under the EU context, the most reliable source of a definition of smart city is usually considered the research paper by a group of researchers led by the Centre of Regional Science at Vienna University of Technology (Giffinger et al., 2007) entitled Smart cities: ranking of European This classification of the six characteristics of urban smartness is present in most literature about the smart city, which are Smart Economy, Smart People, Smart Governance, Smart Mobility, Smart Environment and Smart Living. There are 31 factors and 74 indicators under the six characteristics. The research about medium-sized smart cities later became the learning templates for many European smart cities studying and the six characteristics also became an important source of smart city standard definition.

In a report entitled "Mapping smart cities in the EU" made by the EU in 2014 (Manville et al., 2014), they made a deeper and more comprehensive definition about Smart City based o also compared and classified the European smart cities. The research report thi is a multi-stakeholder partnership, making use of advanced technology (especially ICT technology) to solve public issues, those solutions developing and perfection through smart city initiatives or projects, as well as various actions and networks. The report also retains and reinforces the six characteristics as the criteria of definition to form the structure of smart city (Figure 1).

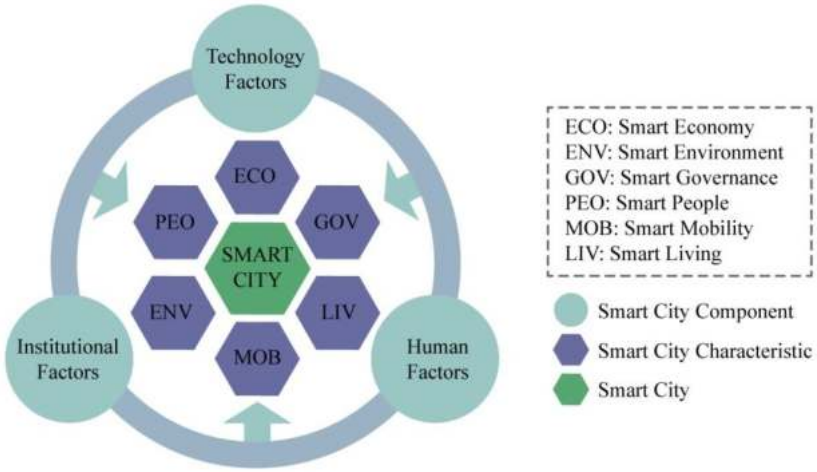


Figure 1. The components and characteristics of smart cities (Manville et al., 2014)

*2.2 History of Smart Cities policies development*

Since long ago the EU started thinking about using new ways to manage urban growth. From the 1990s, there is the emergence of sustainable development policy concept. In July 2005, the European

Union formally implemented "i2010" Action Plan, which stresses the importance of acceleration the introduction of eGovernment in Europe (Deakin, 2009) as well as the communication technology, new network, new service and media[1]. In 2006 the EU launched the European Network of Living[2], which uses new tools and methods, advanced information and communication technology to solve social problems. In 2011 the European Commission introduced the "Europe 2020", proposing three priorities of smart, sustainable and inclusive growth and determined the digital agenda as one of the seven flagship initiatives(EU, 2013). The following "Digital Agenda for Europe" explicitly listed smart city as one of the key projects. The latest progress is that in July 2012, the European Commission launched the "The European Innovation Partnership on Smart Cities and Communities (EIP-SCC)" to promote smart technologies development, and from 2013, the budget increased from 81 million to 365 million.

### 2.3 Motivation about EU s Smart Cities policies

1) EU s economic crisis and its accompanying hazards make EU need new stimulation of deve
The European debt crisis began in 2008 has several manifestations (McCann and Ortega-Argilés, 2013). Unemployment has constantly increased in several EU countries, with a particular burden on younger generations, and this dilemma has not yet been completely removed (Caragliu et al., 2011; Caragliu, 2013), EU countries hope through the economic stimulus package to save the domestic economy and enhance international competitiveness. For the regions whose majority of the population living in urban areas, they need a new way to manage the complexity of city life. Smart City concept combines many important issues of economic, social, environmental which are important for urban transformation.

2) EU s backward in the field of information technology urges its smart technology to d
Compared to other industrialized countries such as United States and Japan, EU is relatively backward in the field of information technology. According to statistics, Google, Amazon and other successful Internet providers that origins outside Europe; at the list of Fortune 500 companies, only one of nine ICT operation company is European company; among the highest 54 visited sites in the world, only four from Europe (EU, 2010). Today the information industry is flourishing, the importance of information security is growing, EU has fully conscious the importance of information technology industry.

3) Smart City concept will help cities save energy and create greater economic benefits
Smart City as Europe-wide demonstration projects, are able to improve energy efficiency by large-scale deployment of low-carbon technologies. Europe as a highly urbanized area, more than half of the pollution generated by the city, 70 percent of the energy consumed in the city, so the cities are the key to the EU low-carbon economy. The openness and connectivity of the European Single Market have allowed its cities to become hubs for the creative economy, technological and societal innovation,

[1] http://europa.eu/legislation_summaries/information_society/strategies/l24226j_en.htm
[2] http://www.openlivinglabs.eu/

welfare enhancement and sustainable development (Roche et al., 2012; Manville et al., 2014).

4) Smart City reflects the people s vision for clean, livable, sustainable urban
Smart City concept is prevalent in Europe also because it fulfills people s image of clean and livable urban environment, reliable advanced technology development, and stable and harmony social-economic environment (Vanolo, 2013).

## 3. Important structure and components about EU Smart Cities policies

Due to EU s special political joint system, making the European Union could integrate researc resources, provide fundings, and form a unified strategic and implementation system, therefore makes the EU Smart Cities different from other countries and regions. At the same time, it is possible to take into account the different characteristics of member states, to conduct different implementations with both integrity and flexibility.

Basically, the EU smart cities policy system can be divided into the following four levels: the **Strategy** level, EU s important strategies and major decisions for the future, Smart City aspects; the **Research** level, under the guidance of Strategy level, usually charged by the EU major research institutions and departments, can also provide adequate financial support for research; the **Platform** level, is a convergence between research results and practical application, it aims to provide cooperation opportunity for various stakeholders such as the city government ,the research department and the enterprises, to share information and experiences, and to find suitable solutions; the **Project** level is directly involved in the implementation of the smart cities, including the pilot smart city, smart technology solutions, regulations and activities etc.

### *3.1 The Strategy level*

One of the most important strategies that has great impact on Smart City is the European Union s ten-year growth and jobs strategy that was launched in 2010. The Europe 2020 Strategy is intended to act as an umbrella organizing framework under which all EU policies will operate over the coming decade (Caragliu, 2013). Overall, the strategy wants the EU to become a smart, sustainable and inclusive economy. These three mutually reinforcing priorities should help the EU and the Member States deliver high levels of employment, productivity and social cohesion[3]. Concretely, the Union has set five ambitious objectives on employment, innovation, education, social inclusion and climate/energy to be reached by 2020[4]. Each Member State has adopted its own national targets in each of these areas. The strategy is also supported by seven flags which the EU and national authorities reinforce their efforts in areas supporting the Europe 2020 priorities such as innovation, the digital economy, employment, industrial policy and resource

[3] http://ec.europa.eu/europe2020/index_en.htm
[4] http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/priorities/index_en.htm

efficiency[5]. The relationship between three targets and seven flagship initiatives are as follows (Table 1), the contents of Smart City belongs to the Smart Growth, the initiatives and measures of Smart City considered to be a beneficial tool to achieve Europe 2020 objectives.

Table 1. Europe 2020 priorities and flagship initiatives

| Smart Growth | Sustainable Growth | Inclusive Growth |
|---|---|---|
| Digital agenda for Europe<br>Innovation Union<br>Youth on the move | Resource efficient Europe<br>An industrial policy for the globalisation era | An agenda for new skills and jobs<br>European platform against poverty |

Digital Agenda for Europe (DAE) is a branch strategy of Europe 2020, it aims economy and help Europe's citizens and businesses to get the most out of digital technologies. Launched in May 2010, the DAE contains 101 actions, grouped around seven priority areas, including create a new and stable broadband regulatory environment, launch grand coalition on digital skills and jobs, launch new electronics industrial strategy etc. Over the next decade, by increasing investment in ICT, improving eSkills levels in the labour force and reforming the framework conditions for the internet economy would increase the European GDP by 5%, or 1500 per person. In the end of 2020, up to 900.000 digital jobs will be provided, while 1.2 million jobs could be created through infrastructure construction, this would rise to 3.8 million new jobs throughout the economy in the long term[6].

In terms of Smart Cities, digital technologies translate into better public services for citizens, better use of resources and less impact on the environment. Smart City makes the traditional networks and services more efficient with the use of digital and telecommunication technologies, for the benefit of its inhabitants and businesses.

*3.2 The Research level*

The complete name of FP7 is 7th Framework Programme for Research and Technological Development, which is the European Union s main instrument for funding researcl 2007 until 2013, the programme has a total budget of over 50 billion. It re increase compared with the previous Framework Programme (FP6 only about 63% of FP7), reflects the high priority of research in Europe[7]. The Seventh Framework Programme (FP7) bundles all research-related EU initiatives together under a common roof playing a crucial role in reaching the goals of growth, competitiveness and employment[8], such as a new Competitiveness and Innovation

[5] http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/index_en.htm
[6] http://ec.europa.eu/digital-agenda/digital-agenda-europe
[7] http://ec.europa.eu/research/fp7/understanding/fp7inbrief/what-is_en.html
[8] http://cordis.europa.eu/fp7/understand_en.html

Framework Programme (CIP), Structural and Cohesion Funds, the European Research Area (ERA). The objectives of FP7 have been divided into four categories: Cooperation, Ideas, People and Capacities (Table 2). For each type of objective, there is a specific programme corresponding to the main areas of EU research policy.

Table 2. FP7 type of objectives and programmes

<table>
<tr><td rowspan="12">COOPERATION</td><td>Health</td><td>IDEAS</td><td>European Research Council</td></tr>
<tr><td rowspan="2">Food, Agriculture and Fisheries, and Biotechnology</td><td rowspan="5">PEOPLE</td><td>Initial training</td></tr>
<tr><td>Life-long training</td></tr>
<tr><td rowspan="2">Information and communication technologies</td><td>Industry-academia</td></tr>
<tr><td>International dimension</td></tr>
<tr><td rowspan="2">Nanosciences, nanotechnologies, materials and new production technologies</td><td>Specific actions</td></tr>
<tr><td rowspan="8">CAPACITIES</td><td>Research infrastructures</td></tr>
<tr><td rowspan="2">Energy</td><td>Research for the benefit of SMEs</td></tr>
<tr><td rowspan="2">Environment (including climate change)</td><td rowspan="2">Regions of Knowledge</td></tr>
<tr><td rowspan="2">Transport(including aeronautics)</td></tr>
<tr><td>Research potential</td></tr>
<tr><td rowspan="2">Socio-economic sciences and the humanities</td><td>Science in society</td></tr>
<tr><td>Coherent development of research policies</td></tr>
<tr><td>Security</td><td>International cooperation</td></tr>
<tr><td>Space</td><td colspan="2">Non-nuclear actions by the Joint Research Center</td></tr>
</table>

Horizon 2020 is the biggest EU Research and Innovation programme ever with nea funding during 2014 to 2020 (not included the private investment). It promises to bring more breakthroughs, discoveries and great ideas from the lab to the market[9]. Horizon 2020 emphasizes on excellent science, industrial leadership and tackling societal challenges, the goal is to ensure Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together (Table 3).

Table 3. Horizon 2020 programme sections

| Excellent Science | Societal Challenges |
|---|---|
| European Research Council | Health, Demographic Change and Wellbeing |

[9] http://ec.europa.eu/programmes/horizon2020/en/what-horizon-2020

<table>
<tr><td>Future and Emerging Technologies<br>Marie Sk odowska-Curie actions<br>European Research Infrastructures, including e-Infrastructures</td><td>Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy<br>Secure, Clean and Efficient Energy<br>Smart, Green and Integrated Transport<br>Climate Action, Environment, Resource Efficiency and Raw Materials<br>Europe in a changing world - Inclusive, innovative and reflective societies<br>Secure societies Protecting freedom and security of Europe and its citizens</td></tr>
<tr><td>Industrial Leadership</td><td>Spreading Excellence and Widening Participation</td></tr>
<tr><td rowspan="3">Leadership in Enabling and Industrial Technologies (including Information and Communication Technologies; Space; Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, and Biotechnology)<br>Access to risk finance<br>Innovation in SMEs</td><td>Science with and for Society</td></tr>
<tr><td>European Institute of Innovation and Technology (EIT)</td></tr>
<tr><td>Euratom</td></tr>
</table>

In Horizon 2020, the ICT Research & Innovation is a spotlight. The ICT sector represents 4.8% of the European economy. It generates 25% of total business expenditure in Research and Development (R&D), and investments in ICT account for 50% of all European productivity growth. EU investments in ICTs are due to increase by about 25% under Horizon 2020 compared to FP7[10]. Horizon 2020 will support the whole chain from basic research to innovation that can deliver new business breakthroughs. It underpin innovation and competitiveness across private and public sectors and enable scientific progress in all disciplines, that is the reason that ICT-related topics can be found in all priorities, from Excellence Science to Industrial Leadership , to Societal Challenges , re secure, clean and efficient energy, smart, green and integrated transport and climate action etc.

*3.3 The Platform level*

The Smart Cities and Communities Initiative (SCC) was launched in 2011. It has close relationship with FP7 and Horizon 2020. In the coming year 2012, the European Innovation Partnership on Smart Cities and Communities (EIP-SCC), the Partnership is under the framework of Digital Agenda as well as directly funding by Horizon 2020. In the year 2012, only 81 million has be SCC initiative, covering only two sectors: transport and energy. Demonstration projects financed under the scheme can be in either one of the two sectors, rather than the two combined. Starting from

[10] http://ec.europa.eu/programmes/horizon2020/en/area/ict-research-innovation

2013, the budget has been increased from 81 Million to 365 Million, coveri
of two: energy, transport and ICT. In addition, each and every demonstration project financed under the scheme must combine all the three sectors[11].

With this Smart Cities Partnership, the EU will combine cities, industries and citizens, through a more sustainable way to improve city life, to establish a strategic partnership between European cities and industries and to contribute to the EU s 20/20/20 climate action goals. Current the potential of smart technology innovations, such as high-tech risks, the uncertainty of the return on investment and regulatory difficulties. The Partnership aims to overcome bottlenecks impeding the changeover to smart cities, to co-fund demonstration projects and to help coordinate existing city initiatives and projects, by pooling its resources together[12].

The European Innovation Partnership on Smart Cities and Communities (EIP-SCC) consists of High Level Group, Sherpa Group and Smart Cities Stakeholder Platform (Figure 2). The representatives of Higher Level Group are coming from industry, research and cities, together with Sherpa Group, they are responsible for the Strategic Implementation Plan (SIP), which helps promote Smart Cities into practice. It also helps how the European Commission can support these measures during the next Research Framework Programme (Horizon 2020).

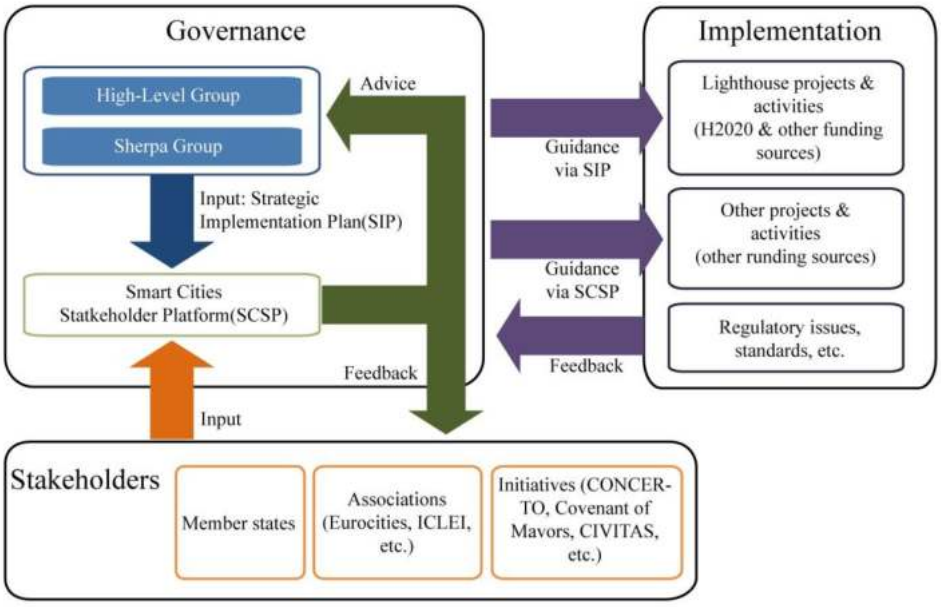


Figure 2. European Innovation Partnership on Smart Cities and Communities operation mode (Resource:http://ec.europa.eu/eip/smartcities/about-partnership/how-does-it-work/index_en.htm)

The Smart Cities Stakeholder Platform was initiated by the European Commission with the dual aim of identifying and spreading relevant information on technology solutions and providing information

[11] http://europa.eu/rapid/press-release_IP-12-760_en.htm
[12] http://ec.europa.eu/eip/smartcities/about-partnership/what-is-it/index_en.htm

for policy support to the High Level Group and the European Commission. The Working and Coordination Groups are at the heart of the Smart Cities Stakeholder Platform. There are three thematic expert (technical) Working Groups, each dedicated to one technology area, and three horizontal groups, for developing strategic visions for the future based on the work undertaken in the Platform[13]. The Smart City Stakeholder Platform provides a unique opportunity for individuals and organizations across Europe to take part in establishment Europe s Smart City Ro and analyzes all information stakeholders input, you can upload all the data and add any news about your city and the projects or you can look for specifically tailored projects for your city. The Platform also helps High Level Group feedback on Strategic Implementation Plan, the Group and the Stakeholder Platforms work together to encourage and support more extensive cooperation of smart cities.

*3.4 The Project level*

The Project level consists of all sizes and forms of projects and becomes a Smart City project library, which covers the urban pilot projects, smart city organizations, the use of smart technology and other aspects.

For instance, the Strategies Towards Energy Performance and Urban Planning(STEP-UP) aims to bring together excellence on energy planning from four European cities together with their industrial and research partners, running from 2012 to 2015. The Planning will assist cities enhance their sustainable energy action plans and integrate energy planning into their sustainable city planning. The programme is working together with twelve organizations, local government, research and commercial partners in the European cities of Ghent, Glasgow, Gothenburg and Riga. The programme is also part of the EU FP7. The main targets of STEP-UP include to create a coherent and easy-to-use model for energy planning that helps to achieve Europe's 2020 energy targets; to deliver wider policy objectives such as improving security of energy supplies, achieving urban regeneration and economic growth; and to make these cities better places to live, work and do business[14].

ICT for Energy Efficient Neighbourhoods (IREEN) is funded under the FP7 as a Coordination and Support Action. The project commenced from 2011 to 2013 with total budget of 1, aim is to extend the notion of energy positive buildings. Energy positive are build those that have the capacity to generate more energy than they use, this can be achieved in three ways: spending less energy than they have produced over a time; facilitating eco-responsible behaviours; consuming low energy over their life cycle. The project engaged with[15] a wide range of stakeholders including those from technology, energy, construction, local authorities, building managers and owners.

[13] http://eu-smartcities.eu/groups
[14] http://www.stepupsmartcities.eu/AboutUs/ProjectOverview/tabid/3166/Default.aspx
[15] http://www.ireenproject.eu/about

The whole structure system of EU s smart cities policies and their relationships are listed below (Figure 3):

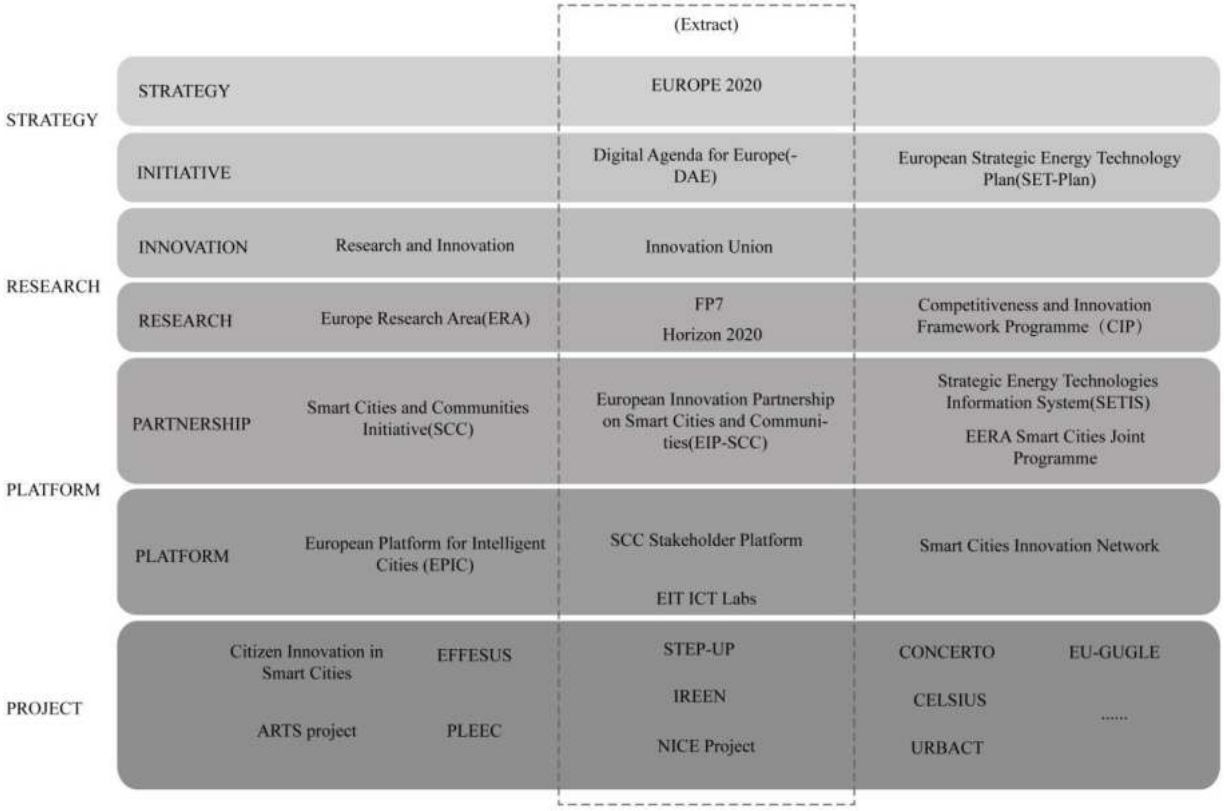


Figure 3. The structure of EU smart cities policies system

## 4. Evaluation of EU s implementation of Smart Cities

### *4.1 Achievement of EU Smart Cities*

According to a latest EU research report (Manville, etc., 2014), seriously speaking nearly all the Smart Cities in Europe are in the primary stage of development and they still has a long way to go for the strategy of Europe 2020. In the key research cities, more than two-thirds of the smart city projects are still in the planning or pilot testing phase. The smart city projects mainly clustered into five characteristic types: neighbourhood units, testbed micro infrastructures, intelligent traffic systems, resource management systems and participation platforms.

The study also found that most of the smart city projects are towards the goals of Europe 2020, proving that the problem facing European cities are widely recognized. Smart City initiatives can be considered as a useful tool for cities to achieve their Europe 2020 targets. In most of smart cities initiatives, the environmental issues and green solutions appear to be the principal concern; nearly 50% of sampled initiatives address environmental problems through improved energy efficiency in buildings or smarter city transportation options. In addition, over one-third have initiatives that support

the attainment of poverty reduction targets while one-fifth of cities have initiatives that address employment. However, only few initiatives encourage private sector R&D investment. Some cities have project portfolios that aim to contribute to the attainment of multiple Europe 2020 targets.

The analysis found that by far the "smartest" five European cities are Helsinki, Hamburg, Amsterdam, Barcelona and Manchester. Although the implementation focus of the five smart cities are different, but the results of comprehensive evaluation shows the advantages.

*4.2 Funding of EU Smart Cities*

Since the great majority of Smart City initiatives in Europe had been financed by research funding, rather than on a commercial basis, thus it is necessary to understand the constitute system and operations of EU research funds. The European Union possesses five key funding opportunities to support research and innovation: the Research Framework Programme, the Competitiveness and Innovation Framework Programme, the Structural Funds and the Cohesion Fund within the Cohesion policy; the European Agricultural Fund for Rural Development and the European Fisheries Fund within the Rural development policy and the Common Fisheries Policy[16].

Usually smart city-related issues are funded by Research Framework Programme, Competitiveness and Innovation Framework Programme, the Structural Funds and the Cohesion Fund. Among them the Research Framework Programme is the most important source of funding and able to lead the smart cities research and become the core of innovation, system integration and standards establishment. The other two programmes are also important funding sources, they are not only involved in the Framework but also provide supports for other studies. In addition the Structural Funds and the Cohesion Fund support qualifying smart city projects, such as URBACT projects.

Furthermore, the EU act as an important guarantee for Smart Cities research and implementation, plus each projects could get funding from local government and private sectors, together they constitute the funding system of smart cities. Study also shows that projects using multi-channel sources of financial support are much easier to be successful.

*4.3 Evaluation about EU Smart Cities*

The EU has built a unique smart cities policies system, which already made some achievements, but also accompanied by a corresponding problem.

1) From the perspective of structure, the smart cities policies system constitu
from strategy to implement, however the complexity of the system may cause some difficulties while performing.

[16] http://cordis.europa.eu/eu-funding-guide/home_en.html

The EU smart cities policy system consists of four levels: the Strategy, the Research, the Platform and the Project, each level has own responsibilities and higher levels direct or cooperate with lower levels, the projects often reflect the strategy of Europe 2020 and the Innovation Partnership of Smart Cities, thus forming a complete industrial-chain system, which helps the final impleme Cities. But it is undeniable that the huge EU policy making system, as well as the research funding, are too complex and inextricable to manage, will cause some problems of coordination.

2) EU has a clear objective to develop and implement smart cities, which helps strengthen the confidence of the industries and governments to implement smart cities, but the "bottom-up" smart city participation is still weak.

From long ago EU considered that the smart city transformation can help them achieve their goals in environmental, social and economic aspects. The Europe 2020 strategy and other initiatives also stressed this point. For the government, these policies contribute to smart cities pilot development in order to achieve the future needs of the cities as soon as possible. For the enterprises, clear goals can directly enhance the confidence of research development, they are more willing to invest and promote the development of new technologies and intelligence technologies. At the same time, it cannot be ignored that the meaning of the smart cities includes Smart People and Smart Living, therefore the role of citizens should not be forgotten. We must focus on bottom-up participation in smart cities planning to build more livable and harmonious smart cities.

3) The system has built a multi-stakeholders platform for the governments, industries and the public, but most of smart city projects are still dominated by the city government, enterprises participate in the marketization of smart city technologies need to be strengthened.

The stakeholders of the EU smart cities policy system includes the European Commission, the European (and the world) industry enterprises, the Mayors and relevant EU organizations, and the citizens. Today the stakeholders platform is open, any stakeholders can participate and seek for better solutions. The technology platform is also established and the experts are integrated to guide the key technologies. The benefits of smart cities sometimes are not obvious and cannot entirely returns to investors, but it should be taken into account, which explains why most of the smart city projects are government-led. But it is undeniable that a market-driven business model is critical, the transformation of science and technology of smart city is important, and in this respect the EU still needs efforts.

## 5. Conclusions

Considering its international situation, the EU makes Smart City to be one of the most important issues to promote the EU's economic, social, environmental development for the next decade or even longer. The EU also develops a complete policies system from the strategy to the research and to the implement, in order to promote smart technology innovation leading by the information and communication technology industry; to define the goals of environment, energy, transport,

employment and other aspects; to build a platform for cooperation with governments, businesses and the citizens. Current European smart cities construction is in full swing and has achieved some success, especially in some big Smart Cities, the Smart concept has started to show some advantages. However in the future, the EU Smart Cities still need to strengthen bottom-up participatory mechanisms and marketization to be able to protect the long-term implementation of the EU smart city plans and to promote smart city vision finally realized.

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# UNIVERSITY-LED SMART CITY RESEARCH COOPERATION IN EUROPE

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*Abstract: With the development of Information and Communications Technology (ICT), the smart city has increasingly become one of the urban planning research focuses in recent years. Universities and other higher education institutions have become the major research organizations for smart cities. This paper investigated higher education institutions in 15 European countries and a total of 122 university-led smart city research organizations or alliances. Classifying and analyzing the research cooperation patterns of these research organizations or alliances, the paper summarizes four types of cooperation patterns, which are research project, research group, research institution and research platform respectively. Then the paper introduces Fuzzy Consistent Matrix to evaluate the performances of four types of cooperation patterns with five factors, including internal factors and external factors. The results show that the platform pattern is the most preferred pattern of smart city research cooperation, followed by research institution, research group and research project. The research platform can maximize the integration and collaboration of research resources and people, thus it should be applied to future smart city research.*

Keywords: smart cities, research cooperation, European universities

## 1. Introduction

In the past few decades, European cities and policy makers have been engaged in initiatives aimed at improving cities environment, infrastructures and services to provide better economic, social and living conditions for the citizens and to enhance the competitiveness and attractiveness of the cities (Neirotti et al., 2014; de Jong et al., 2015). The concept of smart cities brings more effective means in responding to these requirements, especially with the widely use of Information and Communications Technologies. In European context, smart city strategies have been greatly valued. For example, European Union s strategy of Europe 2020 has clearly wanted the EU to become a smart, sustainable and inclusive economy ((Caragliu, Del Bo and Nijkamp, 2011; Lazaroiu and Roscia, 2012; Caragliu, 2013). Smart cities are sustainable, ecological, intelligent and harmonious (de Jong et al., 2015), thus the concept and the best practice of smart cities could effectively assist with the implementation of EU s strategies.

Meanwhile, the level of scientific research cooperation has been growing worldwide, with no exception in Europe, therefore the level of international research cooperation, intra-EU cooperation and inter-organizational collaboration have been increasing rapidly in Europe (Hoekman, Frenken and Tijssen, 2010). The EU has been committed to promote collaborations across universities, enterprises

and governments to transfer knowledge and technologies, and to establish connections among researchers and scholars in different cooperation countries (Cummings and Kiesler, 2007). For instance, European Framework Programmes are the most significant research instruments and funding in Europe, which constitute a pool of research-related initiatives of EU (Hoekman, Frenken and Tijssen, 2010). Most of smart city-related research are based on collaboration research, and many of them are supported by European research programmes and fund.

This paper aims at studying smart city-related research cooperation which is led by European universities in 15 countries. Summarizing different patterns of cooperation, analyzing and comparing which kind or kinds of patterns are preferred by smart city research.

## 2. Data collection and methodology

*2.1 Definition and classification of smart cities*

Before collecting the data of university-led smart city research cooperation in Europe, the notion of smart cities should be defined. Despite the extensive discussion, there is no general consensus on the definition and classification of smart cities at global scale (Angelidou, 2014; (Jucevi ius, Pata ien and Pata ius, 2014); Neirotti et al., 2014; Ben Letaifa, 2015). Even the improper use of smart cities in superficial ways may mislead the meaning of smart cities. The main reason is that the needs of smart cities are highly depend on the contextual condition of different countries and cities, such as natural resources, technology development, government etc. So there is no one-size-fits-all exists for smart cities (Ben Letaifa, 2015, pp.1415).

However, there is a wide agreement that smart cities are characterized by the widely use of Information and Communications Technologies (ICT) in different domains of urban system (e.g. traffic control system, security cameras, power grid, waters, etc.), in which ICT system plays the central role (Neirotti et al., 2014). ICT help cities make better use of urban and natural resources, enhance the efficiency of urban systems, and prevent the cities from hazards and disasters. In other words, the technology-based approaches and solutions endow cities with digital nervous systems plus the abilities to sense and react.

On the other hand, although ICT-based solutions are considered as one of the most special features of smart cities, a growing number of scholars have realized that smart cities contain not only technological capital but also human and organizational capital. Social, economic, political and cultural context shape the ways of cities to become smarter and information technologies are complementary tools, depending on the cities backgrounds and needs. In that way, smart cities initiatives can be fostered by education, innovation industry, social welfare system and city liveability.

Based on the understanding above, smart cities contents could be divided into two categories, one is tangible, including smart infrastructure, transportation, energy and nature resources etc., the other is intangible, including social capital, innovation economy, public administration, intellectual capital etc. (Neirotti et al., 2014). Similarly, the classification could also be expressed as hard domains and soft domains of smart cities initiatives.

Some other scholars think that ICT-based smart cities solutions emphasize top-down monitoring of city systems. The other aspect of smart cities is bottom-up approaches in which the public could get access to the data and make their own decisions, and the authorities are fair and transparent enough when making decisions (Ben Letaifa, 2015).

*2.2 Data collection*

ICT-based solutions are not the only way to evaluate smart cities has become widespread awareness, this paper explains the notion of smart cities from both research and practice aspects.

In the research aspect of smart cities, the paper retrieved and extracted the data from published scientific articles of the Web of Science . The Web of Science is a bibliographic by Thomson Reuters, which is considered as one of the most comprehensive and reliable research database worldwide (Hoekman, Frenken and Tijssen, 2010). The paper retrieved smart city as th theme of literature and the search period was limited between 2000 and present. The retrieval date is 13th March, 2015 and total of 1253 eligible articles are selected.

Statistics showed that since 2011, the number of publications regarding smart cities has considerably increased (Figure 1), thus selecting publications from 2000 could represent the research of smart cities. And the results covered 15 European countries the paper studies, as well as United States, China, etc. (Figure 2).

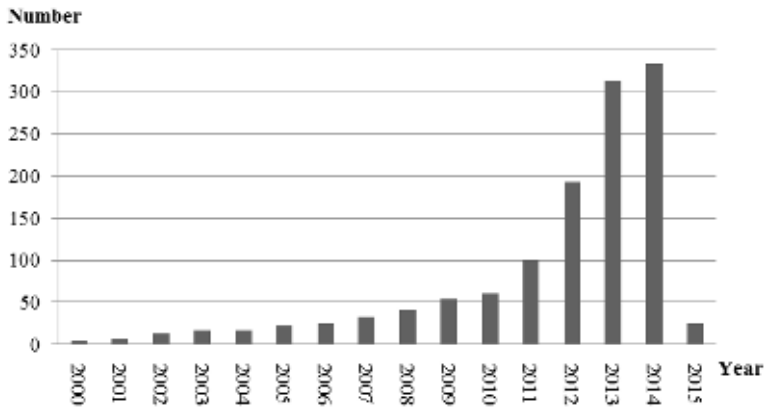


Figure 1. The number of smart cities publications in Web of Science (2000-2015)

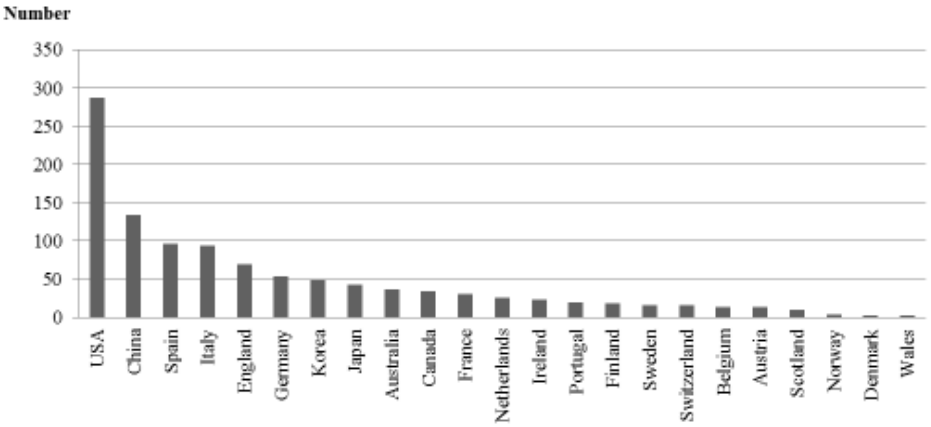


Figure 2. The number of smart cities publications by countries/regions

Analyzing the retrieval results, ten categories of smart cities research topics are classified according to the Web of Science categories and listed by the number of publications (Table 1). The 12 categories include Computer Science/ICT, Engineering, Environment/Ecology/Energy, Urban Planning, Science, Traffic Engineering, Geology, Administration/Management/Political Science, Economics, Biology/Medicine/Health, Sociology/Culture/Education and Architecture.

Table 1. Classification of smart cities research categories

| Categories | Web of Science categories | Publications |
|---|---|---|
| Computer Science /ICT | Computer science information systems, Computer science artificial intelligence, Computer science interdisciplinary applications, Telecommunications etc. (10 items) | 905 |
| Engineering | Engineering electrical electronic, Automation control systems, Engineering civil, Engineering mechanical, Engineering manufacturing etc. (11 items) | 540 |
| Environment/ Ecology/Energy | Environmental studies, Energy fuels, Environmental sciences, Ecology, Water resources etc. (7 items) | 310 |
| Urban Planning | Urban studies, Planning development (2 items) | 201 |
| Science | Physics applied, Thermodynamics, Mathematics applied, Mechanics, Physics multidisciplinary etc. (15 items) | 146 |
| Traffic Engineering | Transportation science technology, Transportation (2 items) | 104 |
| Geology | Geography, Remote sensing, Geography physical etc. (5 items) | 92 |
| Administration/ Management/ Political Science | Management, Operations research management science, Political science, Public administration, International relations, Law (6 items) | 65 |
| Economics | Economics, Business, Business finance (3 items) | 48 |

| | | |
|---|---|---|
| Biology/Medicine / Health | Public environmental occupational health, Infectious diseases, Plant sciences, Social sciences biomedical etc. (11 items) | 48 |
| Sociology/Culture/ Education | Sociology, Education educational research, Social work, Art, Criminology penology, Cultural studies etc. (10 items) | 46 |
| Architecture | Construction building technology, Architecture (2 items) | 33 |
| Sum | | 25381 |

As for the practice aspect of smart cities, the paper selected 15 smart cities evaluation index system around the world to classify smart cities practice, including European medium-sized smart cities rankings (Giffinger et al. 2007), Smart City Evaluation System by The World Economic Forum, and by International Data Corporation etc. Calculating the frequency of sub-index of those evaluation systems, the results contain 10 categories of smart cities practice in Table 2.

Table 2. Classification of smart cities practice categories

| Categories | Contents | Frequency |
|---|---|---|
| Computer/ICT/Internet | Ubiquitous network, Internet popularity, Information and communication facilities, Computer, Radio etc. | 90% |
| Society/People | ICT social foundation, Social justice, Social security, Social inclusion, Smart people etc. | 82% |
| Culture/Education | Knowledge-based labor, Education, E-learning, Culture and Entertainment, Cultural heritage protection etc. | 30% |
| Government/Management /Public Services | E-government, Smart urban management, Public platform database, Democracy, Government transparency etc. | 65% |
| Environment/Ecology/ Energy | Ecological conservation, Renewable energy, Urban waste management, Food and agriculture etc. | 78% |
| Traffic | Transportation information, Smart logistics, Automatic toll road, Urban convenience etc. | 60% |
| Infrastructure | Municipal facilities, Smart grid etc. | 40% |
| Planning/Buildings | Smart planning, Compact land use, Green building etc. | 45% |
| Economic/Business | Smart industry, Economic information service, Enterprise innovation etc. | 35% |
| Medicine/Health care | Medical information system, Home health services etc. | 20% |

Combine the analysis of smart cities research and practice above (Table 1 and 2), the paper determined 8 domains of smart cities: Information and Technology, Environment and Energy, Society and People, Government and Management, Transportation and Infrastructure, Economy and Innovation, Medicine and Health, Planning and Architecture (Table 3). This classification is consistent with the literature review about smart cities (can be divided into hard and soft domains).

Table 3. Final classification of smart cities domains

| Categories | Contents |
|---|---|
| Information and Technology | ICT, Computer science and technology, Remote sensing, Geographic information technology, Internet of things etc. |
| Environment and Energy, | Environmental monitoring, Ecological protection, Renewable energy, Energy efficiency, Water management, Atmospheric research etc. |
| Society and People | Social justice, Social inclusion, Social security, Education level, Recreational activities, Heritage protection, Public space management etc. |
| Government and Management | E-government, Public platform, Government transparency, Smart city management etc. |
| Transportation and Infrastructure | Traffic information, Smart traffic management, Green transportation, Smart municipal facilities, Smart grid etc. |
| Economy and Innovation | Information economy development, High-tech Industry, Enterprise information innovation etc. |
| Medicine and Health | Public health, Medical information system, Food and agriculture etc. |
| Planning and Architecture | Smart planning method, Smart buildings, Green buildings, Building services etc. |

According to the classification of smart cities domains, the paper screened 122 smart city research cooperation institutions or organizations which were led by universities in 15 major Europe countries. They are listed by countries in Table 4.

Table 4. Screening results of university-led smart city research cooperation

| Regions | Countries | Numbers |
|---|---|---|
| Northern Europe (4) | Finland | 6 |
| | Sweden | 9 |
| | Norway | 5 |
| | Demark | 6 |
| Central Europe (3) | Germany | 20 |
| | Austria | 6 |
| | Switzerland | 4 |
| Western Europe (5) | UK | 21 |
| | Ireland | 5 |
| | Netherlands | 7 |
| | Belgium | 2 |
| | France | 13 |

| | | |
|---|---|---|
| Southern Europe (3) | Italy | 7 |
| | Spain | 7 |
| | Portugal | 4 |
| Total | | 122 |

Those collaborative institutions are mainly located in western and central Europe, around the North Sea, English Channel and Cantabrian Sea. They are distributed more in countries like UK, Germany and Netherlands etc.(Figure 3).

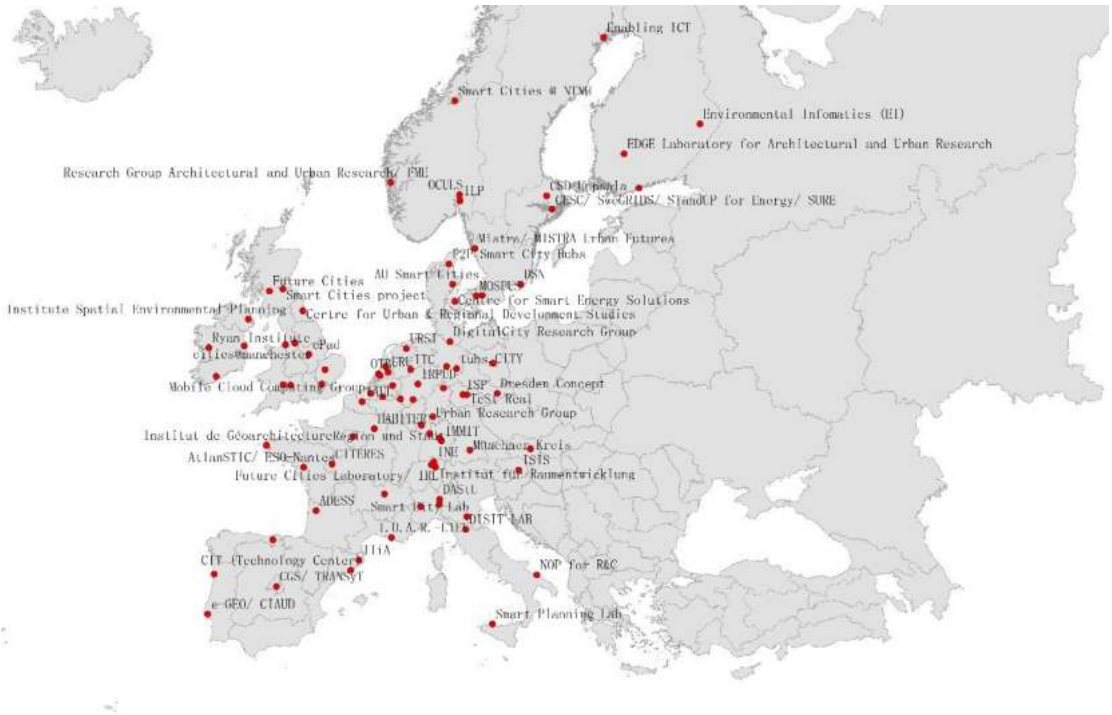


Figure 3. The distribution of university-led smart city research cooperation

*2.3 Methodology*

This paper attempts to analyze and compare different patterns of smart city research cooperation led by universities, involving in several qualitative factors which are difficult to quantify. Therefore, the paper introduces Fuzzy Consistent Matrix for cooperation pattern performance assessment. The method and procedures are as follows:

Suppose there are N decision-making alternatives, then $a_i$ (i=1, 2, , n) constitutes preferred alternatives set. And suppose there are M evaluation factors, then $e_k$ (k=1, 2, , m) constitutes factors set. The corresponding weight of each factor is $w_k$ (k=1, 2, , m), and

$$\sum_{k=1}^{m} w_k = 1 \tag{1}$$

Step I: Constitute preferred relationship matrixes. According to the supposes, there are N decision-making alternatives under M evaluation factors, therefore M single-factor fuzzy preferred relationship matrixes are established, named $B_k$,

$$B_k = (b_{ij}^k)_{n\times n} \quad (k=1, 2, \ldots, m) \tag{2}$$

where $b_{ij}^k$ represents when evaluation factor is $e_k$, the priority relationship between $a_i$ and $a_j$, and values are as follows:

$$b_{ij}^k = \begin{cases} 0 & \text{when evaluation factor is } e_k,\ a_j \text{ is superior to } a_i \\ 0.5 & \text{when evaluation factor is } e_k,\ a_i \text{ equals } a_j \\ 1 & \text{when evaluation factor is } e_k,\ a_i \text{ is superior to } a_j \end{cases}$$

Step II: Transform matrixes $B_k$ (2) into fuzzy consistent matrixes $R_k$,

$$R_k = (r_{ij}^k)_{n\times n} \quad (k=1, 2, \ldots, m)$$

$$\text{where } r_{ij}^k = \frac{r_i^k - r_j^k}{2n} + 0.5, \ (r_i^k = \sum_{l=1}^{n} b_{il}^k, r_j^k = \sum_{l=1}^{n} b_{jl}^k) \tag{4}$$

Because $l = 1, 2, \ldots, n,$ are

$$r_{il}^k - r_{jl}^k = 0.5 + \frac{r_i^k - r_l^k}{2n} - 0.5 - (\frac{r_j^k - r_l^k}{2n} - 0.5) = 0.5$$

$$\frac{r_i^k - r_j^k}{2n} + 0.5 = r_{ij}^k \tag{5}$$

Through (5) to verify $R_k$ is fuzzy consistent matrix.

Step III: Calculate univariate priority. $s_i^k$ represents the priority of decision-making alternative $a_i$ (i=1, 2, …, n) under the evaluation factor $e_k$ (k=1, 2, …, m),

$$s_i^k = \frac{\overline{s_i}}{\sum_{l=1}^{n} \overline{s_l}} \tag{6}$$

$$\text{where } \overline{s_i} = \sqrt[n]{\prod_{l=1}^{n} r_{il}^k} \tag{7}$$

Step IV: Calculate multivariate priority. $S_i$ (i=1, 2, …, n) represents the comprehensive priority of

decision-making alternative $a_i$ (i=1, 2, , n),

$$S_i \quad \sum_{k=1}^{m} w_k s_i^k \quad (i=1, 2, , n) \tag{8}$$

Finally, the most preferred alternative among N alternatives under M evaluation factors is selected.

## 3. Results

*3.1 Patterns of University-led smart city research cooperation*

By analyzing 122 university-led research cooperation engaging smart cities research, the paper summarizes four types of cooperation patterns, named research project, research group, research institute, and research platform respectively (Table 5, Figure 4).

Table 5. Patterns of University-led smart city research cooperation by countries

| Countries | Research Project | Research Group | Research Institute | Research Platform | Total |
|---|---|---|---|---|---|
| Germany | 0 | 4 | 13 | 3 | 20 |
| Austria | 0 | 1 | 4 | 1 | 6 |
| Switzerland | 0 | 0 | 3 | 1 | 4 |
| Finland | 1 | 2 | 2 | 1 | 6 |
| Sweden | 0 | 2 | 5 | 2 | 9 |
| Norway | 0 | 2 | 3 | 0 | 5 |
| Denmark | 1 | 1 | 3 | 1 | 6 |
| UK | 1 | 4 | 14 | 2 | 21 |
| Ireland | 0 | 1 | 3 | 1 | 5 |
| Netherlands | 0 | 0 | 6 | 1 | 7 |
| Belgium | 0 | 0 | 1 | 1 | 2 |
| France | 0 | 1 | 11 | 1 | 13 |
| Italy | 1 | 2 | 4 | 0 | 7 |
| Spain | 0 | 1 | 5 | 1 | 7 |
| Portugal | 0 | 0 | 4 | 0 | 4 |
| Sum | 4 | 21 | 81 | 16 | 122 |

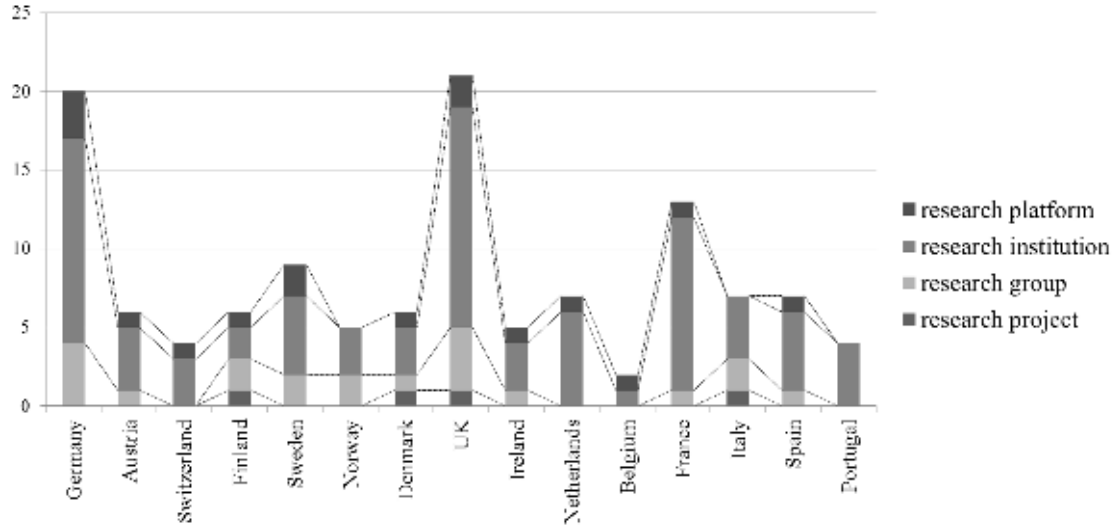


Figure 4. Patterns of University-led smart city research cooperation by countries

1) Research project

Research project pattern is research collaboration that based on one single research project related to smart cities, which is the most basic and simple cooperation pattern. Many of those cooperation projects are initiated by European Union research programmes. Some of them are sponsored by national research institutions, enterprises or local governments. Such kind of cooperation last for relatively short time, generally for the period of 3 to 5 years with loose organization structure. Smart cities research requires multidisciplinary and cross-regional researchers, those people and research resources join together to form temporary research collaboration.

2) Research group

Research group pattern is collaboration based on common research contents. Compare with research project pattern, this pattern forms a relatively long-term and stable research alliance. Those research groups are not joined because of one single research project, but joined to conduct a series research projects related to smart cities which are led by universities. The team size of research groups are small, there are rarely more than 50 people in the research group. And the organizational structure is simple, consisting of a team leader or co-leader, several professors and research staffs to form a close cooperation relationships.

3) Research institution

Research institutions are the most common type of collaborative research pattern, accounting for more than 65% of European universities-led smart city research cooperation. It is the most stable form of

cooperation. As the name implies, research institutions refer to the research entities that are long-term exist and conduct multiple smart cities research. These institutes could be est single school or department, by multiple schools and departments in the university as an interdisciplinary research organization, by one or more universities and by the government or EU. They could also be funded by enterprises to conduct joint research and technology transfer regarding smart cities. All these research institutions highly rely on universities taking charge of research and training programme, but they are individual institution.

The organizational structure of research institutions is much more complex than the former two research patterns. They have a clear division of responsibilities including teaching, researching and managing, especially for institutions having the task of teaching and training. Many institutions are origin from research groups or even research projects, after years of development they grow up as research institution, which is a more advanced research cooperation pattern.

4) Research platform

Research platform pattern is a more complex and sophisticated form of cooperation because they set a relatively virtual cooperation platform compare with institutions. On the platform, partners from universities, governments and business work together. This pattern of cooperation is relatively new and not as common as research institutions. Research platform pattern has the highest potential to organize and form a wide national and international cooperation.

The core of the platform is managed by one university or multiple universities who are taking charge of arranging scientific research projects, conferences and seminars. Another important work for those people is recruiting different researchers from other institutions, universities, companies etc. based on research needs. Therefore, after each time of research cooperation, the collaborative network will be expanded. Research platforms integrate more potential research resources include the talent, technologies and facilities in order to form a greater cooperation network. This kind of cooperation also attracts universities and governments attention financial supports.

However, this pattern of research cooperation also has disadvantages. The platforms are not entities, whose researchers and research places are unstable for the most of research platforms, which increases the difficulty of cooperation. There are less research results made by the platforms than stable research institutes, and many of research results are conferences articles and working papers. They need more practical research results like technologies, planning methods, books etc. But it is undeniable that research platform is an innovative pattern of research cooperation, especially with the rapid development of ICT. The platform partners can cooperate by teleconference and the internet, there is no need to do research face to face in a fixed place, thus the research platform will better adapt to

these changes. In summary, the similarities and differences of four types of research cooperation patterns are listed below (Table 6).

Table 6. Comparison of university-led smart city research cooperation patterns

| Items | Research Project | Research Group | Research Institute | Research Platform |
|---|---|---|---|---|
| Research projects | Single | Multiple | Multiple | Multiple |
| Team size | Various | Majority small size | Majority middle, large size | Various |
| Cooperation partners | Multiple | Multiple | Single or Multiple | Multiple |
| Cooperation methods | Interdisciplinary | Interdisciplinary | Interdisciplinary | Interdisciplinary |
| Organization | Simple | Simple | Complex | Complex |
| Stability | Short-time, unstable | Short-time or long-time | Long-time, most stable | Various, unstable |

*3.2 Preferred cooperation selection*

Suppose there are 4 cooperation alternatives, respectively research projects ($a_1$), research groups ($a_2$), research institutions ($a_3$) and research platforms ($a_4$). And suppose there are 5 aspects of evaluation factors, considering both internal factors and external environmental factors, respectively smart cities research fitness ($e_1$), operational or management difficulty ($e_2$), research mainstream adaptation ($e_3$), economic benefits potential ($e_4$) and European policies compliance (e5). See Table 7.

Table 7. Evaluation factors of university-led smart city research cooperation

| Categories | Factors | Name |
|---|---|---|
| Internal factors | Smart cities research fitness | $e_1$ |
| | Operational or management difficulty | $e_2$ |
| External factors | Research mainstream adaptation | $e_3$ |
| | Economic benefits potential | $e_4$ |
| | European policies compliance | $e_5$ |

1) Smart cities research fitness means whether the research cooperation pattern are suitable for conducting smart cities research because smart cities research need interdisciplinary researchers and inter-regional or international collaborations. The more partnerships in the research, the more ideas and intellectual benefits generate during the cooperation. From this point of view, research institution and platform patterns are superior to research project and group patterns because they have larger cooperation network.

2) Operational or management difficulty means whether the research cooperation demands more inputs of personnel, facilities, funds and time. Although the institution and platform pattern will attract more partnership, multi-institution and inter-regional cooperation tend to have less frequent and effective collaboration but more often diverging interests, free-riding and conflicts (Adams et al., 2005; Cummings and Kiesler, 2007). That is, they will experience more difficulties and complexities during the cooperation research processes.

3) Research mainstream adaptation means whether the research cooperation is common and effective cooperation pattern that is required by urban planning research and innovation development. The extensive research cooperation provides more shared resources and expertise, which are required by smart cities research in the field of urban planning.

4) Economic benefits potential means whether the research cooperation will contribute to generating more economic benefits and attract research funding and contracts. Despite the fact that research institution and platform patterns have more potential partnerships, multilateral cooperation foster more coordination cost because of geographical distance and institutional differences (Cummings and Kiesler, 2007; Hoekman, Frenken and Tijssen, 2010). Further study shows that research organizations and project teams within one institution is more effective in integrating research resources and expertise and more likely to be successful.

5) European policies compliance means whether the research cooperation is encouraged in European context (e.g. the research projects under the research framework of European Union), and whether the cooperation supported by national or local governments. Since more significant public funding are used to foster inter-regional and transnational research collaborations in Europe, perhaps research platform is more preferred by the policies.

Adopting Fuzzy Consistent Matrix to select the most preferred cooperation pattern for university-led smart city research. First, constitute preferred relationship matrixes as below:

$$B_1 \begin{matrix} 0.5 & 0.5 & 0 & 0 \\ 0.5 & 0.5 & 0.5 & 0 \\ 1 & 0.5 & 0.5 & 0 \\ 1 & 1 & 1 & 0.5 \end{matrix} \quad B_2 \begin{matrix} 0.5 & 0.5 & 1 & 1 \\ 0.5 & 0.5 & 0.5 & 1 \\ 0 & 0.5 & 0.5 & 0.5 \\ 0 & 0 & 0.5 & 0.5 \end{matrix} \quad B_3 \begin{matrix} 0.5 & 0.5 & 0.5 & 0 \\ 0.5 & 0.5 & 0 & 1 \\ 0.5 & 1 & 0.5 & 0.5 \\ 1 & 0 & 0.5 & 0.5 \end{matrix}$$

$$B_4 \begin{matrix} 0.5 & 0 & 0 & 0.5 \\ 1 & 0.5 & 0 & 0.5 \\ 1 & 1 & 0.5 & 1 \\ 0.5 & 0.5 & 0 & 0.5 \end{matrix} \quad B_5 \begin{matrix} 0.5 & 0.5 & 0.5 & 0 \\ 0.5 & 0.5 & 0 & 0 \\ 0.5 & 1 & 0.5 & 0.5 \\ 1 & 1 & 0.5 & 0.5 \end{matrix}$$

Second, transform 5 matrixes $B_k$ (k=1, 2, 3, 4, 5) into fuzzy consistent matrixes $R_k$ (k=1, 2, 3, 4, 5):

$$R_1 = \begin{matrix} 0.5 & 0.4375 & 0.375 & 0.1875 \\ 0.5625 & 0.5 & 0.4375 & 0.25 \\ 0.625 & 0.5625 & 0.5 & 0.3125 \\ 0.8125 & 0.75 & 0.6875 & 0.5 \end{matrix} \quad R_2 = \begin{matrix} 0.5 & 0.5625 & 0.6875 & 0.75 \\ 0.4375 & 0.5 & 0.625 & 0.6875 \\ 0.3125 & 0.375 & 0.5 & 0.5625 \\ 0.25 & 0.3125 & 0.4375 & 0.5 \end{matrix}$$

$$R_3 = \begin{matrix} 0.5 & 0.4375 & 0.375 & 0.4375 \\ 0.5625 & 0.5 & 0.4375 & 0.5 \\ 0.625 & 0.5625 & 0.5 & 0.5625 \\ 0.5625 & 0.5 & 0.4375 & 0.5 \end{matrix} \quad R_4 = \begin{matrix} 0.5 & 0.375 & 0.1875 & 0.4375 \\ 0.625 & 0.5 & 0.3125 & 0.5625 \\ 0.8125 & 0.6875 & 0.5 & 0.75 \\ 0.5625 & 0.4375 & 0.25 & 0.5 \end{matrix}$$

$$R_5 = \begin{matrix} 0.5 & 0.5625 & 0.375 & 0.3125 \\ 0.4375 & 0.5 & 0.3125 & 0.25 \\ 0.625 & 0.6875 & 0.5 & 0.4375 \\ 0.6875 & 0.75 & 0.5625 & 0.5 \end{matrix}$$

Third, calculate univariate priority according to the formula (6,7):

$s_1^1$=0.1823, $s_1^2$=0.3151, $s_1^3$=0.2185, $s_1^4$=0.1823, $s_1^5$=0.2176;

$s_2^1$=0.2168, $s_2^2$=0.2827, $s_2^3$=0.2500, $s_2^4$=0.2506, $s_2^5$=0.1846;

$s_3^1$=0.2506, $s_3^2$=0.2176, $s_3^3$=0.2814, $s_3^4$=0.3502, $s_3^5$=0.2827;

$s_4^1$=0.3502, $s_4^2$=0.1846, $s_4^3$=0.2500, $s_4^4$=0.2168, $s_4^5$=0.3151;

Finally, calculate multivariate priority $S_i$ (i=1, 2, 3, 4) according to the factors weights belo
8):

Table 8. Weights of evaluation factors

| $W_1$ | $W_2$ | $W_3$ | $W_4$ | $W_5$ |
|---|---|---|---|---|
| 0.27 | 0.18 | 0.13 | 0.17 | 0.25 |

The comprehensive priority of cooperation patterns are $S_1$=0.2197 $S_2$=0.2307 $S_3$=0.2736 $S_4$=0.2759, and $S_1<S_2<S_3<S_4$. The results indicate that considering these five factors or criteria, research group pattern is superior to research project pattern, and the research institution and platform patterns are superior to the former two. But the difference between institution and platform pattern is extremely small. It should be noted that the four types of cooperation patterns have no absolute priority, but have preferred solutions under different conditions.

## 4. Conclusion

European university-led smart city research has a range of cooperation patterns which are innovative and have deep insights of smart city research. A growing number of urban research institutions join in the research of smart cities, and more smart city research platforms will be set up in the future.

For large-scale smart city research institutions, which have better research projects and networks, the pattern of research platform will help them move one step further. By multi-disciplinary partnership s participation and interaction, the research platform expands the collaborative network of institutions and organizations. As for smaller smart city research groups, whose strength is the flexible and weakness is lack of enough research projects and funds. The platform pattern will help them attract more partnerships and to be better involved in collaborative research. And the platform pattern would not spend too much organization and management cost, only a small group of people could take charge of the daily works.

However, despite the high potential to become the most promising research cooperation pattern, the research platform also has its own flaws. For example, the organizational structure is looser compare with research institutions, which makes it difficult to function efficiently and have substantial research results. In order to deal with the situation, the platforms need to set up management teams for taking charge of publishing working paper, contacting with their research members regularly, publicizing the collaborative research results through internet and other advanced technologies. Research platforms should cooperate with institutions who already have good research foundation and extensive research cooperation network, and making full use of those advantages. Moreover, the universities and local governments should encourage this kind of research pattern and involve in the research network, thus help promote further development of smart city research.

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# Study on Public Participation of Urban Planning in the Age of Big Data

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*Abstract: Along with the development and popularity of the information technology, the concept of big data has gradually come to public attention. A variety of new data types and new data sources have greatly expanded the data view of urban planning. On the one hand, it has formed a new method of public participation in urban planning, on the other hand, it has also provided a new analysis tool for the research of urban planning. This study, taking big data, urban planning and public participation as the starting point, tried to seek the best combination and establish a potential bridge among them. In this way, planners can not only apply the new technology into urban planning, but also deeply understand the urban planning during the technology development. As a result, a visual, dynamic and interactive smart city platform will be built to improve the ability of information exchange and the level of public participation. As a reaction, public participation, with the mining of diverse knowledge and the participation of multiple thinking, can also ref*ine planners understanding of urban planning, *is favorable to their policy behavior. Therefore, in the stage of practical application, with the new technology such as big data, planners can transport and release information, citizens can sharing experiences and present opinions, decision-makers can absorb suggestions as references for urban planning.*

Keywords: public participation, urban planning, big data

## 1 Introduction

Along with the development and popularity of the information technology, the concept of big data has gradually come to public attention. A variety of new data types and new data sources have not only greatly expanded the data view of urban planning, but also quickly promoted the innovation of thinking mode, value guidance and technical method in urban planning. Through the transition of urban planning, which is form simple observations, fragmented statistics and rough sets to complex simulation, dynamic evolution and subtle individual, big data will provide infinite possibility for urban informationization construction and management.

Since the Urban and Rural Planning Law firstly established the mechanism of public participation in urban planning on January 1, 2008, public participation has become the impetus for the further development of urban planning. The core value of public participation is to encourage people to actively participate in urban planning and explore various knowledge sources with the aid of technology. Through the participation and integration of multidimensional thinking, designers and decision-makers can refine the understanding of city and improve the precision of policy.

So we can say that big data and public participation are the two significant trends of urban planning transformation. However, in practice, we find that the basic data needed for urban planning are collected, processed and used by different functional departments separately, thus information isolated island will be formed and cannot support the rational analysis and scientific research. Moreover, obstructed channels and the imperfect mechanisms of public participation also restrict the public demands expression for urban planning, construction and management.

Therefore, this study tried to seek the best combination and establish a potential bridge among big data, urban planning and public participation, aiming at providing technical support and decision basis for scientific and rational urban planning.

## 2 Connotation of big data

Big data is a huge set of concepts, referring to the vast, diversified and rapidly increasing information property, which has the stronger power of decision-making, insight and optimization due to the new processing mode. Michael Batty, a British scholar, has pointed out: Big data i fit into an Excel spreadsheet. (Batty, 2012) He revealed the double connotation of big data. Firstly, the data sample size of big data is large enough. Secondly, big data is not a new concept, but a sample quantity expansion of traditional small sample data analysis. That means the analysis space can be fully covered only based on the sample data, and then the analysis result will be displayed intuitively.

Volume , velocity, variety and value, as the 4V advantages of big data, provi platform between users (Philip Chen and Zhang, 2014). However, These advantages also result in several problems, such as available data explosion and public demand diversification. The generation of SoLoMo precisely makes it possible to obtain extensive data and promote public participation. Social, Local and Mobile are the most representative technological concept of SoLoMo, which brings Social Networks Service, Location Based Service and Mobile Terminal together. It is this immediate information interaction and transmission that meets the needs of public participation in urban planning to a great extent.

### 2.1 Social Networking Service (SNS)

Social means an online community created by individuals having the same interests based on social networking service (SNS). This kind of service always bases on internet and provides various interactive platforms for user connection and communication. It gives data specific social attribute, and makes the process of data propagation predictable and traceable. At the same time, This kind of platform generally extends and spreads by the realistic social relations, so it is able to provide indirect description of the individual information source to a certain extent. The vast amount of users with specific social attribute are the objective foundation of directive data collection and broad public participation.

Sina Weibo, as a SNS platform for information sharing, spreading and obtaining based on user

relationship, can accomplish text update, information publish and instant share. The basic characteristic of Sina Weibo is to encourage the target audiences to pass message to others, forming a new dissemination mode that the exposure and influence grow at a geometric rate. Relying on the social networking tools represented by Sina Weibo, on the one hand, planners can spread urban planning knowledge more effectively, on the other hand, public can express their appeals and maintain their rights with the help of network platform.

## 2.2 Location Based Service (LBS)

Local, as the core of SoLoMo, is the mapping of the individual users of network virtual world in the real physical space. Through the location based service (LBS), it can record the geographical location and give data spatial attribute. The main functions include localization (individual position orientation), guidance (path navigation), query (query somebody or something), recognition (recognize human or object), event trigger (send a message to the individual in a particular situation). Data generated in these function processes precisely can provide objectively true individual behavior records for urban planners.

LBS focus on obtaining the spatial position and behavior of individuals. However, spatial resources allocation, as the most central question of urban planning, involves a large number of the spatial, social and economic information which is always difficulty to obtain. GIS technology can provide the perfect database organization, lively visual interface and 3D real feelings. What s more, WebGIS, the internet platform and getting rid of GIS tool software, enable public to easily obtain the comprehensive information by web browser and even directly present their opinion on planning scheme. That is called the PPGIS, which is internationally popular in recent years. It can provide spatially-related information service for LBS with the support of GIS.

## 2.3 Mobile Terminal

Mobile terminal is a terminal that with which individual can produce and receive data. It mainly includes smart phones, tablet computers and various application programs based on them. Related technologies involve global position system (GPS), gyroscope, acceleration transducer, augmented reality (AR), two-dimensional code or other things networking technology such as NFC. Mobile terminal, with perfect multi-media capability and a large number of interactive technology integrated in small devices which are easy to carry and hold, has already become the substantial platform that recording specific individual behavior, raising public planning awareness and expressing public subjective willingness. Along with the growing popularity of different kinds of mobile terminals, they are gradually taking the place of desktop PCs and becoming the main medium of SNS and LBS.

For different events or locations, developers can develop specific mobile terminal applications to popularize urban planning knowledge and encourage public participation. However, the technical threshold of native APP development is relatively higher. Therefore, in the public participation, developers can make an easy secondary development relying on the social platforms, so that users can

interact information with PPGIS server and query content in the social platform interface. Through uploading photos and comments with location information, which can be viewed and analyzed by planners and public, the traditional working mode of urban planning will be changed. So, we can expect that using mobile terminals and application programs to encourage public participation in PPGIS will quickly gain in popularity as an easier and better way.

## 3 Public participation mechanism in urban planning

SoLoMo, as an integrative concept generated in the age of big data, corresponds to the public thinking mode in today's society and integrates into life in all aspects. SoLoMo application can effectively protect the informed right of public, widely collect and analysis data produced by public, promptly provide various expression ways for public. Thus, it can improve the public participation mechanism in urban planning and guide the design effort to proceed in an orderly way.

### 3.1 Extend the ways for public understanding

SoLoMo, with its unique attributes, fills in the blanks of information dissemination and presentation media of traditional urban planning at different aspects and levels, and gradually becomes an important way for public to understand urban planning. With the portability of mobile terminals and the transmissibility of social networks, SoLoMo provides a professional and dynamic display platform of urban planning for public.

Take the application of AR technology in dynamic presentation as an example. AR technology, applies the virtual information to the real world and overlays virtual objects, scenes and system prompts generated by computer onto the real scenario, thus achieves the aim of reality augmentation. Relaying on LBS, the individual geographical location can be positioned accurately. Thereout, applying AR technology to mobile terminals can provide specific scene information and real tour experience. In the meantime, using the angular sensor technology can accurately analysis the individual orientation and angle, which contributes to provides the appropriate visual angel pointedly. What s more, SNS also provides convenient transmission ways and wide user base for this platform, which enables AR technology to apply to the scheme demonstration phase of urban planning through SoLoMo. This dynamic and vivid demonstration, low requirements on professional knowledge and rich in interesting, is very applicable to public-facing planning scheme notification.

### 3.2 gather the data generated by the public

In the context of big data, urban planning pays great attention to public participation, and emphasizes to introduce public city image into planning and design. City image, drawing from the traditional ways such as questionnaire survey, still has deficiencies in sampling quantity, manifestation mode and so on. However, SoLoMo can not only enlarging the sample size, but also embody the abstract conception in the geographic space accurately. As for the data produced by public, it has the advantages of immediacy,

dynamism, universality and convenience. Therefore, it can promote the dynamic recording of city image in urban planning and the interaction between them, making it possible for the city image to guide the planning and design.

Take the area boundary definition by Flickr as an example. Flickr, composed of mobile terminals, application programs and websites, is a platform that provides storage and sharing service for digital photos. Based on the support of social network and GPS, The core characteristics of Flickr include enlarging and reorganizing the data uploaded by users, giving images attributes such as longitude and latitude described by users. Livia Hollenstein and Ross S. Purves reanalyzed the boundary of the city center of London with Flickr data. Through filtering the labels of the images uploaded by users, they collected the image data with labels of Northlondon, Innercity, Eastlondon and Camden, Mayfair, Soho, thus they analyzed the spatial data distribution and obtained the density gradient variation.

### 3.3 Enrich the public feedback means

SoLoMo can spread messages efficiently and rapidly between mobile terminals with the support of social network. Its feedback mechanism follows the laws that from point to surface and from bottom to top. In the field of urban planning, it is always from practitioners including planners and designers to public, then to more practitioners, finally to decision-makers. With the guidance of practitioners, on the one hand, public interest is widely attracted, leaving the specific incidents as society hot spots, on the other hand, a large section of public opinion will draw the attention of more practitioners. Therefore, the discussion environment, integrating social public and professional planners, is mutual complementation and mutual benefit.

Take the reconstruction project for Enning Road as an example. Enning Road is the most complete and the longest arcade-house street in the city of Guangzhou. From the year of 2007, Liwan District Government began the large-scale old city reconstruction for this road. In the process of multilateral game, the scheme has been changed multiple times and the reconstruction has come to a deadlock. The academic concern group of Enning road reconstruction was founded in March 2010. Its members include undergraduates and volunteers, and their majors involve urban planning, architecture, sociology, economic, geography, journalism, etc. Through the further study and accurate evaluation of the situation of Enning road reconstruction project, The group, as a third party different from governments and residents, provides professional advices for the old city planning and development. It devotes itself to improving the government consulting process, rationalizing the resident compensation plan and building the discuss platform for all relevant stakeholders. At present, this group are gradually integrated into the residents of Enning road. They jointly drive the implementation of the organic renovation way, whose core ideas are government leading, public participation, gradual treatment and incremental improvement (Zhou Kai, Yan Yan and Song Bin, 2012).

## 4 Realization of public participation in the urban planning of big data era

In the age of big data, a platform is needed to realize the public participation of urban planning. This platform, is not a graphics design platform such as CAD, but a broader platform which provides public participation and use based on GIS technology (Batty, 2013).

### 4.1 Involuntary participation: public participation of urban planning

Public participation in traditional urban planning is voluntary. That means participators provide information for urban planning consciously. However, participators involved in this public participation form are restricted, and the information provided by participators is mainly limited by their spirit of dedication and degree of participation.

Urban planning in the age of big data places more emphasis on involuntary public participation. Nowadays, urban residents are in numerous digital networks, such as mobile communication, bank, GPS, etc. Public will inconsciently leave their daily digital paths, while they are getting benefit from the web service. These digital paths can fully reflect the real life of urban residents. The data, as the product of urban residents daily digital paths, will be more helpful in promoting urban op if it is once associated with data from other sources. Thus, it can guide the environment-adapted and futurity-oriented planning decisions.

### 4.2 Induced using: construction of public participation platform

Based on the principle of involuntary public participation, induced using has already become the basic principle for constructing public participation platform in the age of big data. Induced using, including benefit-induced using and interest-induced using, can construct the public participation platform of urban planning with the help of corresponding forms such as services, games and forums.

Take the icity program in England as an example. With the help of infrastructure constructions such as wireless networks and sensors, it have already established a service platform, which includes climate information release and public facility use, etc. Through inducing residents and encouraging the third parties such as developers, small and medium enterprises, neighborhood associations to use the data produced during the use phase of icity, decision-makers can discovery the public interest, improve the service strategies and increase the service content. As another example, the students from HafenCity University Hamburg designed a game named B3 (Murgante, Gervasi, Iglesias, et al., 2011), when they were designing the market update in the district of Billstedt. This game makes residents to design the infrastructure constructions in their heart such as squares, seats, trees and children playgrounds, and induces the data reflecting the habit and willingness of residents to generate. In addition, Brain McGrath, an American scholar, established the virtual space platform and the on-line forum system about urban evolution in the urban design of Roman with the spatial data of archaeology and the temporal data of systematology. Through inspiring the passion of public participation, urban design will become the city image advocated by most residents rather than the city simulation created by few experts.

### 4.3 Data visualization: construction of urban planning platform

Traditional urban planning, only relying on the point-line-surface cartography mode, can t fully expression the complex information which implies non-space data. The design platform of traditional urban planning can boil down to the mapping platform of design achievements, while that of the urban planning in big data era is not only the expression platform of design achievements, but also the exchange platform which provides data analysis with abundant visual representation.

Data visualization technology developed in recent years will efficiently solve the problem of urban planning platform construction in the age of big data. Data visualization can realize the data analysis and communication with the application of tables, diagrams, pictures and other intuitive data visualization mode. Accordingly, it can inspire the public participation. The theory comes from the perception study of brain science. When all sense organs of human are perceiving things, 70% information is obtain by eyes. What s more, eye is the sensory organ whose perce (Long and Dhillon, 2014). On the one hand, the visualization function of human eyes can analyze a mass of abstract data, and the new data analysis technique can amplify and expand the human eye vision. On the other hand, the creative nature of human is benefit from the mutual action of the logical thinking and imagery thinking, therefore, massive amounts of spatial data and non-space data can inspire the imagery thinking and creativity of human only through the data visualization technology (Post, Nielson and Bonneau, 2003).

Data visualization technology will encourage designers, managers and public to understand and participate in the whole process of urban planning. Moreover, in the circulatory design flows, public can constantly feedback information and designers can accordingly modified result. Therefore, it is necessary to construct the data analysis platform and the design communication platform in the urban planning platform of big data era. The data analysis platform synthetically integrating the machine learning algorithm, can capture the corresponding social-networking data. With the correlative thinking of big data and knowledge discovery, the visual interface whose data updated automatically and timely will be established to induce more public to focus on and participate in data feedback. The design communication platform, based on the visual interface of data analysis platform, builds the visual interface for design scheme and the feedback environment for plan implementation and public participation. It can provide instant feedback on the dynamic data of public participation and plan implementation and timely correct the design scheme.

## 5 Conclusion

Big data can provide the ideal public participation platform for urban planning and realize the long-distance communication. With the help of the platform such as e-government and SNS, which play an important role in information disclosure and positive interaction, a new paradigm of public participation in urban planning will be created to change the traditional urban management pattern and the urban planning process.

The appearance of big data realizes the real-time dynamic interaction and communication of government, planners and public in the process of planning investigation, scheme development, planning evaluation, plan implementation, etc. It is conducive to promoting the scientification and humanization of planning process and advancing the democratization process of urban planning. Moreover, with the big data analysis of urban planning, construction and management expressed by public through e-government and SNS, government and planners can promptly adjust the urban spatial layout, optimize the public service facilities allocation and innovate the urban management pattern.

However, big data only provides the tools and methods. To realize the real public participation and scientific planning still need the unremitting efforts of planners. With the open attitude and scientific spirit, planners can really exert the advantage of big data to provide a key support for urban planning under the background of new urbanization.

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# TRACK 17

# Ethics and Justice in Planning

## Track description

Co-chairs: **Simin Davoudi**, **Willem Buunk**

In recent years, there has been a growing interest in research into normative and moral aspects of planning in both planning practice and theory. This includes concerns over justice and fairness as well as a number of other values such as aesthetics, safety, health and wellbeing. This track is open to papers that provide a deeper understanding of the wide range of ethical and moral dilemmas with which planning practice and theory are confronted.

The pursuit of justice is seen as central to the justification of political authority and political obligation. In this sense justice often has a legal connotation and is about how people are treated. Another meaning of justice is how society s benefits and burdens are distribu distribution is decided upon. In the past few decades planning theory has been largely preoccupied with just processes and appears to have paid less attention to just outcomes. We suggest that such dichotomous position is not helpful and instead planning theory and practice should embrace the concept of just planning defined broadly in terms of distributi ognition, capability and responsibility, without subsuming any one of these into another. Despite the acknowledged significance of such inclusive understanding of justice, the bulk of justice studies continue to focus on distribution. We welcome papers that aim to fill the gap.

In addition to issues of justice and fairness, planning involves a number of other social, economic, cultural and environmental values. The process through which these are defined, debated and prioritised is a contested one and riddled with complex power-knowledge relations. Planners in their daily practices and thoughts are immersed in a wide variety of moral concerns and values, some of which become overt while others remain implicit. Clearly articulating these normative issues is in itself a major challenge, but one that planners ought to aspire to.

In this track we welcome papers that critically engage with a) theoretical debate on ethics, justice and other moral concepts and normative value, b) provide practical examp good/bad approaches to spatial development and (un)ethical practices in p light methodological challenges of assessing claims of justice, ethics or other moral concerns. We welcome papers that address any of the above questions theoretically or empirically and challenge the taken for granted assumptions about just planning , good planne outcomes of planning. We look forward to receiving your papers and having stimulating discussions in Prague.

# ASSESSING LAND TAKE IMPLICATIONS FOR ENVIRONMENTAL JUSTICE: A CASE STUDY USING THE ECOSYSTEM SERVICES APPROACH

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Key words: Ecosystem services, land take, environmental justice

Abstract
*Land take is consuming a non-renewable resource and an essential one to human wellbeing?, with relevant social impacts and different implications as far as several sectors of the economy are concerned (EC, 2012). Assuming that (a) right livelihood is based on ecological balance and social justice (Shiva, 2008) land take may be considered as an unjust practice, in terms of fair share, equal opportunities, recognition and participation of present and future generations. Within the frame of the Land System Science (Verburg et al., 2013; Turner et al., 2013), the relationships between land take and environmental justice is analysed through the lens of the ecosystem services (ES) approach (MEA, 2005). ES evaluation is a challenge to be undertaken by planners (De Groot et al. 2010) because it enables the assessment of the benefits that the natural environment provides to human well-being and can help to assess environmental justice claims.* A case study has been carried out for one of F *15 wards, the X Municipality, where large amount of green land was built up in recent years and more is expected in the future causing relevant impacts such as increasing flood risk, overloading of existing drainage and sewage systems, loss of agricultural land, natural area fragmentation. A GIS-based semi quantitative assessment of relevant ES has been conducted, and a number of experts (including scientists and local administrators) have been consulted to gather their views on values and responsibilities connected to land use change occurred in the area. The case study draws out lessons for an analytical framework that operationalizes the ecosystem services approach to assess environmental justice land take implications.*

## 1. Introduction

How to assess and manage social inequality resulting from land-use changes, in particular those produced ad consequence of land take and unequal access to ecosystem services? This is the question we are trying to answer in this paper, using ecosystem services (ES) approach (MEA, 2005) as a lens to analyse the relationships between land take and environmen evaluation is a challenge to be undertaken by planners (De Groot et al. 2010) because it enables the assessment of benefits that the natural environment provides to human well-being and can also help to assess environmental justice claims .
The X (10th) District case study was selected both because of the relevant land take acted in the area in recent years and for the expected further changes in next future. impacts such as increasing flood risk, overloading of existing drainage and sewage systems, loss of agricultural land and natural area fragmentation are increasing In the area together with land take.
The way land use changed and loss of natural soil took place in the area brought to unequal access to ES, influencing environmental conditions and causing justice concerns. The expected further transformation, planned in 2008, made the X District an interesting opportunity to analyse potential land take and ES impacts on environmental justice.

## 2. Background and conceptual framework

Concepts of Environmental Justice, land take, and Ecosystem Services are integrated in the proposed methodology, with the assumption that the effects of land take on ecosystem services profoundly influences environmental justice in the study area.

*2.1. Environmental justice*

Recognizing that a right livelihood is based on ecological balance and social justice (Shiva, 2008), there is a concern about distribution of scarce resources between present and future generations and between social classes, but also about people s capabilities to access these resources with framework of participation and democracy (Sen, 2009). In this framework, land take must be considered as an unjust practice, which relates to efficient and fair use of present resources, to the equal opportunities between present and future owners, and to a just consideration of local issues and participation of communities.

The environmental justice (EJ) is a multifaceted concept, emerged first in US in the early 1980s from environmental activism struggling against polluting facilities, and then addressing social factors like income, race and other socioeconomic variables and disparity in hazard levels and environmental quality. The EJ debate has been further developed by the political and the academic spheres, leading to a four dimension concept of Environmental inequality (OECD, 2006; UK Environment Agency, 2007; Pye et al.,2008) that are: exposure and access inequalities (distribution of environmental quality/goods); policy inequalities (effect of environmental policies); impact inequalities (different environmental impact of individuals and social groups with regard to their incomes and/or lifestyles); policy-making inequalities (access to environmental policy-making).

Integrating environmental and social initiatives at the local level, with the objective of achieving more sustainable environmental and social policies, is possible with a common objective (Pye, 2008). In these terms analysing the potential of ES scheme to address social dimension of ecosystem benefits could lead to a new synergy making environmental policies more equal.

Following the growing interest in studies addressing urban ecosystem services distribution by race, ethnicity, socioeconomic class, and other demographic characteristics and studies on social-ecological resilience and adaptive governance of ecosystem services connecting fields like ecology, planning, and law, there is a promising research area addressing the distributional impacts of providing ecosystem services and the challenges posed by pursuing environmental equity, in order to guide decision makers to equitable urban ecosystem services provision (Salzman et al. 2014). The main research questions emerging from these studies are: how to incorporate environmental equity and justice concerns into planning for ecosystem services? Should certain ecosystem services (e.g. parks and green space) be prioritized over others? How to deal with the impact of pre-existing levels of environmental inequality in a community and which inequality to address first? Which stakeholders must be involved in policy making?

In this context, several studies considering equitable environmental benefit provision, such as ecosystem services, are becoming more common and highlight some interesting research area (Ernstson, 2013).

Considering that the main issue is related to assuring environmental equity and justice in accessing ecosystem services, this paper tries to integrate land take, ecosystem services and inequality in a methodological approach that includes the quantification of land take, the assessment of land take impacts on ecosystem services, and the assessment on inequality in the case study, analysing main factors in decisional process through a network analysis, as proposed by Actor-Network Theory (Latour, 2005).

*2.2. Land System Science and land take*

As highlighted by the Guidelines on best practice to limit, mitigate or compen the European Commission (European Commission, 2012), soil provides a great variety of ecosystem services with direct and indirect use value for humans.

In the last few years, the increase of land take in Europe has been mainly driven by demand for industrial, commercial infrastructures, and transportation, without a direct correlation to demographic growth (Indovina, 2009). Consequently, the attention towards the land take issue has increased in the last decade, particularly at European level with the Thematic Strategy for Soil Protection (European Commission, 2006; European Commission, 2011).

In this conditions of increasing land take, the unjust social and economic effects shall be addressed by national policies particularly those dealing directly with spatial planning and land management to achieve a more efficient, sustainable and durable use of natural resources. The European Union developed a specific environmental monitoring product (i.e. Degree of Imperviousness) in the frame of the Copernicus initiative, which aims to foster the assessment of land take and urban fragmentation at regional and local level (European Commission, 2014). Moreover, the role of ecosystem services related to soil is crucial in the mitigation and adaptation to extreme events such as floods or droughts (European Commission, 2014). In fact, land cover change caused by human activities has indirect effects on climate processes (i.e. non-climatic driver) because of the role of soil in carbon fluxes and greenhouse gas emissions (IPCC, 2001).

Considering the complexity and interrelation of land cover change and environmental phenomena, this study endorses the framework of Land System Science (Verburg et al., 2013), which is a set of disciplines that aims to understand the relationship between urban development and impacts on ecosystem services. In particular, the Land System Science considers land cover change as cause and effect of climate change, which allows to analyse the interrelation between ecosystem services and adaptation in order to improve policies and planning processes (Verburg et al., 2013). In order to assess ecosystem services, land cover monitoring of urban and peri-urban areas through remote sensing can be both affordable and efficient in order to support planning processes (Maes et al., 2012; Brook and Davila, 2000), allowing the assessment of land cover change and the impacts thereof on ecosystem services (Chen, 2013). This study used a built-up map developed by ISPRA using remote sensing images and semi-automatic classification techniques.

### *2.3. Ecosystem services approach and methods*

The role of soil in the ecosystem is fundamental because of the provided services in terms of food production, biodiversity, and sustainability (Lal, 2005). The comprehension of how the land use trend can affect the ecosystem services is an innovative tool in the planner s hands benefits that people obtain from ecosystem (MEA, 2005) can be used by the pu as an incentive to reduce the soil consumption and the urban sprawl. It should be noticed that an exclusively monetary evaluation of ecosystem services has the main risk of underestimating the natural resource values, and generate a trade based on compensation, with evident unequal effects on poor people and countries. The purpose of evaluation should be to associate a value to the soil as a resource with a unit of measure easily comprehensible by everyone in order to motivate the public opinion to avoid its uncontrolled urbanization.

In this study, we analyse two individual ecosystem service as a demonstration of the evaluation method proposed: carbon storage and habitat quality. The economic value has not been defined. It must be pointed out that crop production is the only ecosystem service with financial data available. In evaluation of the first ecosystem service, habitat quality, the average agricultural values have been linked to the land use classes to get a picture of the crop production extent in the area. Average agricultural values do not represent cost of production but the expropriation price of the land. Another ecosystem service evaluated is carbon sequestration. Ecosystems regulate the atmospheric concentrations through the carbon flows, playing a role in regulating the Earth climate. Soil ecosystems have a great carbon absorption capacity. Capturing carbon, not binding the oxygen in the atmosphere, lead to a prevention in the greenhouse gas formation such as carbon dioxide.

## 3. Methodology

The research focuses on land take, as one of the major drivers in reducing, unequally, the ecosystem services. Once established the linkage between ecosystem services and environmental justice, the case study analyses the land take amount, the effects on the ecosystem services and the inequalities in this situation. The target is to provide useful tools for the planner, the end user of the study.

X District was chosen because of the relevant land take in past years and for the remarkable social differences at local and urban level.

The proposed methodology used to relate Ecosystem Services of Land with Environmental Justice, implies a comparison of outcomes from a public consultation at the local level and two different environmental evaluation about land take and ecosystem services in the area. The focus is to highlight impacts of land take on environmental quality and equal distribution of ecosystem services.

*3.1. Land take*

To assess land take impact on environmental quality, land cover monitoring is crucial for environmental sustainability. There are several ways to monitor land cover, the use of which depending on the specific objectives and scale of the study (Verburg et al., 2013).

A key factor as far as the environmental monitoring is concerned is spatial resolution.

European Environmental Agency (EEA), in collaboration with other European and National Institutions, developed several High Resolution Layers (HRLs) in the Copernicus framework, referred to the year 2012. The main objective of HRLs is European countries land cover monitoring with a highly detailed level (20m resolution) regarding major environmental issues (i.e. soil imperviousness and natural cover such as forest, grassland, wetland, and surface water).

In Italy, ISPRA developed a monitoring network to assess land take evolution over time at national and regional level; this method has a high accuracy level , nevertheless it doesn t allow urban areas spatial analyses or cartographic representation. In this study we used a Very High Resolution Layer (VHRL) that identifies built-up areas with a spatial resolution of 5m (year 2012), this allows an accurate estimation at local level, developed by ISPRA in 2015(ISPRA, 2015).

The classification process is based on semi-automatic identification of built-up areas from satellite images (i.e. RapidEye) and the integration of local ancillary data such as OpenStreetMap enhancing the classification results and correcting omission and commission errors.

Further, a classification of 2000 has been produced by photointerpretation [1] using the 2012 classification applied to 2000 high resolution images .

It is worth mentioning that the VHRL and HRL of impervious surface have some classification differences in terms of definition: the Copernicus HRL excludes from the impervious area: railway lines, dump sites, mines, which, on the contrary, are included in the ISPRA VHRL.

*3.2. Ecosystem services assessment SE*

Land take affects the ecosystem services, decreasing the offered benefits and increasing natural environments degradation . To quantify the selected ecosystem services carbon storage and habitat quality it has been used the InVEST (Integrated Valuation of Ecosystem Services and Trade-offs) evaluation software, a tools set developed by Stanford University within the Natural Capital Project. InVEST, together with a GIS software, allows to establish where the ecosystem services are provided and to quantify the variations caused by different soil uses in two different periods.

As far as Rome District X is concerned , the case study area, maps and data come mainly from the regional level ones, sometimes even national. The proposed models ideal application would require on site samplings or even more accurate studies of the selected area.

InVEST model Carbon Storage and Sequestration provides a map that links lar codifications with the sum of the carbon values of the main four natural pools: above / underground biomass, soil and dead organic matter. Working on the X Municipality, the reference values of the forest categories land use have been obtained starting from the biomass volumes charts published by the Italian Forest Inventory ( Inventario Nazionale delle Foreste e dei Serbatoi For Carbonio - INFC). Once established the connections between INFC and land use categories, the pools data have been calculated through coefficients derived from scientific literature (IPCC, 2006).

As far as others land use classes are concerned (urban and agricultural) the soil s data have been obtained by matching, at national level, the land use / cover map and the SIAS map ( Sviluppo

[1] Thanks go to Eng. Monica Palermini for photointerpretation and correction of the 2000 and 2012 study area VHRL .

Indicatori Ambientali sul suolo ). Aboveground biomass, belowground biomass and dead organic matter values have been extracted from literature researches.
Some values (continuous urban fabric, port areas, dumpsites and building sites) were forced to zero.
The reference is Lazio Region land use map of (2003).
The second InVEST model applied to the area of interest, Habitat Quality , has While some consider biodiversity to be an ecosystem service, this model treat attribute of natural systems, with its own intrinsic value (NCP, 2014).
The test on the X Municipality has been developed with the aid of Nature s Cha 2009).
The threats analyzed, based on values extracted from bibliography (Terrado et al., 2015), are: urban zones and road net (coming from the Urban Atlas layer) and agricultural zones (from the Land Use Map of Lazio Region).

*3.3. Values and responsibilities*

Environmental Justice dimensions selected for the case study analysis (Beretta,2012) are:

1. Exposure and access inequalities: unequal distribution of environmental quality and natural resources availability, connected to a higher vulnerability;
2. Policy inequalities: unequal impacts of environmental policy and regulations, fiscal regulation and economic incentives;
3. Impact inequalities: unequal environmental impact from individuals and groups with different behaviour, life style, education level and different impacts of settlement models on land take and ecosystem services;
4. Policy-making inequalities: unequal access to policy making, in terms of existing and effective participation processes, , different perceptions of topic relevance an/or under representation of certain interests or groups.

These dimensions, as explained in the 2.1, are related with values and issues emerging from the case study in District X, here analysed. Relationships between land take and environmental justice in the case study are investigated trough the critical reading and network analysis of the participatory process involving citizens, public administration and other actors, through the lens of Ecosystem services.
The participatory process object of this analysis has been framed within two initiatives promoted by the City of Rome Municipality planning department, involving the Ostia X Distr March 2015):

1. the local level urban planning conferences: a cycle of public meetings that brought to a Values Charter a shared document summarizing perceived local values, pl objectives. This initiative consisted in six local conferences coordinated by the Municipality planning department and participated by an average of thirty neighbourhood committees representatives , private citizens and some cultural and environmental associations.
2. the 100Resilient Cities program, participated by Rome administration and promoted by Rockefeller Foundation. It focused on proactive and integrated strategies to face sustainability challenges, and it is aimed to allow cities to survive, adapt, and react to chronic stresses and acute shocks (environmental, social, economic). The workshops, coordinated by Rome Resilience office , involved a more complex stakeholders netwo institutional, scientific and economic level. A specific water cycle management workshop focusing even on hydraulic risk assessment (February 2015) provided information about perception of land take effects in Ostia and its inner-land.

Many authors, investigating in the last few decades how policy works and which are main factors in decisional success or failure, focused on network analysis. Actor-Network Theory, developed initially in sociology in the 1980s to study scientific practices (Latour, 2005), includes things and objects together with humans values and relations, in actor-networks able to achieve power enrolling more humans, artefacts and social arenas in their articulation. Assuming that a policy success depends

strictly on the ability to correctly understand the decisional situation and consequently strategies preventing and overcoming obstacles (Dente, 2014). Adopting conceptual frameworks to understand how public and private interests are represented and how policy decisions are taken in the decision-making process analysis is very useful. The main questions to be answered are:

- who are the actors of the process, and which is their type, including managers and scientists, the nature of their goals, which resources and abilities they have, and the decisional arena they belong to;
- how actors participate in constructing values around different and sometimes opposite resources, including ecosystem services (i.e. their role in the interaction);
- which are the connections in the network and their type of interaction: comparison, bargaining and problem solving (Richardson, 1982).

The discussion on decision making about natural resources can be divided into two views : the finding the right trade-off , on a rational and science-based solutions basis , a position we represented by PES, and the value perspective , helping to un-pack the inherent political and relational process that such problems entail. We assume that a value perspective together with a strong ecosystem services bio-physical evaluation is to be preferred, to achieve a more effective natural resources and services protection. In the given condition actor-network analysis used in our case study helps understanding structural conditions (that give shape to the network) with direct influence on decision about land take, giving analytical tools to understand why certain values (and certain ecosystem services) would be prioritized over others (Enstrom, 2013).

## 4. Case study findings

### *4.1.* Rome s X District area and the environment

The X District territory lies off the GRA[2] in Rome south-western area : its borders are the sea, the river Tiber and Castel Porziano natural reserve . It is one of Rome largest and most populous areas, spreading on 150 sq. Km and with 220 thousands inhabitants, by 2012 rates. Despite that, the population density is rather low (522 per sq. Km) if compared to an average urbanized surface. The district faced a very quick urban growth, over the last 40 years. What happened led to several consequences, which affect:

- land take
- Ecosystem services (on both offer and demand)

These are the reasons why this territory is a relevant case study for this paper. The Ostia District urban development was based on extensive housing (mostly unauthorized or un-planned) [3] . This characteristic can be regarded in terms of both values and criticism with values lying in a high rate of green areas and permeable soil, as in private gardens, and criticism focused on the extensive housing itself, which means a wider land consumption than in intensive housing.

The sudden and massive urbanization brought systematic soil sealing in an area with a fragile balance on both hydraulic and hydro geological aspects. Furthermore, the building expansion itself did not mean an adequate infrastructure development, which led to a disruptive perception, that backed up criticisms perceived by the population. Free un-urbanized ground is mainly included into the Castel Porziano Natural Reserve area and along the river Tiber. Both areas represent founding values for environmental and ecological reasons.

The urban growth process in this area is grounded on historic reasons linked to the progressive development of Rome towards the sea[4]. Before that, by the end of XIX Century, a vast land

[2] Gran Raccordo Anulare , the highway surrounding the city of Rome

[3] not planned neighbourhoods cover up to 64% of the urbanised area.

[4] In the 1916 the town plan for a core residential and tourist area of Ostia has been published as a part of the Fascist program for a monumental expansion of the capital towards the sea, having the EUR district as head. This planned expansion was supported by a big infrastructure system including two main roads (Via del Mare

reclamation for agricultural use was planned and realized around Ostia. It was only by the beginning of the second half of last Century that this area faced a huge, systematic expansion, partially planned by urban plan in 1962.
In those years, most part of residential development took the typical forms of urban sprawl. This problem affected particularly the inner portion of the territory, while on the coast itself the urban development tended to be intensive and mostly planned.
The development and growth of neighbourhoods that started as unauthorized ones and later redeveloped after being regularized[5], had a huge and risky impact in land use terms: it represents half of the entire urbanized area in Ostia hinterland.
Actually, with population facing flooding hazard, that risk is considerably higher. The fact itself that the vast majority of those suburbs was built on wet-lands, with no adequate infrastructures put peoples lives at risk.
The new urban plan for Rome released in 2008, reaffirmed the greatest part of the previous program, and added some new ones, focusing on its full implementation. Similar transformation has certainly affected other Districts, but some factors are more relevant in the Ostia area because of :

- The effects of land take on hydraulic and hydro-geologic hazard
- Presence of significant environmental values and ecological potential in the surrounding area
- The present perception/awareness of land take as loss of environmental values and of an increased flood risk

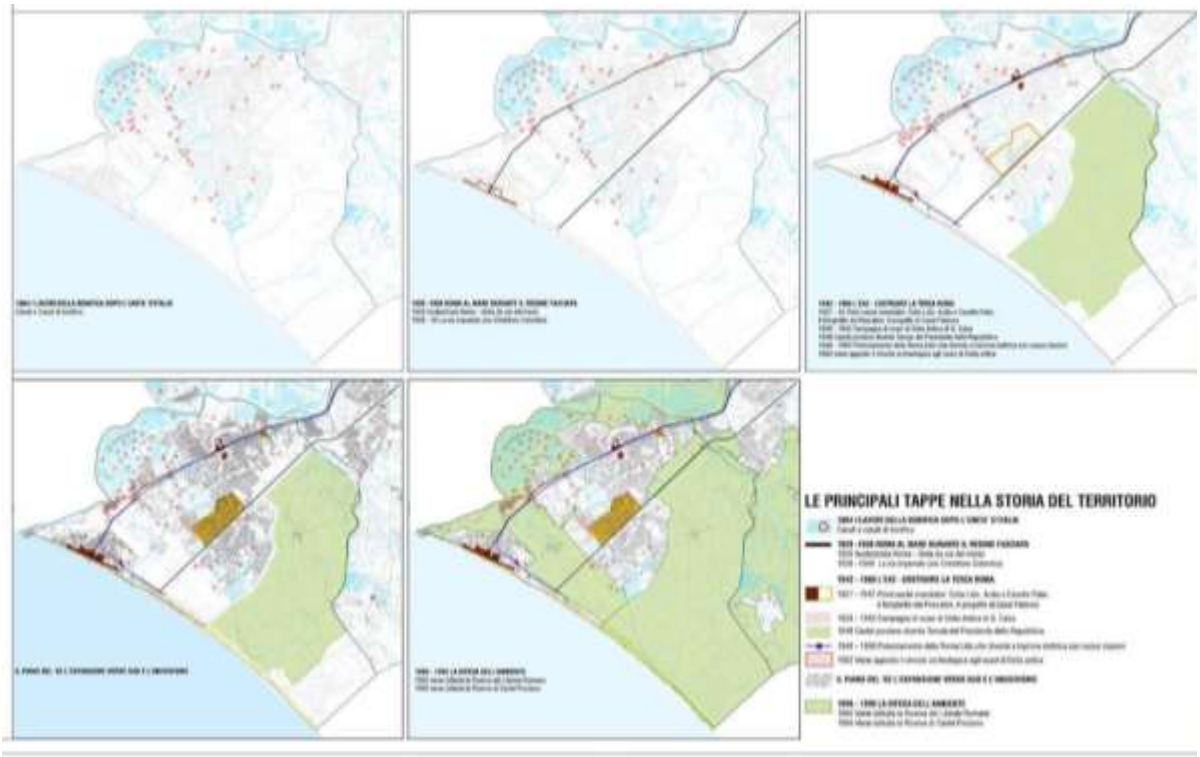


Figure.1 Trasformation process of District X

Making actual reference to the resilience concept, which goes along with ecosystem services, environmental values are recognized as structural ones for the territory. Coast, beaches with dunes, the

and Cristoforo Colombo) and the railway Roma- Lido . Nevertheless until the World War II Urbanised area was represented only by few isolated suburbs of public housing (INA Casa).
[5] A variation to the Regulatory Plan in 1978, followed by executives plans for the spontaneous areas, the so-called O-zones .

river Tiber itself along with the canalization system made for reclamation, archaeological sites and areas of private green inside neighbourhoods, are globally recognized as environmental resources, which made resilience easier and allowed to offer eco system services both in the local and extended area. The above figure (Fig.1) represent the transformation process through the years from late XIX Century up to date, and the potential further transformation in the previsions of the 2008 urban plan of Rome.

*4.2. Land take and ecosystem services in the study area.*

As shown also by ISPRA monitoring network, impervious surfaces in Rome remarkably increased in the last few years. The built-up area has grown from 7.1% of the 60s to 26% in 2008 (Munafò e Tombolini, 2014). The built-up surface of the Disctrict X, the case study area, has been estimated for 2012 using the Copernicus HRL, resulting in 3.410 ha, that is 22.6% of built-up in the study area.

In addition, this study used the ISPRA VHRL for 2012 producing the 2000 classification for the District X. Figure 2 illustrates the imperviousness classifications of 2000 and 2012 in the study area.

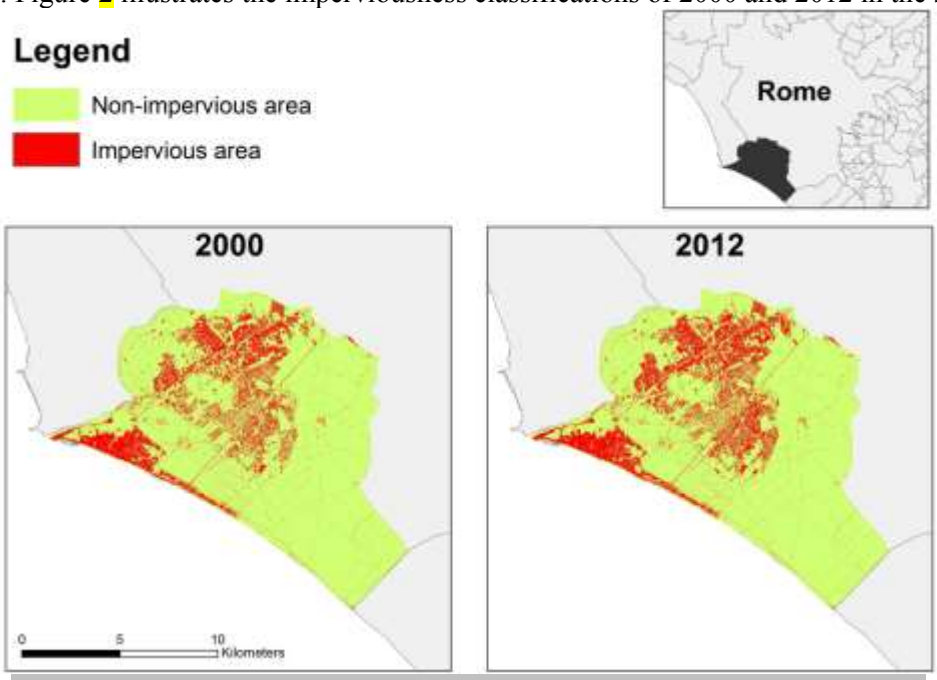


Figure 2. Imperviousness classification of X municipality for 2000 and 2012 -

The built-up surface of the Municipality for the 2012 using the ISPRA VHRL is 2.620 ha that is 17.3% of built-up in the study area. It is noticeable that spatial resolution of used data influences the estimation of impervious surface causing a difference in the two estimates of about 5%. In addition, the classification of 2000 showed that impervious surface was about 2.300 ha (15.2% of the study area). These results demonstrate an increase of impervious surface of about 300 ha in a dozen years which can be related to the urban development (both formal and informal) described in the previous paragraphs. It is remarkable that the use of the VHRL allowed for accurate estimates and facilitated the production of the 2000 classification. Therefore, this type of study could be used by local administrations to create and update a database of impervious surfaces with little effort.

In terms of ecosystem services, the presence of a forest area consisting of 6.000 hectares makes District X the most relevant carbon storage for the entire Rome area. Taking account of the agricultural zones, mainly situated in the NE and the input (minimum) coming from the medium/low built-up urban fabric, a total estimate is around 1.500.000 tons of carbon stored in the area distributed as showed in the Figure 3.

Soil consumption causes the emission of noticeable quantities of carbon from this large storage into the atmosphere, so increasing the formation of dioxide and consequent negative effects on the climate.

In Figure 3, it is shown how urbanized areas with less carbon-intensive soils than forest areas - provide a lower level of habitat quality and, at the same time, generate environmental degradation along its boundaries. As shown in lower part of Figure 4, the area includes the Castel Fusano Pine Forest and the Castelporziano Reserve, both rich of vegetation and carefully protected from the human influence. The habitat quality is at a very good level (left map), only presenting some degradation along its boundaries, affected by the considered threats (right map). As shown in the ma negative effect is maximum when a small natural area is surrounded by a built-up zone.
By matching the land use classes and the average agricultural values coming from the public chart for Lazio Region - rural area No 15 Lido di Roma (source:Agenzia delle Entrate), - a to around 220 MM has been estimated for the whole territory of District X.

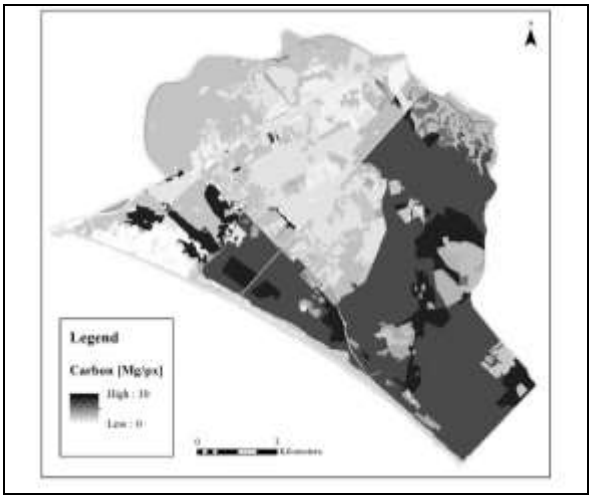


Figure 3. Carbon distribution map in the ecosystems of District X. Values in Mg/pixel (20x20 m each).

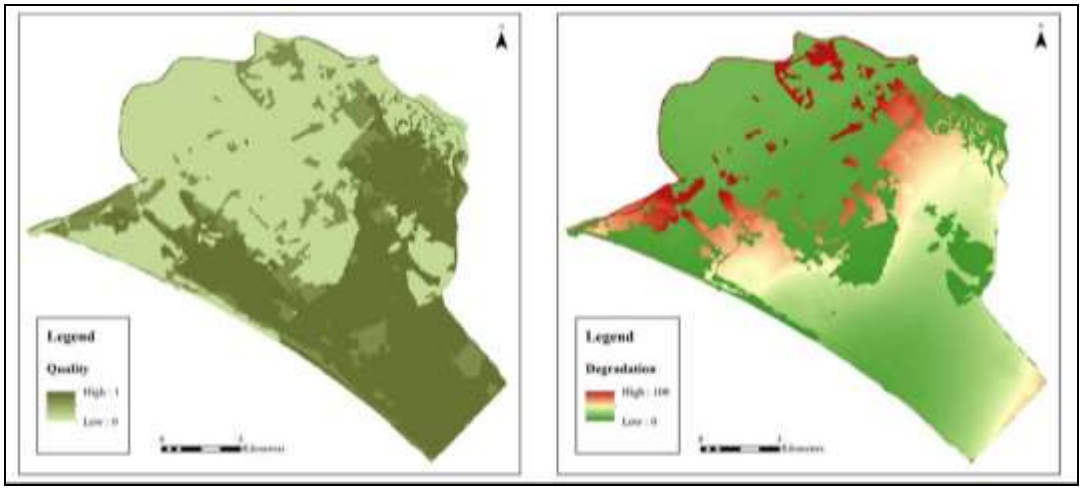


Figure 4. Habitat quality and habitat degradation maps in the District X of Rome.

*4.3. Views on values and responsibilities.*

In the public meetings of urban planning conferences in the District X, for the definition of a Value Charter, population interests were manly represented by neighbourhood committees, private citizens and some cultural and environmental association. The main outcome was a quest for a stop to further urbanization, and for re generation and renovation of existing structures. It is largely recognized that urbanization in Rome in the last twenty years was too much and unqualified. As a result, Rome is

actually facing lack of public services and infrastructure along with proliferation of commercial and residential buildings. In this context, the Value Charter construction process was focused on four criticalities, all relevant for land take prevention:

- flooding risk and security of buildings, especially in informal neighbourhoods grown on wet lands;
- lack of mobility infrastructure (the existing highways and railways were planned in the late 50 );
- despite a grate extent of green spaces the informal settlements are not providing the necessary services to community in terms of quality of life;
- the lack of valorisations of the rich environmental, historical and archaeological heritage on the territory , represents an economic and cultural loss for community.

Land take and ecosystem services are deeply interconnected with those criticalities. Despite the role of ecosystem services had not been explained in the participation processes, the natural resources availability, including land, and the sustainability of their use was perceived like one of the principal issues that affects also life quality of inhabitants,,. The strategic role of unsealed soils in terms of environmental quality and resilience to natural risks emerged as a priority in the value charter. After years of continuous and unlimited urbanization in the area, the discussion is finally on alternative development scenarios focused on renovation and re generation.

Figure 5 Extract of value charter of District X- Objectives for the urban planning development, resulting from the participation initiatives

It must be pointed out that the stakeholder participation was not full. Stakeholders that have a very strong position in influencing land use decision, as economic actors and land owners, real estate companies, land and environmental protection public agencies, and public services managers did not participate. For that the Value Charter must be better intended as a citizen
analysis of the workshop on water cycle in District X, within the participatory process of 100 Resilient cities program in Rome and the four urban planning local conferences, was an useful tool to identify

actors to involve and values/needs and opportunities to be considered (table 2), with the aim to improve the functioning of ES and to limit land take in the area, preventing more injustice.

Table 2 the water cycle participatory process in District X -Values/needs and opportunities

| **Values/needs** | **Opportunity** |
|---|---|
| The need for a vision for the district ; | Participatory initiatives (i.e. Contract for a water district area) |
| Pilot projects to help coordination and problem solving; | Rehabilitation of the Tevere river |
| Best practices sharing and integration of action under different policy sectors; | Research and case studies from university |
| Providing awareness and supporting transition; | New regulation on building sector for Rome area |
| Promoting new and present business sectors, including archaeology; | Awareness of citizens about natural resources values; |
| Training for enterprises and citizens | Coherence of plans from different level or sector |
| Promote networking | Overcome illegal behaviour |
| Overcome fragmentation in territorial management | Overcome disapplication of regulations and incoherent licencing for new buildings |
| Fiscal incentives for reuse, regeneration and renovation | Transition to smartness for old approach enterprises |
| Communication between actors; | Overcome Lack of planning |
| Simplified (and clear) regulation framework overcoming fragmentation of competences and responsibility; | Overcome Lack of communication, education, training about environmental matters |
| Usability and maintaining of public resources and spaces; | Overcome Lack of effective knowledge by decision makers |
| More participatory democracy in decision making; | and lack of coordination about environmental condition |

The actor network scheme, focusing on land take and ecosystem services issues in X District is shown in the Figure 6, dividing actors by type (by colour of rectangle): orange for technical and operative institutions (general interests- bourocrats), blue for elective institutions (politicians bureaucrats), red for special interests actors, green for university and research bodies (experts). In the scheme we show different arenas (by colour of circle) highlighting how actors are connected to ecosystem services management.

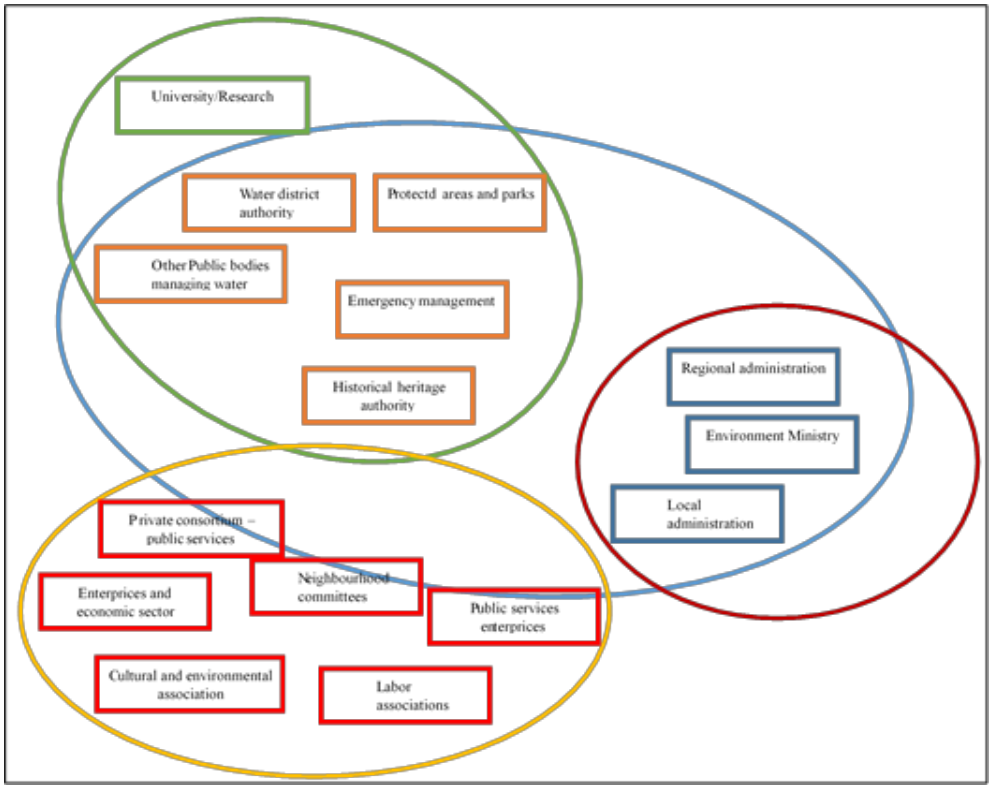


Figure 6 Distict X Actor network on land take and ecosystem services

The green circle, including research and operative institutions is involved in ES management and discussion, and offer technical competence. The dark red circle include institutional competences involved at different level depending on the regional and local policy (in the case study, institution at district and municipal level are involved, without specific regional policy). The yellow circle include social actors, with a scarce level of connection with ecosystem services at the moment. it must be pointed up that only few of these actors have direct competence on ES and that the main (perceived) problems are economic and cultural obstacles. Finally the blue circle identify those actors to involve in awareness program in the next future.

*4.1. First findings from the case study*

A qualitative classification (high, medium, low) of relevance of connections between ES of land and environmental justice issues is provided (Table 2), with the aim to identify more sustainable land use planning directions. The classification is based on case study results on land take, ES and citizen s values. Some of the implication for ES management, urban planning limitation are discussed.

| | | Dimensions of environmental justice | | | |
|---|---|---|---|---|---|
| Ecosystem Services | | Exposure and access | Policy | Impact | Policy-making |
| Provisioning services | Food production | | | | |
| | Non-food biomass | | | | |
| | Reservoir of minerals | | | | |
| | Fresh water supply | | | | |
| Regulating services | Water storage | | | | |
| | Run-off and flood control | | | | |
| | Pollution attenuation | | | | |
| | Global Climate | | | | |
| | Local climate | | | | |
| | Biodiversity | | | | |
| | Invasive species | | | | |
| | Air purification | | | | |
| | Noise control | | | | |
| Cultural services | Recreation /Tourism | | | | |
| | Archives of human history | | | | |
| | Landscape | | | | |
| | Education | | | | |

Table 2. relevance of connections between ES of land and environmental justice issues

A first reading of the table shows that unequal distribution of environmental quality and natural resources, and the resulting different level of vulnerability, has a strong connection with provisioning and regulating services. An increase of ecosystem services, like food production, bio-mass and fresh water supply or runoff and flood control, help in increasing resilience at local level. Provisioning services, like the availability of food produced in agricultural areas and the access to the drinkable water, directly contribute to guarantee an essential level of social justice.

Regulation services improve the response capacity of urban settlements to mitigate effects of natural hazards linked to climate change (flood, drought). Those services have an important role in reducing environmental inequalities and have significant relationship not only with exposure and access inequalities but also the other dimensions of environmental justice (policy, impact and policy making inequalities). It must be pointed out that services as global climate, having impacts at the global level, are not directly producing inequalities. Indirect unequal effects comes from

stresses on economic systems and capacity to cope transitions produced by global change.This is the reason why we evaluate a low connection with unjust exposure or access.
As highlighted by the participatory activities, both workshops of Resilient cities program and the urban planning local conferences, cultural services have an important role for local communities and impacts on environmental justice, particularly in policy-making and participatory process.
The environmental and cultural values from Values Charter discussed above are a representation of social meaning of the ES, here connected to different justice dimensions. Cultural services (tourism, heritage, education, landscape) valorisation is directly connected to the awareness of inhabitants about environmental resources and its economical, touristic and cultural potential. Thus, working on ES awareness in local communities is also a way to promote a sustainable economic development.
This table highlights how different environmental policies influence the ecosystem services management and perception. Notwithstanding a broad regulation on environmental management at the European level, Italy still suffer from difficulties and delays in adoption of EU Directives, for example water Directive 2000/60. In this case the lack of regulation and the ineffective policy results in a unequal effects on water storage ecosystem service. Another example for Italy is the lack of effective regulation on land take, dangerous for ecosystem services produced by soil. The table offer the base for a first discussion to define tools and methodologies, with the final aim of guiding the discussion and policies on ES management, urban planning and land take limitation in a more equal way.

## 5. Conclusions

This research, focused on land take as one of the major driver in impoverishment of ecosystem services, tried to highlight the resulting social inequalities, in particular those produced as consequences of unequal access to ecosystem services.
As a result, it can be affirmed that there is a problem of social inequality produced by land take. There is a certain level of awareness by citizens, certainly of land take and of loss of environmental quality, less of ecosystem services values.
Environmental assessment of land take and ecosystem services and promotion of awareness must work together for the common aim of helping land planning in reducing unequal effects of land take. It must be pointed out that the choice of the two ecosystem services analysed in the case study, even partial, is specific for that area. Studies on local condition should be based on a specific selection of the proper ecosystem services to evaluate.
High resolution data used in this study of land take are a useful tool for local administration for making decision. Their free accessibility make them also a tool for population in assessing the decisions on land use and therefore foster environmental justice.

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# PLANNING AS HUMAN DEVELOPMENT: RESOURCES, CAPABILITIES AND RESPONSIBILITIES

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Keywords: Resourcism , Capability Approach, Responsibilities

**Abstract**

*In recent years the debate on justice focused on the matter of (in)equality and on the challenge of advancing social justice (also) through the practice of urban planning (e.g. Fainstein 2010, Soja 2010). With this paper I wish to contribute to this debate by focusing on two central points, namely, (1) the interpretation of social justice, in planning, as a form of spatial equality , and (2) the matter of defining the equality of what consistent with the mandate and scope of public planning.*

*Drawing on Amartya Sen s* The Idea of Justice *(2009) the paper retraces the origins of the debate on equality and summarizes the perspectives of two relevant philosophical lines of inquiry, namely, the resourcist and the capabilities inquiries. The former perspective approaches equality in terms of the resources at disposal of individuals and strives for defining the social minimum which should be equally allocated to all; approaches equality in terms of the possibilities of realizing the pric individual has in the concrete realm of her living environment. Whilst the former inquiry concentrates on the equality devised by essential goods and universal liberties, the latter concentrates on the pathway to equality achievable by acting on the s individuals with different often, limited - capabilities.*

*By recalling these two perspectives on equality the paper intends to promote a discussion regarding how the two respective evaluative frameworks do and could further inform the scope of public planning interventions*.

## 1. Introduction

In writing this paper I have made some choices about which I wish to inform the reader at the outset. The first is the narrative style which I have opted for, which consists of inviting the reader to reason on her personal experiences while I will elaborate on personal experiences of mine; the second is to limit literature to the essential literature needed to convey my position. My underlying intent is to limit the philosophical premises of my position to their essential tenets and introducing them in the succinct and essential form conveyable through simple personal examples. The empathic reasoning which I try to stimulate in the reader may be fertile of further debates at the yearly AESOP congress in which this paper will be presented.

First of all, I want to introduce the main theme of the paper with a question. Why do we think that human beings are all *equal*? To do so, we need a conception of *equality*, and some ideas regarding how to measure it. In some way, our conception of equality has to do with the observation that we belong to the same species; then, with the further observation that we all have the same basic vital *needs* (eating, drinking, resting). The following observation is that among these needs there are some which need to be secured through certain *means*; that is, food, water, shelter. Then, it takes little to realize that these needs are not comprehensive of other needs, which are relational and emotional: the need to be cared for (on which we depend for much of our life), the need to care for others (something we tend towards for all our life), the need to respond to the stimuli implicit in these relations (experiencing anger, compassion, love, humour). Then, it comes the spiritual which is not necessarily attached to the religious sphere: Marx s conception of human significance, for example, relates to our constant dialogue with ourselves and with nature (Marx, 1844); however, it is easy to observe how despite the (Western) post-modernist claim of the death of god as privileged reference of our spiritual dimension, such significance is found by many in the constant dialogue with *her* God.

None of these elements explains equality though they do participate in its definition; but they are not what we mean when we say we are all equal on earth . What we mean with that is that *each human life has equal worth*. And this is an intuition a *moral* intuition, to be more precise, to which the idea that all human beings are *entitled* to the same set of fundamental means and rights by virtue of birth follows. Now, the immeasurable part of our intuition of equality is our common worth; life insurance companies may well attach a figure to it, however we all know that worth and economic value are not the same. The measurable part consists of those means and rights; how much freedom we need, what type of freedom we need, what rights do we need to secure all of these measurables are the detectors of our condition of equality from one another.

And here is where it starts the problem. Philosophical inquiries rooting in the most diverse ideological backgrounds share this fundamental intuition of the equality of worth of human life, but have been debating for centuries on (i) how to define the liberties and means each and all are entitled to across different cultures and situated conditions, (ii) the indicators through which appreciating the concrete equality of people in relation to these liberties and means, and (iii) what role the state has in securing them and whether this role is desirable at all; if so, within which margins and limitations?

These three points cover centuries of political philosophy and economic inquiry which will be unduly difficult to cover in the limited space of this paper. Therefore, I will only touch upon some of the moments of the relevant debates conducive to formulate my position in relation to equality, justice and urban planning. I will start with clarifying how the notion of equality philosophical accounts of the term, namely, Rawls s *Theory of Justice* (1971) and Se *Justice* (2009). Based on the writings of these philosophers I will outline the broader inquiries gravitating around their ideas, namely, the resourcist and capabilities inquiries. In the following section I will discuss the evaluative frameworks engendered by the respective notions of equality and I will discuss their relevance to the contemporary challenges of urban planning in relation to themes such as the growing cultural diversity of European citizens, the increasing distance not only physical, but also perceptive and experiential - between the poor and the wealthy areas of our cities and between the corresponding life conditions of their inhabitants.

I will conclude by proposing to re-centre the mandate of urban planning on a renewed humanism and to put at the centre of the evaluative practice of urban planning the human fundamental capabilities (Basta 2015; Nussbaum 2003; Sen 2009). My proposal is to endorse a planning approach orientated towards creating fertile relational conditions between urban resources whose fair provision shall

remain the guiding principle of state intervention and the transformative capacity of citizens in relation to their capabilities whose consideration and enhancement should be the evaluative focus of the practice of planning day to day.

**2. What is equality, and why it matters to urban planning?**

Few concepts attracted comparable scholarly interest as the concept of *equality*. The concept entails a descriptive component the intrinsic equality between you and me and a prescriptive component the extrinsic equality that you and me consider just to share with others. The first component relates to the equality of worth of our lives; the second to the equality of the human rights that need to be secured to affirm and protect that worth. From Marx and Engels s conceptio significance of human life which in their *Political and Philosophical Manuscript* they identify in man s necessity to cultivate a continue dialogue with nature and with the self, die (Marx, 1844) to the liberal thinkers who reflected on the role of the state as provider of the basic means and opportunities enabling to pursue that significance (Rawls 1951, 1971; Sen 1979, 1989, 2009) innumerable pages debating the most diverse aspects and implications of these ideas have been written.

Such enormous scholarly interest in the notion of equality has reached its momentum since equality started to be recognized as the *pre*-condition of justice[i]. This occurred also albeit not exclusively - thanks to the systematic economic analysis of Marx and Engels, which positioned equality as a primarily material rather than spiritual condition; however, what equality is and how to measure it remains an open question ever since. For Marx, as well-known equality related to the material condition of sharing the ownership of the means of production enabling the transformation of matter into goods without the parallel production of capital surplus (the capital, that is, the means of production, being commonly owned together with the transformed matter). For Marx the Marxists, and the so-called Neomarxists we are equal insofar you do not own the means upon which my capacity to transform matter depends, and do not own the outcomes of that transformative capacity. For utilitarian thinkers like Stuart and Mills an implicit idea of equality related to the equal worth of each and all citizens in counting for the social pursuit of happiness; this is what we all experience when, as children, we have to decide what game playing and we opt for the game that satisfies the majority. The cumulative happiness of our group of buddies is the maximum happiness achievable; the *distribution* of that happiness though implies that the majority of us enjoys whilst a minority doesn t. So, we all counted equally for determining the happiest choice but in our final condition of happiness we are, in fact, not equal.

It is with the contractarian tradition inaugurated by Hobbes, Locke and Rousseau that the discourse on equality started to be centred on the liberties and resources each citizens shall have but it is only with Rawls, in the second half of the past century, that the distributive outcomes of those resources started to be the fulcrum of inquiry on equality. To go back to my example, Rawls was among the first to reflect with philosophical rigour on the fact that as children we could all equally contribute to determine the cumulative happiness of our group of buddies but that somehow, for some reasons, some of us were unhappy in the end.

I will linger on this latter point which, in my opinion, is the underlying point of the contemporary discourse on equality. The assumption of thinkers like Rawls is that, by intuition, you and me would agree to be entitled, by virtue of birth, to a certain set of liberties and means without which we would be deprived of our mutual opportunities of self-realization. Self-realization in the Raw

conception does not relate to satisfaction or happiness , as the classic u
articulate it, but to be what one wants to be . Rawls conclude through the mechan
ignorance, which I have shortly summarized in a previous writing (Basta 2014) that you, me and all others, under condition of ignorance, would agree on assigning to all of us a set of liberties whose definition is pretty close to that of human rights and means whose identification is pretty close to that to which human rights conduce: basic education, shelter, medical treatment, and so on. This set of liberties and means would be the basis of our social contract and the aim of our coexistence would be that of expanding them from the perspective of the most disadvantaged. This means forcing a little the example of our group of buddies that our normative goal would be to ensure that each of us depart from the equal decisional condition; not determining the game that we will play in the end based on the criterion of cumulative satisfaction.

In reality, the accent on self-realization as what one wants to be which I mentioned above in exquisitely Rawlsian but rather conduces to his fellow Sen, who departing from the ideas of Rawls formulated the famous question Equality of What? (Sen, 1979). Sen challenged this idea of eq as the equal distribution of liberties and means and of social justice as the expansion of those who relate to the individuals departing from a disadvantaged condition; this, according to him, reduces equality to what people have disregarding what people *can concretely do and be* with what they have. Going back to our group of buddies, we may well agree that all of us must depart from the same decisional condition; none of us has to prevail on the other, each of us has the right to propose the game she desires, all of us have to possess the means through which the entire set of games proposed can be played. Does this make us *equal*? According to Sen, it depends on whether our fundamental capabilities are *equally enabled*.

I will give an example. When I was a child, I developed cross-dominance, that is the tendency to use the right or left hand (and eye and leg and hear) depending on the task and not depending on the dominant side of the body that, for 95% of the global population, is either right or left. Thus, I would write on the notebook with the left hand and throw the ball with the right on; I would write on the board with the right hand and hold the racket with the left one. At school, to help myself adjusting to circumstances I had to use some tricks; one typical trick was to incline the notebook towards the right side, when writing, so to compensate for the asymmetric use of my body. This would lead me to take some weird positions on my little school desk. The teacher would recall me all the times claiming that to learn to write well I had to do like others keeping the notebook straight and that if I would, I would overcome that confusion with my hands. In her good faith, she was making a statement of equality: I had to behave equally so to achieve equal results. What she couldn t see is that to achieve the same functioning of others writing orderly and straight I had to be provided other means the freedom to incline my notebook and possibly a wider school desk because *the means everybody had, could not have the same effect on me.*

This is the best summary I could give of Sen s theory of capabilities. It is starting from this observation that equality is not about what means one has, *but about what these means do to her,* that Sen proposed an idea of justice based on the idea of our fundamental capabilities. I will give another example. If you and I are assigned the same means for example, the same education but I have a cognitive impairment, I will not achieve the same functioning that you will achieve. Assuming that I could achieve that functioning by being provided another type of education for example, a teacher experienced in my impairment *then* the means that I shall be provided shall be adapted to my specific capability. Our equality, in other words, is not measured through the allocation of the same mean but through the level of functioning that we can achieve based on our respective capabilities.

This idea of Sen may attract criticism in fact, society, in its organized form known as the state, cannot tailor the means to assign to each specific capability without incurring in the contradiction of treating individuals differently. This was the concern of my teacher, in fact. It is my claim, however, that mature democracies have increasingly orientated their distributional effort in the direction of enhancing capabilities rather than allocating equal goods. Not only: they have also converted capabilities into *objects* of rights. I will give another example. Nowadays, nobody would question the right of a person with impaired mobility to commute on public means as any other non-impaired individual. The history of removal of what in my country of origin are called a long, painful and slow history of social struggle and campaign though. To convert the capability of circulating into a *right*, and to convert such right into design solutions transforming the city in both its public and private spaces, much political activism and social campaign had to be organized. Many more examples could be given from the establishment of social assistance services for elderly, to the educational support given to children with impaired learning abilities, to the mandatory allocation of work posts to people with disabilities the message being that society (or at least European society) has made quantum leaps forward in allocating public resources by bearing in mind the diverse level of capabilities of its citizens and by orientating the ultimate scope of public policy towards enabling equal functionings rather than towards the distribution of equal means.

This brings me to discuss the role of the state in relation to these means. I do so in the following section.

**3. Resources and capabilities: ideas for political synergies**

The debate on the role of the state here intended as the organized and regulated form of social coexistence in relation to resources and capabilities inspired, in my opinion, the most important political philosophy writings of the past two decades. Philosopher Martha Nussbaum is particularly inspirational for the rigour of her inquiry and for her tendency to ponder her ideas always by considering the cross-cultural interpretations they may be subject to. This immunizes her reflection on capabilities from the ideological tone that always in my opinion permeates the writings of prominent theorists in planning theory for example, Harvey, 2008 who have reflected on the city, as a micro-dimension of the state, in relation to (political, albeit they claim human) rights.

To avoid confusing the reader, I will proceed with some order. What is the role of the state towards the resources citizens shall have access to in order to pursue their self-realization? This question calls for a theory of *right* the rights you and me have and for a theory of *duty* the duties you and me and all others have towards each other. Lefebvre s writings constitute the main point-of- theory, for the former issue (e.g. Purcell 2002; Harvey 2008). Little has been written in relation to the latter issue, albeit one could conclude that prominent paradigms like participatory and collaborative planning imply a conception of duty for instance, the duty to provide opportunities of participation to citizens and of formulating goals and constructing decisions together with them and also that citizens participation implies some notion of obligations for example, of bei considering others interests next to the own interests, and so on.

Coming to the main question, one way to reflect on what resources the state shall secure and provide to all is to reason on the notion of *social minimum,* that is, the *bundle of resources that a person needs in order to lead a minimally decent life in their society* (White, 2004). I could engage with the debate on what this bundle consists of however, more fruitful is to construct a reply through observation. What do you, reader, have (had) access to through your life that related to some sort of

social minimum? I can help by replying to this question from the perspective of my experience: a public pre-schooling and schooling system, which enabled my parents to keep working while I was looked after by someone else who was teaching me important things; a public healthcare service, which enabled me to recover from injuries and illnesses; public means for commuting to and from schools and sport facilities, most of which were accessible through the payment of small fees, since they relied on public funds; a public university, that I could attend paying minimal yearly fees due to my scholarly merits, promptly assessed and rewarded by the academic administrative system; plenty of public space and green areas, easily accessible from my parents house and re

The following question is, what among these resources (I realize, privileges) constitute the social minimum one shall be provided in the society in which she lives (in my case, Northern Italy, specifically Venice). In a real setting, at this point of the conversation a fierce debate would probably erupt. Ultraliberals may well reply, none: their theory of right is positioned at the right extreme of *negative* rights, whose fundamental principle is that the state shall *not intervene* in any aspect of one s life. Communists may well reply, all of them and more: their theory of right is positioned at the left extreme of *positive* rights, whose fundamental principle is that the state shall provide all means one needs to live a decent life (and thus prevent their allocation through market mechanisms). Centrists may reply, some of them, for example schooling and education but not sport facilities, whose management should be left to private initiative: their theory of right is a combination of positive and negative rights, whose principle of reference is that the state shall secure the provision of non-exclusive (thus, public) goods, leaving to the market to provide exclusive (thus, private) goods.

To continue reasoning concretely rather than theoretically, let s now observe European democracies position themselves on the spectrum of negative and pos imagine this spectrum as a line at whose left we position positive rights and at whose right we position negative rights. The transition from one to another extreme of the line is continuous not divided into discrete intervals. Where does, for example, my country of residence stands on the line? I would say central however, with a tendency (for many, disappointingly) to move gradually towards the right side of the spectrum. My country of origin is in some respect more on the left side for example in relation to healthcare and for others more on the right side for example in relation to social security. We could replicate this simple exercise for all European countries and then extending it to other countries in the world. Remaining in Europe, however, would lead us to position the majority of countries somewhere centrally; in fact, our constitutions are written based on the recognition of certain positive rights for example, the right to access education and negative ones for example, the right of not been prevented from exerting some fundamental liberties.

This does not reply to my original question; but it helps to introduce my reasoning on what further duties we could associate to the state in relation to the capabilities of its citizens. If we accept as you and me most likely do this idea of the state as provider of some sort of goods and means to which all of us are entitled, *then* the following question is whether the state has a duty also to ensure that you and me can derive the same functionings from them. In part, I have already replied to this question, and I did so again through observation: we already live in states securing effective relational conditions between (social and urban) resources and our capabilities in relation to big and small difference, insignificant and significant impairments. The public university in which I work, for example, has ensured that my desk and my screen are positioned compatibly with my height and with my slight visual impairment; while you read this paper, you might be in a similar *enhanced* condition.

And so with this, I introduced the concept of *enhancement* which is a concept central to my discourse on the political synergies to be activated between resources, capabilities, and cities. I develop it in the following section.

### 3.1 Enhancing capabilities: planning as human development

In this paper I have opted for writing in a narrative style and for avoiding the level of abstraction with which I have treated the theory of capabilities in other contributions (Basta 2014, 2015). I did so for encouraging the reader a peer academic, but ideally anybody else to reflect on her situated, daily, unique life conditions so to grasp the main message which I am trying to convey in an emphatic rather than analytical way: planning is an exercise of *enhancement* of *human development*.

The line of reasoning which I followed to arrive to this proposal by no means a conclusion is that the type of equality we value is the pre-condition of the justice we want; my assumption is that urban planning aims at advancing such justice, therefore, through observation, I proposed that maturely democratic states are called to allocate basic resources to all *and* creating relational conditions between such resources and our capabilities in such a way to enhance our equal functionings. Two theoretical questions remain: the first is that which urban resources shall be equally accessible (thus, being part of the social minimum), and the second is whether these are alway specific capabilities. This latter question is particularly important for urban planning.

To respond to these questions, I refer to Nussbaum s Central Human Capabilitie sake of completeness I report integrally as it appeared in 2003 (Nussbaum, 2003):

> 1. Life. Being able to live to the end of a human life of normal le before one's life is so reduced as to be not worth living.
> 2. Bodily Health. Being able to have good health, including reproductive nourished; to have adequate shelter.
> 3. Bodily Integrity. Being able to move freely from place to place; t assault, including sexual assault and domestic violence; having opportunitie and for choice in matters of reproduction.
> 4. Senses, Imagination, and Thought. Being able to use the senses, to imag and to do these things in a "truly human" way, a way informed and c education, including, but by no means limited to, literacy and basic ma training. Being able to use imagination and thought in connection with ex works and events of one's own choice, religious, literary, musical, and one's mind in ways protected by guarantees of freedom of expression with and artistic speech, and freedom of religious exercise. Being able to ha and to avoid pain.
> 5. Emotions. Being able to have attachments to things and people outside who love and care for us, to grieve at their absence; in general, to longing, gratitude, and justified anger. Not having one's emotional develo

and anxiety. (Supporting this capability means supporting forms of human a
shown to be crucial in their development.)
6. Practical Reason. Being able to form a conception of the good and to
about the planning of one's life. (This entails protection for the liber
observance.)
7. Affiliation. A) Being able to live with and toward others, to recogni
human beings, to engage in various forms of social interaction; to be ab
of another. (Protecting this capability means protecting institutions that c
forms of affiliation, and also protecting the freedom of assembly and po
the social bases of self respect and non humiliation; being able to be
whose worth is equal to that of others. This entails provisions of non
race, sex, sexual orientation, ethnicity, caste, religion, national origin.
8. Other Species. Being able to live with concern for and in relation
world of nature.
9. Play. Being able to laugh, to play, to enjoy recreational activities.
10. Control over one's Environment. A) Political. Being able to particip
choices that govern one's life; having the right of political participatio
and association. B) Material. Being able to hold property (both land
having property rights on an equal basis with others; having the right
equal basis with others; having the freedom from unwarranted search and
able to work as a human being, exercising practical reason and ente
relationships of mutual recognition with other workers.

In a forthcoming article, I indulge on the source of inspiration that Marx s
dignity constituted for Nussbaum s attentive definition of the fundamental huma
move directly to the extraction of the capabilities which, in my opinion, could be related to the urban realm of human life more explicitly than others. These are, evidently, the capabilities related to the exertion of control on the environment, which for Nussbaum are material and here, pace Marx, it compares private property and immaterial the most important one being the capability of participating in the decisions which affect one s living environment.

Compared to the language of rights as used to promote the right to the city -a
if I had the space to discuss it at length here, I would explain my grounded scepticism the language of capabilities used by Nussbaum to articulate human functionings differs because it is (i) affirmative: capabilities are inherently positive their spectrum could be visualized as a compact circle with at its centre the notion of human dignity, and (ii) substantial: capabilities are *objects* of rights not rights *per se*; that is, they can be evaluated as ways in which people can function, not as entitlements that people have. I will clarify this latter point with an example. If I sit on a wheelchair, I am entitled to circulate on your same bus this, in fact, is meant to be equipped to allow me to travel as comfortably and safely. However, if one wants to investigate whether I can indeed circulate as comfortably and safely as you do, the question I would be posed is not whether I have that right but whether yesterday, the day before and the day before it I could take that bus or not. This example serves to

clarify what I mean when I say that capabilities are affirmative and substantial (I can or I can t do something) in contrast with the formal nature of rights (I have or I don t have that right).

Now, when thinking of what one can or cannot do in cities, some of the functionings related to Nussbaum s capabilities most of us would regard as fundamentals are, together with other functionings that I will elaborate on in more details in a forthcoming article,

1. The capability of living in a safe place commensurate and adequate to one
2. The capability of living healthily and receiving affordable medical treatment in the city,
3. The capability of travelling from one part of the other of the city safely and inexpensively,
4. The capability of meetings others, joining and creating groups, cultivating interests and sports,
5. The capability of accessing nature, of being surrounded by green and animals,
6. The capability of working and of constructing the own path of development freely,
7. The capability of learning, acquiring new competencies and forming new ideas, of relying on a pre-schooling and a schooling system which secures these functionings to children.

My idea is to use these functionings as reference for devising evaluative instruments capable of investigating what people can concretely do and be (Nussbaum, 2003; but also Robeyns, their living environment and for generating the actual knowledge on the city from which urban planning could tap its inspirational guidance. Nussbaum, however, offered me an opportunity to reflect not only on the front of inspiration but also on the front of the responsibility which the exertion of the right to participate in decision-making (one of the few rights she explicitly associates to capabilities) constitute for (we) citizens. I reflect on this, briefly, in the following section, which precedes my conclusions and ideas for further research.

**3.2 Capabilities as responsibility**

On why capabilities entail an individual responsibility I discussed in a previous contribution (Basta 2015). I would like to return on that point and to connect it with the line of reasoning which I followed in this short paper.

Having a right does not mean exerting it. Two conditions are necessary: (i) the concrete opportunity of exertion, and (ii) the will of exerting it. Positive rights of the kind parti can be discussed from both perspectives. Here, I will focus only on the second one.

Some months ago the municipality of The Hague invited all residents of my district to participate in a meeting in which the project of renewal of the system of collection of domestic waste would have been presented. This project included some changes of the routes of the cycling paths so to make space for the new underground containers. These changes demanded to eradicate some magnificent oaks whose blooming in the spring, I can tell, was an event we were all looking for every year. My partner attended that meeting, which I could not attend instead. When he reported the discussion he told me that our neighbours expressed firm opposition against the removal of the oaks something we could expect, considering and that the representatives of the municipality responded that their removal was inevitable; the roots of the oaks had caused several cracks on the paths, and it would have been unduly costly to first remove them, and then replanting them. The story continues with some rumours regarding a petition launched to save the oaks to which we two did not participate, simply for the fact that we were not informed about it. Another petition was launched to prevent one of the cycling paths facing our street to be re-routed. I thought this latter petition was unmotivated, as evidently the re-routing of the path was based on safety concerns related to its proximity to a traffic light at which cars, in the morning, used to line up in numbers. I didn t sign this latter pet

the former one. So the oaks were cut and the cycling path re-rerouted, with much discontent from the side of our neighbours.

Of this story I wish to highlight two things. The first, is the petition for saving the oaks which I could not sign; the second is the petition for not re-routing the cycling path which I haven t signed. I former case, was I prevented from exerting a right? Obviously not; simply, I concrete opportunity of exerting it. In the latter case, was the right of my neighbours of not seeing the path re-routed violated? Certainly not, as the reasons of the municipality for re-rerouting it were very well-considered. In this latter case, I had the opportunity of signing the petition, and *not* signing it consisted of the equal exertion of my right.

What bothers me still is the petition which I couldn t sign though. When I think for not having attended that meeting. There, I could have probably been informed of that initiative, and I would have most likely signed the petition; through it, I could have exerted my right to make a point regarding our much valued oaks. Not having attended that meeting means, for me, not having been *responsible* towards *my right* to try to save them.

This is what I mean when I say that capabilities call us to act responsibly: to take full ownership of our opportunities to participate in decision-making without expecting that others will knock at our doors and will create all the conditions for us to do so. Active citizenry, and here I conclude, means *responsible* citizenry: it entails some sort of obligations moral rather than legal; but not for this less important to exploit all the opportunities we have to participate in the transformation of the city that the language of rights (in Harvey s use of it) reduces to something we must *h* that there is something that we must *do* in return.

**4. Conclusions**

I have a few hundreds of words left to conclude my journey throughout personal experiences, the theories which may help framing them and orientating them towards a higher level of abstraction, and what I wish to propose as a way to regard urban planning - and ultimately to make urban planning happening in a certain way. If I had more words I would linger on why the language of rights, totally prominent in planning theory, is important to convey one s political position in relation to these issues but not conducive to engender viable evaluative instruments for detecting how people, concretely, live in their cities and how much they can and do contribute to its transformations.

The language of capabilities is a more robust point-of-reference for formulating these evaluative instruments, and many of the example which I gave support this proposal of mine. Urban planning has to re-conquer space for growing its evaluative practice, abandoning or at least limiting its tendency to occupy terrain for implanting a judgmental narrative on how cities are produced.

This space could be reconquered through a new humanism, capable of re-centring the discourse on planning on human development what people can concretely do and be and of steering its evaluative practice towards the formation of knowledge regarding how a more capable and responsible citizenry can be encouraged.

Philosophers have always given an hand to all others along this difficult journey. Let s not confine them in their world of ideas and neither in the most remote and unattractive rooms of our congresses.

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[i] I feel the duty to signal that several monotheistic religions have been founded upon this recognition in the order of thousands and not hundreds of years and that philosophers of the stature of Kant and Hegel thanks to whom we could read Marx at some point - were impregnated, if not of the respective ontology, most certainly of the respective transcendentalism. The secularization of the European philosophical inquiry across and beyond the era of Enlightenment is, in historical terms, the new born baby of human thought. The idea that religious beliefs do no longer play an ontological and epistemological role in today s Western society shall be therefore re-considered. When orientating our intellectual reflection from a position of *self-reflection* (we philosophers talking about and among ourselves) to a position of *observation* as philosophers like Sen and Nussbaum invite us to do the world would appear closer to what it is: a world where people construct their identity, perceptions, explanations, judgments and ultimately idea of self-realization upon the foundations of their religious belief. Whilst the reader may wonder why this should be of importance for European urban planners, I invite the reader to reflect on how much space is allocated to cultivate such credos in our cities; the role and significance that that space has had historically and has for many still; and how much disputed and contended that space can still be. A practice of planning insensitive to the symbolic and concrete importance of this space is a practice we should neither desire nor encourage. It is a practice of which we should, rather, discuss beyond the notion of diversity and the discourse on rights and frame within a broader humanistic discourse on the concrete space that what many regard as the source of their human significance reclaims in our cities. I will not do so here; my proposal ends with this note.

# WHO IS ENTITLED FOR THE RECOGNITION OF PUBLIC RIGHT IN THE URBAN DOMAIN? A PERSPECTIVE FROM THE SOUTHERN ITALIAN CONTEXT

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## Abstract

Who has the right of access to public space of the city and what are the limits depending on the circumstances: the shift between the public and private spher institutional system, laws and planning tools. If many scholars focus on rel public/political spaces, the sphere of public facilities is a central issue. In by an ancient national law, aimed at ensuring minimum collective rights, the standards as mandatory quantity of areas to locate within the municipal plans regions of Northern Italy have satisfied and raised this standard, the southern situation of severe shortage. This lacking of equipment, during the long period affects mainly the disadvantaged groups of the population. Although the urban intercept the multiplicity of services required by the plurality of social group public/private partnership does not ensure the creation of truly inclusive spa quality. Even new national bill on urban regeneration appears unfair. Subjugate interests, it raises questions of planning responsibility with respect to popul most easily excluded, not possessing negotiable values such as property rights New issues are arising from legislation proposal involving the equality between distribution. These approaches lead to rethink on public responsibility and ab depending on the geographical context, and economic-political and bureaucrat reference, on the basis of Arendt s thought.

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## 1. Introduction

Scholars have highlighted many facets of public space often in compare with (private, social and political) from really different perspectives. Among explorations, the relational nature is surely one constant feature of the publi has been highlighted, for instance and not exhaustively as an informal contact simultaneous encounter of social needs, which are motivated by individualizatio (Lefebvre, 1968), as speech and action among equals in political pluralism (Ar reciprocal recognition of differences, which are moved by power relationships am (Young, 2000) and eventually as collaborative and communicative interactions Hillier, 2003).

This relational nature is certainly connected to the collective mode of using pu in the double meanings of spatial and political dimension. The rights corr dimensions, which should be sustained by the free participation to the city. Ac (1968), such rights to the city consist in a form of conflicting appropriation, in terms of property right and is based on the recognition that the social nee They interact in urban space with rhythms and different time of the daily life survival and security reasons, but also because inhabitants are moved by desire of welfare that the recreational and ludic dimension of creativity and festivity

Mostly untied by the exchange value, according to Lefebvre (as well as other S sphere of the game and of the festivity is the highest form of the use value tha urban space. What can be said in period of crisis when disadvantaged groups are the risk of exclusion from this dimension as well as from basic needs satisfacti

From this perspective, the right to the city does not appear only as a basic
sphere kept privately) but also to the complementary public space of serv
interactions among social groups are more evident and acquire also political sen

According to the Arendt analysis, unlike private sphere (privately possessed a
primary needs) public space is a place kept in common with a wider community whe
through speeches and actions recognize themselves and are recognized. Public spa
space connecting people and places where different interests, not merely economi
to be among others in the world, appear each other under public light (Arendt,
plurality of human condition, the public space of the city because of its cha
properly a political space.

With this meaning, the process of spatial planning can be considered a place
political sense (Arendt, 2005) can flourish because different social groups and
the same object from multiple points of view within a required frame of shared l
when laws are not aligned with sharable values, to equality, but are only
commodification economic principles?

Neoliberal economic principles by influencing each political, social and private
arouse ethical question on political responsibility with respect to social group
excluded from participation to planning processes because they do not own negoti
as property rights or stable incomes. In a process of neoliberal development,
space of commodification (when is not a financial space) where the exchange va
both the relational value and the use value of urban space. Who is entitled to
space? Who holds this responsibility?

The following paragraph argues that asymmetrical power relationships cause a sh
space borders and manipulation of consensus in political space of planning, wh
neoliberalism produce ethical crisis and lack of political responsibility on
Arendt (2003), in contrast with the dangerous and widespread preconception to n
supports individual and political responsibility to make difference between jus
mostly in public domain crisis to avoid indifference to ethics, which drive us t
principles in laws on urban planning regarding Italy and southern Italian contex

In the following subsections, the paper investigates the topic of the public spa
which is ruled by an ancient national law for planning practice, rooted in
principle. Equipment of public services were claimed and established as collecti
This law is compared with a new bill, at national level, which raises quest
distribution equity or indifference principles, within a framework of econ
development.

Since judgment and responsibility are framed by institutional, economic, and pol
case study from a southern Italian context, where unbalancing in provision of
exacerbated, will show to what extent these collective rights to the city ar
planning practice, which of them are ascribable to previous government and whic
current political government.

## 2. From relational values to responsibility for public space

### 2.1 Power relationships and implications in planning

Lefebvre s idea that the city is a continuous and complex oeuvre, worked by th
citizens, leads to consider urban space as a social product of a collective acti
value and perceived significations that should not be converted in tradable g
exchange value. The same participation to oeuvre is recognized as a right an
terms, as a right of responsible self-government of urban space.

Although the relational values and use of public space are socially produced, it
they are gained without explicit or latent struggles among different social groups
power relationships, which are not habitually symmetrical (Young, 1990), neithe
nor in the public arena of planning process.

Who has the right to the public space and what are the boundaries to have acce
rights, as several authors pointed out (Mitchell, 1995; Harvey, 2013), vary beca
situations, the shift between public and private sphere, the political-instit
economic system, the norms and the plans. The public space in itself cannot
considered as neutral and fixed over time, this idea should be demystified, beca
result of impermanent conflicting interests and power relationships.

For instance, when the private space of house increases for wealthy people, i
usually out from this sphere (like places for encounter, gyms and fitness, garde
for disadvantaged people in terms of areas dedicated to common activities, the
services takes a compensation function (Ricci, 1999). Also, when the rules esta
time to use specific public spaces, like parks and gardens for instance, it mea
will be included while some other will be explicitly excluded (Mitchell, 1995).

The spatial plan, in particular, as a political representation of the conceiv
1968) can reshape power relationship among social groups, by affecting the reso
and the rights to the city, when it do not become just a cultural mediator for
economic interests. It is well known from Gramsci analysis that the hegemon
necessarily imposed from the top of an ideology, can be instituted also throug
civic society, through consensus. This latter interpreted as common sense
traditional values and interests, contributes to the continuation of a cert
whether it is not permeated by original cultural processes, also imported by cul
is not rooted therefore on the development of ethical principles (Chambers, 1990

Such a process of consensus building despite being deeply decentralized is not
manipulation of neoliberal hegemonic social groups. Strategies of expropriatio
some concepts on equality principles in urban regeneration and participative p
typically displayed from southern areas of the world (Holston, 2008; Miraftab, 2
Lo Piccolo, 2010).

They are habitually based on economic domination and on the ability to produce c
persuasive discourse, by influencing for personal advantage the public are
participative planning practices, which rely on citizens inclusion perceptio
utilized for strengthening the pre-constituted economic interests. The commo
though interpreted as a result of conflicting interactions among social grou

automatic sum of private interests), is realistically driven by hegemonic cultu
crisis of ethical principles, without a real perception of political responsibil

2.2 Arendt thought on political responsibility and faculty of judgment

With this regard to ethical principles during period of crisis, Arendt (2003)
between individual and collective responsibility as well as the judgment facult
dynamic process of the thought, an apparently less political activity since
soundless dialogue with themselves and staying in company with themselves.

While the responsibility in face of the law is always individual, the collect
intrinsically political, both when an entire community or a government takes th
past actions, even of only one of its members, and when a community is deemed
what has been made in its name (Arendt, 2003, p. 129). This latter case is the most inte
Arendt because concerns any kind of political community (beside revolutionary
totalitarian regimes) that takes the responsibility of its past and of its prede
benefits of their merits as well as being aware of the disadvantages caused by t

However, the political community is not guilty for the misdeeds of its predec
ethical level nor at juridical level, as well as political community cannot ascr
of its predecessors. Supporting, unlike obeying to, the speeches and the action
is understood as an equal among equals, for initiating new political processes
redeem the past with unpredictable results anyway.

The political responsibility does not however exclude the individual responsibil
faculty of judgment whether political actions, laws and orders are not aligned w
principles. In this case the not-participation (that can be a choice in demo
develop in active resistance. The faculty of judgement, which is founded on self
not, or not only, discern the lesser evil, which in particular circumstances is
distinguish good from evil, justice from unfairness.

The Arendt reflections are framed in a period of political balances reconstructi
totalitarian regimes, caused by a severe crisis of common ethic, resulting
fundamental ethical laws with the complicity of a wide section of well-educated
system of thoughtless bureaucrats. That period for its example of limit case,
circumstances of crises in which the thought faculty missing and therefore the
an own judgment causes negative consequences in the arena of public domain.

This ability to form an own judgment is independent from intellectual capacit
cultural background, rather rests on the habit to think, to doubt and to wonder
order to make flourish the conscience, which is interpreted in the double meani
to examine opinions revising their validity. Unlike prejudice, the faculty of judgm
particular cases, which cannot subsume to general rules (Arendt, 2003, p.163
thinking, people cling to the rules of already prescribed behaviour and get used
rules content as to not take a decision (Arendt, 2003, p.154).

Nonetheless, Arendt wonders to what extent the faculty of thought, exercised i
into political sphere, hoping for an answer by political philosophy, considers
maieutic, as one of the most political activities during periods of crisis of
purifying and invisible activity of the wind of thought frees the judgment fa

product (Arendt, 2003, p.163). The thought does not create values or discovers c
good because rather disperses the consolidated rules of behaviour; however its e
relevance leaps in the foreground during emergency periods and finishes of be
political field (Arendt, 2003, pp.162-163).

As highlighted by other authors (Davoudi and Brook, 2012) responsibility and ab
are strictly linked to political participation (or not participation) in publi
decisions, to establish norms, laws and plans. In a period of economic crisis a
well as of political representation, I wonder who is entitled for the acknowl
rights in urban space. Who holds this responsibility? I try to answer by explor
of southern context, framed by Italian debate on new bill on urban planning pri
proposed erasing of norms on public space of services.

2.3 Law principles on the right to the public services equipment in Italy

In Italy the public space of services is ruled by a national law enacted at the
last century (n. 767/1967) and in particular by a related ministerial decree (MD
the decree on urban standards . Unlike other European nations, these law and de
allocation through municipal urban plans of a minimum of areas per person dedi
services, the so-called urban standards.

According to the decree, in particular, the municipal urban plans distribute
neighbourhood the minimum need of areas per person of four main groups of public
urban standards): public schools; public parks for game, sport and leisure; pub
areas for other collective facilities like those for culture, health, security,
While at general level of urban scale, municipal urban plans allocate minimum th
areas per person dedicated to public urban parks, hospitals and high school
standards). Additional typology of local and general facilities can be obviou
standard without any predetermined quantity of areas.

These minimum needs, expressed in square metres per capita, were appraised on
several researches, professional handbooks and planning practice, mainly foc
technique, in a period of great expansion of the cities. The cultural debate on
decode social needs through the sizes of areas for services came also from ot
architectonic projects of specific buildings and facilities like schools, playgr
ground etc. (Falco, 1987).

Consequently to widespread demands raised by civic society and by radical planne
social needs and democratizing planning, the left-wing political parties have fo
that time to improve and modify the entire body of laws that had ruled urban pla
war world. The reformer law and related decree were indeed obtained through soci
political mobilizations for claiming collective right to the city, in orde
urbanization and unequal decisions in planning practice, mostly influenced by
southern regions also by criminal groups, like mafia, with the complicity of so
Nevertheless, the decree on urban standards has interrupted fertile researches
of the public space for services and currently it fails to intercept the multip
claimed by the plurality of social groups inhabiting the city.

Waiting for an updated national law on the principles for urban planning, many
officials and planners, however have interpreted over the time these urban st

flexible approach, by including private facilities within urban plans. This pro
privatization has involved both northern and southern regions, although minimu
public space has been previously ensured in the northern regions (also because
laws), while a severe shortage has been usually recorded in the south.

As some scholars have pointed out from the point of view of the distributive
private sector can be more efficient than the public sector, nothing hinders
with full tariff for wealthy people provided that ensure free services for low-
therefore means to maintain minimum standard of public space for services in the
(Falco, 1987; Ricci, 1999). Consequent to the development of neoliberal economy
sector shrinkage, even the private provision (sometime even inconsistent with m
not definitely sufficient to balance the great lack of urban services, which ge
the southern regions.

Mostly in great cities like Palermo, the public/private partnerships (the
programs) focus their attention on the multiplier effect of the real estate i
improve the urban quality of neighbourhoods at high risk of social exclusion, us
of these kinds of interventions. Unlike the partial success recorded in northe
areas these programs substantially favour the creation of private facilities, wh
to medium-high income population groups, leaving practically unchanged the pu
services and the deprived social context (Bonafede and Lo Piccolo, 2007).

Despite the effort of the third sector (voluntary services and associations) te
disadvantaged groups of population continue to be affected by the public equip
remaining in urban condition of overall hardship mostly in marginal neighbourho
regions. In addition, during periods of economic crisis, the segment of popul
needs of the public services like health, school, culture and sport, increases r

In this situation, the right to minimum equipment per person of public servic
discredited by neoliberal positions instrumentally, when not utilized as persu
business. Actually, the decree on urban standard does not appear adequate for
different demands expressed by the flows of socio-cultural groups, which are m
body of the city, like the migrants for instance. However, the current debate o
the Principles on matter of public spatial policies and urban regeneration
rarely focalized on the enhancement of public services equipment in urban domain

The new national bill does not regard the development of policy for recognizing
redistributions of the rights to the city, the quality of services and their s
environmental protection and of the number of population compared to morpho
typological aspects within the urban fabric (rather than the old zoning). The bi
to ensure indifference of owners positions principle with respect to the plan

Such indifference principle implies the rights for owners to build on the en
city through the free exchange and transfer of such building rights from one
depending on negotiation with municipal officers on distribution of the services
indexes, probably equalized, which are established for urban and rural zones wit

As some scholars highlight from this perspective, the development of financial
building rights will explicitly imply the growth of private buildings unlin
demographic dynamic and soil consumption concerns. Despite volatilization of fin

fact the capital has always the need to invest in tangible goods as the urban
2013). While, it seems that municipal technicians and planners need to become s
in order to acquire areas for services for free, by exchanging with private owne
in other areas or by increasing the building index in built-up areas.

Though, this indifference principle does not ensure that public action can be fr
influence of the individual owners and of the great financial capital. On the
giving to the private owners more contractual power with respect to the public
expressly requests only the owners as included subjects in processes of pla
regeneration.

While the bill considers the building rights freely tradable as a precondition
treatment of the property, the previous national decree on the urban standards
the minimum equipment of public services per person is simply eliminated by the
Decisions on the issue are devolved to the regional levels of legislation, whe
allowed to establish criteria for planning public equipment. However, the region
a weak role in the absence of national principles to which the regions should
Moreover, regional laws cannot refer to national norms abolished, unless local
new laws more restrictively.

In this background, the only recognized form of equality is incorporated
commodification. When the inhabitants do not possess negotiable values, like p
steady incomes, how do they access the rights to the city? Does the minimum equ
services per person continue to be a form of equity? Who is not involved by e
among owners, has the right to participate at the democratic processes of pl
relational values of public space yet significant?

These questions are linked to concepts of political responsibility and faculty o
period of economic crisis and ethical values, which in their turn are reflect
planning practice. To start answering the above questions, a particular case of
within Italian south regions. It clarifies how much the political responsibility
governments is really hard to bear for the political community in terms of publ
and urban low quality. The analyses illustrated in the following subsection are
to appraise how much these law rights on public space endowment have been overwhe
initiatives and principles are implemented by current government, taking respons
in the terms clarified by Arendt.

2.4 Public space of services in the Italian southern context: the case of Palerm

In the last year, the new municipal government of Palermo (in charge since 2
update the urban plan, since urban constraints had expired. In addition to oth
infrastructures, these constraints regard the public areas dedicated to ser
Therefore, the debate on the new urban plan was the occasion to revise the goal
of uncertainty regarding national and regional laws on urban planning and a
minimum
equipment of public services per capita.

The municipal directives for the plan, a sort of technical/political guidelines
of technical department of urban planning, illustrates existing public serv
prevision, by describing typologies and areas occupied or still to be emp
neighbourhood except for historical centre because is ruled by a different pl

indications, these data on areas are not linked to the number of inhabitants, ju
public services
are not distinguished from the private ones. While the population is known, da
between public and private services are not therefore available.

By using data provided by municipal offices, the analysis is therefore addresse
existent and in prevision amount of services per person within the entire m
aggregating 23 neighbourhoods; 2) the distribution of existent services per
typology and for each of the 23 neighbourhoods; 3) the existent and in previsio
urban level per person; 4) the consequent soil consumption, measured as percent
areas designed to services on the entire area of Palermo (except historical cent
urban level. The first three analyses use instead the index of square metr
($m^2$/inhabitant).

The typology of services and the quantity per capita are compared with the
standards of 1968 as described in the subsection above. The data of popul
neighbourhood is provided by municipal office for the year 2010. The total popu
655,380 inhabitants, while the total area of Palermo (except historical ce
157,433,036 square metres.

Table 1. Local Services Palermo 2010

| Typology | Urban Standard ($m^2$/inhabitant) | Existent ($m^2$/inhabitant) | Prevision ($m^2$/inhabitant) |
|---|---|---|---|
| School | 4.5 | 1.9 | 3.3 |
| Common Interest | 2.0 | 1.4 | 2.7 |
| Park | 9.0 | 2.3 | 6.0 |
| Parking | 2.5 | 0.7 | 2.4 |
| Total | 18.0 | 6.2 | 14.4 |

Table 2. Local Services Soil consumption Palermo 2010

| Typology | Theoretic by Standards (%) | Existent (%) | Prevision (%) |
|---|---|---|---|
| School | 1.9 | 0.8 | 1.4 |
| Common Interest | 0.8 | 0.6 | 1.1 |
| Park | 3.7 | 1.0 | 2.5 |
| Parking | 1.0 | 0.3 | 1.0 |
| Total | 7.5 | 2.6 | 6.0 |

The analysis on the entire area of Palermo (except historical centre) illustra
public service equipment is equal to about a third of the minimum established by
shortage is mostly recorded for parks (equipped for game and sport) and for
(primary, secondary, kindergartens and nursery).

Furthermore, the supplementary areas in prevision for the public equipment do
situation (Table 1). Also by adding these new areas foreseen by the directive
amount of services does not reach the minimum established by law, mostly regard
public parks.

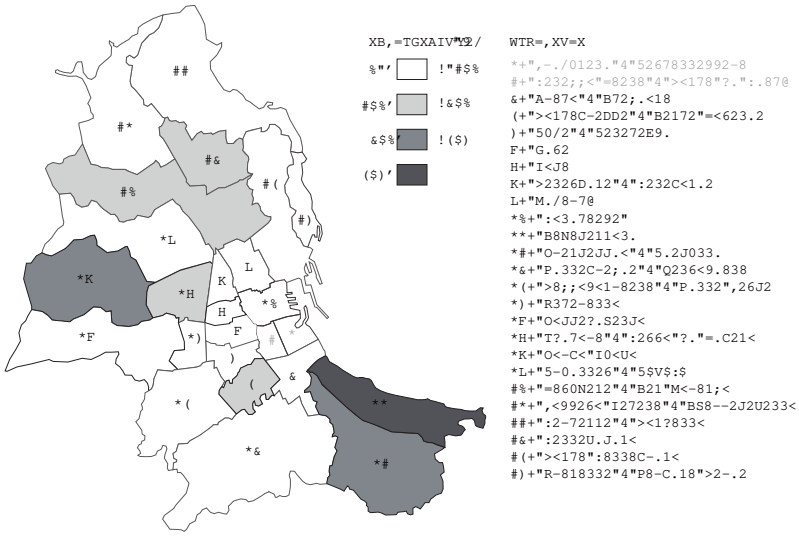

Figure 1. Schools per neighbourhood (m²/inhabitant)

In particular, the distribution of services per-neighbourhood shows that in t
cases, the areas for schools are minus or equal to two squared metres per inh
Only four neighbourhoods, Montegrappa-Santa Rosalia (n.4), Uditore-Passo di R
Resuttana - San Lorenzo (n.20) and Pallavicino (n.23), have an endowment of educ
between two and three square metres per capita. Two neighbourhoods, Brancaccio
and Borgo Nuovo (n.18), exceed three square metres per person and only one, Set
has equipment above standard, probably resulting from a high concentration
schools which should be more correctly included in urban facilities level.

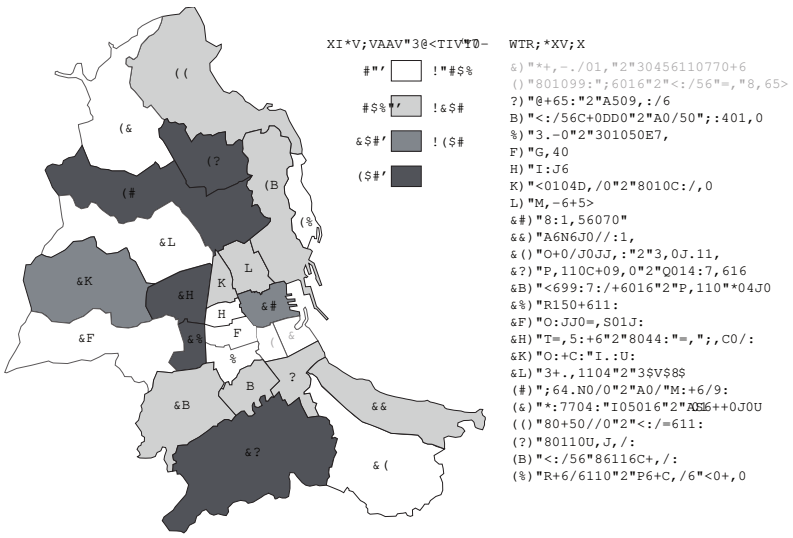

Figure 2. Common interests facilities per neighbourhood (m²/inhabitant) Palermo (m

With regard to facilities of common interest (Figure 2), five neighbourhoods
exceed the standard (two square metres per person) and the central Politeama nei
is near to mandatory minimum, while eight neighbourhoods reach no more than one
per inhabitant and eight others have values less than or equal to 0.5. In addi

analyses could probably show a large incidence of the religious facilities co
services for collective activities.

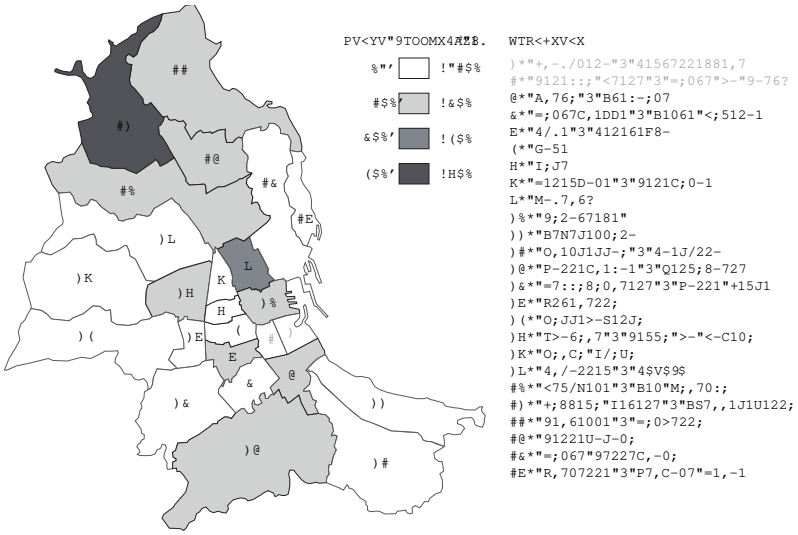

Figure 3. Public parks per neighbourhood (m$^2$/inhabitant)

The public parks for games and sport (Figure 3) only in Tommaso Natale–Sferra
reaches values between six to seven square metres per person, while in the
neighbourhood (n.9) the values are between four to six square metres per perso
neighbourhoods the values are between two to four square metres per person, whi
the thirteen neighbourhoods the equipment of public parks is not over two sq
person.

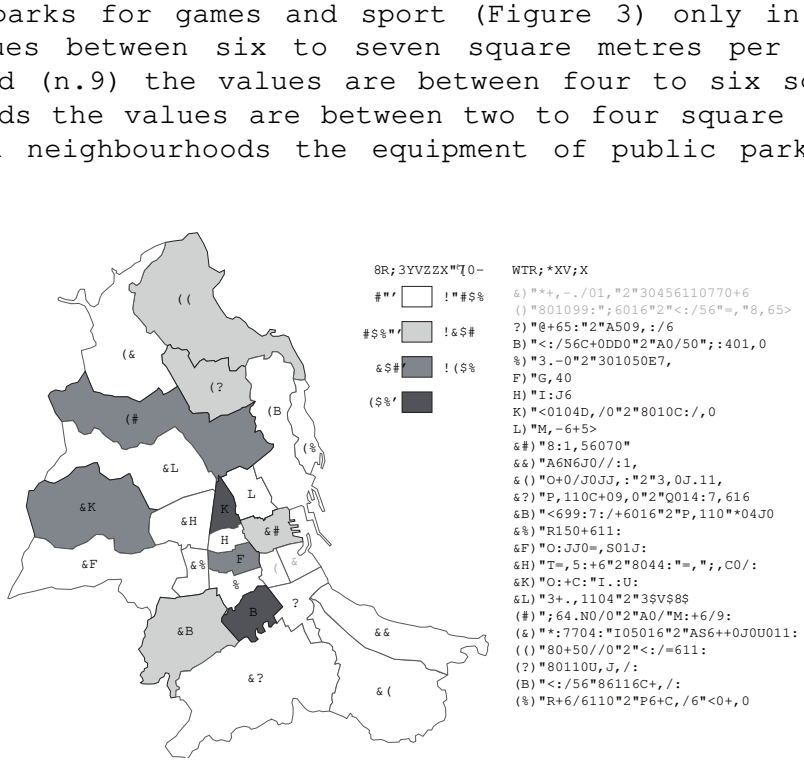

Figure 4. Parking areas per neighbourhood (m$^2$/inhabitant)

With regard to parking areas (Figure 4), the highest values are recorded in Zisa
(n.18) and Resuttana–San Lorenzo (n.20) that exceed the standard in Montegrapp
Santa Rosalia (n.4) and Malaspina–Palagonia (n.8) because of computation of gre

should more correctly be included in services at urban scale. For four neighbou
n.22, n.23), the equipment of parking areas is between 0.5 and 1.0 square meter
all other neighbourhoods the recorded values do not exceed the 0.5 square meters

Table 3. General Services Palermo 2010

| Typology | Urban Standard ($m^2$/inhabitant) | Existent ($m^2$/inhabitant) | Prevision ($m^2$/inhabitant) |
|---|---|---|---|
| High School | 1.5 | 0.5 | 1.3 |
| Hospital | 1.0 | 1.7 | 1.8 |
| Urban Park | 15.0 | 3.7 | 3.7 |
| Total | 17.5 | 5.9 | 6.8 |

Regarding the public equipment at the general levels as urban parks, hospitals
(which should overall respect the minimum quantity of 17.5 square meters per cap
is not better. As can be seen (Table 3), also in this case the recorded total va
the mandatory quantity. Only hospitals have values over the required standard pe

Table 4. General Services Soil consumption Palermo 2010

| Typology | Theoretic by Standards (%) | Existent (%) | Prevision (%) |
|---|---|---|---|
| High School | 0.6 | 0.2 | 0.5 |
| Hospital | 0.4 | 0.7 | 0.8 |
| Urban Park | 6.2 | 1.5 | 1.5 |
| Total | 7.3 | 2.5 | 2.8 |

In this background, the incidence of soil consumption of public equipment on t
Palermo is really modest both considering local services at neighbourhood scal
general facilities at urban level (Table 4).

2.5 Results

Based on data of directives for urban plan, the analyses highlight a great d
equipment, which is not balanced by foreseen provisions, neither in quantitative
general levels, nor in distributive equity and qualitative terms. The municipa
promote the attention on efficiency in managing public/private services, althou
the references to the spatial and environmental qualities of these latter.

An interesting spatial analysis, which is based on a social hardship index, is
section of the municipal directives as an unconnected aspect from public serv
Linkages between these two aspects are needed. Nothing is therefore said on
demands of multicultural city, on the inclusion of disadvantaged social groups
environmental issue (like energy saving, alternative energy using, soil perm
conservation and security of buildings and on sustainable mobility) as some
criteria (or parameters) to consider for an equitable public provision of servic

The issue is particularly problematic since in Palermo the endowment of fac
computed not only by including the private services, but also by referring to
inhabitants. In other words, if the volumes of buildings for housing become the

100 mc per capita) to appraise corresponding number of population (as original
decree on urban standards), the quantity per capita of the endowment of servi
further, showing instead a great wastage rate in terms of empty housings.

Furthermore, the municipal directives for the urban plan do not mention many
buildings and green areas, which are derelict in the city, in order to be re
services functions. A transparent appraising of convenience for their renovati
increase and enhance public space of services should be taken in consideration b
to privates. With this purpose, exhaustive maps of public properties and their c
needed as well as descriptions on the use of urban space.

In a frame of severe contraction of public local finance, according to munici
acquiring of the new areas designated for public facilities relies explicitl
measures among owners and consequently on the building rights freely transferab
distributed on all over urban zones. Implicitly inspired to the abovementio
principle, these measures imply the same ethical questions regarding exclus
inhabitants from the democratic process of planning.

Moreover, the public services reduction in favour of private ones has been o
period of crisis and deregulation because of the contraction of local public fi
Italian northern areas where though regional laws had already increased the mini
public services compared with the quantity established by decree on urban standa

Some private services provided that are subjected to particular conventions witl
certainly contribute to improve the urban endowment, although the public prop
warranties over the time, principally if the latter is recognized as a commo
treated as a particular form of private property of local government. Such dist
in the public institutions and latent conflicts which practices of the public
which are insurgent from the city, have the merit to make manifest.

## 3 Conclusions

In a frame of neoliberal practices development, the value of relational use of
related rights of citizenship are considered negligible compared to the value of
commodification. Although neoliberal tendencies are more developing in contemporary
Italy social and political concerns about the public space decline in former t
minimum measures for territorial allocations of public services. These minimum
aimed at ensuring, at least on the theoretical level, rights of citizenship, re
social needs and according to distributive equity principle.

In following periods in Italy, the deregulation practices in planning have tri
principles of equity and social justice with flexibility and efficiency from a
avoiding answering plurals social demands and, mostly in Italian southern co
redistributing citizenship rights for deprived population groups. Neoliberal p
aimed at promoting privatization of public spaces removing their public relation
only resulted in exclusion of weaker social groups from citizenship rights, b
confusion among political ends, technical tools and ethical principles.

It is not, in fact, political aim of every government (central and local)
endowment of public space for services (distributive justice) expanding access t

which at certain strict conditions could be justified by means of compensatory
owners. Conversely, some urban plans as representations of political space a
privates real estate values and the construction volumes consistently with t
rights of building inherent any privately owned land and freely tradable in the

According to a recent Italian bill, the principle of equality to have access to
be replaced by indifference principle among all owners regarding public dec
planning as well as, in a technical level, the building index could be indiffe
urban zones in the city. In other words, these urban zones are equally indiffere
do not have intrinsic features as well as private sphere and public sphere are
mere properties. Consequently, according to bill, only owners could be enablec
public spaces of services under their entitlement of properties to participate
plan and to negotiate their freely tradable building rights.

In a background of political representation crises and of public local financ
negative impact mostly on southern contexts, is the public actor (as local go
institution) aware to represent inhabitants both owner and without property? In
who is entitled for acting in the name of the public property contextually rep
who are not owners, according to the national bill, the first ones will be r
participation to planning process, while the second will have only the individu
respect law. This mode of equality is a paradox in front of the law on urban pla
arena, because it introduces a great discrimination among citizenship rights,
owner and who is not an owner; between social groups, which are entitled for rec
space and excluded ones.

As highlighted by Arendt, whether social sphere is governed by difference and
principle, regulated by uses and customs, while private sphere is governed by e
ruled by daily necessity, the public space, which is eminently political and re
instead governed by equality principle and is regulated by law. Juridical acts,
avoid preferences in social relations, are not however entitled of establishinc
discrimination or exclusion in democratic regimes (Arendt, 2003).

Even though I agree with many scholars that pointed out the unrealistic dimensio
ideal public space, constantly defined and equally accessible, but rather the
struggles over time, reflections on principles that inspire laws on urban pla
ethical concern. In this frame of flipping of ethical principles, discriminatio
not only private interests of owners will certainly compromise distribution o
services, but also the deprived inhabitants will be excluded from public spa
Distributive equity and equality/indifference among owners are definitely confli

From a southern Italian perspective, national influence of such indifference pr
laws has more serious consequences, since public endowment of services per pe
prejudiced by a severe shortage, especially in disadvantaged areas. Who takes th
deprived people? Compared with insurgent claims in other geographical context
1998, 2003; Holston, 1998, 2008; Harvey, 2013), in southern Italian regions ar
Palermo disadvantaged social groups mostly occupy public property in order to
while relational values of public services and their social use are usually
income social groups, who implement fragmented forms of self-management.

Although occupation of abandoned public spaces in order to recover their socia
resistance against privatization and a rebellion against economic domination o
additional questions on the distributive equity regarding low-income social gro
Are these latter groups allowed to be included in these rebel social spaces? A
goods really able to ensure inclusivism or are they in themselves new forms of p
social discrimination?

Scholars argue that this contradictory condition arises from neoliberalism a
inclusion (manipulated) and redistribution (denied); squatter movements by en
fissure are useful in order to destabilize the neoliberal hegemonic order (Mir
consider this contradiction a way to develop claims of urban rights in urban r
neoliberal economy (Harvey, 2013). Urban planning therefore is able to undertake
a bureaucratic process deemed functional to neoliberal principles or radical, in
movements, in order to contrast unequal principles and rights.

As Fraser highlights  justice today requires both redistribution and recognitio
sufficient  (Fraser, 1998, p.5) where participation links together these prin
revisions for new development of relational values of public space are requ
participative practices, which besides routine useful to depoliticizes communit
enhance democracy, including deprived social groups in deciding rights to p
services. This entails the reject of whatever indifference principle among urban

Although urban standards, as minimum public space per person, appear an insuffi
distributive equity, appropriately integrated with social hardship index, urban
parameters should be still a purpose to reach in Italian southern context i
disadvantaged inhabitants to have rights to the city; reducing or delegitimizin
authorization to enact undemocratic urban planning processes. Whether loca
automatically aligns with national economic principles, as the indifference pri
focalize its judgment faculty on local context, substantially avoids of inte
standards on public services as a democratic finish line that should be improv
extend rights rather than reduce them. When local government through urban plan
space for services implicitly reinforces neoliberalism of its predecessor wit
responsibility for the present and future actions.

The thought of Arendt leads me to consider responsibility as a prerequisite f
political initiatives. The faculty of judgement therefore helps to distinguish
previous ethical principles and its political inheritance. From a southern Itali
a local government, as well as the community, is politically responsible when
predecessor s actions and ethical principles, and independently from national di
judge the need to change political direction.

Acknowledgement

I am grateful to Gramsci Institute of Palermo, which has promoted cultural debat
Palermo urban plan at municipal level. Analyses on the municipal directives have
thanks to the work I developed within this frame in order to highlight critical
services provision.

# THE POST-DISASTER AS AN OPPORTUNITY TO RECONSTRUCT A MORE JUST CITY

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**abstract**

*This paper would like to investigate the response strategies to a disaster from two different cities.*
*In this context, the disaster looks like as an opportunity for the city to be able to decide the direction for their reconstruction.*
*The reflections relate the strategies undertaken by two cities: New Orleans and Beirut hit by a disaster, respectively by Hurricane Katrina and a civil-war.*
*As the disasters give rise to complex situations (new socio-spatial configurations, conflicts, inequalities) and have greater effect on the most vulnerable populations, it is believed that the issues related to justice in post-disaster may be interesting topics of discussion.*
*For this purpose, firstly , the paper would like to promote reflections on the concept of disaster. Generally disasters are classified according to their root cause. This paper would like to draw on definitions of disaster from the social sciences in order to develop reflections with reference to the disaster impact (effects) rather than the phenomenology (causes) .*
*After that, an exploration of the direct and indirect effects of disasters will drive the reading of the case studies. In the end, the analysis of the response strategies of the two cities will investigate the effects previously identified whether or not they were considered and the implications it had on the city.*

## 1.Introduction

This paper would like to proposes the first part of a doctoral thesis, still ongoing, that wants to investigate the operation of the planning in the context of the post-disaster situation. The thesis intends to inquire the possibility for planning to catch the disaster as an opportunity to operate with the a propose of urban justice. Many academics argues that planners should strive for "just city" as a main goal or main objective of the planning acts (Fainstein, 2000, 2005, Krumholz and Forester, 1990; Harvey, 2003). The thesis intends to investigate how these debates may be declined in a post-disaster situation. The importance of justice in the city is highlighted by Susan Fainstein that describes the justice as one of the main elements of a good city but also one of the most transgressed elements (Fainstein, 2009). According to the Susan Fainstein's ideal of "just city" the city is identified as the place " public investment and regulation would produce equitable outcomes rather than support those already well off " (Fainstein, 2009,p.3); More over pena families or those who have less, excluding them from rights that are enjoyed by others who are wealthy individuals it is unjust. Democracy, diversity and equality are the three main qualities that made up the Fainstain's "Just city". Equality is foundamental even for Uitemark's just city. In according to him, a "just city" are requires to be both " accessible to each and every person irrespective of their purchasing power", and to be a city where " residents have control over their living environment, that is, they engage with the polity of which they form part". (Uitermark 2009,p.359). This investigation of the the implications of disasters and their considerations in planning in terms of justic, would like to propose the first part of the PhD research. This first part starts from the definition of disaster deduced from the social sciences, identifies the effects of disasters and ends finding the majors key to put the focus on the justice in the city in post-disaster situation.

Regarding this, it has been chose to start with scouting the international literature including different discipline and proceeding with the classification of the disasters effects. Finally, this major effects are investigated in two specific context: the city of Beirut and the city of New Orleans.

The choice of this two context is linked to the easy availability of information on the disaster effects and the planning activity in the post-disaster phase. More over this two disasters, are considered interesting because are at the same time originated from different causes and the time elapsed since the disaster is sufficient to investigate tree different phases: the pre-disaster, the moment of impact, and the post-disaster.

The proposition of the direction that the planning has undertaken in response to the disaster and how it has considered whether its effect will advance the considerations on how the latter seizes the disaster as "windows of opportunity". At the end all these considerations want to be useful to explore and persecute the concept of "windows of opportunity".

**2. Disaster as "windows of opportunity"for...**

Disasters can be seen: in one hand as an "windows of opportunity" for the city to improve itself (Cuny 1983, Burby et all 2000, Vale and Campanella 2005,) in the other hand they can unleash the latent situations which, if not considered, hinder the city in the recovery. Infact in some case, they may perpetuate the economic and social inequalities pre-event. As like disaster of deliberative human origin (M.C Treu, 2010), for someone this disaster may represent the opportunity to increase the prosperity, the power and influence, whereas in an extreme point of view , they can become an influential power tool ( N.Klein , 2009).

These results underline and highlight the lack of clearness of what can be defined as "better" and "more just", which implies the lack of a conceptual framework to guide recovery efforts (Regnier 2008).

**What is a "Disaster"?**

When an external event impacts violently into an urban system, it causes a shock and a interruption of the normal course of his function. If you imagine two similar events, like two earthquakes, with the same intensity, duration, magnitude, but dislocated in two different place, one in a desert uninhabited and one in a city, it is simple to understand that the two outcame are very different. Therefore an event can be defined "disaster" only when it strikes people socially organized in a space(Marcuse 2013; Donovan 2013; Ligi 2009).

In the sociology of disasters, academics define the disasters as "collective events that require extraordinary efforts to protect and defend a social resource whose existence was seriously threatened." Ligi 2009).

In according to Daniel P. Alchrich and Michelle A.Mayer, the disaster is "an event that interrupts the normal activities and causes severe damage to the society. Disaster can be defined as events that can both kill people and destroy homes, infrastructure, economies and the human bonds in a society, in other words everything needed for a society to operate properly "(Alcrich, Meyer, 2013). Therefore, disasters are social phenomena (Cutter, 2010).

**3. Disaster effects**

The consequences of disasters on society are often similar: extensive loss of life, economic block, destruction of the natural environment and of buildings, obstacle of development and endangered local institutions and livelihoods . However, the damage directly caused by the effect of the agent itself (direct damage ) are not sufficient to explain the consequences of disasters (Tierney, 2001). Quarantelli argues that "even if indirect effects (secondary impacts) are massive, the recovery process sometimes ignores or minimizes this indirect effects of disasters" (Quarantelli, 1999). in agreement with this approach, we intend to provide a classification of the effects of disasters which takes into account the direct and indirect effects.

**Physical impacts**

The physical impacts of the disasters have several effects. In one hand affects people regarding their personal health, mortality and violence (Charveriat, 2000) ; in the other hand affects the damage of the built environment as damage of material goods and infrastructure (Tierney 2001).

The physical destruction has even other indirect effects on the society , like:
- the destruction of home and key building (such as public facilities, cultural and historic buildings) has a double indirect effects. First on the reorganization of urban space due the forced moving of people, the second on the loss of "identity" of individuals who see destroyed their landmarks.
- the destruction of infrastructure (such as roads, bridge and dams). For example, the importance of the destruction of transport infrastructure, is evident since the phase of response to a disaster because trasnportation is a major conponent in any emergency preparedness and evacuation plan. Unequal access to transportion alternatives in a disaster increases the vulnerability of the poor, elderly, and disabled people. In addition, their destruction cause indirectly the difficulty for individuals to access to homes and jobs.
- The destruction of businesses and workplaces causes indirect damage to the economy and productivity (Lindell and Prater 2003).

**Social impact**

In addition to the physical impact, the disaster generate effects on society. The entity of these effects are strongly correlated on the social context, this is specified in the concept of social vulnerability. In according to Winsner, social vulnerability is defined as "the characteristics of a person or a group that affect their capacity to anticipate, cope with, resist and recover from the impacts of a natural disaster" (Wisner, 2004) . This concept is also been expanded in post-conflict situations by Aurbee . In according to Aurbee, social vulnerability is defined as 'the characteristics of a person or group in terms of their capacity to anticipate, cope with, resist and recover from the impact of any form of natural or artificial hazard '. Cutter describes social vulnerability as including "the susceptibility of social groups or society at large to potential losses ( structural and nonstructural) from hazard events and disaster"(Cutter,2006).

This vulnerability (or susceptibility) to the impacts of disasters of a group of individuals, according to Susan Cutter, "is not only a function of demographic characteristics of the population (age, gender) but of more complex constructions" (Cutter,2006).

For this reason, the social vulnerability is influenced by the :

1-socioeonomic status (income, poverty, employment and education variables).

2-minority status (social and economic marginalization of racial and ethnic groups).

Smith and Petley argue that inequality in society are highlighted more after a disasters. As stated by Haas recovery is not an equal process: infact it accentuates the disparity between those who can rebuild in a faster way and better position. Those who have greater access to resources before the disaster continue to have greater access even in to post-disaster situation (Haas, 1977).

The importance of recognizing explicitly the role of the vulnerability during the recovery process is highlighted by Wisner et al. (2004), which defines the recovery based on the reduction of vulnerability. He argues that to reach a real recovery, the people (individuals, families and communities) in the post-disaster must have reduced their vulnerability and increase their resilience. A community is defined as resilient if it swiftly recovers after a disaster ( Cimellaro 2010).

A further element that affects the social vulnerability is the social capital. Many studies have focused on social capital in the post disaster shown the ability of disasters to modify existing levels of social capital (Putman 1993 Catiglione, Van Deth and Walleb, 2008 and so on). In according to Putnam social capital is

defined as, features of social organizations, such as networks, norms, and trus
cooperation for mutual benefit (Putnam,1993: p. 35). Studies have been demostrated that disas
reduce the social. Social capital may deteriorate following a disaster because of dislocation of network members, loss of network ties through injury or death, or overwhelmed network resource capacity (Kaniasty and Norris 1993).

**4 disaster in Beirut and New Orleans**

**Beirut pre-disaster context**

Beirut in 1970 was a city with a million inhabitants. Originally, the inhabitants were Sunni Muslim and Greek Orthodox Christians, with a small percentage of the Jesuits. Beirut also has become home to many immigrants and refugees, including Armenians and Greeks, that added to the diversity of the city and enhanced its commercial base. The social tolerance between ethnic groups and the many sects of the city (including Shiites, Sunnis, greek-orthodox, greek-Catholic, Maronite Catholics, Druze and Jews) was guaranteed by common economic interests.

The downtown was the Lebanonís Melting Pot; place where people from all walks of life mingled. Khalaf argues that "the relation and the intercultural mixing in the city center, was strong. Many merchants of various communities were partners in private business and in the old souks and bazaars, artisans and merchants have worked side by side. Christians and Muslims have continued to meet in an official capacity, and served on the same committees, tribunals" (Fawaz, 1983). In addition, the historic core contained important buildings such as the Parliament and a number of ministries, the Municipality, the Central Post Office, banks and public squares.

**The disaster effect in Beirut**

The destruction that followed the civil war broke out in 1975 caused massive displacement of population.. During the war, Beirut was divided along ideological and religious lines. The famous "green line", starting from Martyrsí Square in the historic center, divided the city in two part est and west. The central district was completely abandoned because it was the main combat zone. In particular, commercial activities and businesses destroyed where relocated in the suburbs, in the specific in coastal areas north of the city. The population that had animated the old town before the war moved to the suburbs and Ras Beirut, while the buildings destroyed were occupied by people displaced by the war and forced to take up residence in abandoned buildings.

**Beirut post-disaster and reconstruction. Solidere 's Master Plan in the City Center**

After the war, the city started the reconstruction phase channeling his forces over the city center as part more destroyed. Because the government had no effectively and efficiently structure neither enough funds for reconstruction, the physical reconstruction and development of the central areaentrusted in 1991 was assigned to a private company known as Solidere (Lebanese society for the development and Reconstruction of Beirut Central District). The vision of the Solidere's Master Plan in the City Center was to create a lively center of activity mixed: commercali activities, offices, administrative buildings, public spaces, recreational areas and cultural in addition to residential areas.

The goal was to restore Beirut as a regional and international center business: the new city center was to become a coveted tourist destination and prime residential area. Beirut had to have the most beautiful center city of the Middle East.

In the preliminary phases, the objectives of the master plan were established to the citizens. On this occasion, the citizens did not agree on replacement of most of the urban fabric with new forms because the latter was

completely unrelated to those pre-existing. In short, the plan presented ideas were not shared by the inhabitants (Gavin, 1996).

However, the aim of recreating a sense of place that is a sense of "community feeling of identity" was expressed in its slogan "anciet city for the future.". The goal of this slogan was very clear in the strategy of mixed uses. this strategy had a double goal: promoting the housing market and creating an urban fun life in continuity with the atmosphere that existed in Beirut's downtown before the war. Look to the future, however, was seen as the development of grand scale of the project, using mostly high-rise buildings and modern construction technologies to represent wealth and regeneration.

**Outgoing**

the conflict caused extensive damage to the urban fabric. As regards the downtown, almost all of its buildings and infrastructure had been destroyed. the population was forced to abandon their homes and leave the downtown, as well as for security reasons. These movement have caused the destruction of the existing social network. The aim of the Solidare's plan was to recovery of the economic aspect. In this direction, the plan held was concerned by type of building and their economic use . The fragmentation of property, as a result of the conflict, allowed Solidare to expropriate all the eligible parties. Moreover, the target population was made up of Lebanese expatriates or wealthy Arabs and not the old citizens and merchants. The reconstruction was not sent to the effects generated by conflict: the pre-disaster population, the urban functions of the city, the activity, the increase in urban poverty.

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**New Orleans Before Hurrican Katrina**

The population of New Orleans before Hurricane Katerina was estimated at 484.672 inhabitants (2002). New Orleans was characterised by high poverty rates and low-wage jobs (Gault et al., 2005) was infact one of the poorest cities of the USA, with a poverty rate Opinions more than twice the national average (Center for Progressive Reform, 2005). The main core city, the Orleans Parish, and the region with about the 23% of the residents of New Orleans, the Jefferson Parish, lived in poverty. In Particular, the 48% of Orleans and 32% of the residents of Jefferson was low income. Eighty four percent of New Orleans residents living in poverty were African-American. The Ninth ward fully reflect these characteristics, infact before the hurricane the Lower Ninth had a population of about 14.008 inhabitants, 98% made up of African-Americans and 34% of the population lived in poverty. However, in their marginalization, the African-American population was organized in social circles creating a socio-political tradition, self-help, mutual aid, and resistance to structures of oppression. This enabled the population to realize institutions, social networks and events that was expressed in a neighborhood full of small businesses, barber and beauty shops, corner stores, eateries, gasoline stations, day care centers, as well as public schools and many churches.

**The disaster effect in New Orleans**

The disaster effect in New Orleans On August 29, 2005, Hurricane Katerina has caused destruction and flooding in 75 percent of the city. Immediately after the disaster, 200,000 individuals were dislaced (FEMA2005). The New Orleans African American residents were much more likely than displaced white residents to end up living far from the region. Many African American displacees ended up in cities suh as Houston and Atlanta. For these people, the forced movement to another state destabilized generation-old networks of kindfolk and close - knit comunities. Infact , longstanding social aid and pleasure clubs, organized to support leisure and community needs, have dispersed, as have church congregations and parishes. In addition, the displaced have been labeled as "refugees" (Rhodes, 2010) this alludes that is not as if they had lost only their home, but also their right to have a home.

**Post- disaster and reconstruction. People's plan of Ninth Ward district**

After Katrina, New Orleans Mayor *Ray* Nagin asked the ULI to prepare a strategic plan for the reconstruction of New Orleans that would guide the work of his committee recently established. ULI sent 40 of its members representing the public, private and non-profit organization for the city, under the leadership of Marilyn Taylor of Skidmore, Owings and Merrill , an architectural firm in New panel was published after a careful review of the planning reports of the past, the analysis of past data and present the United States Census, the visual inspection of the city, 300 local interviews and the organization of a local town hall meeting . Amongst other things, the ULI s report suggested a strategic operati redevelopment : the short-term rehabilitation of the areas that were less damaged and the destination of a park and wetlands for areas badly damaged. Many of these areas fall in the district Nith ward. However, the report of the mayor recommended the creation of planning teams to production of recovery plan for areas badly damaged. For this occasion, ANCON contacted the Department of City and Regional Planning for technical support, planning and design for all those who sought to rebuild New Orleans. The team format started a qualitative and quantitative analysis (Reardom, 2006). The quantitative analysis showed that a relevant part of the Ninth Ward was recoverable (as opposed to the analysis given in the report).The qualitative analysis, based on participatory processes, showed that residents of the area were willing to move to reconstruction of their neighborhood. This effort is underlined in the People's plan, presented just a month after. The People's plan is a strategic plan of action aimed at identifying a recovery model for the area. The vision of this plan is to "Create a Opinions more vibrant, sustainable and equitable 9th Ward That offers former and current residents, business owners, and institutional leaders to higher quality of life and attracts new residents and investors eager to participate on in an unprecedented revitalization of one of America's most historically, culturally, and socially significant urban communities ". The aim of the equity, highlighted by the plan, is clear both the result to be reached and plan process itself. Infact, the team was working both to ensure that all inhabitants to be able to return in their neighborhood and also that all inhabitants to be able to be part in the process. For example, in addition to the activities of survey and collection of information on the economy, population, employment etc, people and civic organizations were interviewed to collect their ideas about the redevelopment strategies. These analyzes have identified a series of answers to the issues that concerned the city both before the disaster (as endemic crime, the lack of jobs etc .) and after the disaster (lack of funds to rehabilitate houses, close of business etc.).

**Outgoing**

The impact of Hurricane Katina involved the devastation of 80% of the city. The Lower Ninth Ward recorded the largest number of damages. The majority of the population was forced to abandon their homes and leave the downtown, as well as for security reasons. The destruction of homes, economic structures and roads caused a lot of indirect damage to society as a weakening of social networks and, in turn, the increase in their social vulnerability. The Nagil's plan appears to take no account of this aspect. The right to return to their homes was not equally guaranteed to all citizens: while citizens of the less damaged houses was given the chance to rebuild, to the citizens of the houses damaged this possibility was not offered. the goal of the

People's Plan was to address this issue in order to allow the same right to citizens of the most damaged . It is possible to observe through analysis of the case of Ninth Ward that through the active involvement of the population, the solutions are directed not only to the physical reconstruction (the plan gives different directions), but also are directed to social reconstruction. the solutions, in the process and in the outcome, have been directed to the reduction of social vulnerability because they aspire to :

-Enable all citizens access to the assets. objective of the plan is not only to allow all citizens the right to return to their homes, but also to be able to improve their living conditions through the attention paid to the improvement of urban spaces and work spaces.

- Ensuring that all citizens the access to "power". the planning process had a strong inclusive nature. That has been reflected in the People's Plan. In this way citizens had access to power to target and contribute to the rebuilding process of their living environment.

**5.Conclusions**

As Ozerdem Argues, if disasters and their impacts are the result of unresolved development challenges, then disasters can Shops provide new opportunities for development. 'This requires a development approach That is both sensitive to opportunity and able to reserved respond by designing reconstruction Programmers to built such opportunities' (Ozerdem, 2003). In this way, the opportunities can be seen in a perspective of social justice. in according to Harvey, the right to the "just city" "is not morely a right of access to what the property speculators and state planners define, but an (common) active right to make the city more in accord with our hearts desire, and to re-make ourselves thereby in a different image" (Harvey, following Mar 2013: p.42).In the case of Solidere the disaster has been caught as a "windows of opportunity " to rebuild a beautiful city center for a great city. The beautiful city center is in reality as an exclusively island isolated by the city. In this direction, it did not take account the impact generated by the war. The plan helped to perpetuate the economic and social inequalities by moving these issues in the other part of the city.

In the case of Lower Ninth ward neighborhood the People's Plan grasps these opportunities. Infact, it has double objective of making a city accessible to all and creating a city where residents are committed to have control over their living environment. The consideration is this was been possible because the plan aimed at the reduction of social vulnerability increasing the quality of social network. Social vulnerability and social network of a community destroyed are some of the key processes affecting the level of impact of disaster and as such should be considered as main components in the efforts of the reconstruction.

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# ORTHODOXY OR OPPORTUNITY: THE DIFFICULT MATCH BETWEEN THE ENVIRONMENTAL AND SOCIAL JUSTICE DIMENSIONS OF SUSTAINABLE MOBILITY

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## Abstract

*In the field of mobility and environment, recently a number of promising developments can be observed. Despite the sustainability optimism emerging from such observations, the Club of Rome question whether there are any limits to growth is increasingly relevant. Perhaps even more important, policies with respect to mobility, accessibility and environmental impact seem not to contribute automatically to social justice. Through adding a limits-to-growth stance and a social justice perspective to what is called the orthodox sustainable mobility vision, we argue that all possible controversies on environmental impacts eventually boil down to an ethical debate. Such* debates are not the exclusive domain of experts, hence we state that there are sustainable mobility . Experts can nevertheless play a particular role in discus *mobility. In order to make our ideas tangible and to demonstrate the consequences, we apply this to a number of policy decisions in Belgium that carry the "sustainable mobility" label. Starting from our Belgian case study, in the conclusions we adopt again a global perspective, in which we stress the importance of looking for synergies between those environmental and social justice measures that allow for accounting the ethical dimension of sustainable mobility debates.*

## 1. Introduction

*In the field of mobility and the environment, a number of promising developments can be observed*

In Belgium, as an example, quite some indicators suggest that sustainability objectives are slowly but surely achieved within the field of transport. With an average annual growth of 2.41% between 2000 and 2011, inland navigation in the Flemish region could make a nice report (Meersman et al., 2013:27). In 2011, sulphur emissions from inland shipping, rail and road transport have practically disappeared, but twenty, or even only ten years ago, the situation was entirely different (ibid.: 90) . When looking at Belgium s federal home-to-work travel survey, we see that both public transport and bicycles have gained market share between 2005 and 2011 (Verhetsel et al., 2014:37). Also, national road traffic statistics show that the number of kilometres driven per car registered in Belgium is decreasing, while the number of train passengers increased by as much as 50% between 2001 and 2010 (Statistics Belgium, 2014). Still in Belgium, we see the $CO_2$ emissions of newly sold cars falling from 160 g/km in 2002 to 130 g/km in 2012 (MIRA, 2013).

And these are just some figures. Sustainable mobility has become a common notion in many policy plans at almost all levels of government, in which emphasis or even general meaning may vary considerably (Bulkeley and Betsill, 2005). At the European level, for example, the term is used to indicate a decoupling between the growth rate of transport and its associated adverse effects (Tight et al., 2004). At national or regional level, under the same heading, new technology is subsidized and efficiency increasing measures are funded. And at the local level, the notion of sustainable mobility is often used to justify investments in pedestrian areas, parking policy, and the construction of bicycle tracks. This goes along with the drawing up of Sustainable Urban Mobility Plans (SUMP). But except in policy circles, sustainable mobility is also live among the public and businesses. In many cities, cycling has actually become fashionable, railway station precincts are refurbished, and the car is no longer the sacred cow it was in the 1960s. Some authors have even identified a paradigm shift, in which the smartphone has become an attribute more importantly to a contemporary lifestyle than the car (Davis et al., 2012). Finally, we can refer to concepts such as Transit Oriented Development, Smart Growth and compact city policies which have increased in popularity. This collection of ideas can be labelled the sustainable mobility paradigm (Banister, 2008) or the ort transport vision (Baeten, 2000).

The spread and acceptance by many scholars and practitioners of the sustainable transport paradigm is a complex process, which is not only about knowledge diffusion, but also about opposition, struggle and the promotion of alternatives to traditional views. A number of papers in transport studies have portrayed sustainable mobility as an alternative to predict and provide transp discussing these two visions on transport policy, Enoch (2012) speaks in terms of camps and tribes Traditional transport planning is the domain of conventional transport engineers and economists, while sustainable mobility is rooted in urban planning and related disciplines. In a similar fashion as with sustainable mobility, Transportation Demand Management (TDM) or mobility management is seen as an alternative to strategies that provide additional capacity to meet travel demand (Giuliano, 1992; Meyer, 1999; Vanoutrive et al., 2010). TDM on the other hand, attempts to manage demand by promoting public transport, the bicycle, telework and flexible work schedules. One of the most cited articles adopting the alternative point of view is The sustainable mobility p 2008 by David Banister. This paper is largely structured around four transition lines that are, according to the author, essential to sustainable mobility: travel mode choice, urban and regional planning, technology, and travel substitution.

In the present paper, the aim is to challenge the orthodox sustainable transport vision, of which Banister s seminal paper is exemplary, by confronting it with two potentially tr being firstly the urge for growth, and secondly the issue of social justice. By doing this, we highlight the ethical dimension of sustainable mobility, and sustainability in general, and we argue that this dimension should be made more explicit in current debates. In the next two sections we will elaborate

on the meaning of each of both issues in relation to the notion of sustainable mobility. Earlier discussions can be found in Baeten (2000), Essebo and Baeten (2012) and Farrington (2007). Here, the focus is on Belgium and thus not on the global level (in contrast to e.g. Holden, et al. 2013, 2014), furthermore, we discuss some recent contributions such as the socio-technical transition approach (Geels, 2012) and the book How Much is Enough (Skidelsky and Skidelsky, 2012).

After a discussion of the environmental dimension in the next section, we illustrate the paradoxical, often ironic and sometimes even cynical situations to which measures in the field of sustainable mobility can lead, when viewing these from an ethical perspective. Again, we turn to a number of examples from Belgium, which may be considered fairly representative in terms of mainstream sustainable mobility policies, considering the central location of the country, and its engagement in relation to the European Union.

## 2. A limits-to-growth perspective

*Despite the sustainability optimism emerging from recent observations, the Club of Rome question whether there are any limits to growth is increasingly relevant*

By 1970, environmental reports sounded far less optimistic than the positive introduction of this paper. The oft-quoted report of the Club of Rome (Meadows et al., 1972) argued that the growth of the world population and its consumption would slowly but surely bump against the carrying capacity limits of the earth. And even though in the seventies global warming was not yet on the political agenda, the impending exhaustion of natural resources made the problem outlined very palpable, especially after the outbreak of the first oil crisis in 1973.

Ever since, within many economic sectors, ecological thinking has become the formal reason to adopt a perspective of energy efficiency more often or more quickly. The concept of carbon intensity, which measures the ratio between $CO_2$ emissions and economic output, is a logical product of this way of thinking. Indeed, today, many economic sectors can rightfully be proud of their improved carbon intensity level. In the developed world, examples include the energy sector, but also heating emissions from new houses are declining.

But do we observe such results in the transport sector too? From time to time car manufacturers show off with new, high efficiency concept cars . But in reality, the fuel consumpti the world is hardly, if at all, going down (Chiara and Canova, 2013). Recently, the market for large cars has only steadily increased, and in smaller cars, part of the potential energy savings are offset by the presence of a range of new gadgets. Furthermore, replacing a thirsty car with a more efficient one does not mean that the old car is removed from the market: used vehicles remain a prized import product in many Third World countries, even the less fuel efficient ones.

Broadly speaking, we can say that mobility has been growing quasi continuously in the course of time. In 1960, the number of motor vehicles registered in the world was estimated at 127 million, while in 2010 more than 1 billion vehicles occurred in the tables (Davis et al., 2011). It is interesting to note that the average increase in the number of cars in this era (slightly more than five per cent per year) was even higher than the world s GDP growth (a little less than five per cent per to indicate that the increase in the number of cars in the world proceeds in interaction with economic development in general. But does this also apply to the amount of kilometres travelled?

Until recently both scholars and policy makers assumed a steady increase in distances travelled. Although global figures on this are not readily available, many developed countries do keep related statistics. For the United States, for example, we see that the mileage increased from 1,600 billion in 1983 (when the effect of the then crisis started to wane) to more than 3,000 billion in November 2007, just before the international fuel prices showed an unprecedented peak (Davis and Baxandall, 2013). Since then, the statistics show some decline, and the 2007 mileage level was not reached again.

Today we see this phenomenon, which was meanwhile baptized peak car (Goodwin, up in many other countries too. In Belgium, our example, we see not so much a decline in the growth of the overall distance travelled, but rather a stabilisation of the number of kilometres per inhabitant since 2007, and a decrease when counting per registered vehicle (Statistics Belgium, 2014). In other words, the Belgians just continue to buy additional cars, but are driving these less than they would have done before.

The discovery of the mentioned kink in the growth curve may have provoked some almost euphoric reactions among activists and even researchers: finally, the limits to growth had become visible in the behaviour of the motorist! It is therefore no coincidence that the term "peak car" was clearly inspired by peak oil . The latter refers to the expected production peak of petroleum, wh bell shaped curve fitting in nicely with the discourse of The limits to growth 2008). Meanwhile, however, it has been demonstrated that the relationship between peak car and peak oil is not unambiguous: there is not a clear correlation between the distances travelled, and the oil price on the commodity market. Perhaps, apart from the fuel market, a number of other developments are at stake as well. Newman and Kenworthy (2011) point out, for example, that decline of private motor traffic is mainly recorded in a number of larger Western cities. In some of these cities, including Vienna, Zurich, Brussels and Stockholm, current policies are not by chance targeted on discouraging additional car traffic. Narrowing roads (for example, by sacrificing a lane to the benefit of a bicycle path or a reserved tram track), the introduction of road pricing or a restrictive parking scheme affect the motorized traffic volumes in the city. However, this does not necessarily mean a reduction of the number of trips: the cities mentioned are known for their traffic growth being shifted towards public transport and cycling.

Perhaps, we have arrived at an important nuance of the peak car discourse. Although today continuous growth of surface traffic should no longer be taken for granted in any context, we cannot just transfer the principle to other forms of mobility. Just as mobility within emerging countries, international trade, and therefore also intercontinental freight transport, keeps growing unabatedly. And the same goes for air travel. In these subsectors, the limits to growth are nowhere near in sight, and this applies too for associated greenhouse gas emissions or consumption of fossil fuels.

Although in the developed world the growth of car traffic may start to collide with spatial and environmental constraints, the human desire for ever more interaction with the world seems to translate into a choice for ever faster means of transport, of which the exploding air travel market is the ultimate outcome.

The foregoing considerations suggest that growth in mobility is inherent to present-day society, in which the increase of travel speed can be seen as the equivalent of the increasing efficiency that is typical of a growing economy. The parallel with the issue of economic growth, and its possible limits, can hardly be denied. Although in his study Prosperity Without Growth (2009) his utmost to show that the statement reflected by the title of his book is a real option, he only succeeds partially in this. Since increased efficiency is inherent in our system, less and less work is needed to maintain the same standard of living. If we want to stay at work all together, this means that either we need to produce more (with the same amount of labour), either we should work fewer hours in total (Skidelsky and Skidelsky, 2012). But even more free time leads to more consumption, and the desire for more and better of anything seems to be latent in all of us. And even though for many Westerners the degree of saturation at which more consumption no longer equates with more happiness has been reached yet, in most of the world this is still far from being true (Inglehart and Klingemann, 2000).

In our Belgian case too, in the recent past we can distinguish some policy measures which, according to official communication, contribute to greater sustainability, while focusing in practice on additional growth and more consumption of fossil fuels.

In 2004, a new access plan to the national airport in Brussels was decided on. Although at the time, the airport had already a rail connection with the capital, a second and a third rail branch were planned to connect Antwerp (in the north) and Leuven (in the east) as well. These investments were supposed to contribute to the expansion of the airport, offering an alternative to using the congested motorways near the airport. According to regional economic theories, such measures increase the accessibility of the airport, making it thus more attractive for both travellers and airline companies. Since aircraft may be considered among the least efficient forms of transport when it comes to emissions and fuel consumption, we can assume that such investments in airport accessibility will lead to an increase in emissions over time. However, the federal government clearly thought otherwise. In late 2008, the new rail access projects where included in the federal climate accounts, in which it was simply assumed that any new rail passenger is a former car driver (National Climate Commission, 2008, p. 58). So there would be fewer cars on the road, and part of the climate goals would be achieved. Despite the highly questionable nature of such an assumption, the effect of the measure was never monitored. In contrast, in 2013 a plan was launched to add a new motorway access to the airport anyway, in the direction of Leuven.

In the city of Ghent we see a similar paradox in the redevelopment of the central station area. In the context of the Spatial Structure Plan for Flanders, an overarching vision for the sustainable spatial development of the Flemish region, efforts have increasingly been geared towards upgrading the precincts of mainly the larger railway stations (RSV, 1997[2004]). By creating density and functional diversity in areas that are well served by public transport, local modal split adjustments towards public transport where hoped for. Near the Ghent railway station, which is one of the three largest Belgian stations in terms of passenger numbers (45 000 passengers a day, planned to increase to 60 000 (NMBS, 2014)), a large-scale programme was developed including apartments, offices, all kinds of amenities, and a large car park. The construction of the 2800 vehicle large car park fitted explicitly in a programme to encourage train use by long-distance commuters (Coppens, 2010). Employees living in Ghent s suburbs, which were used to go to work by car, would henceforth be ab at the station, then take the train to their office in Brussels or elsewhere. This would lead to quite some savings in terms of $CO_2$ emissions. However, the local environmental movement was skeptical of the plan, and a couple of years after the opening of the car park, it organized a user survey. The survey results showed that only a very small minority (four out of one hundred surveyed parkers) had indeed switched to the train for their long haul (as could have been expected on the basis of studies reported in the Park and Ride literature (Zijlstra et al., forthcoming)). However, the majority of the users of the car park consisted of commuters who previously arrived by a local train, or by bus or tram before taking the express train in the station. Therefore, the construction of the car park had led to more car use, instead of less. In addition, the parking had contributed to a local concentration of particulate matter production in the surrounding residential area (GMF, 2012).

In 1997, the regional city of Hasselt introduced a subsidy in order to make access to the city bus network free of charge for all passengers, a situation which would last for the next seventeen years. After the introduction of the measure, as expected, the number of bus passengers increased to an important extent. However, a survey found that of all additional bus passengers, only 16% would have taken the car in case the bus would not have been for free. Six out of ten additional bus passengers would simply have stayed at home in that case, and another two out of ten would otherwise have been walking or cycling (Van Goeverden et al., 2006). In the university city of Leuven, between 2001 and 2013, free buses where offered to the student population. Again, an important shift from the bicycle to the bus was noticed. In Leuven too, the subsidy caused an increase in demand and a need for more buses, making it unlikely to meet the original sustainability targets.

Better than any theory, these examples demonstrate that perhaps the growth of mobility is much more intertwined with the present structure of society than experts and activists would like to admit. If that is true, then it seems that only a real shortage of, for example, energy, or physical or environmental space, can obstruct the expansion of the transport system. And it may also mean that any attempt to reduce the environmental impact of an individual trip may be insignificant for the world in its entirety.

However, as we shall argue in the next section, such debates risk to neglect the dimension of social justice.

## 3. A few considerations on social justice and transport

*Policies with respect to mobility, accessibility and environmental impact seem not to contribute automatically to social justice*

The development of a transport system which is overall less environmentally harmful does not automatically guarantee a fair distribution of access to transport and to full participation in society. While this argument may not apply to all facets of the sustainable mobility paradigm, it is indeed likely that positive interventions in planning may only affect those who are in the position to have their voices heard, while technological solutions seem to be first and foremost reserved for those who can afford it. Through careless implementation of sustainability-aimed transport policies, we risk limiting access of mainly vulnerable groups in society. Moreover, it is presumably not the aim to *design and develop a low carbon post-car system that does* [ ] become like George Orwell s 1984 (Dennis and Urry, 2009, p.11). This concern was already expressed by Baeten at the turn of the 21st century, who wrote that *the orthodox sustainable transport vision actually leads to the further empowerment of technocratic and elitist groups in society while simultaneously contributing to the further disempowerment of those marginalized social groups who were already bearing the burden of the environmental problems resulting from a troubled transport system* (2000, p.69).

The environmental justice literature focuses on the maldistribution of the environmental burden of, among other things, transport activities. Although the size and even the sign of effects varies across cities and regions, there is some evidence that low-income and minority communities are exposed to higher levels of noise and air pollution (Schweitzer and Valenzuela, 2004). This is one side of the (distributive) justice coin. The other side concerns the morally proper distribution of transport benefits (Martens, 2006, 2012).

The orthodox sustainable transport vision generally favours public transport in general, and rail in particular. However, attempts to attract new customers by investing in suburban commuter rail projects might result in the neglect of poor transit dependents in city centres. In such occasions, public transit is promoted as a solution for congestion and air pollution problems, and thus not as a social service (Garrett and Taylor, 1999). In this context, Reeves (2005) writes that sustainability thinking has changed little in the paternalistic approach of transport planners. In the past, reasoning often departed from facilitating travel with the family car, which used to be driven by the man in the household. Today, the focus has been shifting to the development of large-scale rail infrastructure, which usually focuses on improving access to job concentrations in the larger conurbations, and connecting these with each other by means of fast trains. While such projects are usually viewed as sustainable, they are still mainly serving members of the hyper-mobile society, usually highly educated and often male. The needs of socially vulnerable groups, which are rather located in the sphere of buses, transport on demand, and dense networks of facilities close to home, are much less evident in this discourse.

The outlined dynamics usually apply in the context of an urban area. But also at the regional scale, the orthodox approach to sustainability is not always compatible with social justice. It is known that in the United States residents of poorer states travel, or need to travel, greater distances by car compared to residents of wealthier states (Baxandall, 2013).

But in Europe too, examples may be found: in Belgium, an average inhabitant of the Walloon region has a longer drive to work than his Flemish compatriot (Verhetsel et al., 2007), who on average has a higher income. This means that in some less prosperous regions, people are required to spend a disproportionate share of their salary on transport, at least if they want to be assured of a certain level of income and accessibility. In such cases, environmentally-inspired tax schemes (such as carbon

taxation or some forms of road pricing) aimed at discouraging long distance travel may be detrimental to the poorer regions and their inhabitants (for an overview of studies on equity and road pricing, see Levinson (2010)).

Again in Belgium, a long tradition of commuter subsidies determines travel patterns in questionable ways. Already in the nineteenth century, cheap rail subscriptions were offered to workers, supporting a suburban commuter system and purposely limiting urbanization (Dujardin et al., 2012; De Decker, 2011). Over the last decades, the subsidy was extended to car commuters, in the form of a company car tax deduction. While this measure is very selective, because it only includes that class of staff that can claim a company car, this tax deduction is generally seen as a compensation for the high taxation of labour (Vanoutrive et al., 2010; Zijlstra et al., 2014). Since the scope of this favourable tax regime is mainly on the higher income groups in the private sector, an equivalent measure was introduced for public sector employees and those who choose not to go to work by car. For this purpose, in 2004 the third party payment system was introduced, which meant that almost all staff in the public sector and part of the private sector were allowed to take the train and the bus to work entirely free of charge (Belgisch Staatsblad, 2004). The social-democratic coalition partner in particular communicated this measure as being in favour of sustainable mobility. A large number of employees would change towards public transport instead of going by car, for which they would have to pay themselves. Official communication did not mention that the measure was largely covering those who were already using public transport, for example because they work in the centre of Brussels or another large city. Besides, in 1999, a bicycle allowance was made tax exempt and had already been introduced to many employees commuting by bike (Belgisch Staatsblad, 1999). Because cycling was considered the most sustainable form of travel to work, and thus the cost of bicycle maintenance and specific clothing would no longer have to be borne by the employee. With this combination of measures, finally almost the entire continuum of travel to work seemed to be covered, which compelled the OECD in 2013 to severely criticize the Belgian commuter policy because it was apparently subsidizing every mode of transport mode: car, train, bus, tram and bicycle (OECD, 2013).

OECD s criticism regarding the lack of distinction between travel modes was cer
what was conveniently overlooked is the fact that most of the subsidies might essentially end up with higher income groups. Private employers offer their company vehicles usually only to executive and representative staff members, in contrast to labour class workers and assisting or cleaning staff. In the public sector, jobs with above average salaries are typically located in large urban areas, such as Brussels, where the train is the most efficient means of transport. Less well-paid jobs in the public sector, e.g. in education, health care, maintenance or support services, are often found in places where public transport is hardly a real alternative to the car, e.g. due to low service frequencies. So, public sector employees in decentralized locations are often obliged to cover their own (car) commute expenses. With regard to bicycle subsidies, it is less clear which groups are reached, although, depending on the context, cycling is not necessarily associated with lower incomes (Vandenbulcke et al., 2011). In short, commuting subsidies, whether targeted to sustainable mobility or not, mainly reach the middle class, and therefore contribute negligibly to wealth redistribution. However, finding quantitative evidence for this statement is difficult, since in Belgium such redistribution effect of transport subsidies are not purposely monitored. For the UK, the Sustainable Development Commission (2011, p.7) concluded that  The richest 10 per cent of the population effecti
four times as much public spending on transport as the poorest 10 per cent.

Another example is situated in the domain of subsidizing electric vehicles. On January 1, 2010, tax
deduction of company cars in Belgium was linked to emissions. This means that CO2
accounting, very economical cars on diesel or gasoline may be deducted from taxable revenues at a rate of 100%, while electric car expenses may be deducted at a rate as high as 120%, which should be regarded as an important subsidy. Since the tax deduction system is proportional, this also meant that expensive electric cars would receive a larger subsidy compared to more democratic, small electric cars. In the first months after the introduction of the new tax regime, eight out of the fifteen electric cars that were sold in Belgium where Tesla Roadster, which then cost around 84,000 euros (Mobimix, 2010). These sports cars were sold to company managers which were looking for an ecological

showcase for their business. The Tesla Roadster was characterized by a zero local emission rate, an incredible acceleration potential, space for one passenger at max, and the quasi absence of a trunk. Although the assortment of electric cars sold in the following years would better correspond with the image of the zero-emission car as an efficient, useful and responsible vehicle, the Tesla sports car may have become an icon of the discrepancy between a techno-optimistic sustainability discourse and the pursuit of social justice.

In other words, the sustainable transport discourse may be used to support policies that are potentially socially inequitable. But then the question remains, what is just, fair or equitable? Numerous principles have been proposed by transport scholars to distribute benefits and burdens among members of society (Hay, 1995; Langmyhr, 1997). The dominant principle is that of demand, which is a key element of standard transport models. A simple example of a demand-based strategy is the building of a new railroad where, according to model estimates, there is a large enough customer base. The number of people that is willing or able to pay is a crucial element of cost-benefit analyses for such and similar projects, together with travel time savings and the related value of time. It is now common to use the equity value of travel time in order to avoid evaluations that favo incomes (van Wee, 2011). However, even when the average income is used, the approach works to the advantage of the more mobile higher income groups, in particular since current travel patterns are used to estimate future demand (Martens and Hurvitz, 2011; Martens, 2006).

Martens (2006) argues in favour of a need-based approach as an alternative to demand-based models. Accessibility gains are seen as the prime benefit, while a less well-off individual facing a gain in accessibility is valued higher than the same increase in accessibility faced by someone who was already better off. Defining needs empirically is, however, not without challenges. It is difficult to distinguish between needs and wants, since defining needs might turn into a paternalistic exercise, while these are heavily dependent on personal and contextual characteristics. Nevertheless, a novel paradigm with needs, access(ibility) and social inclusion as key concepts, that accessibility narrative , has gained some popularity (Cass et al., 2005; Martens, 2012; Preste Raje, 2007; Farrington, 2007; Farrington and Farrington, 2005).

Social inclusion refers to the ability to participate in normal activities of society. Accessibility is a crucial concept since exclusion is a constraints-based process, i.e. exclusion is a lack of access to opportunities (Cass et al., 2005; Preston and Raje, 2007; Clifton and Lucas, 2004). The concept of accessibility is preferred over mobility since in a situation where potential destinations are located in the neighbourhood, less mobility is needed to reach a standardized set of destinations (Levine and Garb, 2002). This illustrates that accessibility is a derived need, i.e. transport is needed to reach destinations.

According to Martens (2012), transport should be distributed independent from the way in which other goods are allocated, notwithstanding the derived nature of transport and accessibility. He claims that:

> a strong case can be made for the recognition of transport as a separate *sphere. Transport has developed from a taken-for-granted and hardly disputed good, to a* highly desirable good, an indispensable resource shaping one s life path, availability is subject of public debate.

Given the increased spatial reach of daily lives, people need a certain level of mobility and accessibility to be socially included. Accordingly, authors refer to mobility r accessibility rights (Farrington, 2007) and basic levels of accessibility (Preston an Although a significant part of the sustainable mobility literature does not explicitly refer to accessibility rights, social justice is often implicitly present. Calls for mixed land use, proximity and compact cities are not only motivated by decarbonisation dreams, but also by the new narrative of accessibility. Studies on the adverse effects of sustainable transport policies illustrate that the aspiration of social justice cannot be replaced by objectives like compactness, transit-oriented development and bicycle friendliness (see, for example, the discussion of social equity and

investments in transit cited earlier (Garrett and Taylor, 1999)). As a consequence, ethics and social justice deserve a central place in the sustainable mobility paradigm.

Besides demand and need other distributive principles are mentioned in the literature such as merit, expectations ((legal) certainty), procedural fairness, formal equality, and outcome equality (Langmyhr, 1997; Hay, 1995). In practice, a mix of these and other often overlapping principles will be applied. Indeed, theoretical purity is impossible, but ignoring the ethical dimension of transport policy and research might relegate social justice to the background.

## 4. From the limits to growth to ethics

*All possible controversies on environmental impacts eventually boil down to an ethical debate*

The aim of the present paper is to challenge the orthodox sustainable transport vision from two perspectives that may draw too little attention in current debates. First, we discussed this paradigm by confronting it with the troublesome issue of the limits to growth. Then, we challenged the sustainable mobility paradigm by confronting it with the literature on social justice and transport and studies on social exclusion and transport. Apparently, the discussion seems to confirm the idea that all debates on sustainability eventually boil down to ethical discussions.

While the report of the Club of Rome has achieved an iconic status in the environmentalist movement and has played a significant role in the development of the sustainability discourse, economic growth is generally not questioned by sustainable mobility scholars and practitioners. From the same observation, Essebo and Baeten (2012) problematize sustainable mobility, and sustainable development in general, since such visions unconvincingly attempt to integrate the opposing goals of growth and biophysical limits. Also Tim Jackson s work (2009) points out the co the current economic system, in which growth is necessary to maintain employment levels, and the physical limits of the earth in terms of raw materials, energy and environmental space.

The sustainable mobility literature acknowledges biophysical limits which are made concrete by making reference to peak oil, climate change and greenhouse gas emissions. A typical paper starts as follows:

> Environmental problems such as climate change pr*esent formidable challenges for trans* *which is one of the few sectors where $CO_2$* emissions continue to rise. (Geels, 2012, p.4
>
> Car travel is related to climate change, dependence on fossil fuels, and *(Buehler, 2011, p.644)*
>
> The carbon dioxide (CO2) level *that causes global warming has been increasing rapidly since 1990 and many countries are trying to reduce these $CO_2$* emissions. (Ding et al., 2014, *p.109).*

These three randomly selected examples illustrate that biophysical limits are commonly expressed in scientific terms. It is about tons and atmospheric levels of $CO_2$, estimated oil consumption and percentages of carbon reduction and some other IPCC terminology.

Although we do not call into question the added value of research on climate change or estimations of effects of greenhouse gas emissions, we want to point to the moral and ethical dimension of anti-growth (or pro-growth) claims. As father and son Skidelsky (2012, p.131) argue: *the environmentalist case for growth reduction cannot be explained as a pragmatic response to known facts. It betrays a passion, a will to believe, to which the facts are incidental.* Interestingly, they illustrate this wi example in the field of transport: *if current fears about global warming turn out to be baseless, climate radicals will not abandon their opposition to long-distance flying and four-by-fours; rather,*

*they will find new arguments to justify their austerities.* (p.132). Although this quote does not do justice to the variety of visions hold by environmentalists, the point is clear: it is very likely that carbon emissions will have a significant effect on climate, but the apocalyptic visions that regularly accompany such scientific findings, are part of a storytelling process (in the sense of Hajer, 1995). Although this does not mean that efforts to limit greenhouse gas emissions and air pollutants serve no goal, it mainly suggests that we should take the ethical nature of environmentalist debates into account in any case.

The Skidelskys prefer an environmentalism based on ethical values, called good-life environmentalism, over one that hides behind climate models. Their openly paternalistic approach condemns greed, insatiability and other vices in themselves, and thus not for their climate impact. They put forward seven basic goods which are essential for the good life: heal personality, harmony with nature, friendship and leisure. We will not go into detail on the exact meaning of these goods, but we highlight that this is a positive stance towards life. Note that also for Jackson (2009) the aspiration is to provide capabilities for flourishing. This is particularly the case when we realize that in the past, the move towards a more egalitarian society has mostly been a matter of redistribution of surplus wealth. In a society without growth, welfare redistribution can only happen if the well-off would surrender a portion of their wealth. Although inequality is not necessarily linked to growth (Aghion et al., 1999), it is clear that the reproduction of power relations ensures that wealth redistribution in a stagnant or declining economy is hardly happening beyond mere philanthropy. The argument of the Skidelskys can straightforwardly be applied to the case of sustainability, as can be illustrated by Neuman s discussion of sustainable urbanism (Neuman, 2005). To hi too vague a term, and the search for an exact definition is doomed to failure. *the way things ought to be and how we ought to live.* (p.17), it is *a category of the good.* (p.17). An if the ethical nature of sustainability is not taken into account, dogmatism is likely to prevail. Ethical questions do not have an answer, they require a dialogue. For Neuman (p.17), *Sustainability is a debate about how to live.* , and according to us, we can simply replace sustainability by mobility or sustainable urbanism.

Seeing sustainable mobility as a debate or as an ethical question might have some implications for scholars in the field. It implies that everyone has something to say about sustainable mobility. Given that *there are no experts in morality* (Skidelsky and Skidelsky, 2012, p.145), the role o is not to prescribe what to do, but to substantiate the debate, to point to adverse effects, to indicate what is possible and to reduce illusion, especially when illusion leads to exclusion. This view on the role of research is not new (see e.g. Sayer, 1992; Feyerabend, 2011), but we would like to stress this point again. The statement that *there are no experts in sustainable mobility* must be understo way. It does, however, not imply that all moral opinions are of equal worth, or that scientific findings are nothing more than opinions. And even though scientific findings may lead to disenchantment, they can also nourish the debate and bring it to higher standards.

## 5. How to achieve Utopia?

*It is yet unclear how the highly popular sustainability transition approach incorporates questions of growth and social justice*

The previous section indicates that sustainability and sustainable mobility relate to the good life. This is a positive approach which stresses what sustainable mobility is or ought to be. This stands in contrast to approaches where the focus is on the negative, i.e. sustainable transport is about mobility with *less* $CO_2$ and *less* congestion. Among others, Goldman and Gorham (2006) make such a distinction between emphasising *what sustainable transport should not do* and *what the ideal system should do* (p. 264). They also distinguish between end-state visions and efforts that see sustainability as a pathway. Good-life mobility can be seen as a pathway or a good life or a permanent dialogue on mobility, but it can also be seen as some kind of desired end-state, a world where the good life is the norm. In order to be able to continue our story, we

provisionally define the good life as a situation characterised by a permanent dialogue on ethical questions. In line with Sen (2009), we do not put too much emphasis on highly idealist descriptions of utopias that show little correspondence to the world today. What is of importance here is that it brings us to the following essential question: how to achieve a situation which is considered more just and sustainable?

Besides a description of some essential features of the sustainable mobility paradigm, the iconic paper by Banister (2008) provides an overview of the necessary conditions for change. He a public acceptability and confidence are the keys to turn sustainable mobility into practice. Essential elements to promote the public acceptability of sustainability include information, communication and involvement, policy packaging and coordination across sectors, the adoption of more controversial policies in stages, and a reflexive attitude in order to remain flexible. In ess pragmatic and down-to-earth guide for the promotion of sustainable mobility.

Banister s pragmatic approach is one way to deal with the pathway to a more desi discussion to a meta-level is another. Most likely, the fastest growing family of perspectives on change is the so-called transition approach (Rotmans et al., 2001; Geels, 2012; Schwanen et al., 2011). In order to promote his socio-technical approach to transitions, Geels (2012, p.471) critici alternative approaches such as environmental economics, political science and industrial ecology since these focus *on a limited set of dimensions of (un)sustainability. The socio-technical approach to transitions instead highlights co-evolution and multi-dimensional interactions between industry, technology, markets, policy, culture and civil society.* (p. 472). Although this multi-dimensional approach looks promising, the transition literature largely neglects social justice and limits to growth related issues. Geels (2012) (awkwardly) refers to political scientists as being too on decision making processes, but the fact that he cites Newell (2008) to position this approach in the literature indicates that he actually means political ecologists and cognate scholars. The reduction of political science or political ecology to studies on political debates about emission targets and the bureaucratic implementation thereof in Geels (2012), ignores relevant issues discussed in that literature (e.g. Braun, 2006; Castree, 2000). Social justice and uneven development are core concepts in this stream of research, themes which only occupy a marginal position in transition studies. Note that Geels (2014) cautiously discusses political economy issues in a recent paper, including the role of firms and industries, economic growth, neo-liberal thinking and the role of the state in establishing the conditions for capital circulation. However, he did not without a long introduction on carbon-dioxide levels and tipping points, and without making clear how insights from political ecology have changed the transition approach.

Also in two well-cited other papers in the transition literature that deal with power (Avelino and Rotmans, 2011) and the geographical unevenness of transition processes respectively (Coenen et al., 2012) at least one difficult question raised in work on political ecology is not treated to some extent. And that question is whether the growth in energy consumption and transport is an essential feature of present-day society. Avelino and Rotmans (2011) give an overview of the conceptualisation of power in different literatures in an attempt to give the concept a place in the interdisciplinary transition framework. However, this has not yet resulted in the integration of uneven development in the transition approach. The second paper, by Coenen et al. (2012), cites virtually all famous, especially radical, geographers (Amin, Baeten, Brenner, Coe, Cooke, Cox, Harvey, Massey, Peck, Theodore, Sayer, Swyngedouw, ; admittedly, several of them without a formal background in g However, difficult issues are circumvented and the idea that the elimination of spatial barriers is an essential element of world capitalism (often referred to as the annihilation o `time-space compression (Brenner, 1999)), is not discussed.

Outside the transition literature, Schwanen et al. (2011) argue that the socio-technical approach to transitions offers an interesting perspective. However, they add practice theories as a promising research framework, an argument based on the critique of Shove and Walker (2007, 2010) on the transition approach. This focus on everyday practices illustrates that behavioural change is constrained, and shows the complexity of practices like daily showering or driving. Doing so, practice

theory stresses the importance of the demand-side which is less well developed in the socio-technical transition literature. The practice approach also illustrates that individuals are not the (self-)entrepreneurial, rational, utility-maximising, well-informed agents imagined in the neoliberal discourse.

The adoption of the transition label by policy making in Belgium illustrates that the introduction of this concept, like sustainability, does not automatically lead to major changes. In the Flemish region, Flanders in Action (Vlaanderen in Actie, ViA) is a project set up by the regional government to achieve an innovative, sustainable and warm society by 2020. Major challenges consequences of the economic crisis, the energy question, mobility problems, ageing and poverty. Transition is proclaimed to be the method used, since small adaptations to the as the transport system) are not considered sufficient. The goal is to develop new systems, meant to replace the existing unsustainable ones through many small improvements. This process is seen as a partnership between all sorts of societal stakeholders and is subject to permanent evaluation (Flemish Government, 2014). However, critical observers note that such transition initiatives are exemplary of green washing, post-political policy making and the persistence of power imbalances, despite the sometimes radical discourse (Debruyne and De Bisschop, 2013).

We can conclude that the predominant focus on climate change and decarbonisation in transition studies reflects a negative interpretation of sustainability, which stands in contrast to the good-life environmentalism of the Skidelskys, and, strikingly, the Transition Movement which emphasises community building (Hopkins, 2011). But as the study on scientific research about clima mitigation in transport by Schwanen et al. (2011) illustrates, a negative perspective on sustainab leaves some fundamental questions unanswered. At the very end of their paper, Schwanen et al. (2011, p. 1004) actually raise the questions *What is the kind of world that we would like to live in and fir desirable and how should mobility be configured in that world?* and *Is mobility in principle a right to which people are entitled?* . In a way, this can be interpreted as what we have called limits to growth to ethics . They carried out a review of studies on climate change mitigation in transport and they ended up with some ethical questions.

It will bring us too far to criticise transition studies from a political ecology perspective, but the point that we want to make here is that a key paper by a leading scholar who wants to introduce the topic into transport studies (Geels, 2012) tends to reduce it to low-carbon transitions , thereby i questions of social justice and the nature of society. However, some other authors on which our discussion above was based, at least recognise the problem. Again, we refer to Schwanen et al. (2011, p. 1004) who raise following question: *Will neo-liberal ways of decarbonising transport not exacerbate inequalities in travel patterns along lines of gender, race/ethnicity, class, residential location and their intersections?* . Although the work of the Skidelskys is more on ethics than on political ecology, they state: *Natural limits to growth, even if they do exist, will come into play far to late to meet the requirements of the good life.* (Skidelsky and Skidelsky, 2012, p. 143). In other words, the Skidelskys share with political ecologists concerns related to social justice.

## 6. Conclusion

But where do the above considerations lead us? The apparent incompatibility of the potentially systemic urge for growth and the expected climate induced problems are reminiscent of the tragedy of the commons, as described by Hardin (1968). According to the same author, a collapse of the system could only be avoided through judicious management of individual appropriation, thus through regulation. In the context of this article, regulation reminds us of what we have called the orthodox concept of sustainable mobility. For indeed, an environmentally friendly modal shift, substitution of trips that are less necessary, increasing the energy efficiency of vehicles, and the pursuit of compact urban development are all part of a vision in which government intervention is essential. When it appears that a number of possible interventions needed to reduce the environmental burden are not

effective, while on the other hand these can lead to more inequality, the whole concept of sustainable mobility could be collapsing like a house of cards.

Our main point is that mobility is worth a debate, where we recognize that the nature of such a debate is ethical. Consequently, everyone must be given a voice, hence our statement that there are no experts in sustainable mobility. But we also indicated that experts should be a role in the debate. Because in debates on sustainable mobility, often everything is lumped together, we try to introduce some structure. A first element is the distinction between relative and absolute figures. While climate change is about absolute levels (tons) of atmospheric components, the success of strategies is regularly measured in relative figures (e.g. percentage car commuters). This mixing of absolute and relative measures confuses the debate. Second, we suggest to distinguish more clearly between scales.

Debates on mitigating climate change are associated with the global scale. Key themes are aviation and international freight, and discussions about limiting such forms of transport are necessary. Perhaps it is effective to charge aviation and international freight transport with an appropriate carbon tax. In terms of $CO_2$ emissions, the potential gains by such measures are impressive, while the effects on social justice may be relatively limited. Because at the global level, it are not the weakest groups in society who are dependent on regular air travel and consumer goods produced overseas. A broad discussion on the wider social impact is needed, as it requires rethinking consumption and production patterns and an analysis of the impact on poor migrant populations is also recommended. Nevertheless, let it be clear that anyone who talks about climate change and transport without talking about aviation misses an important dimension. Since in such a debate with a global scope, it would be much less far-reaching to neglect the bicycle.

Conversely, it might be a good idea to continuously favour the use of public transport and the bicycle in cities. Even though the expected impact on greenhouse gas emissions is only little, such policies will contribute to the quality of life of those living in urban areas, especially with respect to the socially weakest. This does not mean that all vulnerable groups will benefit from a car discouraging policy, but by offering public transport and bicycle paths as a public service, all segments of the population would face additional travel opportunities. Road safety too can benefit from such measures, while compact urban planning may improve accessibility by limiting distance between origins and destinations of journeys. Several existing ideas about sustainable mobility dovetail with these considerations, even though the contribution to social justice is often not explicitly mentioned. In this case, the suburbanisation of poverty is a possible side-effect that calls for a debate.

By stressing context sensitive use of figures, and the importance of scale, we want to show that the sustainable mobility debate would benefit from a distinction between e.g. daily urban travel, and intercontinental transport. Thinking in levels of scale does not imply, however, that global dynamics necessarily happen above our heads (Herod, 2011). Apart from awareness about the necessary distinction between various levels, also the connection between these is of prime importance. The popularity of sustainable city logistics may not result in the neglect of what origin of goods, regularly hundreds or thousands of kilometres away, and the city edge. Even more, in order to label a logistics flow as being sustainable, the production process a should be taken into consideration. In the case of food and putting it frankly, sustainable logistics is either organic fair trade, either *artisan food production* [ ] *that would help maintain links wi soil.* (Skidelsky and Skidelsky 2012, p.143). So, whether it is in aviation, cycli the real challenge is to find solutions that combine benefits in terms of climate impact, pollution and resource depletion, with more social justice, and this at all levels.

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# THE JUST CAUSE FOR PLANNING.
# SIX PERSPECTIVES ON THE PUBLIC INTEREST IN THE PHYSICAL DOMAIN
# (7000)

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Keywords: justice, decision-making, public interest

## 1. Introduction

Planners are a special kind of professional. They are not just knowledgeable ex
plans for urban or regional development, commissioned by municipalities, priva
anyone else who pays them. Planners do their work in a strive for a better wor
hold a firm set of beliefs about what this better world should look like and
contribute to this better world. The cities they build and the developments t
cause. But planners are also normal people. Like any other professional, expert
them may think differently on what precisely is a better world. In other wor
different views of what is the just cause for planning.

The ethical concerns underlying planning efforts and spatial policies are often
of justice or other moral frames. In practice, many planning efforts relate to
and their contribution the public interest. This paper focuses on this broad pr
public interest and aims to give insight in the variety of views people have o
when it comes to the physical domain of urban and regional development. Base
research with a value-oriented approach, in which the variety of normative vie
spatial planning is defined, six perspectives on the public interest in the
presented. Each of these perspectives reflects a distinct combination of underly

This overview of six perspectives on the public interest in the physical domai
better plans. Plans that present a substantial normative choice on spatial dev
can be tested in social debate and decided upon in the political arena. The six
public interest will be characterised with a view to contemporary spatial deve
will be positioned in view of social, economical and political preferences
interventions. This helps to draw up plans and decide upon the appropriate role
dealing with spatial development issues, either in collaborative processes with
communities, or with a clear-cut division in responsibilities between gov
organisations and private parties.

## 2. The normative background of planning approaches

Spatial planning is traditionally driven by strong normative beliefs in creati
working conditions for the poor. Planning for urban development needed to pro
housing and amenities, as well as for industry and offices to provide enough pe
work. Urban and regional planning served the public interest with this social ar
in which there was a self-evident role for government intervention in the physi
justice has been a dominant underlying value of these traditional planning
growing post-war prosperity, even more prosaic social aims for planning could
governments, in order to create pleasant spaces for leisure and beautiful landsc

Decades later, this social and economic agenda gave way to more focused ec
regional development and real-estate driven inner city projects, as well as
environmental an ecological concerns. With this change in normative background
evident role for government has changed. A variety of planning approaches has
over time. In the more entrepreneurial public-private partnership approaches, pl
role of government in negotiation with private investors. Environmental concer
explicit role for government with environmental legislation, in which planning
strict and regulatory role for government and identifying the specific physica
safeguarding. In contemporary processes of transformation of existing urban are
define the division of responsibilities between community initiatives, pri
government.

In this variety of trajectories for planning policies and planning practice, the
role of government in dealing with spatial development issues. There are also
definition of the public interest that is being pursued. It s not always the
economic agenda, with social justice as its guiding principle for redistribu
defines the public interest. The public interest may also be facilitating econor
possible to create added real estate value or preserving basis environmental qu
to come.

Recent developments show an even bigger variety in government involvement
development issues. An active civic society in cities often takes matters in t
when it comes to the transformation of disused space or derelict buildings. I
claim a say over redevelopment areas in their vicinity. Local entrepreneurs dev
cases, often in the creative industry. Newly founded cooperatives of neig
sustainable energy and dedicated residential complexes are developed for people
in a sustainable lifestyle. With these approaches come different conceptionalis
interest at stake, and what role and responsibility governments needs to take fo

In the contemporary pluralistic western society, people have different notions c
Some are particularly keen to foster small-scale creative business opportunitie
others focus on climate neutral housing. Many people seem to want to see the v
their own community, whether traditional or culturally diverse. For planners t
translate this variety of views on the good society into plans that help make
urban development. The question therefore is, what is the just cause for planni
whom should this good society be created?

To find an answer on this fundamental and philosophical question, this paper
practical concept of the public interest. Using the outcomes of value orie
recognises the variety of normative views on the role of spatial planning (B
Weide 2014), six perspectives on the public interest in the physical domain are
of these perspectives reflects a variety of underlying values. It shows that v
care are not the only values that are represented in the normative beliefs o
values like safety, diversity or autonomy. The six perspectives on the publi
characterised in terms of spatial development issues and will be positioned
economical and political preferences for government interventions.

In order to gain an understanding of the variety of perspectives in society abo
in the physical domain and the extent to which the government has to assure
interest, firstly the notion of interest needs defining. In general, inte
advantage or benefit for one or more individuals, a wish that is fulfilled or a
justice. An interest derives from a certain action or structure that is offere
collective (Stone, 1997; Barendrecht and Beukering-Rosmuller, 2000). Most of the
fields of planning, law and economics distinguishes between three types of in

interests, societal interests (public interests in which the government has a m
interests (in which the government has a prominent role).

Individual interest refers to the own interest pursued by the individual, whic
interests of the individual s private sphere such as relatives and close frie
focused on the short term (Barendrecht and Beukering-Rosmuller, 2000). Bounde
private context, the individuals interest is characterized by the affective
relatives and close friends and by a bond of unconditional loyalty. When an ir
level of the private sphere, it shifts to a groups perspective. Group formatio
indeed bring benefits, sometimes to the level at which none of the members of
excluded, in which case there is some form of common interest or even a collecti

Common interest can be distinguished from shared (combined individual) interes
specific choices. When the common interest no longer relates to a specific
significant larger part of society or to the society as a whole, this interest
social interest or public interest. The next paragraph further investigates the
of public interest, with a specific focus on the various societal perspective
government in the physical domain.

## 3. The public interest in the physical domain

In most literature, a clear distinction is made between social interest and publ
to the Netherlands Scientific Council for Government Policy (WRR, 2000), social
interests that are considered important for the society as a whole, such as educ
an inclusive health insurance system. Individual interests and social interest
almost each individual needs (and profits from) such basic facilities. The pul
distinguished from social interest, in the sense that it concerns an interest f
primarily responsible. Only government can define and legitimise a public inter
(Moore, 1995; WRR, 2000: 57). However, in most societies public interests are
exclusively as a government responsibility. The public interest is often s
responsibility of government, societal institutions, businesses and communities.

Public interests can therefore be seen as social interests, for which goverr
responsibility (Baarsma & Theeuwes, 2009: 27). The traditional characterisation
in which the government either has a major or a minor role, therefore doe
historically strong involvement and responsibility of societal institutions and
in the physical domain. Public interest as a shared responsibility, based on mu
be distinguished as a third type of public interest.

### 3.1 Public interest as a government responsibility

A classic perspective on public interest in the physical domain is that in wh
appropriates the final responsibility of providing the interest, based on
otherwise this interest would not (properly) be provided to all (WRR, 2000: 57)
and coastal defenses are common examples, based on concerns of health and safet
complex of social interests which in the long term best serve the well-being and
collective, perceived as the public , including those of future generations (v
2000; Smit, 2010). According to Bozeman (2011: 12): ( ) the public interes
dependent, but not different for various groups or individuals . It exceeds the
level, as well as their temporal constraints. Public interests can match the
conflict as well, since the individual tends to focus on its own rights and inte
while the public interest focusses on (the distribution of) rights and intere
According to Moore (1995), within a democratic society the government, as
representative of its citizens, is the sole actor which is legitimated to defi

process of political decision-making. This emphasizes the formal legitimacy of
public interest. The government takes full responsibility for this type of publ
be seen as an active government assurance and structural engagement, on which pe
may establish their long-term expectations (WRR, 2000).

Economic arguments focus on collective goods that are neither excludable nor ri
prevention and military defence, which must be provided to every individual in s
al., 2003; Korsten, 2014). The government guarantees and provides these goods,
risk of free-rider behavior or due to (positive or negative) externalities th
internalized by the market (van den Noort, 1986; Baarsma & Theeuwes, 2009; den
Quasi-collective goods, such as highways, which the market cannot provide, are
government on the basis of socio-economic arguments and arguments for the distri
(Baarsma & Theeuwes, 2009; van den Noort, 1986).

This closely relates to the social or political arguments, according to Talbe
interests with government assurance not only improve welfare, but also have
redistributive content . Defining the public interest is justified if technica
provision of goods or services through the market, while it s a prerequisite fr
social justice (Moore, 1995). This relates to preferences of solidarity and re
2005; Baarsma & Theeuwes, 2009; den Butter, 2014). Government intervention, i
results in an increased well-being or welfare benefits on the long term, w
individuals in society do not or cannot provide for. Defining and guaranteeing
security by well-maintained dikes and health through a hygienic environment, ar
welfare growth, individuals are able to participate in society. Environmental ar
to concerns of common goods, wherein goods are rival but not excludable. The rol
that follows from this is to guarantee that activities are organised in suc
exploitation or pollution of the environment is prevented, and their avail
generations is secured.

Also legislation, the institutions of government and the institutional and proc
policies serve a public interest. This refers to the necessity of justice and f
domain in particular with respect to property rights and land use. Legislati
provide the transparency of public decision making and the provide the possibi
participate in decision-making processes of government (Beukering-Rosmuller,
2011).

### 3.2 Public interest as a shared responsibility

The public interest as a shared responsibility of the government and society
represented in corporatist structures in the economy, such as the former agricu
are cooperatives in which government and businesses jointly provided economic
contemporary form, around the issue of the transition towards sustainable ener
economy examples can be found of new forms of shared responsibilities for a pu
often concerns a complex of group-exceeding or social interests, aimed at both
term, which are of significance for a particular business sector or community.
interest is characterised by the decentralised control of the government and
preconditions that facilitates collaborative approaches, with businesses, socie
individual residents. When the government subsidises projects, compensation is
sense that this facilitates collaborating in and executing of projects.

Economic arguments often focus on the creation of optimal welfare, which can be
a mixed or hybrid economy, wherein private initiatives, businesses and public
each other. Public and private actors jointly provide goods and services that a
society as a whole. This also allows for semi-public or merit goods and services

by government, such as social housing, recreational parks and public transpor
1986).

Based on social arguments, defining the public interest can be seen as the outc
and agreement with the involved stakeholders. The shared responsibility often f
a welfare optimum for a community or area, which includes activation of vulnerab
The government aims at joint agreements with businesses, industry and social or
use of, for instance, green and renewable energy. It concerns initiatives that
spatial planning and land use, in which the identity and the areas specific qua
legal instruments can be based on private as well as public law, aimed at provi
and procedural framework within which public and private parties can cooper
(re)development public-private partnership (PPP) is a commonly used instrumen
subsidies and concessions enable (semi-)private organizations to provide (by
defined quality of) services such as social housing and public transport. With
and preconditions for subsidies, the government also provides the substantive fr

3.3 Public interest as a system responsibility

A form of public interest with emphasis on the demarcation of tasks and respon
the government and society, in which the government is assigned to a more limit
is often formulated in terms of system responsibility. This refers to a comple
relevant to the community, with a limited role for the government because: the
that interest is desired for the society as a whole (WRR, 2000: 20). Unlike in
group interests, these forms of social interests do not differ for individuals
balanced complex of their (sometimes competing) individual and group interests
may focus on the short as well as the long term.

An example is the demand for bread in a community provided by the bakery. There
rules required in order to meet this need, unless there are quality issues of
the tipping point for public interest. In this definition, the private or civ
goods and services of public interest. This may involve, for instance, self-orga
and nature reserves by private organizations or foundations, but also hou
cooperatives in which (groups of) individuals are the independent producers a
goods and services. Involvement of the government is often required to provi
preconditions in a legal framework or policy system, which creates the context
unsubsidised services.

Economic arguments tend to focus on the welfare optimum, which can best be ach
the market that can create an optimal allocation of goods and services, for wh
creates the necessary preconditions (Baarsma & Theeuwes, 2009; den Butter, 20
social arguments, the public interest is related to the creation of optimal wel
such as adequate health and employment opportunities. Here, the individual (als
community. Environmental arguments relate to the community that strives for o
through organisation of the market, inter alia through tradable land use- and
legal instruments that relate to this type of public interest, consists of a fra
system of civil law. This needs to provide for a proper functioning of market
government is limited to facilitate projects (both by legal and planning conditi

4. Six perspectives on the public interest

Decision-making on spatial development issues (or any other issue) requires
interests to be taken into consideration, with a view to the public interest.
always be a political decision. This political is not a redistributive act, in
and mutual gains are acknowledged and divided among stakeholders and the wider p

decision-making is a normative act, in which a variety of points of view consideration and a choice is made on the preferred development, the design and urban territory (Buunk 2010; Buunk en van der Weide 2012). Decision-making development issues with a view to the public interest is based on value rationa perspectives on the public interest that play a role in plans and projects in therefore needs to be based on the variety of values people relate to in society

4.1 Interests and values

For a proper understanding of the public interest, it is important to make a cle interests (that were explored in the previous paragraph) and values. The publi representation of a public value. It is the larger picture people often like to of their views. The public interest, to which politicians, bureaucrats, and lo as justification for a particular policy they may advocate, is close to public being about the value itself, interest is one of the reasons or reference points things. People may be said to value something because it is in their interest The public interest is seen here as an overarching concept that serves to legi have on others and on society, based on personal interest people have, thei interests and, more importantly, their preferences for a good society.

In order to create an overview of the perspectives people take on the public in to look at the combination of the interests in and concerns people have for the well as their preferences and the underlying values they represent. A value expression of a deep-rooted belief, motive, incentive, desire, or ideal for (Buunk and van der Weide 2014: 217). Values have a meaning in social interacti become tangible in emotions and in the argumentation behind points of view and people make. Some people will argue for an extensive role and responsibility f preserving the quality of the physical domain as a collective good, thereby exp protection and safety. In previous research, the variety of values that play a identified (Buunk and van der Weide 2012, 2014). The values that play a role in development issues are often abstract, but become much more concrete when they in perspectives people have on a practical concept like the public interest.

Following this value oriented-approach, six perspectives on the public interest that each reflect a typical combination of three or four underlying values a development issues. For these perspectives to represent the variety of views on in the physical domain, the dominant value represents one of six moral fou foundations are groups or families of values defined by moral psychologist Jona & Graham 2007; Haidt & Kesebir; 2010, Haidt 2012). These moral foundations are intuitions people have that guide their behavior in social contact with others a behavior of others and on society. These moral foundations help to distinguis values and emphasize the orientation of desires people for a good society. Here to recognise six distinct perspectives on the public interest in the physical perspectives has a characteristic line of argumentation on what are the issues the preferred way of dealing with these issue, including a the role for govern argumentation, underlying values are expressed and the moral foundation to whi relate dominantly can be recognised.

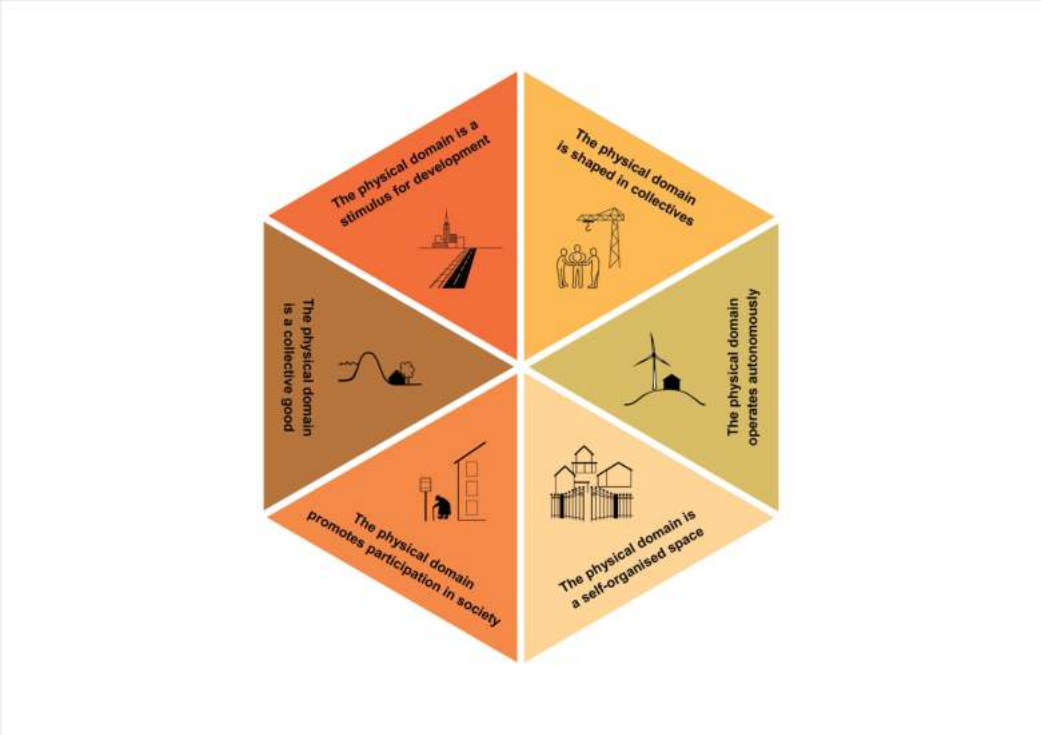


Figure 1 Six perspectives on the public interest in the physical domai

In the best-known perspective on the physical domain as common good, the argume public interest is an expression of the value of hierarchy. In particular i Netherlands, where the main urban area is under permanent threat of inundation has an undisputed responsibility for all aspects of the watermanagement. This that, when necessary, surpasses any other interests. In other traditional perspe public interest, the physical domain serves to stimulate development economicall promotes the participation of all in society. These two perspectives voice value underpins many redistributive mechanisms in economy and development opportu solidarity, which can be recognised in a spatial development that meets the n groups in society. In the other three perspectives on, the physical domain is communities or individuals that in a variety of ways and with a variety of mo action for a public interest. The characteristic line of argumentation that i these perspectives reflects the variety of collaborative approaches in dea development issues.

## 4.2 Traditional perspectives on public interest

Three perspectives on the public interest in the physical domain can be qualifie they reflect strong beliefs in the possibilities for planning and other governm planning efforts are not restricted to the physical domain; they also concern social structures and economic performance of cities and regions. The argume exemplary for these perspectives, reflect a robust trust in the ability of gove social and economic ambitions. The institutional arrangements of spatial pl countries are grounded in these notions of the public interest.

The first and most well-known traditional perspective on public interest sees t as a collective good provides a safe and healthy environment for people to li goods that are indispensible for everyone, but neither individual citizens communities can provide for these goods on their own. Watermanagement and mili are amongst these self-evident government tasks in the physical domain. Once

arrangements, zoning and installations for these goods are defined, installed an
everyone gains from them. Also when someone doesn t pay their taxes to the wat
authority or when someone strongly prefers the force of positive thinking inst
force to maintain world peace, they still enjoy dry feet and are left in peace.
is characteristic that government provides it and no one can be excluded
argumentation often stresses the inevitability of safety, health and other k
underpinned by values hierarchy, protection (of everything that is vulnerable) a

The preservation of clean air requires national and international legislation a
that delivers air quality for everyone to enjoy freely. The same counts for the
even though the actual management of the nature areas is not only done by gover
but also by ngo s, private landowners and famers. Some national parks are only
membership or a ticket. The availability of global biodiversity by means of legi
a perspective on the public interest in the physical domain as a common goo
government. It is available for everyone, including the preservation of the va
medicinal herbs someone might benefit from once. For the preservation of nat
perspective is not always followed. Some nature areas, maybe containing key e
that are legally protected, are owned and managed privately for some to en
perspective on the public interest shifts towards one in which a division
responsibilities and private responsibilities are preferred.

The second traditional perspective on the public interest defines that the ph
stimulus for development. In this perspective, the role of government and the ex
intervention in urban and regional development is less self-evident, but moti
economic growth opportunities and the requirements for people individually and s
to develop. Investing in roads and railroads to improve accessibility of re
zonation and other prerequisites for investors to develop business estate
development of amenities are the type of interventions that help business and
people, as well as other development opportunities. The motivation often lean
economic theory, with notions of welfare and utility at their core.

When the public domain is a stimulus for development, the role of governmen
providing quasi-collective goods. Providing for subsidised affordable public
example. Not every one gains form it directly and travellers need to pay fare
accessible and well-connected urban region. It allows people to go about their
work and any other activity they wish to pursue. Public investments in a specif
a business district improve the accessibility of a location, where private d
choose to invest. In the motivation behind this perspective on the public intere
(with linkages to a notion of justice in terms of reciprocity) are combined
development (in terms of offering opportunities to learn and improve oneself) an
stewardship and careful consideration of economic, environmental and social aspe

The third traditional perspective on the public interest emphasises that th
promotes participation in society. In this perspective there is an important ro
take care of people that need some help in their lives, because they otherwise
themselves. It is a perspective in which the planning and realisation of socia
amenities play an important role. Public transport is seen as a social provis
those who do not have access to private means of transport. This perspective al
free public transport for elderly. Government, semi-government agencies and so
operatives are seen as institutions to provide for these developments in cities
services. In the motivation that is applied in this perspective on the public
solidarity is dominantly recognisable, often dubbed in terms of justice, and co
Other values that may be recognised in arguments are the importance of provid
people. In the institutional approach, with many semi-public organisations, a c
way of working can be seen.

## 4.3 Perspectives on public interest for contemporary challenges in spatial deve

The challenge for urban and regional planning is three contemporary perspectiv interest in which private initiative and a variety of new social collectives particular in many cities, the redevelopment of derelict areas and former i become the focal point of local entrepreneurs and artists. These representati industry often join forces with local community groups to take initiatives, some to corporate developers and sometimes in close cooperation with these privat variety between these new perspectives comprises the typical role that is government. Sometimes initiatives demand an actively participating and subsidi for the public interest. Sometimes refraining form intervention is required. variety concerns the nature of the challenges or the issues that are seen as imp

In the first of the more contemporary perspectives on the public interest, the shaped in collectives. A variety of forms of collective action actively look government. This can be public-private partnership with a business-like way of local community groups often wish to work together with government on equal driving force behind this type of collective action is often a creative idea something completely new, with better urban quality or exceptional architectura many initiatives involve the energy transition, which spurs a variety of co-op invest in solar panels on the roofs of public buildings and other available roof often also involves the claim to have a say in developments, with a strong en Values that can be recognised in this perspective are diversity, in combination a value as such and equity of position of actors.

In the second of more contemporary perspectives on the public interest, the ph self-organised space. This concerns collectives that aim to design, create and part of a city, including public amenities. Examples are sporting clubs that ma accommodation or companies taking over responsibility for the management of an e estate from a municipality. This type of collectives seeks to pursue a public in clearly defined division of responsibilities between themselves and government. recognised are singularity of a community, freedom and say.

In the third of the more contemporary perspectives on the public interest, th operates autonomously. This is a rather extreme variety, in which private i overtake almost all of the more traditional government responsibility for som considered to be a public interest. These are the more radical collectives th challenges of climate change, by producing their own electricity but want to st therefor do not need a public energy network. The motivation for this type of or public interest will often strongly be based in a belief system. Values that ca approach are above all autonomy, but also community values, harmony and respons represented.

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# FROM BORGATE TO METRO-BOROUGHS. THE CHANGING CLAIMS FOR JUST PLANNING IN ROME

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The paper seeks a reflection upon the consequences of urban development on the practice of just planning. City change involves a complex reworking of the urban fabric, expanding boundaries, substituting people, and transforming places. Thus, the paper discusses the issue of justice in modern urban policies of Rome adopting a historical and geographical retrospective view. The overall purpose of the paper is in fact to offer a conceptual frame that may lead to a comparison.
The first paragraph set the case for such a discussion, identifying the characters of a spatial model that articulates issues of justice and planning in different zones of the city. Just policies are a varied set of heterogeneous initiatives; consistently changing over time, inextricably woven to the political role of a collective agent.
The second paragraph contrasts the struggle of an historic urban *borgata*, with the apparent quietness of a late metro-borough in the widespread city (Cremaschi, 2011), discussion of some contentious claims for urban justice. However, these are situated cases, and not immediately comparable.
Their juxtaposition helps in fact to highlight, in the next paragraph, how the changing spatial scale alters their claims for justice in planning. Our main thesis is thus that a historical perspective is needed in order to discuss the issue of justice in modern urban policies; besides, the changing spatial scale and the current rescaling process, is profoundly altering the claims for justice in planning, putting citizens and planners in front of new challenges.
In conclusion, the paper points out that a sort of centrifugal drive has in fact designed new geographies of spatial injustice. Today, fast growing municipalities deal with social conflicts, environmental concerns and cultural diversity in a piecemeal way, lacking both a general framework for interrogating urban change, and a collective actor to question its effects.

## 1. Spatial justice in the urban evolution of modern Rome

The history of urban planning in post-war Rome is a fascinating example (accurately investigated by Italian urban historians[1], though less known internationally) of a contentious policy field.
The argument postulates that justice in planning is better understood if one imagines that a sort of zoning process has historically articulated urban political issues. Roughly, a conceptual zoning results from the combination of positioning in space and time; and of representing either directly through *collective action,* or indirectly through *narratives*. This quick articulation leads to analyse four areas, the city s core and three concentric belts of neighbourhoods.
This simple model provides a sharp spatial interpretation of the social geography of the city that makes sense of major urban trends. While the city core, and the peripheral rim are fully urbanized, densely built, and heavily populated, the external zones are far wider, sparsely built, and interspersed by large natural or agricultural areas.
These zoning articulates in fact several distinctive phenomena (for instance, the growth of population: Cremaschi 2010), and corresponds to different phases of the city s growth. doubled in size between the 30s and 50s, and almost again before the 80s. Land and housing markets have steadily overheated, creating enormous profits and corruptions. Beside, urban

[1] For notorious examples see: Insolera, 1962; Parlato 1970; Benevolo 1977, 1992.

planning in Italy has been dealt with mostly locally, often by the local elites, rarely by progressive government. The growth of the population of Rome has stopped since the mid-70s, and change occurs primarily through the displacement of middle classes and (later) of immigrants from the core area of the city to the surrounding municipalities.
Namely, a profound articulation of the 20th century models influenced the production of these city zones: the metropolitan model used in fact to define core and periphery, while the incumbent post-metropolitan evolution is at the origin of the scattered and external communities.
More precisely, the urbanization process has come to define different spatial settings. These spatial settings differ by form, construction process, actors involved, and constraints posed to collective action, social and cultural profile:

a) The city ancient core and its dense popular neighbourhoods (late 19th, early 20th century). The core area changed the most, as scholarly research recorded, adding to the ancient Rome new vernacular neighbourhoods, residential areas of the new elites, government office districts including university and ministries, museums and ceremonial buildings, and eventually turning everything in the mass-tourism scene. Today, the predominant affluent population raises post-material claims for the quality of life, and an appreciation for public space. Often, these claims combine with a more radical defence of the commons, not unusually encountering the struggle of minority groups for recognition and justice;
b) The working class peripheral ring (20th century, mainly post WW2) has come to surround the city centre. During the first half of the XX century, the city has been invested by a massive immigration wave. The lack of appropriate planning strategies and housing policies led historically to massive speculation (Insolera, 1993), during and after the Fascist regime; and eventually, to the establishment of the largest informal housing sector in Europe. *Borgate* are thus the crucial offspring of the urban development of Rome in the first half of the 20th century, resulting in a divided city with a strong social, functional and physical gap (Ferrarotti, 1970). The socially homogenous post WWII working class neighbourhoods have been the cradle of all urban political conflicts, though receiving less attention from researchers, and are today ageing rapidly and on the verge of gentrification. These are the area of the traditional redistributive claims, a sort of an early right-to-city movement, which strongly affected the political life of the Capital (and in a way of the country).
c) The post-industrial, loose collection of outer estates across the main circular ring road (GRA). These area hosts a mix of extreme conditions, the poorest neighbourhoods, interspersed by Social Housing Estates and by spot settlements of refugees and Roma. In fact, during the last quarter of the 20th century, first public agencies, then private promoters, built up a scattered collection of outer estates. No doubts that these areas does not support an organized mobilization, even less so for social justice. It rather corresponds to the political space of individual mobilization, sometimes invested by right wing political entrepreneurs.
d) Finally, the last ring hosted suburban communities that have been invested by metropolitan flows, and converted into the new metropolitan neighbourhoods. These settlements have been renamed metro-boroughs. In fact, the fast growth of metropolitan area has often changed the destiny of neighbouring townships, which become attractive for a highly mobile population. These areas mix local folks, new young families and international migrants, who tend to commute on a broader geographical scale though they may set a claim on local welfare services. However, these fast growing municipalities deal with social conflicts, environmental concerns and cultural diversity in a piecemeal way.

The contemporary story of Rome, as sketched trough the simple zoning scheme, asserts precisely that a claim for spatial justice has been formulated in the 60s, and has become integral part of the political manifesto of the Communist Party and other left-wing political groups, that later arrived to govern the city in a progressive coalition.

This claim was supported by the image of the divided city and brought to a local political manifesto stressing the centrality of urban issues, thus profoundly different from the traditional position of Socialist and Communist parties. The political priorities of the main left party, the Italian Communist Party, were reoriented towards urban issues, and a concern for the quality of life.

In particular, urban informality was included in the political agenda, influencing backwards politics and policies. Eventually, both leftists and Christian-social activists coalesced in a civil rights movement that forced an agenda for urban rehabilitation. Urban claims (housing, schools and transport), rather than labour, reframed the political agenda.

In fact, post-war political action concentrated upon the Borgate. A consolidated feature of the city, they indicate precarious, sometimes informal and illicit settlements (self-)built to respond to the growing urbanization and to the displacement of people due to the vast program of city renewal brought about, in particular, by the fascist regimes. Known for the typical strong solidarity of close communities, they have been the cradle of early urban protest movements, having in turn influenced the trajectory of left parties[2] (Berlinguer, Della Seta, 1960; Foa and Natoli, 2014). Since then, Rome has offered in fact a unique collection of a political reflexive practice of urban struggle, well before Lefebvre s writings, and late fame: earl of the 50s; more divisive and contentious issues in the late 70s; late squatt current through fragile insurgent movements fostering a more balanced approach to both the metropolis and the environment.

In addition, the main narratives changed over time. The main narrative seeking to capture the process of city change has been based upon the image of the two cities, the first corresponding to a bourgeoisie, which was central in both spatial and political terms, and was able to influence in particular the flow of public resources; the second, to a populace relegated to the physical and political margins. The divide between the city centre and the peripheral districts was the grand narrative of the 1970s, a spatial metaphor that has ever since oriented the leftist understanding and policies of the city.

Over the past forty years, since the first leftist government of 1975, Rome has changed radically. Today the city is no longer poor and magnificent as Pasolini wanted. The capi the agglomerative core of the region, since urban development has structured a vast urban field almost coincidental with the region. In the meantime, the post-war economic boom had brought about a new sense of wellbeing and optimism. Eventually, the expectations of people went well beyond the administration s capacity, and it was unable to fulfil even the origi

Under represented social needs, often reframed on wider or smaller scales (transport and urbanity, for instance), both improper and unusual for political action. Sudden confrontations often explode, contrasting old class solidarity and xenophobic mobilization. Even more importantly, the political space has been restructured along these patterns of metropolitan organization. Since then, the history of the Roman periphery has been the history of a divorce between the declining commitment to collective policies and growing claims for individual wellbeing.

Of this tumultuous process of growth, two distinctive social and spatial formations have emerged, post-war *borgate,* and late *metro-boroughs*.

Table 1 The zoning of justice claims and policies

[2] Being a government city, and lacking an industrial working class, Rome (sometimes describes as a colonial c

| | **Central monumental area** | **Working class periphery** | **Post-industrial outer ring** | **Metro-boroughs** |
|---|---|---|---|---|
| *Position in Time and Space* | *1870-1975, the construction of the metropolis* | | *1975, onwards, the post-metropolitan evolution* | |
| | 19th and early 20th century core areas | Between 1915 and 1975, 60 years of continuous development and demographic growth | In the last quarter of the 20th century, both public and private promoters built up a scattered collection of outer estates | Beginning of 21st century, |
| | Elites and vernacular neighbourhoods, business districts and tourist scenes | Early social estates, dense neighbourhoods and informal settlements, all rapidly ageing and on the verge of gentrification | a mix of extreme conditions: poor and affluent suburbs, interspersed Social Housing Estates and by spot settlements of refugees and Roma | suburban communities that have been invested by metropolitan flows |
| *Representation through collective actions and narratives* | *Political mobilization around left parties, trade unions and parish churches for public services* | | *Diffuse yet not politically structured urban and environmental awareness* | |
| | Traditional redistributive claim; early representation by social movements, especially in the *borgate* and working class neighbourhoods. Post-material demands of participation and recognition; claim for the commons, quality and a better environment (right to the city) | | Under represented social needs, often reframed on wider or smaller scales (transport and urbanity, for instance), both improper and unusual for political action. Sudden confrontations often explode, contrasting old class solidarity and xenophobic mobilization | |
| | The *Capital* city, the modern, liberal city that ought to cancel the rule of the Popes | The *divided* city, a city divided by the social conditions of the affluent core vs the poor ring | The *scattered* city, one that the polycentric strategy of the 2005 plan should reorganize | The (post-) *metropolitan* city, a yet undefined vehicle for mutual adjustments |

## 2. Comparing a borgata with a metro-borough

To shed light on the consequences in terms of spatial justice of the described phenomenon of urban change two case studies are discussed, belonging to two different historical and spatial zones. The first one is Pigneto, a neighbourhood of the eastern periphery of the city on the borderline between dynamics of degradation and trajectories of trendification considered as a *borgata*. The second is Riano, a small municipality in Rome metropolitan area, which has almost doubled its population in the last ten years, mainly because of an influx of people moving off Rome city core, in other words a *metro-borough*.

### *2.1 The working-class borgata*

Pigneto[3] is a neighbourhood of nearly 50.000 inhabitants located in the oriental periphery of Rome, in the Municipio[4] V. It was a working class neighbourhood, spontaneously developed at the beginning of the twentieth century around local industries.
The majority of inhabitants were workers, railwaymen, artisans, many of whom were immigrants from southern Italy attracted by the labour opportunities during fascism and after the war. The characteristics of this area, dense in relational bonds, inspired many of the cinematographers

[3] The area s boundaries are ambiguous, because they include simultaneously a large territ variety of neighbourhoods and sub-zones within it. Boundaries change according to the perspective, whether it be administrative, historical or that of inhabitants perception. Depending on which these different definitions is deployed, Pigneto either includes or does not include the neighbouring areas of Prenestino and Torpignattara. For the purpose of this research it is considered the triangular area, squeezed by two major roads (both of Roman origins) the Prenestina and the Casilina, and crossed by Via del Pigneto which connects Piazza Caballini to Via dell Acqua Bullicante

[4] Rome Council is divided in fifteen administrative districts called Municipi which have management and financial autonomy.

representative of Italian neo-realism. The neighbourhood was the setting for Pasolini s w particularly *Accattone* (1961) and his novel *Ragazzi di Vita* (1972), both of which describe the extreme poverty of these zones.

The area well represents the dualism of the urban evolution of Rome, because it was born outside the town plan, in a fragmented way to a point that it has been defined as an (Severino, 2005). The first nucleus where formed by self-built housing organized in *spontaneous borgate*. In the 1930s appeared other neighbourhoods realized by Rome s governorshi back to that period are both the Borgata Gordiani, a settlement of very rudimental single storey houses (almost shacks) meant to host temporarily low-income inhabitants evicted from the city centre, and the *villini* area, a sort of garden city, characterized by low density, high quality, detached-housing, built for state employees and railways workers. The zones in between these formal and informal nucleuses have been filled up for subsequent additions by high-density housing, tall apartment buildings (6-8 floors) mainly part of the speculation of the 60s an

From an economic point of view, the population was traditionally employed locally in the transport sector and in industry, but the majority of the factories closed down with deindustrialization process during the 1960s and 1970s. Historically, the neighbourhood showed considerable vitality in commercial enterprises, which made it self-sufficient. During the nineties there was a significant reduction of the local traditional shops following a wider national trend which saw corner shops hit by the competition of large retailers, and following the progressive trajectory of decay of the neighbourhood. Since 2000, this trend has been counterbalanced by the growth of ethnic businesses, and the reconversion of some commercial premises into pubs, restaurants and other nightlife venues, located in a relatively confined area in the west closer to the city centre.

Table 2. Demographic data of Pigneto and Riano. Source: Roma Statistica, 31 dicembre 2013; demo.istat 31 dicembre 2013

| | Population | Pop density (res/Kmq) | Ageing index (>65/<14) | Foreigners (%) |
|---|---|---|---|---|
| Pigneto | 47.680 | 20.289 | 202 | 18% |
| Riano | 10.155 | 399 | 93 | 16% |

Demographically, it has an ageing population, testified by an ageing population index that in 2000 was almost the double the city average. Today, the growing number of immigrants who tend to be younger counterbalances this trend. The area is one of the most multi-ethnic in Rome, with a percentage of foreign residents that has increased from 2% in 1991 to 18% today, well beyond the city average (12%). The main nationalities are Bangladeshi and Chinese.

Another influx of young population has been provided by the new creative class , young people, students and artists, who began to move into the neighbourhood in the late 1990s, attracted by the romantic heritage of Pasolini, and the cultural connotations of the neighbourhood (Annunziata, 2011).

*2.2 The metro-borough in the widespread city*

Riano is instead a small municipality located along the northern border of Rome City Council. Historically it was a village based on agriculture, with the main nucleus dating back to XII century clinging onto a tuffaceous hill.

Just after WWII it begun a modern activity of tuff quarrying, and Riano was interested by Italian immigration, hosting workers from other regions. Also thanks to that, the population growth increased especially after 1951, and the town developed spontaneously. The absence of any planning regulation and the particular orography of the tuffaceous area characterized by peaks and valleys resulted in an extremely fragmented settlement lacking of a clear fo high-income gated community was also established, made of low-density villas and facilities. The

quarries and related plants occupy a large part of Riano, while the rest is mainly agricultural land interspersed with scattered houses.
The two traditional economies, agriculture and mining, had progressively shrunk and today the major job source for Riano s inhabitants is represented by the City of Rome whic far. In the last 10 years Riano saw a significant increase in the population, passing from 6.486 residents in 2001 to 10.155 in 2014. This growth is mainly due to people who moves its residence from Rome to the Province, looking for more affordable way of life, commuting daily for work.
Among them, there has been a relevant component of foreign immigrants, attracted both by the housing affordability and also by the availability of jobs in the construction sector, which was flourishing together with the progressive expansion of the metropolis. In 2014 foreign residents in Riano were 1.596, that is to say the 15,7% of the population. Immigrants are coming from 66 different countries and the 60% is represented by a single group, the Rumanians.

## 3. Today s geographies of spatial injustice

*3.1 Halfway between disadvantage and gentrification*
In the Italian planning discourse, the word describing the essence of spatial injustice is *periferia* - peripheral neighbourhood. The term *periferia* pinpoint the distance of an area from the centre, both in physical and functional terms. Describing Pigneto as a *periferia* today is not completely appropriate, if considered that the city has grown so extensively that such distance has reduced considerably, even if in relative terms.
However, issues of spatial injustice seems to be still up-to-date. The urban evolution of the area, as described above, had cumulative consequences that led to a degree of disadvantage that is still visible. In particular, the lack of a master plan also meant a general lack of public spaces in terms of accessible green areas, playgrounds, squares, cultural and community spaces etc. and today the few public spaces are characterized by neglect and lack of maintenance, which sum up the disrepair of the poor quality built environment. The massive construction of high-rise housing in the 70s onwards meant that the area became the densest in Rome (table 2), but with a very low service provision in comparison to that.
Another common indicator of spatial injustice is that of socio-spatial segregation. Fainstein in its seminal book Just City warns about the risk of segregation, and advocates for neighbourhoods porous and internally diverse. Several authors depict segregated neighbourhoods as the spatial expression of social exclusion (Murie and Musterd, 2004). In the case of Pigneto-Torpignattara is not correct to think at the area as segregated. It is true that some strong boundaries (the railways, the aqueduct) contributes to isolate physically the area. However, rather than being characterised exclusively by social deprivation, the neighbourhood is internally mixed, with some parts badly-off and in decline and others, more well off. Also from the viewpoint of ethnic diversity, immigrants presence is extremely varied (in terms of nationality); the general incidence of foreign resident on total population is still relatively low, with the exception of some concentrations.
The piecemeal growth, combining formal and informal, public programs and speculation, housing and productive spaces, resulted in a strong differentiation in terms of housing types and tenures, commercial vitality and the social profile of the population. In the last 15 years a process of trendification of the area has started, with the opening of a considerable nu leisure venues. Even if scholars do not agree if it is completely correct to talk about gentrification (Annunziata, 2011), it is true that this process started to attract new population which enriched even more the internal diversity. At the same time, the trajectory of the neighbourhood is far to be predetermined: together with the trendification begun also a serious issue and consumption, which according to the inhabitants brought back the neighbourhood to the level of social emergency of the 80s.

*3.2 Urban growth without urbanity*

In the last 15 years, a strong process of metropolitan expansion has invested Riano. This trend reflected the wider phenomenon of re-localisation of Rome inhabitants outside Council boundaries, in the small towns of the first ring, and further out, along major transport corridors. Dissimilar to other realities, Riano had a very small vacancy ratio, less than 5% in 2001. That meant that together with the population, there was also the housing growth with an increase of 51% in a decade. These are impressive figures, if considered that only two other towns in the province have similar percentages of building production.

The houses growth did not correspond to an increase of the services and an upgrade of the infrastructures, in particular mobility ones. The town plan designed in 1999 had clearly underestimated the growth and it expanded the original urban settlement spontaneously born and consequently lacking any formal and structural elements.

The result was a built up area where houses respect fairly construction standards, but there is not a clear urban form. The neighbourhoods are nearly accessible, with under-dimensioned roads, often lacking basic elements and street furniture such as parking spaces, sidewalks and appropriate public lighting. The urban deficiency concerns also sociability and gathering spaces, such as parks and squares. For culture and leisure, Riano s inhabitants depend entirely on for example for cinemas, theatres, libraries or bookshops. In other words, it is lacking an urban infrastructure of open and collective spaces so important for daily encounters among diverse people (Amin, 2002; Iveson and Fincher 2011).

A research of the Rome Province denounces a similar situation all over the towns of the first ring, witnessing that this expansion process is not assuming the character of a metro[5] but instead that of a *periferia* (Provincia di Roma, 2010, p.6). The overall urban deficiency and the dependence from Rome suggests that Riano is at risk of suffering in the future from the classical ills of deprived peripheries: housing speculation, weakness of the urban infrastructure and social malaise.

The economic and functional dependence of Riano from Rome means firstly a high pressure over transportation. This seem to be an issue of spatial justice considering the higher dependence over public transportations of lower income groups and vulnerable categories such as specific age groups (elderly, minors) and immigrants. Public transportation become an important challenge to manage at the metropolitan level. Riano is a stop of a light railway that connects Roma with Viterbo, this line is frequently congested, and users complain about overcrowding and malfunctioning. Given this situation, it is not astonishing that public transports become places of friction, in particular when overcrowding lead to forced contact between diverse populations. Accessible and efficient public transportation is at the same time a social question and an issue of environmental sustainability considering the level of pollution produced by a town of commuters strongly reliant on private cars.

There are also other consequences of the uneven growth of Riano on the environment. The massive housing expansion permanently affected one of the most important assets of the area: the natural landscape. The town plan has been subsequently modified by zoning variances, which involved also part of the rural land, through a process of questionable legitimacy. In particular, a housing development of 117 villas organized in 16 agricultural hamlets was bui within Zone E (agricultural zone) for a total of 1.319.509 square metres (131 acres)[6].

This happened because of the strong demand for single-family houses surrounded by greenery exercised by new-inhabitants, following the dream of home ownership unreachable in the City Capital, but also attracted by a countryside life style. On the contrary, foreign immigrants tent to occupy a different housing stock in the metropolisation process: they are almost exclusively in

[5] In the sense of an area organized in a polycentric way and thereby capable of offering job opportunities, to contain commuters flows, ensuring a multidirectional mobility, to locate services in catchment areas.

[6] This complex is today the subject of an investigation of an alleged abuse.

private rent, in the more affordable houses of the old town, which was progressively abandoned for better living conditions.
Considering also the presence of a gated community, it is reasonable to wonder if the metro-boroughs can be considered the setting of new forms of spatial segregation. The percentage of immigrants in the old town is particularly relevant, more than 40%, but it is not a ghetto. Migrants are extremely mobile in these areas, the old town represents often an entry point, an intermediate house, and then they change gradually residence, looking for a home better suited to their needs. It is also important to stress how the concentration in the old town is not perceived negatively neither by immigrants themselves who describe it as a place of inclusion, functional to stabilization, nor by Italians who recognise the beneficial outcome of such phenomenon. Immigrants are enacting a spontaneous process of re-population of the old town, with positive gains in terms of revitalization of the urban space, but also in terms of management and upgrade of the built environment. Instead of segregation, it seems more appropriate to talk about a process of differentiated geographies, consequence of a phenomenon of residential insertion completely driven by the market, in which Italians are land consumers, while immigrants are existing stock re-users.
Riano and its surroundings resulted to be a convenient place to relocate not just the population, but also other issues that the city of Rome is trying to handle. An example of that is the tentative to use the exhausted quarries for the new Rome s dump. That decision was strongly opposed the local community supported by the Council. The official reasons behind the opposition where environmental, the proved risk of groundwater pollution, but there was also a strong NIMBY movement relative to the proximity of the site to the urban settlements, at the risk of devaluation of lands that could be interested by the housing expansion. The opposition was finally successful thanks to the wide mobilisation of all citizens, also migrants, and the organization of dozens of demonstrations, assemblies and sit-in. The mobilization was disruptive and Riano was reported as a model of civil strife.

## 4. Planning for justice in Rome s metropolis

### *4.1 Empowering a powerful community*

The highest pick of decline for Pigneto was in the 80s when the consequences of de-industrialisation, neglect and abandonment were more evident. In the same period, the left-wing city government begin a policy of rehabilitation of the periphery and legalizat city. Pigneto was individuated as a target area, with the aim of reversing some of the issues of injustice as individuated above.
Since the mid 90s to the 2000s, a series of initiatives of regeneration we mobilizing funding through public-private partnerships and thanks to the use of new planning tools such as PRIU (Programme of Urban Rehabilitation) and CdQ (Neighbourhood Contract)[7] (Fioretti, *forthcoming*).
The objective of such programmes was to overcome the socio-spatial polarization and enhancing the quality of the neighbourhood for the local community by making the fragmented urban fabric more permeable, refurbishing the public space and creating new services and meeting points. In other words, there was a commitment in terms of redistribution, giving those material assets the local community lacked.
Furthermore, following a wider process at the Council level the Neighbourhood Contract promoted citizens participation in the designing process, demonstrating a commitment to democracy, and acknowledging the importance of just processes besides just outcomes.
It is important to specify that the Council involved almost exclusively representatives of local networks: associations, unions, neighbourhood committees, self-organized social centres (Allegretti, 2004). Pigneto has a socio-cultural context with a strong history of activism, thanks

[7] Area-Based Initiatives acting in neighbourhoods affected by multiple deprivation.

to the presence of organized groups that over time had carried on many campaigns for raising the livelihood of the area, ascribable to the right to the city tradition. These g wing tradition since the neighbourhood was working-class, particularly active in the antifascism and a theatre of clashes during the Resistance.
Thanks to that (and to the harmony in that period of political views among the Council, the Municipio and the local political arena, all the three left wing) the participation process was relatively smooth and successful. On the other side, that constituted a strong limit for reaching a wider scope of citizens, especially most marginal groups and those people who usually tend not to participate, such as migrants[8].
The Council seemed to recognise the ongoing spontaneous market-led processes of transformation, incorporating in the regeneration private interventions as well. The idea was that of providing for a strong public infrastructure, a strategic framework, built in a consensual manner together with the inhabitants, to take up the challenge of accompanying those changes, softening the eventual negative external factors.
However, the programme, that seemed so promising in its premises, was less successful in its implementation. The public-private partnership mechanism seemed to be unbalanced, with exaggerated leanings to private interests. The most innovative public actions, especially those aimed at the realization of community facilities, the establishment of a permanent workshop for citizen participation and the inclusion of migrants, were particularly weak, when realized.
That determined a rupture in the relation between the local government and the citizens. Their involvement in the process had made citizens more demanding, and more attentive to the effective enforcement of the commitments signed in the Contract (Allegretti, 2004). Th participation in a society that was already socially and politically organized (already capable in a sense) contributed, even if not completely wittingly, to empowerment, to raise the capability of the local society.
The local forces, associations, schools, migrants communities, mobilized around Neighbourhood Committees, used it to protest and to encourage the Local Authority to fulfil the promises made, among the claims that for denied spaces , or measures against gentrifica Independently from the success of the single struggles, this form of antagonism succeed in something more general: the recognition of migrants as active agents in the upgrading of their living environment.

*4.2 Who is claiming for spatial justice?*

Inaccessibility to services, overconsumption of greenfield, forms of spatial segregation, the issues of spatial injustice in Riano seems serious but the claim for spatial justice is much less strong than in Pigneto, and the public government seem to respond to injustice in a fuzzy way.
It must be said, that there is a general acknowledgement of the implications of the drastic changes that affected the Council in the last 15 years. The new local government elected in 2011 based its election campaign precisely on the issue of change, gathering left-wing forces and a Romanian participation under a civil list called Fresh air . Nevertheless, concrete mea new challenges are hesitating.
In particular, the local government is now engaged in drafting a new plan to compensate the lack of public services, facilities and infrastructures. However, the task is difficult and the Municipality, lacking resources, proceeds in piecemeal way through regional funding, and concession fees.

[8] Immigration was recognized as a key priority in the Neighbourhood Contract, but the initiatives devoted to that were finally weak, and lacked of long term commitment (for a detailed discussion see Fioretti, *forthcoming*).

More seems to be done on the immaterial side, especially in terms of recognition, if considered that in Riano local authority there is a Romanian councillor[9]. This means that the local government is at least recognising the importance of the migrants component of the acknowledging its positive contribution (for example in terms of vitalization of the old town), and giving them voice in the decision-making arena. But again, also in this field, it does not translate in a clear strategy for promoting diversity and interculturality and the potentialities are not capitalized by urban policy (Fioretti, 2014).

Not only the local government does not have the resources and capacity for a clear commitment in terms of just planning, but also it must be said that there is neither a clear claim coming from the civil society. The local community has been invested almost passively by the process of metropolisation, half of the residents are recently arrived, and many are foreigners. The population is extremely fragmented in its composition, lacking political commitment and organization, still looking for an equilibrium as part of the metropolis, the small-town identity that seems to be lost.

The only episode that witnessed a wide and overwhelming mobilization of all citizens and local forces was that of the movement against Rome s dump. That testified an environme but it is not possible to say that the movement was inspired by a clear identification of sustainability as a key goal for the local society. Instead, it seemed to be more dictated by an individualistic worry, linked to a NIMBY phenomenon.

That example it is interesting because it shows two major limits that inhibit an impulse towards just planning in Riano: first, the lack of a collective awareness of justice values to be claimed; and second, the fact that major issues transcend the local scale.

That can be translated in a lack of two key category of spatial justice: capability and responsibility, to be considered together, being extremely intertwined in this case.

The inhabitants of Riano are individually capable. Many moved in Riano from Rome, driven by a conscious choice, the dream of the single-family home in the green. It means they does have access to opportunity, as testified by their individual (spatial) mobility.

However, they lack of a collective awareness and pursuing of the assets that contribute to the quality of life, which means also a lack of responsibility towards the territory.

## 5. Conclusion

This paper addressed the question of how the social, spatial and geographical features of urban change affect the analytic dimensions of justice, and consequently, the ideal of just planning. The answer depends on whether justice is conceptualized as a universal, normative model; or as an evolving set of practical rules that results from a collective, shared vision (which often requires a reflexive political actor).

We tried to make the argument that the shift from a dimension of justice to another is not purely analytical; on the contrary, it is the outcome of an historical process. It is positioned in time and space, and heavily influenced by the political actors and processes that have tried to address it.

This is bold statement, obviously, which deserves a better attention at a theoretical level, implying that one cannot forget the issues of power, temporality and materiality when addressing urban change.

However, some conclusive remarks sprung out from the investigation of city change at the scale of local development. In particular:

a) The two views are not mutually exclusive. The first classically lies at the core of the Enlightenment project, and it qualifies European societies as a sort of genetic code, and provides the basis of ideological arguments. However, the second illuminates a fairly large set of conditions where a local (Elster 1992) rule intervenes, eithe

[9] That was possible because Romanians are EU nationals, they do not need the permit to stay to reside in Italy and can access to local elections

individuals access to goods or, on the contrary, imposing social burdens on their actions.

b) Both views are needed when dealing with urban space, *space* being at the same time part of the power structure, and a very specific set of local arrangements. However, a general model of spatial justice is hardly tenable, being such the variety of institutions, individual preferences, and collective identities.
c) Following these suggestions, justice cannot be conceived as a single theoretical object, but rather it can be conceptualized as a multilayered normative ideal.

If justice cannot be considered a monolith, just planning is obviously a complex dispositive that progressively adapt to changing situations, positioned in time and space; according to political strategies that combine elements of redistribution and recognition; affecting the quality of the societal entitlements or limitations. For this reason, certain categories used to evaluate the just city as periphery, density, *mixité*, segregation are context dependent, and cannot be used as universal principles.

However, the two case studies suggest something more, related to the how different components mingle in a political, historical ideal of justice.

Let s remind that, in an effort of qualifying the just city, S. Fainstein had to combine as different ideal dimensions as equity, democracy and diversity. Though demanding, this opening is likely not enough: in many fields, scholarly discussion has recognized the opportunity to encompass a broader view of justice, including additional dimensions like recognition, capability and responsibility (Davoudi, 2013; see also Fincher on diversity; Cremaschi and Fioretti 2015). It has been also stressed the importance of considering both the dimension of procedural justice and questions of value (Campbell, 2006).

In particular, the two case studies has shown different combinations, with a similar result:

a) a redistributing, or creative process, depending on whether it mainly leads to the transfer of goods, or to the recognition of identities;
b) legitimating claims either to goods or values, to material and non-material assets that society exchanges;
c) unfolding in situated processes, i.e. in historical conditions, under material and political constraints
d) needing for a collective and relational conception of values beyond the individual dimension.

Finally, it has been underlined how the juxtaposition of the two cases, shows a variation in the spatial scale in which the issues of spatial justice are framed. In the pursuing of the just city , planning should be more responsive to the phenomenon of rescaling driven by urban change.

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**THE SECTORAL PLAN FOR HEALTH PROMOTION: AN INNOVATIVE INSTRUMENT FOR A MORE JUST CITY**

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*The promotion of health is a joined interest of urban planners and health professionals. Due to the existing and increasing inequity in health and the knowledge on vulnerability and environmental determinants of health, the concepts of health inequity and environmental justice enrich each other (Bolte et al., 2012). One approach to reach more health for all promoted by WHO is called "health in all policies". One policy field for health promotion is urban planning.*
*Today health professionals make only little use of urban planning as policy for health promotion. To face this shortcoming the Landeszentrum Gesundheit (LZG, NRW Centre for Health) pursues the development of an innovative instrument: the sectoral plan for health promotion (Fachplan Gesundheit). This plan is based on an integrated spatial analysis of health, social and environmental data, identifies risks and potentials, develops goals and strategies to identify specific measures. This instrument was theoretically developed, illustrated through fictitious plans (LZG, 2012) and tested in a county and a city in 2014. As common in health promotion a consequent consideration of the vulnerability of the population is a natural approach in these plans. Therefore such plans are not only useful for health promotion; they have the potential to put discussions on justice in planning on a solid ground and provide information for planning decisions.*
*The approach and first experiences from the practical test will be presented and put in a wider context of planning. Here we argue why we see the healthy urban development plan as a promising tool for a more just city.*

## 1. Introduction

The present discourse on urban healthy development stands for the revival of health promotion in urban planning that has had received little attention in the last decades of the 20th century (Corburn, 2013; Böhme *et al.*, 2012; Köckler *et al.*, 2014). One reason for this growing interest is the existing and increasing inequity in health, that leads to differences in life expectancy by class and/or neighbourhood (CSDH, 2008; Junior-Forschungsgruppe Salus, 2012).Furthermore the knowledge on both the vulnerability of people and the relevance of environmental determinants for individual health, make the promotion of health for all a joined interest of urban planners and health professionals. While health inequity that correlates with social and/or environmental factors is often seen as an inequality there is a strong interest and contribution of the disciplines of healthy urban planning and public health in the discourse on environmental justice. The concept of environmental justice stands for social justice according to environmental concerns (Bolte et al., 2012).

Several analyses in the field of environmental justice conclude that certain groups of society are more exposed to environmental stressors and have less access to environmental goods than the average of the comparable population (see for Germany e.g. Raddatz and Mennis, 2013) and have to face negative health-outcome due to this factors (Fecht *et al.*, 2015; Bolte *et al.*, 2012). These groups are often deprived groups or groups with a certain ethnicity or migration background. In the discourse on environmental justice such differences are judged as distributional injustice, because an identifiable sub-group of the overall society is not treated equally regarding environmental quality. As environmental justice is not only a concept for analysis, but a vision such results on distributional injustice often lead to claim making for change (for the concept of claim making in environmental justice research see especially Walker, 2012, chapter 1 and especially chapter 3).

The concept of environmental justice encompasses besides distributional justice procedural injustice as another relevant concern. Procedural injustice "stands for unequal opportunities in the meaningful

involvement in environmental decision-making processes as well as the initialisation of such processes." (Köckler, 2014, p. 141). Procedural justice is understood as one determinant of distributional justice as Schlosberg (2007, p. 75) points out „For the environmental justice movement, the demand for more public participation and procedural equity in the development, implementation, and oversight of environmental policy is the key to address issues of distributional equity, recognition, and capabilities."
In the field of urban healthy development it is not only the public that should and could be meaningful involved in decision making. Relevant stakeholders, like the health authority, should also be involved, as they know better than the planning department about health inequality and could play the role of an advocate for deprived or marginalised groups (on advocacy planning in the context of environmental justice see: Harwood, 2003).

The integration of health aspects in urban planning is on the one hand based on law. In Germany §1 of the Federal Building Code calls for healthy living conditions at work and at home. On the other hand it corresponds with the WHO strategy "*health in all policies*" (Ståhl *et al.*, 2006). This calls for considering health in different policies. Urban and infrastructure planning are fields of policies mentioned in corresponding statements (see e.g. WHO and Government of South Australia, 2010).

In Germany public health promotion is based on federal acts. In North Rhine- Westphalia, one of the federal states in Germany, the Public Health Service Act from 1997 provides the legal basis for public activity in health promotion (Land Nordrhein-Westfalen, 1997). The lower health authorities are located in county-free cities or counties. In §8 of the Public Health Service Act the lower health authorities, are mentioned to be included in the formulation of statements in planning and permission procedures, if health of the population is affected. Nonetheless health professionals make only little use of urban planning as a policy field for health promotion. Often public health authorities understand themselves as reactive towards diseases (like HIV) or as active in promoting a more healthy behaviour (like providing information on healthy nutrition). If they participate in urban planning they understand themselves as reactive mainly. To increase the use of urban planning for health promotion the Landeszentrum Gesundheit (LZG, NRW Centre for Health) pursues the development of an innovative instrument: the Sectoral Plan for Health Promotion (Fachplan Gesundheit) since the year 2009.

In the following the development of the sectoral plan for health promotion as a new instrument is described by introducing its aim, first prototypes, so called fictitious Plans for Health Promotion and a first pilot-test. The authors have been actively involved in the development of the fictitious plans and the evaluation of the pilot-test. The paper closes with a conclusion on whether and how this new type of plan may contribute to a more just city with regard to the concept of environmental justice.

## 2. The Sectoral Plan for Health Promotion

The sectoral plan for health promotion is intended to be integrated in the existing structure of public health. It follows two main goals: On the hand it is meant to support municipalities and counties to organise the work of local health authorities more clear and transparent. On the other hand it is a promising tool to enforce health concerns in spatial planning procedures on the local and regional level. [1]

### *2.1 The starting point in Public Health*

The new instrument of a sectoral plan for health promotion is seen a forceful further development of the existing structures in public health in North Rhine-Westphalia. The existing structure of public health, based on the Public Health Service Act, requires amongst others running a local health monitoring. This data is collected by the lower health authority and is to take social and gender specific requirements into account (§21 Public Health Service Act). This data is published regularly in

[1] for general information see https://www.lzg.nrw.de/themen/Gesundheit_planen/fachplan_gesundheit/, last access May 11th 2015

local reports and transferred to the federal state level. It includes different data on morbidity, mortality, health care and child health. One important source of data is the school entry health examination that is mandatory for each child before going to school and therefore provides a census of all children around the age of six. More and more reports use the data to analyse whether health inequities exist in their cities or to identify districts or neighbourhoods with a specific need for intervention. In Bavaria the school entry examinations have had a thematic focus on environment and health that led to findings on environmental injustice in Munich (Thiele and Bolte, 2011).

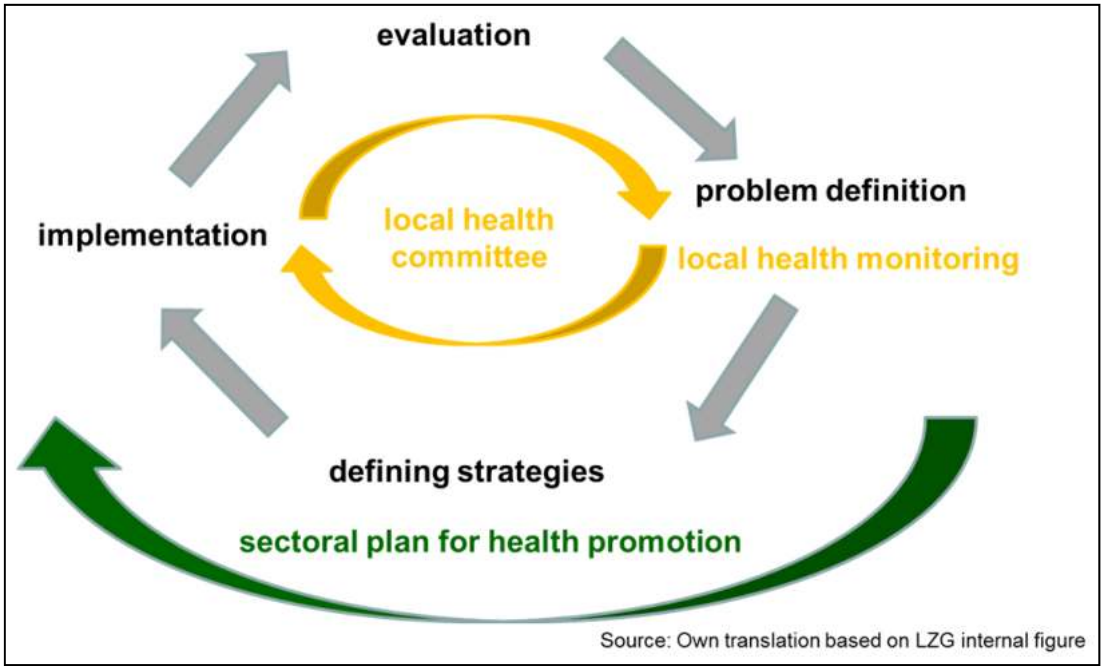



Figure 1: The sectoral plan for health promotion a contribution to the Public Health Action Cycle

Figure 1 shows the policy cycle in the version of a public health action cycle. In the cycle local health monitoring is part of the problem definition and intended to be used for defining strategies. Such strategies are amongst others developed by the Local Health Committee (Gesundheitskonferenz). In North Rhine-Westphalia, such committees are required on a legal basis. Their members are appointed by the local council and include different stakeholders from health promotion including politicians, members of local administration, provider of health services, self-regulating communities, patients organisation and others. Strategies that are developed in the Local Health Committee are implemented by its members due to their ability and responsibility. The work of the Local Health Committees differs in intensity and scope amongst each other a lot.

*2.2Protoypes of Sectoral Plans for Health Promotion*

Based on preliminary studies the department of Urban and Regional Planning of the School of Urban Planning, TU Dortmund was commissioned by the Landeszentrum Gesundheit NRW to develop prototypes of fictitious plans for health promotion. One aim was to give examples how such a plan could look like and how such a kind of plan might be integrated in planning procedures. To take different contexts into account one plan was developed for a fictitious city and another for a fictitious county. The following description refers to the plan for a city called “Healthhausen” (LZG , 2012).

In the prototypes it is suggested to develop the plan by a steering group including different stakeholder led by the mayor of a city. Another option is to develop the plan within the local health authority including contributions from other authorities and stakeholders. In general it is recommended to start with a mandate from the city council and the Local Health Committee.

Furthermore it is suggested to start the development of the plan with specific topics that are of interest in the local context. In the Healthhausen prototype the following topics have been chosen: A) healthy nutrition and physical activity for children and teenager from low income households, B) physical activity of the elderly, C) health promotion of vulnerable groups facing multiple environmental burdens.
Figure 2 shows different elements of the sectoral plan for health promotion. In the following the thematic focus C) "health promotion of vulnerable groups facing multiple environmental burdens" of the prototype for the fictitious city of Healthhausen is used as an example to explain the different elements of a sectoral plan for health promotion.

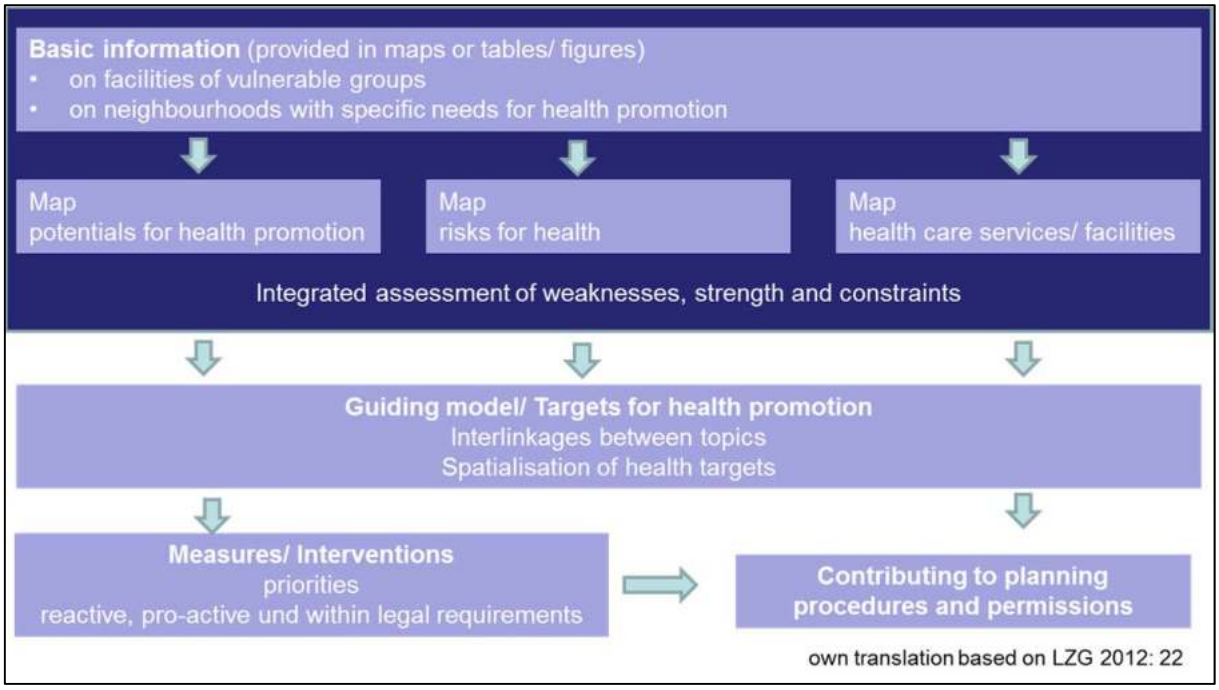
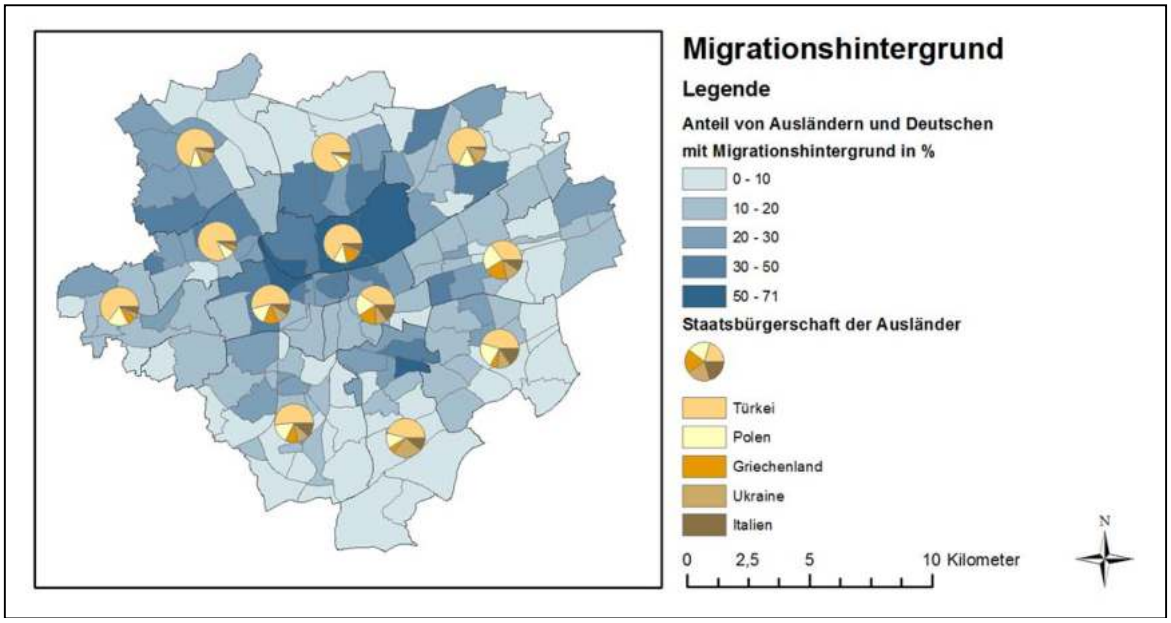



Figure 2: Elements of a sectoral plan for health promotion

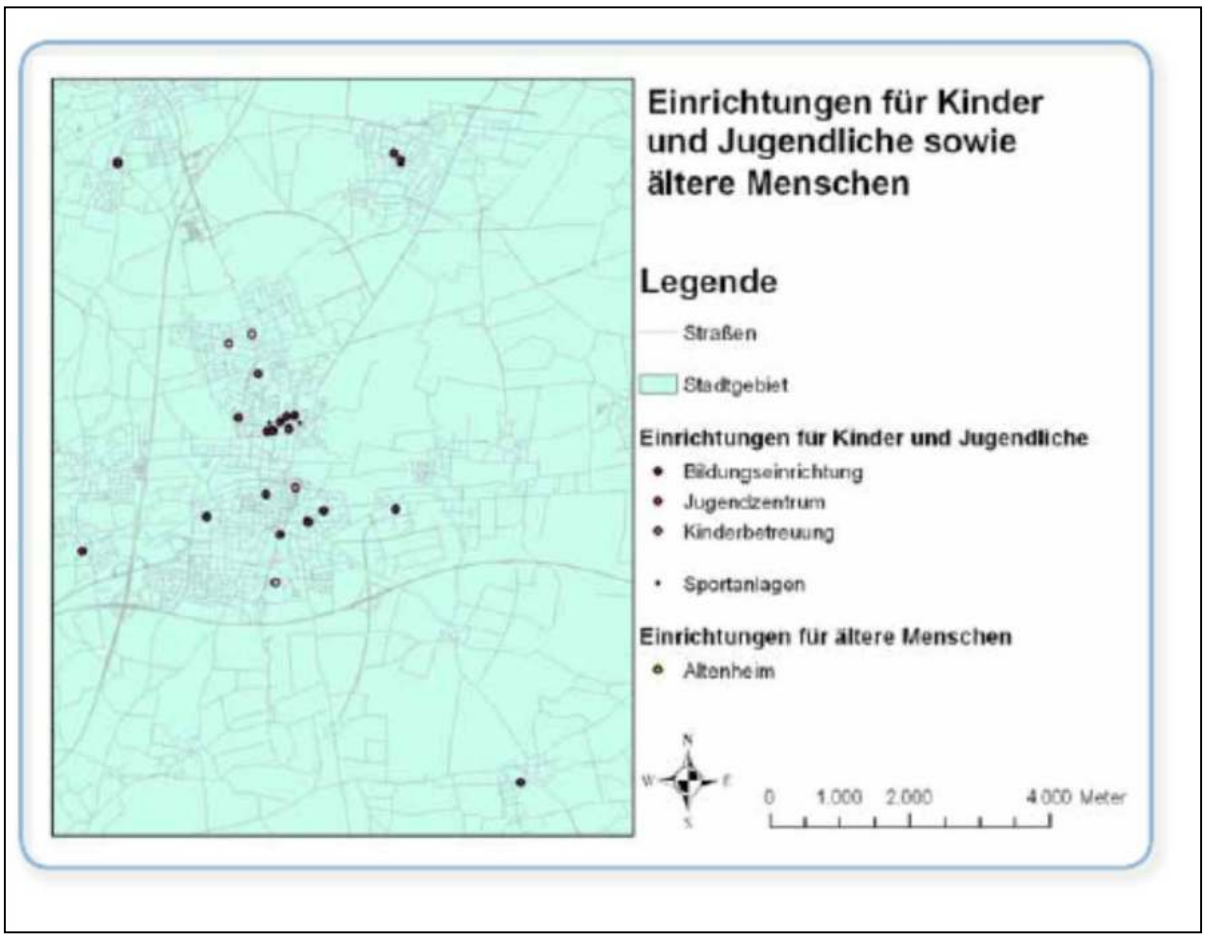
### 2.2.1 Basic Information and integrated assessment

Facing the state of research on environmental epidemiology and environmental justice, it is known that some groups of migrants and people with low income are more vulnerable towards environmental stressors than others. Therefore maps, like that in Figure 3 have been developed. Facilities of vulnerable groups are shown in Figure 4 and are available in the local health monitoring. Additionally data from the local health monitoring on health outcomes like speech disorder or overweight are mapped, too.




Source: LZG 2012: 25

Figure 3: Foreigners and Germans with migration background (share of whole population and nationality of foreigners)

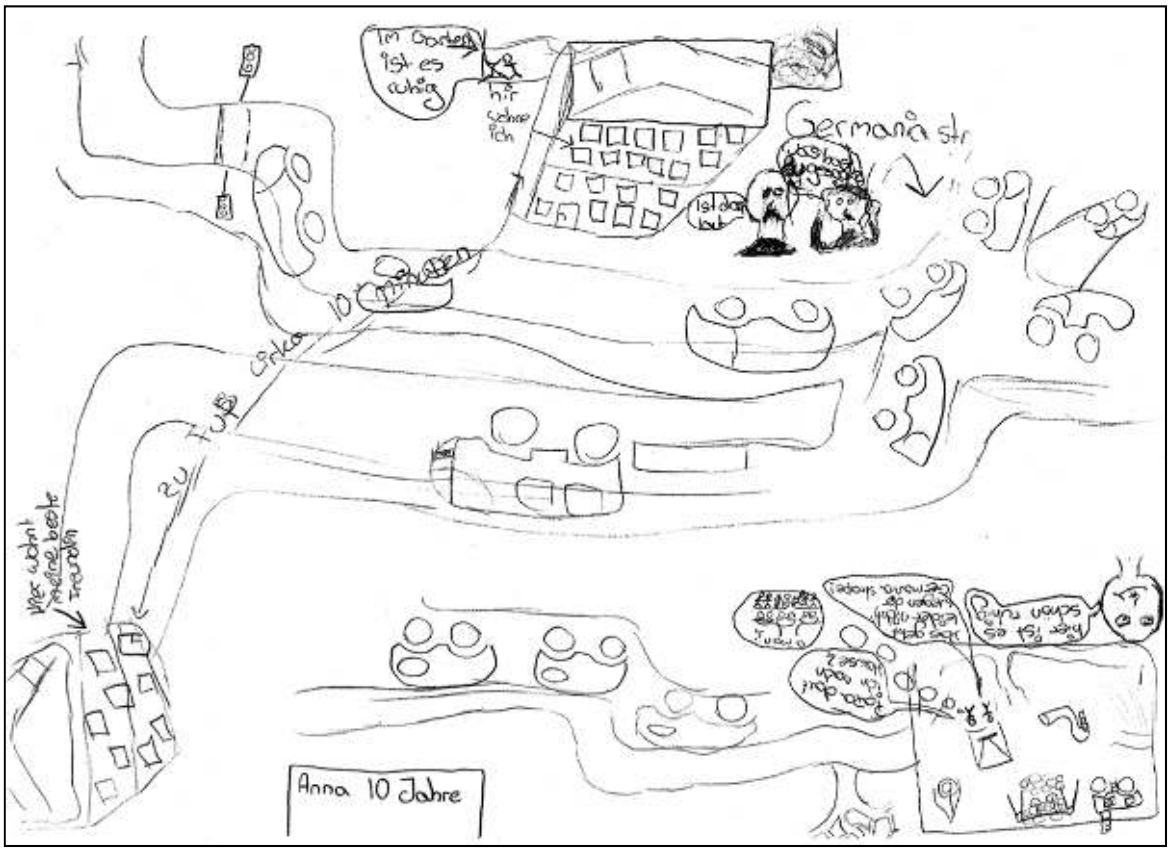



Source: LZG 2012: 24

Figure 4: Facilities for children, youth, elderly and ill people in Healthhausen

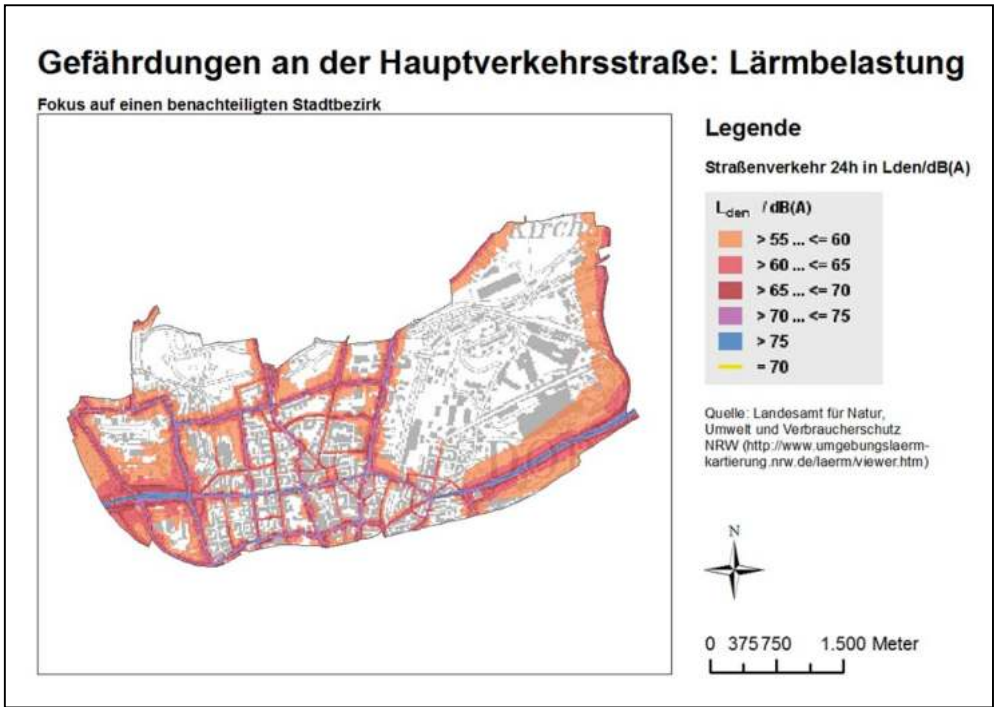
The aspect of multiple burdens was dealt with by providing maps on air and noise immission based on data available in the local environment department, according to EU-Regulations (see Figure 6).

Additionally it was shown that e.g. mental maps of children on quiet areas within neighbourhoods could be integrated in sectoral plans for health promotion, too (see Figure 5).
An integrated assessment of these single burdens was not carried out, but is topic of different research activities and could be implemented based on this basic information (Linder and Sexton, 2011).
Vulnerable facilities and exposure are combined in one map. So it becomes obvious that a kindergarden is exposed to noise with more 70 Lden/dB(A). In noise immission maps such combinations of environmental stressors and vulnerable groups is not required.



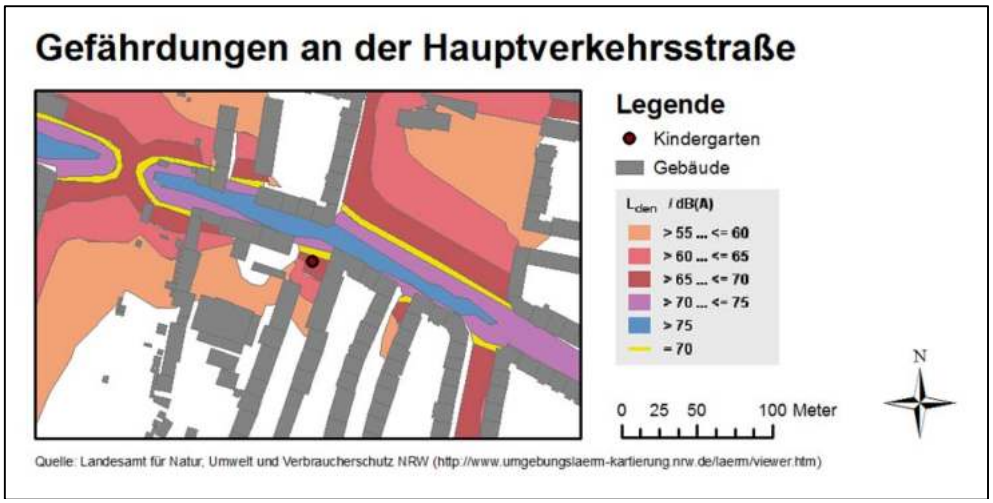

Source: LZG 2012: 40

Figure 5: Quiet areas within neighborhood perceived by a ten year old




Source: LZG 2012: 44

Figure 6: Noise immission by road transport in a deprived neighborhood




Source: LZG 2012: 51

Figure 7: Exposure of kindergarden with noise immissions

### 2.2.2 Targets for health promotion

In the fictitious plan for Healthhausen the targets have been formulated as a Leitbild and as action oriented targets. For the thematic focus of "health promotion for vulnerable groups facing multiple burdens" the overall Leitbild was drafted as follows: *The burden of those, who are exposed by heavily trafficked roads, is to be minimized. Simultaneously the ability of exposed population to cope with remaining environmental burdens hast to be improved.*

This Leitbild has been operationalised by the following action oriented targets:

All facilities of vulnerable groups (kindergarden, schools, homes of the elderly, hospitals), that are exposed to noise by cars are to be protected against this noise.

Next year in three Kindergardens in the northern part of Healthhausen traffic calming will be implemented

Quiet housing space is to be saved and developed. Especially in heavy trafficked roads passive noise protection is to be realized in 20% of the exposed housing space. Specific funding for deprived neighbourhoods will be provided.

The exposure at workplaces on heavily trafficked roads has to be reduced.

The Leitbild and target are exemplary, only. But they show that from a health perspective spatially explicit targets can be derived from the analysis of the maps shown in chapter 2.2.1. Furthermore specific requirements for spatial interventions, like traffic calming and development of quiet housing and working areas have been formulated. These could be used as contributions to planning procedures by local health authorities.

### 2.2.3 Measures for health promotion

Different measures for interventions have been suggested in the fictitious sectoral plan for health promotion. These have been collected in a table. Selected measures have been described in short profiles.

The table provides information on the kind of measure (organizational, related to planning or investment), costs of the measure (low, moderate, high) and feasibility (short-term, medium-term, long-term).

Table 1: Table of Measures in the fictitious sectoral plan for health promotion of Healthhausen (excerpt)

| **topic/measure** | **kind of measure** | | | **expenses** | | | **feasibility** | | |
|---|---|---|---|---|---|---|---|---|---|
| | o | p | i | l | m | h | st | mt | lt |
| **Health promotion of vulnerable groups facing multiple burdens (using the example of highly trafficked roads)** | | | | | | | | | |
| transport calming/ reduction | X | X | X | | X | | | X | |
| noise minimisation on street sections where facilities of vulnerable groups are located | X | X | | X | | | X | | |
| silent asphalt on roads with high pressure on vulnerable groups | X | X | X | | | X | | X | |
| speed limit of 30km/h at specific times of a day (depending on opening hours of facilities for vulnerabel groups) | X | X | | X | | | X | | |
| Assignments in binding land use plans on passive noise protection | X | X | | X | | | | X | |

Explanation of abbreviations used in the table:
kind of measure: o= organizational, p= related to planning, i= reltated to investment),
expenses: l= low, m=moderate, h= high)
feasibility: sm= short-term, mt= medium-term, lt= long-term

Source: own translation of LZG 2012: 59

## *2.3 First experiences from a practical test in two case-studies*

From September 2013 until July 2014 the city region of Aachen and the county Unna, both located in North Rhine-Westphalia, tested the development of a sectoral plan for health promotion.. This project

was supported by the Landeszentrum Gesundheit through financing 1) a planning bureau to support the development of the plan, 2) a scientific evaluation of the process, carried out by the authors of this paper and 3) allowances for the local health authorities of Aachen and Unna. Furthermore existing, and not yet published tools, as well as the fictitious plans described in chapter 2.2 and consulting through the Landeszentrum Gesundheit for the pilot-communities were provided.
In both cases the local health authority was responsible for carrying out the project. Both, Aachen and Unna, chose a specific topic to develop elements of a sectoral plan for health promotion. While Aachen was working on social inequality in dental hygiene, Unna focussed on the exposure of children and youth to electro-magnetic fields. The main focus in this one year project was on the development of maps, targets and the identification of measures. The allowances from Landeszentrum Gesundheit were partly used to train staff members in the use of Quantum GIS. This open source GIS proved to be easy to use and sufficient for the required uses.
The evaluation report and the reports produced by Unna and Aachen will be published soon. Some lessons that can be learned and shared here are the following:

First of all, the pilot-phase proofed that the idea and methodology of a sectoral plan for health promotion is feasible in practice.

Several existing data can be used and combined to learn about social inequity in health and environmental determinants of health on the local level. In Aachen data was provided in so called Lebensräumen (life oriented areas), while in Unna data was available for statistical units, only. The life oriented approach is of higher value for health related approaches as it corresponds with the settings approach.

Staff of both health authorities worked with GIS and appreciates this as a valuable experience.

In both pilot-cases the exchange with other local departments was somewhat restricted due to the character of a pilot-project. The actors see a big potential in overcoming silo-mentality in public administration through working on a plan like this.

In the pilote phase no political mandate was formulate. Both Aachen and Unna intent to get a mandate for the further development of the plan after the pilot phase.

*2.4 Future perspectives*

In Germany different cities start to work on the local plans for health promotion independently from public financial support. For example the city of Bochum aims to develop a plan for health promotion related to an urban renewal programme for deprived neighbourhoods (Förderprogramm Sozial Stadt) in one of its districts.
At present in Baden-Württemberg, another Federal State of Germany, the Ministry of Health launched a programme including financial and organisational support to municipalities that are implementing the sectoral plans for health promotion. This project includes six municipalities, started in December 2014 and will run until February 2016. In this project the participation of citizens in the development of a local plan for health promotion is one aspect of mayor interest. [2]

## 3. Conclusion

The sectoral plan for health promotion can provide a solid basis for local health authorities to play a more pro-active role in contributing to urban planning by own, health specific, localised targets for urban development. The established health monitoring can be improved through the integration of additional spatial and environmental information and provide a more solid information basis for decision making in the whole city. Such integrated analyses provide meaningful information on vulnerable groups.

If health authorities obtain solid information that helps to identify spatial determinants of health, they can play an active role in urban planning. They can follow the invitation to submit statements in planning procedure or can even initiate planning procedures. Regarding the existing legal

[2] For further information: http://gesundheitsdialog-bw.de/gesundheitsdialog/kreisebene/fachplan-gesundheit/, last access May 11th 2015

requirements, Dieckmann (2013) has given the thought-provoking impulse that situations of multiple environmental burdens might lead to a duty for planning (Planungspflicht according to art. 1 para. 3 no. 1 BauGB). If this duty for planning exists, the municipalities would be obliged to develop a binding land-use plan. Health professionals knowing about environmental determinants of health in their city can identify such areas together with urban planners.

The sectoral plan for health promotion is a voluntary planning instrument. The municipalities in Germany have experience with different voluntary plans that can become local law through a resolution of the local parliament. Sectoral plans on retail, transport or the environment are common. To let local plans for health promotion become an established instrument in urban planning the staff of locals authorities has to be empowered to use this tool and get an understanding of being a pro-active actor on the local level.

Regarding its potential the sectoral plan for health promotion can contribute to a more just city, acting against environmental exposure of vulnerable people and decrease peoples vulnerability. The local health authority could use this tool being an advocate for those facing the consequences of environmental injustice.

*Acknowledgements: The development of the sectoral plan for health promotion is developed by the Landeszentrum Gesundheit, namely Rainer Fehr, Rudolf Welteke, Manfed Dickersbach and Odile Mekel. Martin Enderle provided meaningful contributions to basic concepts, developed a tool for the healthy plan and was consultant in the pilot-phase for the city Region of Aachen. Joachim Hartlik and Monika Machtolff were consultants in the county of Unna. In Unna and Aachen several staff members contributed to the work, in favor for all of them the project leaders Christan Scholz in Unna and Thilo Koch are to be mentioned. Natalie Riedel contributed to the development of the fictitious sectoral plans.*

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**Ethical Dilemas in Tanzania Planning system.**

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**Abstract:**
Ethical Urban Planning has recently focused attention on Professional ethics. This paper presents a study of Ethical and unethical Justice in Tanzania Planning system. A qualitative methodology has been adopted to identify planners personal and organizational values and the E Justice in Tanzania Planning system and roles played by Planners. Ethical dilemmas is critically discussed and analyzed.
**This paper aimed at:**
1) Review the Tanzania Urban Planning system and Processes, review legal framework and regulations and procedures for preparation of detailed and general land use plan and compare the real practice by practitioners.
2) Identify how public and private planners prioritize areas for public interests such as open space, cemetery by identifying criteria s for prioritization
3) Study and analyses ethical and unethical justice in planning in theory and real practice.
4) Identify Challenges for ethical and justice planning in Tanzania 5) Provide possible solutions and recommendations for unethical justice in planning.
The research involved both structured and semi structured interviews for data collection. The perceptions of a wide range of key stakeholders were canvassed in a qualitative questionnaire survey. The analysis involved mainly statistical tabulations of the views and data collected, and interpretations of the statistics using SPSS. The results shows typical unethical by practitioners and legal environment has been a challenge for ethics. Political interference by decision makers to professionals is critically discussed.

Keywords: Urban Planning, ethical planning, Tanzania

## 1. Introduction

Ethical Urban Planning has recently focused attention on Professional ethics. This paper presents a study of Ethical and unethical Justice in Tanzania Planning system. A qualitative methodology has been adopted to identify planners personal and organizational values and the Et Justice in Tanzania Planning system and roles played by Planners. Ethical dilemmas is critically discussed and analyzed.

*1.1 Back Ground*

Urban and Regional Planning is a profession that puts the welfare of people on the top of environmental and sustainability agenda. The Tanzania Urban Planning sector is extremely susceptible to ethical erosion due to heterogeneous nature of the sector which makes it imperative for planning professionals to exhibit high level of professional ethics. One of the deters of meaningful development in Tanzania s Planning Sector is the menace of corruption and corrupt practices. Tanzania like many other countries in the world is faced with the problem of corruption in both the public and private sectors. . Tanzania planning system, the separation of control mechanism and acts of planning actors are mostly independent from each other. This separation and independence provokes individual actions to take place in planning control mechanisms. The land use planning process in urban areas is also not free of corruption due to lack of transparent systems, conflicts with the local government reforms and lack of innovative approaches. The

increasing unplanned settlements in urban areas show that the planning process does not respond to effective demand. Planning is promptly done in areas where kickbacks have been offered. The approval process of urban detailed plans is tedious, slow and compels the public to pay for undocumented money to officials to speed up the process.

Figure1: Location Map of Tanzania

*1.2Research Objectives and Methodology*

This paper aimed at:

1) Review the Tanzania Urban Planning system and Processes, review legal framework and regulations and procedures for preparation of detailed and general land use plan and compare the real practice by practitioners.

2) Identify how public and private planners prioritize areas for public interests such as open space, cemetery by identifying criteria s for prioritization

3) Study and analyses ethical and unethical justice in planning in theory and real practice.

4) Identify Challenges for ethical and justice planning in Tanzania 5) Provide possible solutions and recommendations for unethical justice in planning.

The method of investigation adopted in the research essentially relied on published and unpublished materials and interview to stakeholders.The research involved both structured and semi structured interviews for data collection. The perceptions of a wide range of key stakeholders were canvassed in a qualitative questionnaire survey. The analysis involved mainly statistical tabulations of the views and data collected, and interpretations of the statistics using SPSS. Also, both descriptive were used to analyze the data collected and compared respectively.

*1.3 Understanding ethics and Ethical conducts*

Ethics seems to be a concept undergoing revival and is surrounded by much controversy and speculation. There seems to be a genuine concern that the world at large is becoming less aware of the importance of ethical considerations
According to Mbatha (2005:16), ethics can be seen as a system of moral principles that is based on values relating to human conduct, with respect to the rightness or wrongness of certain actions and to the goodness and badness of the motives and ends of such actions. Ethics concerns obedience to the unenforceable moral principles that determine what is honest and fair, and the distinction between right and wrong (Lloyd & Kidder 1997:145). Ethics is a set of rules or standards governing the moral conduct of employees in an institution. Ethics deals with values relating to human conduct, with respect to rightness or wrongness of particular actions and to the goodness or badness of the motives and ends of such actions. Rightness refers to what ought to be or what is approved and wrongness to what ought not to be or what is disapproved of by society (Mafunisa 2001:335).

Ethical conduct refers to a strong desire to do the right thing, especially when behaving ethically imposes financial, social or emotional costs (Website: http://www.josephsoninstitute.org). Surveys taken by the Josephson Institute reveal that, regardless of profession, almost all people believe that they are, or should be, ethical. While most are not satisfied with the ethical quality of society as a whole, they believe that their profession is more ethical than others and that they are at least as ethical as those in their profession.

Unethical behavior may be defined as deliberate or negligent conduct constituting a deviation from or breach of the guidelines designed to inform an expected pattern of behaviour in a given situation (Maluleke, in Mafunisa 2000:53). Unethical behaviour, although it is an indication of a decline in morality, can be regarded as an indication of a negative work ethic only in so far as it relates to work performance. In other words unethical behaviour can include theft and misuse of public property and accepting outside employment during one s tenure in government with

Normative ethical theory poses the question, what ought I do? (MacIntyre, 1985; Swanton, 2003). The study of ethics, is concerned about what is right, fair, just or good; abou not just about what is the case or what is the most acceptable or expedient (F Morality refers to the actual conduct of human beings, whereas ethics (often referred to as moral philosophy) relates to the study of the moral conduct itself. As such, morality may be described as experiences of real problems, dilemmas and conflicts that need to be resolved, at times by individuals, groups or organisations. (Badaracco, 2002; Ruggiero (2004). The circumstances in which there are choices relating to moral conduct are influenced by human values (LaFollett, 2000). Values, sometimes referred to as one s principles, are those to which indi worth and become a guide or reference point for action that has moral significance (Rokeach, 1973; Singer, 1993). Values define who we are, and they influence the choices we make in life (Hood, 2003; Russell, 2001). As such, values influence human behaviour, both in private and public matters (Chatman & Cha, 2003). The personal value system of an individual develops in the context of the specific culture, society and family environment in which he or she develops.

According to Badaracco (2002) ethical dilemmas involve making choices between nonoverriding, conflicting moral requirements; for example, loyalty and honesty. SinnottArmstrong (1988) proposed that ethical dilemmas are composed of four key elements; no clear resolution is evident, the agent is required to do each of two or more actions, the agent can do each of the actions but not both and neither of the conflicting requirements is overridden. Rost (1995) noted that most people do not use ethical frameworks to judge morality. Rather, they draw on life experiences, personal values and perhaps religious convictions. This is illustrated by Beu, Buckley and Harvey (2003), who stated that while there may be basic moral norms, the dynamic business environment brings with it challenges which cannot be readily answered by moral rules. Ethical decision-making,

therefore, is not straightforward and individuals may examine and behave differently when confronted by similar ethical dilemmas.

There are a number of planning scholars whose work emphasises the moral challenges implicit in the planning profession. Wachs (1985) asserts that ethical issues are present in many areas of planning. He remarks that planners exercise their ethical judgments to make decisions that will affect private behaviour and property on behalf of the public welfare. More specific examples are included such as planners accepting gifts and the disclosure of confidential information. Hendler (1995) strongly supports the view that there is an ethical dimension to the planning profession and planning decisions do involve the exercise of human values.

Hendler s assessment draws on a number of classical ethical theories and ill relates to dimensions of the planning profession. One such theory which other scholars cite is the utilitarian theory which seeks planning decisions and outcomes which deliver the greatest benefits to the greatest number. An example in her argument involves a decision for the development of a new rapid transit line as having benefits to the commuter which must be weighed up to the harm to nearby displaced residents who are fewer in number. Howe (1990) argues that planners, whether consciously or not, make decisions from a preferred ethical theory and that a greater degree of awareness in how individual mindsets may influence decision making in planning. Nevertheless, Howe presents the two most common approaches to ethical decision making; that being utilitarian and deontological theories. The former focusing on the rightness of the consequences and the latter on the means to the decision based on principles such as justice and rights. Notably, no ethical theory in itself may be applied to face the challenges planners may face in their role. Hoekveld & Needham (2013) argue that planning involves a public agency s regulation decisi the lives of citizens and as such individual planners, while having their own values, need to be made aware of the ethical implications of their work. They make a distinction between the individual values of the planner and the ethical principles which should govern the operation of the agency. The latter, argues Hoekveld & Needham (2013), should form the framework by which planning decisions be made. Earlier research by Howell & Baum (1998) illustrates this in a case study involving the ethical challenges of community participation in planning decisions. In this example, planners espouse the value of community participation but in reality it demonstrates the ethical challenges in planning, in this case, community participation. It illustrates that planners may be committed to the principles of community participation but the process is by no means value neutral.

Birkland (1995) advocates a new ethic (an ethics-based planning approach) which takes account of planning issues which contribute to addressing questions which relate to how we, as a society, ought to live which relates to the fundamental ethical question posed by the ancient philosophers. She argues the basic decision making mechanisms for planners are based on legal, political and market systems which approach planning from a utilitarian perspective of who new ethic therefore needs to take account of planning decisions based on improving the h condition. Campbell & Marshall (1998) confirm the ethical dimension inherent in the role of planning decision-making. Most particularly, they raise the question relating to competing interests which exist in the role of planner. are planners obliged to serve the interests of employers, the organization, personal values, clients, the wider community, future generations or the profession ? (Campbell & Marshall, 1998:17). The findings arising from thei on focus groups with planners emphasised the tension experienced by planners fulfilling their obligations to corporate and political objectives against decisions which in p public interest .

The engagement of planning consultants, pressure to process planning applications and the perceived risk to the quality of the decision were also themes which emerged from the research. Studies by Howe & Kaufman (1979, 1981) used case scenarios to explore what planners thought were ethical conduct in their role. A key finding in this research distinguished perceptions of ethicality by planners. Politically orientated planners adopted more liberal interpretations to their

decisions. Technically oriented planners made decisions based more towards procedural and technical interpretations and a perceived value neutral position on planning orientations differed, both groups held similar views that the misrepresentation of information in their role was unethical. In conclusion, studies relating to planning ethics in Australia appear to be extremely limited.

A classic dilemma found in any public service profession, including planning conflict between what the agency, which presumably serves the public, defines as the public interest, and what the individual professional thinks the public interest is 1979: 250). Planners actions can never be value free, and therefore planning trace explicit and implicit considerations of ethics in planning (Ploger, 2004: 50). As Howe and Kaufman (1979) found in their empirical study based on several scenarios, ma seem to be influenced, at least to some extent, in what they think is ethical by the intended beneficiaries of their actions. The same tactic used in behalf of different groups is judged differently. They expected this effect to be much stronger for politicians, who approve much more of open value commitment, than for technicians who generally wish to be value neutral. Actually, the results are rather mixed. On the scenarios giving out recommendations, politicians are influenced more by the issue than are technicians; but when it comes to leaking information, there is no difference between the two roles. There is, however, an interesting difference on the leaking scenarios in that the beneficiary is much more important to planners who are not strongly committed to their agencies than for those who are (Howe and Kaufman, 1979: 25 vii) makes an overview evaluation for ecological ethics in his dissertation. As Joma correctly puts in the words that an ethical system must do two things: It must envision a pa and it must work out a path to the realization of that way of life that is internally consistent, yet workable in the real world. Surprisingly, recent ecological ethics have failed to realize these two components of an ethical system. From Leopold s Land Ethic to Deep Ecology, no system was born. Most of the prevailing ecological ethics suffer from being too abstract or utopian in principle . Joma s critic for ecological ethics is mostly valid for planning

## 2. Tanzania Urban Planning system

### *2.1 Tanzania Urban Planning System before Independence (1961)*

The genesis of urban planning in Tanzania owes much to the history of colonialism. In fact it is a direct legacy of it. Urban areas (towns and cities) were established in Tanzania by the colonial government in order to serve the interests of the colonial economy. Most of them were administrative centres of the colonial government. Some were import and export trade ports, like Dar es Salaam. Tanga and Mtwara. Some grew as stopping stations in the colonial transport and communication network system. (Lugala, 1989). Geographically, colonial investment and planning created imbalanced spatial development where resource rich areas received most of the infrastructural development with very little or none in the resource poor areas. During the colonial era, planning legislation was used to control and segregate the population. Residential and commercial areas were divided into European, Asian and Africa categories. Laws were put in place that dictated who could live and work where.

There was a marked difference between the areas occupied by Non-Africans and Africans. Residential areas for Whites, popularly known as *Uzunguni* (areas for Whites) were characterized by luxurious big houses of European style surrounded with golf-courses ,wide roads and open spaces. Abundant luxurious social and service system. Oyster-Bay area in Dar es Salaam City, Gangilonga in Iringa, Mlimani area in Dodoma, Lsamilo Capri Point areas in Mwanza, Forest Hill area in Morogoro, Loleza in Mbeya and Kijengi in Arusha are such places which reflect this colonial legacy. The African residential areas were characterized by shanty houses of slum type. overcrowding. poor sanitary

conditions, lacked in essential social services like water, public toilets, hospitals, community and recreational service centers, and during rainy seasons, houses kept on floating on their own sewerage.

It is in these areas where the African artisans, clerks and other Africans who worked in the colonial government dwelled. The urban planning of those days had its base on the ideology of colonialism. It was not merely a technical process which was neutral from ideology and apolitical as others would want us to believe. It is, therefore, no wonder that technocrats (urban planners) provided urban plans which reflected this legacy, and never contradicted the ideology of colonialism. Race determined where one should live and also the type of social service one should get. In any case, the Whites were the most favoured and the Africans the least favoured

*2.2* Overview of Tanzania s Urban Planning process and system after Independence

Soon after independence, that is, from 1961 - 1980, Tanzania like many other developing countries, set out ambitious social and human resources development plans including programmes generally aimed at the eradication of poverty, ignorance and diseases over two decades (URT, 2000; 1996). In 1967 Tanzania adopted the top-down policies (Arusha declaration) and in 1972 Tanzania introduced a decentralization policy. In Swahili madaraka Mikoani means giving powers to the governments; this focused on decentralizing key authorities and functions of government from the centre to the grassroots level, so as to enable the community to participate in decision making (URT, 2004; 2003; 2000).The most important intended links between local government and the residents of the given area are the Vitongoji (sub wards) in the rural areas and the urban Mtaa committees (sub ward committees), which are designed to mobilise citizen participation in local development.

In addition to the above, citizen participation in local government decision-making is encouraged by the amendments to the Local Government (District Authorities) Act 1982, which provide for Councils to organise public hearings for people to question political leaders and staff. Councils have also been empowered to establish special kinds of service boards, open to all citizens in the area and providing an opportunity to influence service provision. Participatory budget-making has also become a means to increase resident participation. It is currently enabled by the bottom-up budgeting through the ward development committees and the democratic structures above them.For urban planning, after independence in 1961, the, Tanzania Government copied and modified the British planning system. Colonial Zones were categorized as Zone I ( low density areas), Zone II (Medium Density areas), and Zone III (High Density areas). These differences were also in sizes: Zone I is characterized by large areas, compared with zone II whose areas are medium-sized, while Zone III has small areas. Zone I is planned for high- income earners, Zone II for medium-income earners and Zone III for low-income earners.

The legal basis for urban planning in Tanzania after independence (1961) was the Town and Country Planning Ordinance (Capacity 378) of 1956 as amended in 1961. This ordinance was supported by subsidiary legislation such as the Local Government (Urban Authorities) Act No. 8 of 1982, as amended in 2002, which gives power for Urban Authorities to prepare detailed planning schemes and submit these to the Minister responsible for Local Governments for approval, and the Land Act No. 4 of 1999, as amended in 2004. Sites for residential development in Tanzania are usually designated in Master Plans or Strategic Urban Development Plans (SUDP) for large and medium sized cities and Interim Land Use Plans for small towns. The urban councils (Local Authorities) are preparatory authorities responsible for preparing detailed schemes commonly referred to as layout plans, subdivisions plans or Town Planning (TP) Drawings of the area designated in the Master plans, SUDP or interim land use plans. Town Planning Drawings are prepared by the respective Local Council and approved by the Ministry of Lands Housing and Human Settlement Development. The Ministry participates in the designing and preparation of layouts only when a particular council seeks assistance. The Town and Country Planning Ordinance (Capacity 378) of 1956 was amended in 1961 after the Parliament enacted Urban Planning Act no 8 of 2007. Section 19(1b) of the Urban Planning

Act (2007) it calls for participation of all stakeholders including landowners, public and private institutions, community based organizations and non- governmental organizations in the area to be affected by the plan.

The present institutional arrangements for planning have been influenced by a civil service and local government reform programme implemented in the last ten years with the overall objective of enhancing the capacity of the local government authorities to effect service delivery. Guided by the principle of decentralisation by means of devolution of functions and finances to local levels, reforms targeted four policy areas: political, financial, administrative and changed central local relations. Implementation of the reform programme and decentralisation by devolution has involved institutional rearrangements and review and/or formulation of laws and regulations, as well as administrative procedures in 1995 and 2000 respectively (URT 1995, 2000). Both the central and local government authorities are responsible for urban and rural planning in Tanzania within the legislative framework of the Land Act Nos 4 and 5 of 1999, the Urban Planning Act and the Land use Planning Act, both of 2007. The Land Act Nos 4 and 5 provide the legal framework for land tenure and land administration in Tanzania. All the land is under public ownership, the President of the URT being the custodian on behalf of the citizens. Two types of rights to use land are recognised: government granted right of occupancy for 33 and 99 year lease periods to the holders of urban land, and deemed rights of occupancy for land occupied under the customary land tenure system. These are currently being registered and holders of land rights are issued with certificates of customary right of occupancy so that they may use the registered land as collateral for a loan. The Urban Planning Act and Land use Planning Act are the principal legislation for urban and regional planning in Tanzania. These recently adopted pieces of legislation have replaced the Town and Country Planning Ordinance Cap. 378 of 1956. The Urban Planning Act and Land use Planning Act are based on the Land Policy and Human Settlements Development Policy endorsed by the government in 1995 and 2000 respectively. Both policies are inspired by democratic principles and contemporary thought in planning which advocate involvement of stakeholders and consensus building planning processes. According to the legislation, the minister responsible for urban and regional planning is the Minister for Lands, Housing and Human Settlements Development.

The Director of Physical Planning is the chief technical advisor to the minister on matters of physical planning and the approving authority for all urban and rural plans prepared by local authorities in Tanzania mainland. The Division of Physical Planning, one of the four technical divisions of the Ministry, is currently organised into five sections: a) Physical master planning; b) Urban physical planning; c) Rural physical planning; d) Settlement regularisation; e) Physical development control. The division undertakes planning activities in collaboration with other technical divisions of the Ministry, namely the Housing Division, the Land Administration Division and the Surveys and Mapping Division. Until 1998, the division was represented in all the administrative regions by regional town planning offices. However, as part of the decentralisation and civil service reform process, the planning offices were abolished so that planning functions hitherto executed by the regional offices were assigned to local government authorities and regional secretariats which are supposed to coordinate and oversee overall regional development. Rural planning functions are also carried out in collaboration with the National Land Use Planning Commission, which serves also as advisory body to the Ministry of Lands, Housing and Human Settlements Development.

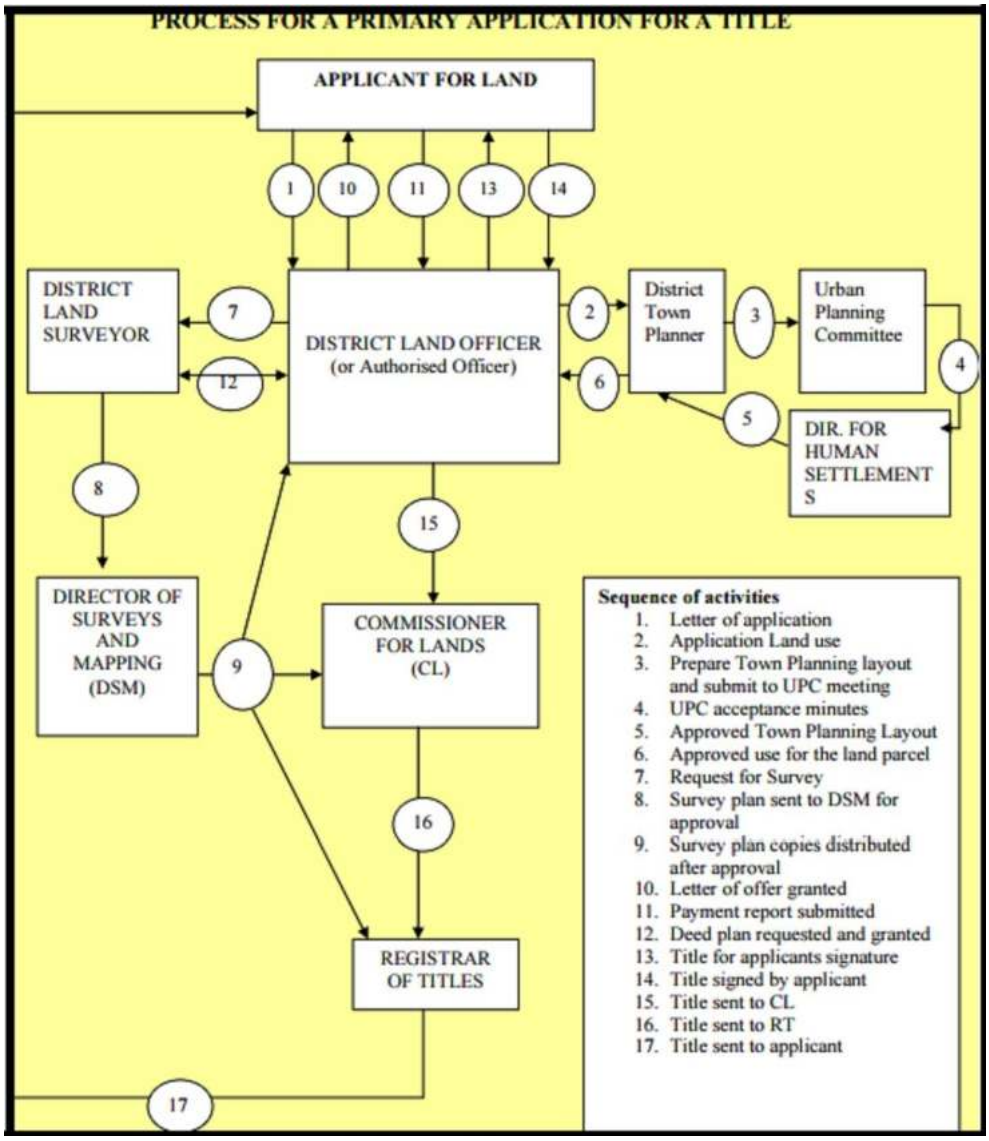


Figure 1: Process for Application for a Title.

*2.2.1 Preparation of Town Planning Drawings in Tanzania*

Town Planning Drawings are prepared by respective Local council and approved by the Ministry of Lands. The Ministry of Lands Housing and Human Settlements Development participate in the designing and preparation of layouts only when a particular council seeks assistance. The following procedures are followed by Local councils in the preparation of layouts. Detailed planning scheme (or detailed land use plan) as stated in Urban Planning Act, 2007, is th guiding scheme of urban development in Tanzania.The Following are formal procedures for Preparing the Town Planning Drawings in Tanzania.

a) Identify the area and declare it to be ripe for urban development in the government gazette.

b) Inform residents within the declared area about the intension (Public awareness).

c) Evaluate properties within the declared areas and pay compensation

d) Designing of Town planning drawings which show different land uses within the area and present them to Urban Planning Committee (UPC) of the respective Local authority for approval. The UPC consists of public elected ward representatives (Ward Councillors). Each ward Councillor must be at least one development committee; these can be finance committee,

security committee, Urban Planning Committee etc. The Urban Planning Committee approves Urban Planning Drawings.

e) Submitting the drawings to the Minister of Lands and Human Settlements Development for approval. (normally approval is done by the Director on behalf of the Minister)

f) After the approval copies are sent back to the Local authority for implementation.

*2.2.2 Preparation process of Redevelopment/urban renewal*

With assistance of Ministry of Lands, the urban councils (Local Authorities) are preparatory authorities responsible for preparing Urban regeneration Plans. The following is a summary of the procedures followed by Local councils in the preparation of urban renewal/redevelopment Plans.

*a)Establishment of redevelopment area boundary.*

This is carried out by the respective planning authority (urban council), defining the boundary and preparing a map of the area. Approval of the proposed boundaries is by the Full Council of the respective Town/Municipal or City.

*b) Submission of the approved proposal to the Director of Human Settlements*. This involves publishing of proposals in the Government gazette as an area for preparation of a Redevelopment scheme. Section 34 of the Land Acquisition Act (1967) Cap 118s empowers the Minister for Lands to declare a scheme of redevelopment. Where the Minister declares any area to be a redevelopment area, he must cause the area to be defined on a map and he must cause copies of the map to be exhibited at the offices of the local government authority within whose jurisdiction the redevelopment area or any part thereof is situated. Subject to such declaration he may advice the President where necessary to acquire land, for the areas requiring redevelopment in urban areas. In the case of redevelopment, all interests in or over land within the redevelopment area, once acquired, become extinguished.

Upon such declaration of re-development schemes, residents of the area whose buildings were of acceptable quality will be deemed to have a valid right in the area. Other residents will have to apply for rights of occupancy as developers under the new terms and conditions. In that case, the law has empowered the Minister to grant to every development owner within the redevelopment area, a right of occupancy over the land on which an acceptable building is situated. The development owner is further deemed to hold a right of occupancy over such land on such terms as the Minister may by order prescribe until the time the grant is made.

Moreover, according to section 8(3) of the Urban Planning Act (2007) Cap 355, the process for the declaration of the planning area requires (a) a favorable response at a public hearing or in the area, conducted by the planning authority; (b) a resolution by planning authority recommending the declaration of planning area; and (c) a positive recommendation by the Regional secretariat of the respective region.

*c) Preparation of base maps and collection of socio-economic data for planning purposes.*

After the declaration of the planning area, the relevant planning authorities may prepare general and detailed schemes of development. The schemes must adhere to legally established procedures.

*d) Presentation of a first draft report showing the existing situation of buildings, land uses and infrastructure to the Urban Planning Committee (UPC)* for comments and recommendation on how they would like their central area to be redeveloped..

*e) Presentation of the proposed Redevelopment plan to the Full council for approval.*

The full council consists of Ward representatives (Neighborhood). These are elected representatives by their respective neighborhoods.

*f) Presentation of the proposed Redevelopment plan to the Minister for Lands and Human Settlement Development for authorization.*

*g)Distribution of copies of the authorized plan to the respective council and other stakeholders for implementation.*

Figure 2 : procedures for preparation of urban renewal/redevelopment plans

Source;Authors

*2.3 Discussions*

Tanzania planning system, the separation of control mechanism and acts of planning actors are mostly independent from each other. This separation and independence provokes individual actions to take place in planning control mechanisms. In other words each actor begins to introduce their own way of urbanism on the basis of proposals. This cause individual interest based urban each citizen tries to implement their own way on the land. However, with respect to that condition, individual interests cause pressures on plan decisions and on local governments. The findings of this research manifest the problems caused due to the gaps in planning system, as a source of ethical problems in Tanzania. In order to eliminate this problem, the planning system should be changed in a way to give priority to public interest and to formulate comprehensive planning implementations.

Plan amendments are extensively used tool by the municipalities for directing the urban development in Tanzania. According to in-depth interviews it is observed that some of the municipalities based these amendments upon the obsolescence of the existing plan, and the others to the insufficiency and bad-quality of recently prepared plans. The implementations in Dar es salaam Municipalities are a good example for this situation.

*2.3.1 Corruption and Conflict of Interest*

Tanzania is urbanising at 4.77% annual rate of change. Unethical behaviour by politicians, technocrats and physical planners in the country threatens cohesive urban development and poses challenges to the future of Tanzania s urban spaces. The country has recently seen an explo development and settlements as citizens have lost confidence in the official town planning system. Corruption and allocation of land through political dictates has watered down the planning profession s integrity. Unethical behavior has added costs to national development and has gone a step further to hurt the poor who cannot afford the high costs associated with acts and practices of corruption, bribery, influence peddling, fraud and extortion by physical planners and their connivers.

Some physical planners are engaged in abuse of office, abuse of privileged information, favoritism, and in conflicts of interests. For example, an official in local government who prepare agendas for Full Council or Urban Planning Committee may be offered a benefit to make an applicant request for change of use or amendments Plan get favors without site verifications or Drawings verifications by the Municipal or Town Planning Authority. Corrupt planners might also advise planning committees to approve a development proposal that shouldn t have been approved if critica concealed. Likewise, a planner or a member of his family or a friend may apply for a plot advertised by the Municipality or Township, which is to be offered on a first-come, first-serve basis before anyone else, by using inside information.

Urban planners are usually hired by developers, private property owners, private planning firms and local/regional governments to assist in the large-scale planning of communal and commercial developments, as well as public facilities and transportation systems. Urban planners in the public role often assist the public and serve as technical advisors in the complex web of the community's political environment.Local public officials who work in a municipality or Town Council many times misuse or abuse their power for dishonest or unlawful gain. The improper use of influence, power, or other means for private gain is called corruption. The study revealed that local government Urban Planners works under pressure of ward councillors (madiwani). However, there exist ethical dilemmas, Foristance the interference to Urban Planner by Politicians during Initiation of Planning Process or during the Planning Process. The Politician may influence Prioritization of the zoning for public services such as Open spaces, Cemetery, schools, roads etc.

> it is common to see recommendation for allocation of cemetery to other
> *a Politian* ~interviewed Planner

Due to lack of Proper Management Plan for Compensation and lack of finance for Compensation, loops have been created for unethical officials to impose unethical behaviors during the Planning Process. The loops have been created for unethical planners to disclose the Planning Process to the Public. Unethical Planners disclose information and give favor s to those who

These favors includes, zoning their lands to safe sides , means their areas services such as roads, cemetery, open spaces etc.

There two type of Town Planning Drawings we use to Prepare, these are Plans wh *Projects and Plans which are individual initiatives, resident needing the Titles of his Plots, The first Option is more implementable, what we Normally do is zoning services such as Open spaces, Nursery school , religious sites. These are more implementable compared to those Plans initiated by Individual* Client - interviewed local Government Planner

Moreover, Local Government Urban Planners Sometimes Prepare layouts due to demand of the public clients .When a Land owner needs tittle deeds for his area, he goes to the Public O him/her the condition which require his/her land to be planned if it is not planned, or if the area has a Plan, the survey needs to follow the Town Planning Drawings. The urban Planner Prepare the layouts for the interest of the client . It is rare to see an Urban Planner zone the client open spaces. This leaves the Town or city lacking Public services such as Open spaces as well as Cemeteries. These Plans prepared in this way, lacks public support and their implementation is difficult due to the fact that they are not participatory at the same tme the government has no budget for compensation and survey the rest of the layout Plan. Local governments may be more susceptible to corruption because interactions between private individuals and officials happen at greater levels of intimacy and with more frequency at more decentralized levels.
Town Planning Drawing Process in Tanzania, especially those initiated by indivi Planners tempted, they end up doing unjustice to the community. It is automatical area cannot be zoned for Open space, thus other areas occupied by neighbours are zoned for such uses! When the time comes for a another Client of the same area needing survey of their area, they have to request for amendments of the Town Planning Drawing, these process also creates loops for corruption from the Urban Planners at Local Level up to National Level in ensuring favours for such amendments.

Unfortunately, it is not a rare occurrence that illegal construction has changed the intended land use; instead of punishing such developers and imposing measures to restore the space to the original state, the authorities would rather amend the plans and and zone the area to new land uses.
The study shows that Urban planners faces pressure from Politicians. The Politicians have high influence in Professional Practice. One of the interviewed Planner from the Regional Administrative Secretary (RAS) argued that , the pressure and Challenges is from the Local Government ( Town Council,Municipal Council). The Politicians puts pressures to them to sign the Draiwings regardless of professional mistakes.

The Planner from the District Council can tell you that these *Town Planning Drawi certain big Politician, so it is argent, needs quick approval to the Ministry of Lands, we end up signing* because of fear of job loss or being transferred ~ Town Planner from RA

Urban Planners at regional and local level claims that since enactment of the Urban Planning Act,and Urban Planner Registration Act, 2007, up to now 2015, there is no any Professional Guideline for the smooth enforcement of the Acts Number 7 and Number 8 of 2007.This puts Urban Planners in Professional Dilemma.

In addition to this, the citizen lack knowledge in Planning Process. This creates loops from unethical professionals in taking advantages. One of the interviewed residents claimed th process for preparation of the town planning drawings. What did was paying the Urban Planner some amount and Planner facilitated in preparation of the Plan. However he was not aware on the planning process. These awkward moments creates loops for unethical decisions. The study shows that 52% of those who were interviewed were satisfied with activities of the Registration Board. The rest who

were not satisfaction were asked the reasons of dissatisfaction, the main answers were doubts on accountability of the board. They claimed that the main activities so far were registering Planners, but they claimed on double standards during registration process. The interviewed unregistered Planners who are practicing claimed that they are not aware of any regulations governing registration process, no guidelines for registration process as well as criteria s for registration d Unregistered Planners claims on bureaucracy created by those who are registered, especially on signing the Drawings. The study shows that there are registered Planners who just signs the Drawings without even checking on the qualities as long as they get something from those who are not registered. This is the same as those Planners who are in Public Offices creates bureaucratic process to Private Planners when official approval is needed. This creates ethical dilemmas among Planners themselves and integrity of the professionalism.

## 2 Conclusions

Tanzania has made some attempts at formulating legislation on planning, but the laws passed have not been adequately enforced. Planning authorities and institutions have suffered neglect in Tanzania. This has occasioned a massive brain drain from the planning sector to other fields, because the sector lacks government support. Town planning has never been as fully recognized as central to delivering economic success, environmental protection and social justice as it is today. Though the government has contributed in setting up the institutional frameworks, since the actual implementations of plans is often dictated by the politicians rather than qualified urban planners. As a result, Urban Planners Practice the Profession unethical. Corruption and allocation of land through political dictates has watered down the planning profession s integrity. Unethical behavior has added costs to development and has gone a step further to hurt the poor who cannot afford the high costs associated with acts and practices of corruption, bribery, influence peddling, fraud and extortion by physical planners and their connivers.

The decentralized system is also beset with other socio-political dynamics that affect planning. Some local government politician s patronage and influence works variously to create negligence, impunity and general counterproductive behaviors. The politician is only motivated by the desire to win or retain power which is a matter of vote. There is no chance for any [planning] proposal succeeding if our political leaders think it has the potential to affect their electoral fortunes It is an open secret that the success or failure of any development management effort depends to a very large extent on how adequately the responsible agencies and department are equipped with the right number and quality of personnel and logistics to rise up to the challenge. There is also the need to ensure maximum cooperation and collaboration between all department and agencies whose work and activities impact directly on the physical development. There is lack of political will in addressing urban developmental issues. On the other hand planning registration board which could advice the ministry and the government on urban land issues are quiet. Lack of transparency and accountability in the planning practice allow for misuse and abuse of the planning system to serve the interests of the more powerful and influential groups, including those entrusted with the powers of planning. The outcomes of a non-inclusive, non-transparent and insensitive planning include: insecurity of land tenure rights and subsequently investments in land; poverty; informal land subdivision and building; unplanned spatial growth and endless conflicts in land development. These are detrimental to the residents and erode their trust and confidence in the government.

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# LATENT CONFLICTS AND PLANNING ETHICAL CHALLENGES IN THE SOUTH-EASTERN SICILY LANDSCAPE OF EXCEPTION [1]

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Abstract

In the last 30 years Southern Italy has changed from being a region of emi
immigration, in main cities as well as in rural areas. Accordingly, South-East
experiencing remarkable physical, social and economic changes, with significant
agricultural landscape.
Statistics of the last 20 years show high levels of development of the agr
remarkable innovation and internationalization of production. At the same time r
show a higher concentration of – often illegal – immigrants in rural areas.
landscape planning and management ensure more sustainable local development.
The difficult immigrants conditions of life and their work in the agricultural
produce: (I) new and differentiated rural lifestyles, as social result of the
between different ethnic groups ( globalization of the countryside); (II) a "l
as spatial result of the power relations between the space of the powerful a
powerless , produced by a suspension of the rights/norms that is paradoxically
2005).
The paper focuses on the cause-effect relationship between landscape planning, a
development and exploitation of immigrants labour, highlighting th
configuration/regulation produces forms of surveillance, subjugation, exploit
(Mitchell, 2002). The paper describes (latent) conflicts and power inequali
landscape, highlighting the ethical challenges and dilemma of landscape plann
where issues of social justice, sustainable development and suspension of
intertwined.

## 1. Introduction

As highlighted by Yiftachel (1998), planning as oppression exists in a variety
a range of social relations in space. The Marxist planning theorists analysed t
planning and power in light of the exercise of political domination based on t
working class by the capitalist class (Hoch, 1984), which are mainly due
contradictions of capitalist economic power.
Alternative interpretations of power in planning beyond the Marxist analytical
undertaken more recently. Under the influence of cultural studies many scholar
impact of urban policies and regional developments on ethnic groups in order to
The most comprehensive analysis has been done by Flyvbjerg (1998), who analyses
asymmetrical) opposition of rationality and power. This turn towards the dark s
the domain of power which has been largely explored by Yiftachel (1994),
Gunder and Mouat (2002) and Kamete (2012), highlights the unethical implica

[1] Although the article should be considered a result of the common work and reflections of the th
took primary responsibility for sections 2, 4, 5, and V. Todaro took primary responsibility for se

relationship (Yiftachel, 1995; Flyvbjerg, 1998; Bollens, 1998). These authors ha
side of planning where a political power uses planning as a tool of oppress
(Sandercock, 1998; Hillier, 2002), leading to subjugation, exclusion, and soci
injustice.
However, a further example of a model for utilization of planning in the exerc
instrument of oppression of the weaker party, is the one, paradoxically, linked
In geographically marginal, and, from the institutional standpoint, often precar
such as certain areas in southern Italy, and in particular socio-economic condi
comes across the phenomenon of so-called suspension of norms (often rega
instrument contents) and unanimously acknowledged regulations, this often bei
perverse alliance between economic and political power.
In these cases a determined economic power, firmly rooted in the local area, m
political sphere by freezing the system of rules that might otherwise damage
regard to southern Italian rural contexts, the presence of a great immigrant flu
dimension to this state of affairs.
In these contexts landscape is transformed into playing the role of exercising
role of achieving fair and equal development; the economic power produces subju
exclusion, and surveillance through landscape transformation. This paper argues
landscape turns into a landscape of exception (Lo Piccolo and Halawani, 2
demonstrates how landscape is not free from conflicts and power inequalities;
vigorously in the organization of landscape. A particular example of the relati
and landscape is the case of the South-Eastern Sicily, that is discussed in thi
is to analyse the instrumental use of (planning) techniques and laws in order t
relationships. In order to explain by which mechanisms oppression actually o
Agamben s concepts.

## 2. Theoretical and conceptual framework

### 2.1 Power relations in the domain of (planning) laws using Foucauldian approaches

Flyvbjerg (1998) has dealt with power and oppression in planning practice in
theory of power. Płłger (2008) applies the Foucaultian analyses of governmenta
arguing that planning is governmentalized through institutionalized hiera
distributing power in space and time and represents institutional ways of thinki
Intensively analysed by Hillier (2002), Michel Foucault s theories on the relat
knowledge offer a comprehensive framework through which to criticize the role
appears to be neutral and innocent from control. Although the work of Foucault is
understanding the relationships between power and knowledge, the ambiguous and i
the law is another key element in the relations between panning and power.
The exercise of power (and oppression) occur in the domain of the law , althou
manipulated and unequally applied; this is what exception means according to Ag
conceptualizes the concept of exception by connecting it with: suspension of la
constitutional principles, and misuse of norms.
Consequently this paper makes use of the integration of these approaches to cre
to understand the transformation of the landscape in the South-Eastern Sicily,
exercise of power that is produced by landscape transformation.
The paper starts by reviewing some theories of power relations starting with
Foucault and then by exploring the concept of the state of exception developed
These theoretical references provide a lens through which we can view the manip

in the South-Eastern Sicily, where landscape has been employed to serve the
control/dominate immigrant workers. As such this paper highlights a gap in plan
way in which landscape is manipulated to play the role of an exercise of power.
The Foucauldian approach (1977), is particularly helpful in understanding the
that are used by a hegemonic power as tools to control people and the space they
The Agambenian approach is helpful in understanding the way in which a he
manipulates laws to exercise power over certain social groups. Agamben (2005) a
relation between government and society: if the mandate of necessity becomes a
state can be such a superior power, if it circumvents and suspends laws and nc
that the law is obliterated in the state of exception the state still claims to
sense the power (state) becomes the law and the exception becomes a rule.
What, consequently, happens to the space, geography, and landscape when the
insists upon controlling them, or when it dominates the landscape while at the
obliterating those who are powerless? The next sections examine this issue
consequences of hegemony on landscape.

## 2.2 Power, ideology and landscape

One of the privileges of power, and an integral part of rationality, is the f
(Flyvbjerg, 1998). This general statement applies also to landscape, as a socio-
of human interventions, but of the exercise of power. The greater the power, the
this respect to define and dominate landscape, and the less need for power
landscape is really constructed.
Landscape is a material as well as cultural artefact; it is a datum , but it is
place, but it is also its imagine. When we refer to landscape, we do not only
object, but we refer to a multiple interpretation of it. Accordingly, in recent years,
literature has developed a more diverse approach to landscape. The work of Mit
book Landscape and Power, which was originally published in 1994, shifts the me
from an object to a process by which social and subjective identities are formed
Barbara Bender (1998) highlights the role of power and inequality in the (poli
landscape, and of the historical and geographical specificity of the socia
Representations of landscape become political issues mediated through the plan
tends to adopt a site specific and segregationist approach (Hillier, 1998). Acc
Purinton (2002) ideologies can play a predominant role in creating a narrative
narrative of landscape is not innocent of ideology, it can be used in the formation o
and enactment of territorial claims. It also has the ability to produce relatio
Purinton, 2002, p. 142).
Also economic power can shape landscape and many of its features, loading it wit
representations, through which new systems of authorities and beliefs are produc
relation between landscape, power and ideology makes the production of landscap
conflict a controversial issue, playing a role in the exercise of power.
Applying Agamben concepts to our planning examples, we highlight as planning s
allow power to exert domination and control, using mechanisms of exception wh
landscape. In the light of Agamben s concepts, we analyse the technical and juri
which landscape transformations and planning emerge as an oppressive activity.
note is that also a strong economic power in the state of exception does not on
circumvent constitutional principles, but also tries to produce new laws in or
issue regulations with the purpose of exercising its control over people.
Furthermore, the work of Agamben considers the law as a paradigm of knowledge
government or a specific form of power can exercise power over people. Hen

understand the manipulation of landscape in the South-Eastern Sicily is bas
mentioned scholars work. The function of landscape as a medium of oppression
cannot be achieved without a system of laws in which the spatial knowledge s
used as an instrument of power. In the case of the South-Eastern Sicily, as it
next sections, through planning law there is an exercise of power, also when
suspended .
Thereby, landscape acquires new meanings: subjection, domination, exclusion, su
function of social control. In this sense the social control is exercised withi
the norms which are tied to spatial knowledge (planning, architecture, geograph
manipulated. According to Agamben (2005) the state of exception creates a new l
away from ordinary norms: the state of exception is the opening space in which
reveal their separation ( ) In this way, the impossible task of welding norm an
thereby constituting the normal sphere, is carried out in the form of the except
40).

## 3. The South-Eastern Sicily case

### 3.1 Local context, cultural heritage, success of the greenhouses

In the Italian national scene, South-Eastern Sicily is known as the other Sici
from the cultural and economic standpoint, comparable to Provinces in norther
within the Island , thanks to its historic autonomy (Chiaula, 2011) and a dyn
context that differs greatly from the rest of Sicily (Spataro, Gentiloni and Spa
Furthermore, South-Eastern Sicily features an exceptionally high concentration o
heritage, which on one side makes it greatly exposed to the risk of deterioratio
resources allocated to protection and preservation interventions, but, on the o
for the potential synergies that can be activated especially with respect
investments (Azzolina et al., 2012).
Nonetheless, the most manifest features of this territory are the numberless intertwi
systems of values and resources depending on one another. An intricate network
archaeological sites of the classical age, agricultural areas with farmhouses an
centres, distorting and adapting to the morphology of the territory (Nifos and L
In particular, in the hilly and mountainous zone the landscape remains almost
examples of actual rural architecture in the peasant tradition, the area being
enhanced by agro-tourism in its various forms ( Ibla sharing ).
The same thing cannot be said for the coastal landscape, in which the far-
greenhouse cultivation, continuously and uninterruptedly along the coastal stri
with an almost surreal landscape, in which the vast plastic expanse, with the reflecti
the greenhouse roofs, encroaches on the surface of the sea. This landscape
transformed because of the productive system of the greenhouses, losing the
features that have characterized it during the centuries.
Furthermore, this area is characterized by the presence of extraordinary urban
the natural morphology of the territory or the ostentatious baroque architectu
the territory contributed to the creation of a complex and polycentric settleme
and medium-sized urban areas are scattered on the edge of calcarenitic terraces
coast and creating breathtaking landscapes.
The town centres feature baroque architecture and urban style (Noto, Scicli
Ragusa, Ispica) and minor Italian Liberty style (Ispica, Canicattini Bagni).
These exceptionally beautiful urban landscapes perfectly express the baroque ic
where architecture, space and light merge and reach maximum harmony. After all

best expresses the most specific features of baroque architecture, which emerge
extensively during the 18th century (Blunt, 1968) in South-Eastern Sicily, a territory
geographical and cultural periphery (Nobile, 1990).
From the economic point of view, within the framework of nationwide policy wi
development, South-Eastern Sicily has traditionally occupied a primary role, re
process of transformation in agricultural production, supported by a combinati
entrepreneurial ability, with significant results on the international exportat
and Pitti, 2011; Giampino, Picone and Todaro, 2014).
This state of affairs has given rise to a dense mosaic of vegetable, flower
cultivation, which can be added to the renowned quality-wine production ( Cerasu
This production is centred in the Hyblean fruit and vegetable region, mainly c
fascia trasformata ( transformed strip ) (municipalities of Vittoria, Acate,
Comiso, Santa Croce Camerina) that constitutes the heart of a more wide-rangin
comprising about 9,000 enterprises with about 26,000 workers (CCIAA-Camera c
Ragusa, 2012), handling a little over 9,000 hectares of UAA, of which 2/3 is se
horticulture. With regard to this specific sector, there are 3,331 farms and
(about 75% of the Regional greenhouse total and 30% of the national total); toma
of early produce, and peppers, aubergines, courgettes and cucumbers make up the
years there has also been an increase in table-grape greenhouse production (ISTA
The success of greenhouse production, often described as the economic mira
agriculture has represented, according to Saltini (1982), one of the sprightl
phenomena to hit the entire Italian agricultural scene. This success has not bee
actual production, which has managed to profitably exploit terrain previously co
economic interest, but has triggered wide-ranging spin-offs involving sectors
agriculture, such as seed-production, commerce in pesticides and plastics (poly
of materials for packaging products, road transport etc.

## 3.2 Landscape transformation and planning suspension

The introduction of greenhouses in South-Eastern Sicily dates back to the lat
farmers decided to reconvert their fruit and vegetable production from agricult
greenhouse cultivation. This approach consented the extra production of out-o
rendering agricultural enterprise more profitable. In the wake of initial
production, especially with regard to tomatoes, soon replaced most of the tradi
activity, including that of grapes.
From this moment on, the success of greenhouse production meant that economic co
widespread and profound changes in the traditional local landscape. In order to
terrain is necessary and so, the famous macconi (sand-dunes), especially tho
(Ragusa) and Punta Secca (Santa Croce Camerina), had to be levelled out; over a
natural modulation had produced a singular landscape, with alternations of w
characterized by typical dune vegetation (Campione and Sgroi, 1994). In some cas
extended as far as the water s edge. The sand-dune landscape was reduced to co
between the greenhouses; the end-effect is one of a vast translucent surface (a
plastic sheeting), which extends in homogeneous fashion over the whole area
levelling out the terrain s natural depressions and protuberances (Campione and
As we shall see in subsequent paragraphs the new lay-out of the landscape, b
pressure of economic power on the natural morphology of the area and on who
greenhouses, represents a landscape of exception , which, re-reading the con
state of exception (understood as a suspension of the rights/norms, which is p

constitutes a possible spatial organization of this phenomenon. In this way th
becomes a landscape of exception .
In this, furthermore, the condition of exception of the Ragusan greenhouse
explicit in accordance with a dual modality: one spatial and the other social,
The former emerges through the suspension of planning-instrument contents, and
suspension of greenhouse-worker rights.
From the planning point of view, the Province of Ragusa has a greater number of
Provinces in Sicily, dealing with aspects of both territorial planning and envi
safeguard.
On the subject of greenhouses, general awareness has been noticeably heightened
impact produced on the environment and the landscape; as regards the various p
there is agreement on the indispensable delocalization of the greenhouses and s
coastal strip.
Many plans, at different institutional levels, faces this issue, with different
capacities and levels of efficacy.
Among all the planning instruments, in the area, it is specifically the Lan
Paesaggistico )[2], (2007) managed by the Superintendence for Cultural and Environmental
in the Province of Ragusa, which examines the issue of greenhouses in depth
document Progetto d ambito Macconi . The Plan sub-divides the greenhouse-belt
with different characteristics:

1. RED ZONE ON THE BEACH. The plan envisages a ban on building new greenhou
   regulation for their reorganization (reduction) in order to create a coasta
2. RESTRICTED ZONE WITHIN 150M OF THE SHORE. The plan envisages a ban on n
   greenhouses, except for those that integrate pre-existing ones or are sit
   (i.e. extensions are permitted), following the principle that only "qualit
   small-scale, poor-quality agricultural) has to be improved.
3. RESTRICTED RETRO-ZONE. The plan provides for diversification of ag
   production, with redirection towards traditional agriculture, redirect
   production towards quality levels oriented to the enhancement of orga
   production and industry certification ; the restricted zone should aim to
   the local area.

Several doubts arise about the efficacy of the planning system in this regard.
plans, with all of them tending to emphasize the need for delocalization of
salvaging of the coastal strip, why are the greenhouses still in place?
We will find our answer in the suspension (and non-application) of the actio
instruments, as provoked by the economic powers that oversee the productive sys
greenhouses. This line of thinking suggests that economic power is able to exe
political-administrative power, which actually controls and, in this case, susp
application of plans and planning decisions. In marginal contexts such as So
particular Sicily, the gap between planning contents and their implementatio
noticeable wherever there is the presence of strong economic interests, which
position to influence the political sphere.

### 3.3 Immigrant workers and the suspension of their rights

Whereas the greenhouse landscape , on the spatial front, has replaced the tr
coastal landscape, from the eminently social point of view, greenhouses have determi

[2] The Piano paesaggistico was adopted through the Decreto n. 1767 of 10th August 2010, Assesso
Culturali, Ambientali e Pubblica Istruzione.

transformation in the social landscape in this area.
With regard to the transformed strip in the Province of Ragusa, unofficial st
Frontiere, 2008; Caritas Migrantes, 2011; INEA, 2013) show a significant conce
workers[3] employed in greenhouses; this consents a doubling of annual production of
the same time necessitates a greater number of workers.
However, apart from the profound changes wrought in the features of traditiona
this economic success an extremely complex situation sees the immigrants often l
seriously demeaning conditions.
The Ragusa area, in particular, apart from being a constant point of arrival for
from north Africa, already boasts a stable foreign presence; this is partl
immigration from the Maghreb of what are now settled ethnic groups, and partly
presence of workers (especially from Romania) on a cyclical basis, this being
Regional and inter-Regional flows, which are, in turn, linked to the various pr
2013). Most of these manual unskilled and low-cost workers in this area are un
badly paid and unprotected); compared with these conditions, the various socia
and housing aspects are at some risk (Gertel and Sippel, 2014).
With the enlargement of the European Union to include Eastern European states,
substitution of immigrant workers was noted in the Ragusa greenhouse-belt (Co
2013); there was a sudden increase in fresh flows of immigrants, especially
employment, and mostly taking the place of north Africans. These neo-EU work
countries characterized by serious socio-economic difficulties and willingly ac
(about 20 Euros for a working day of 10 hours), thus neutralizing the social
north Africans. For the whole immigrant manual workforce this was followed by a
and a worsening of living and working conditions.
Other critical conditions relate to the illegal status of immigrant greenhouse-w
them, moonlighting in the black economy and another one in the grey .
Indeed, in the Southern regions, the informal economy and irregular employment
weight. These two aspects existed well before the arrival of immigrants (De Zulu
In respect to this condition, according to certain cautious estimates by Carita
irregular workers' percentage amount to 10% (and in some periods of the year, a
of regular workers. On the other hand, INEA (2013) suggests an estimated 15,
units of immigrant workers in agriculture and considers 50-60% of them to be i
the immigrants are usually employed by small-time businesses, where there is a l
On the other hand, the so-called grey economy provides for a regular work-co
non-EU immigrant to obtain a temporary-stay permit in Italy), in virtue of w
declares that he is working for about 102 days per year; this is the minimum requi
acquire what is called indennit di disoccupazione (i.e. unemployment benefit
which one is not officially working); in reality the working hours extend to the
The last serious phenomenon involves cases of sexual exploitation of female im
Romanians. People working in this field (Caritas, 2011) report that this rep
problem for the female component among immigrant workers, who may be blackma
owners of the greenhouses and risk losing their jobs.

[3] According to findings by ISTAT (2013) regarding the inter-census period 2001-2011, the perman
resident in Sicily more than doubled, going from 49,399 to 125,015 units. The first five nat
Romanian, Tunisian, Moroccan, Sri Lankan and Albanian, represent over 50% of the total foreign p
INEA, 2013). With regard to numbers for the year 2011, the Province of Palermo provides the hi
terms, of resident foreigners on the island; however, the Province of Ragusa has the highest pe
percentage of the total resident population.

In fact, in this sense, the anomalous increase in the rate of voluntarily-i
(abortions), as registered in the last ten years by healthcare structures in
significant extent, to female immigrant workers from Eastern Europe.
On the subject of this phenomenon, the structural features of the greenhouse l
hide both the presence of illegal workers and the various forms of abuse perpet
together with the distance from towns and the conditions of isolation experienc
this does not appear so far-removed from the forms of slavery carried out in non
Nevertheless, with regard to the seriousness and pervasiveness of the phenomen
the various forms of exploitation undergone by immigrants, the key-players a
(including those stemming from planning instruments) are conspicuous by their
regard to the institutional duties that they should be addressing. The only operators
active in the area are voluntary associations and healthcare structures, whic
resources available, can only respond in emergency cases (Consoli, 2009; Todaro,

## 4. South-Eastern Sicily as Landscape of Exception

In South-Eastern Sicily planning is suspended to maintain the economic power
control over the agricultural production and the immigrant workers. Consequentl
been constantly transformed resulting in a complete change in its role and mea
become saturated with elements of control (enclosures, walls, and hurdles) thus
geographical continuity, and the norms that shape it.
Generally, in spatial and social conflict conditions, a resolute power uses pl
and plans as vehicles for sustaining oppression through landscape. However, th
does not imply that the production of space goes through a clear and system
produced. On the contrary, in conflict situations, the law is very ambiguous and blur
to the political regimes sphere, according to Agamben (2005) when a regime face
circumvents constitutional principles: so an exceptional state is produced, and the legislative power
collapses, being replaced by an executive power; as result, the forms of law become the norms of
the juridical order of the state. Agamben (2005) specifies that the emptiness of
of exception which is characterized by: the transformation of legislative power
and the suspension of norms and juridical forms.
In the South-Eastern Sicily case the political regime is replaced by economic p
of exception does not mean that there is no law shaping the landscape, but that t
spectrum that can be practiced partially and ambiguously. Landscape of exception,
highlights, is produced through three inter-connected processes: firstly, the a
economic power linked to the agricultural production success; secondly, the sus
planning; and thirdly, the manipulation of landscape through the greenhouses,
control for the purpose of exercising power.
Apart from constituting the actual essence of this model, the greenhouses repre
for spatial as, well, as social manipulation and control. Under the spatial
determine the transformation of traditional landscape, exercising an extraordin
eco-system, i.e. the dune-lined coastal system, which was once deemed unproduct
time, of great value as regards environment and landscape. This eco-system, rec
national and international level, with the institution of protected areas (re
sites), has in fact been reduced to a series of isolated strips and fragments.
heritage, the safeguarding system as laid down by law and planning instruments
and is no longer applied, consenting the greenhouses to spread everywhere, even
edge.
From the social point of view, the greenhouses constitute an enormous reservoir
non-qualified and flexible jobs to attract the international flux of immigran

consider this work advantageous when compared to the living and working con
countries of origin. This has often actually provided a solution to the princip
to conditions of illegality, lack of jobs etc. On the other side, the wide-scale
matched by adequate working conditions. Work in the greenhouses proves to be ex
in many cases, scarcely bearable (Avallone, 2011). Most of the basic individua
regards work contracts and a fair wage, and, contextually, multiple forms of vi
out.
However, the economic success of this type of agricultural production depends
work by immigrants (Osti, 2010), who are, nonetheless, unaware of this fact.
The discussion and the case study illustrate that power can produce a system o
rules which are spatially localized, allowing it to reshape landscape by elimi
zones and constructing elements of dominance and control. Under the context of
law the whole landscape is transformed from the purpose of enjoyment or agricu
into the purpose of surveillance, control and repression.
Although the greenhouses constitute an instrument for the transformation of l
manipulation, via a system of new rules imposed by economic powers, the legal v
loss of the role of safeguard of the environmental and landscape heritage fro
Thus, a question of an eminently ethical nature arises, which concerns the safe
in intensively cultivated rural areas and the repercussions, in terms of socia
(Berlan, 2008).

## 5. Conclusions

In his adoption of the Foucaltian analyses of power, Flyvbjerg (1998) stresses
and highlights the selective processing of knowledge in the planning and accrediting that is exer
power. He claims that normative rationality is the upfront planning model p
scrutiny, while the real rationality corresponds to the backstage hidden from
contrasting with the most celebrated aims of advancing democracy. On the other
Mouat (2002, p. 131) highlight how the (individual) capability of resistance relies on
cultural and financial capital i.e. knowledge (including strategic awareness),
and resources. But under which conditions can resistance be exercised? And wha
obstacles to forms of resistance?
Obstacles to any act of resistance are constituted by legal and institutional sy
of resistance by the manipulation of laws and rules, which often occurs in
producing an instrumental misinterpretation (and consequent manipulation) of rul
On the other hand, one of the main risks is the progressive normalisation of the
this might be generalised in the contemporary political and economic conjunctu
2014).
This paper offers conceptual and empirical contributions on the way in which t
manipulated. Its main task is to provide concrete examples of the ways in wh
planning by suspending and manipulating rules and laws, and its consequences no
urban areas but also for rural areas and their landscape, too. This study demon
and discussion of the planning system in South Eastern Sicily that landscape,
has been transformed into a landscape of exception. This transformation has not occurre
spontaneously or occasionally; instead it is a continuous process in which
planning is used in order to transform landscape in an instrument of oppression
way landscape loses the positive value and is transformed from a space of equit
a space of subjection and control.
This paper shows that the production of the landscape of exception is sepa
highlighting the landscape s role as a medium in exercising power over its use

characterized by the meaning of control that influences socio-economic issues
but also-life styles. Through landscape of exception citizens are prevented from fruiti
resources, like the dune system and the seaside. This means to defer the public i
"common good) for a private interest profit. At the same time, others are maintaine
a status of non-citizens, for the same economic reasons.
The manipulated normative context determines the production of a landscape of
subjection, exclusion, domination, and control exist. The common economic intere
order to legitimate landscape transformation, with a suspension of laws and pla
production of landscape is deviated from basic principles of norms.
This is a good example of the detailed insight that Foucaultian critique can cont
planning practice. Flyvbjerg (2004) makes the point that the central questi
exercised, and not merely who has power and why they have it; the focus is on p
structure. We argue that Agamben concepts add a valuable contribution to this c
mechanisms of exception which allow power to be exercised defining what counts
rule, and thereby what counts as reality (Flyvbjerg, 1998).

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# Justifying planning decisions: Institutional response to planning objections in Israel

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**Abstract**

This paper presents our study of current planning ethics and power-knowledge relations, mapping and analyzing the ethical frames used by institutional planners to justify their decisions in eight central and peripheral Israeli cities. While objections hearings are the main procedure for public participation in Israel, the planning committees are obligated to explain all their positive and negative decisions while explicitly regarding oppositions to new schemes. Studying these answers, we find how the very notion of public interest is defined and articulated in terms of economic, legal, architectural, social and environmental reasoning. Tracing the ethical rationales leading the discourse we also learn how planners conceive their own agency in current urban citizenship. We thus map the incremental justificatory notions by mutually analyzing procedural and substantial terms of distribution, participation, recognition, capability and responsibility. We focus on the following questions: **1. How is the public interest defined and shaped in the institutional response?** Is there a set of hegemonic justifications in the planning institutional discourse? How does government perceive its responsibility to serve the public interest? What types of third-party rights or development prospects are often highlighted? **2. What variations are evidenced in the patterns of planning justification?** Are there variations according to the geographic area or to the socio- spatial status of the objectors? Can we identify patterns of closeness and openness towards particular social groups or demands? **3. What can we learn about the level of discursive communicability in planning institutions?** Do the planners present governmental positions or their own disciplinary frames?

**Key words: Public interest, planning justification, urban citizenship, institutional planners, objections**

## Introduction

In the last years planning proposals have increasingly raised public debates in Israeli cities, over social and environmental justice, identity politics and democratic decision-making, among others. Although of wider public significance, and despite recurrent claims on the need to democratize planning, most debates have been effectively channeled through the institutional procedure of objections' hearings. In this framework, the Israeli Planning Law mandates all planning committee professionals to justify their decisions following the

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hearings, with a detailed written explanation to each objectors' claims. The proceedings of the Committees are now all available to public scrutiny on the web, thus offering a unique opportunity for the empirical examination of current planning ethics and power-knowledge relations in the Israeli planning field.

In researching this data we focus on identifying what constitutes the public interest in Israeli institutional planning practice today, and critically analyze how planning choices and decisions correlate with the varying socio-spatial positions of the projects and actors at stake, and how the committee members perceive their own social role in serving different publics in Israel. We argue that adding a sociological dimension, that takes into account how ethics in planning interlink with socio-spatial inequalities, is crucial for engaging with the larger debates on urban citizenship animating current social struggles.

The growing academic interest in urban citizenship reflect increasing social unrest and mobilization addressing urban issues and increased demand for democratization and deliberative planning practices (Held, 2006; Healy, 1996; Inns and Bohr, 2004). Notions of urban citizenship, we believe, are especially relevant regarding the ethics of institutional planners whose role is to both promote the public interest, and advance growth and real estate activity simultaneously. In this capacity, their conceptions and decisions inevitably impact many spatial, social, cultural and environmental aspects. Questio responsibility, pluralism, fairness, social justice and equality connect their daily decision making to grand social narratives at the heart of urban citizenship (Campbell & Marshall, 2000). We thus suggest that planning justifications in objection hearings offer a prolific arena for examining institutional views of urban citizenship in action, as they define who is considered a citizen, on what grounds rights

and obligations should be accorded, and how distributive and redistributive justice are to be attained promoted.

**Urban citizenship and the "Public Interest" justification**

As research on urban social movements shows, claims on the right to the wide variety of demands such as the right to affordable housing and environmental justice, as well as the right to participate in planning the city, and ultimately, the right to be in and make use of urban space itself (Clarke and Gaile 1998; Holston and Caldeira 2008; Mayer 1994). Such contestations touch upon basic issues of urban citizenship, reflecting deep-seated conflicts between local communities and residents and the political and economic interests driving urban development (Ellis, 2004; Kemp, 1990; Lake, 1993; Burgess et al, 1988; Burningham and Thrush, 2001). In this manner, planning institutions are compelled to explain and justify their choices in ways that resonate with the wider issues mobilized by urban contest.

In this context, the idiom of the "public interest" serves as key concepts for justifying planning decisions. Critical scholars have documented how planners choices and justifications frequently conceal the unfair distribution of rights and obligations and reflect narrow understandings of what consists the public interest (Fl PlÖger, 2001; Richardson, 1996; Alfasi, 2003; Yiftachel and Huxley, 2000). Yet since the 1960s, "public interest" has been defined in relation to procedural democracy and distributive justice norms (Innes et. al., 2004), and planning institutions articulate specific notions of it in their quest for professional and institutional legitimation (Alexander, 2002; Campbell & Marshall, 1999). In fact, conceptions of the public interest are tied to the very validation of planning as public institution. The institutional history of planning points to hard-won debates from which the profession drew its legitimacy to become an inextricable part of state bureaucracy and a form of scientific expertise at the service of the public

benefit (Klosterman, 1985; Friedman, 1987). The institutionalization of planning was indeed due to welfare states' conceptions of a normative and shared "public interest" (Campbell and Marshall, 2002), perceived as an "objective of duly authorized governments carrying out activities necessary to the welfare of the community" (Grant, 2005, page 48). Thus, the legitimacy of planning as an institution and a form of rational knowledge was re-opened with the decline of rational- welfarist frameworks since the 1970's (Klosterman, 1985), while substantive and procedural questioning regarding the nature of "good planning" aligned with the demise in planner's legitimation as professionals "healing" society (Friedman, 1987). The current credibility crisis relates first and foremost to planning criteria and to planning institutions. In the urban field, scholars showed how intensified neo- liberal strategies, privatization and divestment of many government responsibilities brought up growing procedural and ethical concerns (Harvey, 1989; Heally, 1992; Tasan- Kok, 2008; Fainstein, 1991, 1994; 2013; Sagalyn, 2007; Teitz and Chapple 2013; Krumholz 2013; Brlow, 1995; Rydin, 1999; Brenner, 2003; Hasson, 1997). As "a collective goal is not a sufficient justification" for according or denying individuals rights (Dworkin, 1984, p, xi), increase of objections by local NGO'S, neighborhood committees and third- right parties was evidenced. These agents tackled not only specific planning issues, but also the institutional accountability of planners in serving the public (Ellis, 2004; Lake, 1993). At a deeper level, by objecting planning decisions they questioned the legitimation of the planning institution as a fair or just arbiter of conflicts operating in the name of [hared citizens' right or public interest.

These legitimation crises provides the context for our analysis of planning justification in Israeli cities. Yet our preliminary tracing of current planning hearings in Israel shows that the notion of "public interest" still underlies much of the discourse produced by planning authorities when explaining their decisions. The terminology has

been also traced in other recent studies of planning debates in Israel, showing the supremacy of legitimating arguments adducing the common interest over self-interest or special interest (Alfasi, 2004; Carmon, 2007). It is n planning. According to Ernest Alexander, "for planners and the planning profession, the public interest has always remained relevant as a legitimating principle and a norm for practice, even while philosophers and political theorists debated its existence" (Alexander, 2002: 227). Despite the growing uncertainties in regard to its meaning, the idea is still vital in legitimating planning as state activity (ibid; Campbell and Marshall, 2002), as a norm for professional institutions and planning practice (Campbell and Marshall, 2000) and as a criterion for evaluating policies, projects and plans (Alexander, 2002).

With "the public interest" thus currently conceived as a "flexible construct for the articulation of disparate views (Grant, 1994, p. 73) we claim that tracing the p ethical schemas planners draw to legitimate their decisions when invoking public interests is crucial for unraveling wider notions of urban citizenship and related debates. In line with current understanding that urban space itself has become the subject for claims to citizenship' rights (Jessop, 1997; Brenner, 1997; Kearns, 2000), we thus examine how the notion of public is currently defined, how planners claim it is to be served and on grounds; what lines of urban development are to be pursued, etc.

**Research questions**

The paper presents preliminary findings of our study of the justificatory logics underlying the institutional world of planning and how they link to different socio-spatial correlates. Planning objections in Israel have been the subject of earlier empirical research. In their study of planning objections hearings for the years 1999-2001 Carmon (2007) and Carmon and Alterman (2011) compared the legal procedure in Israel, England and the Netherlands, and focused the procedural aspect of planning hearings and the degree of

democratization in the Israeli system. Others have carried out substantive discourse analysis of specific planning debates that pays attention to the content of planning rhetoric and its dynamics (Alfasi, 2004; Portugali and Alfasi, 2008; Fenster and Yacobi, 2005). We looked at the national scale. Our analysis traces both substantive and procedural contents of planning hearings, explanations and decisions and aims at grasping hegemonic notions as well as varying framing of planning justifications.

Drawing on an empirical analysis of more than 2500 justification claims handed by institutional planners in five central and peripheral planning committees and regarding eight Israeli cities between the years 2010- 2013, we ask two main sets of questions:

1- How do planning institutions define what the public interest is? What is the frequent balance between their aesthetic, historic, economic, legal and environmental values? Is there a set of hegemonic justifications? How do institutional planners perceive their professional expertise, their commitment and attachments?
2- What variations are evidenced in the patterns of planning justification? Is there a correlation between the ethical frames justifying planning decisions and the socio-spatial position of the cities and neighborhoods where planning projects are taking place, the type of actors submitting the objection (public-private), and the timing of the decision (before/after social justice mass protests)?

Given the changes taking place in the Israeli public discourse in the last years regarding socio-spatial debates and urban protest, we also hypothesized that planning justifications discourse might reflect a move towards different notions of democratic and substantive aspects of urban citizenship. In this manner, we also compare socio- spatial affiliations associated with its variations (for example, in central vs. peripheral areas) and see how the justification frames and framing were used to impact substantial planning conflicts.

**Methodology**

The selected committees cover most of the national area and a majority of its urban sites, and the selected cities were sampled due to comparatively intensive planning activity and building activity in recent years, and to represent a variety of sizes, centrality and marginality, locations, ethnic and socio- economic arenas.

| | Population* | | Socio-economic ratio\ | marginality ratio ratio** | Number of schemes issued 2010-2013 | Regional planning committee |
|---|---|---|---|---|---|---|
| | residents | Ethnicity | | | | |
| Tel Aviv- Jaffa | 418,590 | Mixed | 8 | 10 | 244 | Tel Aviv |
| Petach Tikva | 219,303 | Jewish | 6 | 9 | 209 | Center |
| Beer Sheeva | 199,334 | Mixed | 5 | 5 | 112 | South |
| Holon | 186,399 | Jewish | 5 | 9 | 59 | Tel Aviv |
| Ashkelon | 123,478 | Jewish | 5 | 6 | 59 | South |
| Lod | 71,642 | Mixed | 4 | 8 | 57 | Center |
| Kiryat motzkin | 39,228 | Jewish | 7 | 6 | 25 | Haifa |
| She'faram | 38,717 | Arab | 3 | 5 | 103 | North |

* according to the Israeli central Census, 2013 **accessibility & distance from Tel Aviv.

*Table 1: selected cities and planning committees*

We believe that this sample covers the various notions of Israeli urban citizenship, and enable a thorough outline of the hegemonic legitimating features as well as the social meaning of their variations. We used quantitative and qualitative tools:

1. We identified all planning schemes that had registered objections in the 8 cities under study in the relevant years
2. For each scheme, we traced the following independent variables: the planning components (size, height, relation to the urban context, land use), the location of the project according to the marginality ratio and socio-economic ratio of the city and of the project within the city; ethno-national affiliation of the objectors.
3. We identified the ethical frames underlying each justification handed by the institutional architects and planners to explain their decisions. The ethical frames were identified in two-stages: first, we conducted a pilot analysis and inductively singled out the main ways in which the committees justified their decisions. Second, we built a list of 9 main

substantive or ethic frames.

**Justification frames**

Analyzing the justification claims we found the following main substantive or ethic frames:

**1. Aesthetic Justification:** refers directly to Architectural features, urban typology and urban beauty.

**2. Historic Justification:** refers to preservations and local legacy

**3. Environmental justification:** sustainability, traffic and other infrastructure needs.

**4. Social justification:** refers to distribution of housing, public buildings and public spaces, to residential density, community, neighborhoods' socio- spatial standards, to social unity, regeneration and encouragement etc.

**5. Property Rights Justification:** refers to such rights of the projects developers and the assets owners involved.

**6. Economic Justification:** refers to economic goals, leverage and accountability in the project, to developers' exactions, finances and economic public benefits.

In addition, we realized that many of the planners claims do not provide concrete substantive justification of the type listed above, but rather emphasize the planners' disciplinary' knowledge, education and institutional framework. We thus defined three "expertise" frames:

7. **Substantive expertise:** focus the supremacy of the inner disciplinary knowledge, for example: `The committee feels that the influence of the plan, once real minimal. , Neither this nor that cause an invasion of privacy excessi in any case exists in the dense development of a metropolitan urban c` committee was thorough in its analyze and consulted several experts".

8. **Procedural expertise:** focus the institutional planning practice and terms.
9. **Standards and codes:** relates to existing plans, laws and codes.

**In the analysis we will re-code the PSE (Procedural and Substantive Expertise) and SD (Standards and Codes) as an overall frame called: Institutional self-justification.**

**Preliminary Empirical Findings**

We classified each one of the justificatory claims in each one of the projects according to this list of framings, and according to each one of the socio-spatial independent variables above mentioned, and counted their frequencies.

1. *Number of justifications per city:*

We computed the number of schemes objected, the number of objections, and the number of justifications handed down in each city.

The number of schemes are mostly related to the size of the cities. As for the number of objections: we found that it does not always correlate with the number of schemes. For example: Holon, a small city in the Tel Aviv metropolitan first ring, has almost the same number of objections as Tel Aviv while it has a 1/6 of Tel Aviv s schemes. Interestingly, in Arab towns and areas we surveyed, the ratio between number of schemes and of schemes with objections was substantially lower.

| | Population* | | Socio-economic ratio\ marginality ratio ratio** | Total number of schemes issued 2010-2013 | Number of schemes objected (% of total scheme) | Number of Objections handed (relative to objected scheme) | Number of Justification claims (relative to objected scheme) | Regional committee |
|---|---|---|---|---|---|---|---|---|
| | residents | Ethnicity | | | | | | |
| Tel Aviv- Jaffa | 418,590 | mixed | **8\10** | 244 | **46 (18.8%)** | 115 (X 2.5) | **1550 (X 33.7)** | Tel Aviv |
| Holon | 186,399 | Jewish | **5\9** | 59 | **8 (13.5%)** | **104 (X 13)** | **527 (X 65.8)** | Tel Aviv |
| Petach Tikva | 219,303 | Jewish | **6\9** | 209 | 13 (6.2%) | 57 (X 4.4) | **454 (X 35)** | Center |
| Lod | 71,642 | mixed | 4\8 | 57 | 7 (12.2%) | 27 (X 3.8) | **150 (X 21.4)** | Center |
| Kiryat Motzkin | 39,228 | Jewish | **7\6** | 25 | **5 (20%)** | 6 (X 1.2) | 48 (X 9.6) | Haifa |
| Ashkelon | 123,478 | Jewish | 5\6 | 59 | 6 (10.1%) | 8 (X 1.3) | 14 (X 2.3) | South |
| Beer Sheeva | 199,334 | mixed | 5\5 | 112 | 12 (10.7%) | 13 (X 1.1) | 27 (X 2.2) | South |
| She'faram | 38,717 | Arab | 3\5 | 103 | 13 (0.12%)* | 43 (X3.3) | 45 (X 3.5) | North |

*Table 2. Schemes, objections and justification claims per city*

*Several reasons can be hypothesized on this regard such as the lack of trust of members of an ethno-national minority on institutional authority and/or their fairness, especially regarding highly volatile issues such as land use and planning; or that members of disadvantaged minorities will tend to refrain from

objecting to projects developed by their co-ethnics in their areas of residence.

Regarding the number of justification claims we get another interesting picture: The committee in dealing with the central area (Tel Aviv) raised many more justification claims then other committees. We can fairly see correlation between the affluence and centrality of a city- and the effort put by the committee's to justify their planning decisions.

2. *Justification frames in general and per city*

In general, the most frequent concrete justification frame is the environmental. Yet, when we combine the PSE and SC, we get twice as many as the environmental frame and half of the entire sample.

Justifying by social, property, aesthetic historic or financial claims is less common. The latter three are the last in number, but indeed the main components around which neo-liberal planning in Israel revolves nowadays. This means that planners are highly invested in urban beautification, preservation and financial partnerships they justify their doing by "wider" public interests.

When we break justifications by city, we didn t find a consistent correl

of frame and the location of the city. But the distribution of frames frequencies according to the location of the project in the socio-economic index nation-wide, we found that the PSE and SC frames are more common in justification regarding the lower ranks of the SES.

3. *Justifications by land use (type of project)*

In each one of the categories of land use, we find as expected justifications taken from the substantive area of the project (environmental, historic, etc).

Yet, in regard to land uses that are controversial but not part of local daily life (like: tourism, historic preservation and industry), the appeal to institutional power is less

frequent. The same goes for large projects that incur a major change in the urban context. We interpret this finding as reflecting planners' awareness of the need to give considerable substantive justification regarding projects that are likely to be more contentious.

4. *Type of justification per year*

As already mentioned, our study spans the years 2010-2013. We now pay special attention to the patterns of social justificatory frame and whether its use changed after the so called social justice protests that took place during summer 2011. During this time, unprecedented social protests took hold of the streets and the social media, starting in Tel Aviv with tent camps and then virally expanding nation-wide. The tent camps came to symbolize one of the main issues contended in the Israeli public sphere, namely the lack of affordable housing for the younger generation of the middle class and the lack of public housing for low class, all of which were attributed to rampant neo-liberal policies and politics taking place in Israel since the early 1980s.

We found the following: first, the most significant shift was the drop in the use of the financial and property frames in general and the rise of the social, historic and aesthetic frames. When we compare between cities, we find that in the large cities there was a drop in the institutional expertise self-justification, clear drop in the use of the property and finance frames but this did not happen in smaller cities, regardless of their location in the SES and the marginality ratio index. This longitudinal dynamics regarding the social frame is most clear in TLV where we find a dramatic increase in its use in 2013 when compared to 2010 alongside the dramatic reduction in economic laden frames. We assume that the justificatory framing of the planners are in clear disconnect from their actual deeds meanwhile as the expensive and large size projects continue to be the forefront of urban development in TLV.

**Concluding discussion**

Our preliminary conclusions raise some interesting insights regarding common arguments raised in critical scholarship on planning.

First, unlike arguments regarding the ongoing democratization of planning institutions as a form of institutional and professional adaptation to current critiques and social changes, we find that institutional planners still use considerable institutional symbolic power when it comes to justifying their choices. At the same time, the use of power is not done in a uniform fashion as it has clear correlation to socio-economic variables. In this context, we found that the degree of marginality of the city and the location of the project in the socio-economic map are correlated to the number of justification given by planners and to their type. Meaning that in less affluent areas the city planners are less likely to expand their justifications and they are more likely to use their institutional power as we come closer to the lower ranks of the socio-economic map.

Second, we found a clear gap between what planners say to the public in committees and the plans they make and approve "on the ground". This comes out very strongly in cities like Tel Aviv that in daily life lead clear and outspoken entrepreneurial development policies based on the triangle of urban beautification, historic preservation and PPP, but in planning committees refrain from talking about them.

Finally, we found that the rhetoric in planning institutions is tuned to shifts in public discourse. This is especially visible in large cities such as Tel Aviv where we found a clear shift towards the use of social talk following the so called in Summer 2011, despite minor actual socially-driven planning actions.

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# NEW DEVELOPMENT AREAS (NDAs) IN RURAL HONG KONG: WHOSE SPATIAL JUSTICE AND WHOSE RIGHT TO THE CITY?

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**Abstract**

Justice is a prerequisite for civil order (Rasmussen, 1999). To many Hong Kongers, the return to Chinese rule since 1997 has seen the further bias of the Government s policies towards t recent controversial plan that has triggered multiple protesting acts is to bull-doze farms and non-indigenous farmers in rural New Development Areas (NDAs) to make way for housing produ ultra-expensive commodity fuelled by growing demand from local residents and Chinese investors. If justice means giving people what they deserve (Sandel, 2009, p.7), then the ca thought. Legally, justice is done when non-indigenous farmers who are also squatters, are cleared to make way for housing construction. Socio-economically, the move is to liberate the land value and provide homes for hundreds of thousands of urbanites. However, from a geographical equity point of view, these multi-generation farmers have played a significant role in securing local farm produces to the city. So whose right to the city should be protected: Farmers rights to their farming pr rights to be displaced? Or the claim rights of many urbanites to reasonable housing? Detailed examination of the evolution of the NDA plans reveals the importance of the right to voice out differences to prevent the complete transformation of spaces saturated with use values to exchange values. Nevertheless, the NDA plans can still be seen as a smokescreen to fatten the pockets of big developers who have accumulated huge land banks in the NDAs.

## 1. Introduction

Lefebvre argues that the production of space has nothing incidental about it; it is a matter of life death (1991, p.417). To Lefevbre (1991), plans made by the experts are often abstractions that cause destruction and so it is very important for the users in lived space to voice out their concerns and propose counter-plans to realise their rights to difference. This paper examines the recent planning and controversies surrounding rural new development areas in Hong Kong, a post-British colony best known for its capitalist mode of development under the One Country Two Systems its return to Chinese rule. On the surface, the problems are related to the removal of multi-generation squatter-farmers and their rented farmland for housing development, the shortage of which has created much social debates and discussions. However, a deeper question that is not directly addressed by the Government but widely reported in the mass media is the accumulation of land banks by big and small developers who are keen to have a share in the NDAs. This paper traces the planning process and outcomes of the NDAs. It is interesting to note that the voices of the squatter-farmers were not heard until towards the end of the Study on the NDAs and the problem of land hoarding (and the displacement of farmers and fallowing of fertile farmland) by big developers in the NDAs was not directly addressed in any of the planning documents.

The following section discusses what spatial justice is and how it is related to the right to the city. Then the origin and evolution of the NDA plans are discussed, focusing on the key changes that could be identified in the process. Section four tries to argue that social activism has been an important factor leading to key changes in the NDA plans though the plan remains a tool to privilege big developers who have accumulated land banks in the area. Section five concludes the paper by highlighting the lessons to be learned in this case.

## 2. What is Spatial Justice and What is the Right to the City?

What is justice? According to Aristotle, justice is to give people what they morally deserve. This can be discerned in several of his quotes[1]:

> Man perfected by society is the best of all animals; he is the most terrib
> without law, and without justice; All virtue is summed up in dealing justly; Men acquire a particular quality by constantly acting a particular way... you become just by performing just actions, temperate by performing temperate actions, brave by performing bra

There are several dimensions embedded in these quotes that define justice. First justice cannot be done by oneself, it has to be a collective societal endeavour and the aim is to perf collective. Second, it seems that the perfecting of members of this collective is through a process of dealing things justly so that virtue will emerge, hinting on the importance of procedural j meaning of the last sentence is clear: justice cannot be rhetorical. Justice is done through actions. We cannot be just unless we carry out just actions. If we take Aristotle s quotes t the reason to define justice as giving people what they morally deserve is because only then, can each member of the collective be perfected , virtuous and just and this can only be done group of people willing to adopt procedural justice in their interactions and when they act, they act justly to not just perfect themselves but to bring out the best potentials of their fellow human beings. This definition is very different from the liberal definition by frequently cited author such as Rawls *A Theory of Justice* (1971) who defines justice as distributional justice and based on primarily material terms. To imagine the possibility of justice in a hugely polarized world, he asks us to imagine a position of ignorance, that is no one knows his place in society so that we can agree a providing equal basic liberties for all citizens and that social and economic inequalities should not be permitted unless they work to the advantage of the lease well off members of society. Unlike Aristotle, Rawls does not engage in the conception of perfecting human beings or developing a virtuous society it is about the distribution of things, tangible and intangible.

In Aristotle s quotes, there is a hint for procedural justice which according to Blade refers not only to the formal procedures of decision making and the quality of treatment as stipulated in the rules and regulations but also how they are treated by the authorities and the qualities of the decisions made by these authorities. This brings us back to the issue of HOW we can collectively live out justice in our everyday life. After all, perhaps as Sandel (2009, p.259) arg about the right way to distribute things. It is about the right way to value things .

Values are extremely important when it comes to the organization of space because all spatial locations are unique. Also [a]ll spaces embody power relations of some sort (Amin, Mas Thrift, 2000, p.12) and spatial organization depends on who decides on what land uses will be allowed in space. Hence spatial justice is intertwined with the discussion of the right to the city: who has what right to the city, its planning, design and development? To Lefebvre (1991, pp.336-7), the problem with capitalism is that land must first be wrenched away from the traditional the stability of patrimonial inheritance the entirety of space must be endowed w However, use value constitutes the only real wealth (op cit., 1991, p.341). Tab differences between exchange and use values.

Table 1. Exchange Value vs. Use Value

| | Exchange value | Use value |
|---|---|---|
| Philosophy | Normative and rationalistic | Empirical and humanistic |
| Framework | Positivism | Emancipatory and post-structural pluralistic possibilities |
| Premise | Planning as reaction to socio-political-environmental contexts | Planning as intrinsic understanding of places and creative placemaking |

[1] Quote extracted from http://www.quotationspage.com/quotes/Aristotle/, accessed on 8 Feb. 2015.

| | Exchange value | Use value |
|---|---|---|
| Methodology | Imposition of orthodox modern design principles | Design recommendations based on resident experience and direct naturalistic observation |
| Boundaries | Exclusive and profession-based | Inclusive and people-oriented |
| Knowledge | Professional or expert knowledge | Situated knowledge expert knowledge merged with local knowledge |

Source: Adhya, 2012, p.218.

Lefebvre s (1991) triadic spatial framework is instrumental in highlighting the importance of representational space (lived space) vis-a-vis representations of space (conceived space) and spatial practice (Figure 1). According to Lefebvre (1991, pp.38-39), *spatial practice* (perceived space) embodies a close association between daily reality (daily routine) and urban reality (the routes and networks which link up the places set aside from work, private life and leisure) *space* (conceived space) is the the space of scientists, planners, urbanists, tech and social engineers all of whom identify what is lived and what is perceived with what is conceived. This is the dominant space in any society (or mode of production); representational space is directly lived the space of inhabitant and users This is the dominated her experienced space which the imagination seeks to change and appropriate . To Lefebv [r]epresentational space is alive; it speaks. It embraces the loci of passion, situation, and thus immediately implies time (op cit., 1991, p.41). Predominant social relation reproduced through spatial practice and the representation of space, that is, plans made by planners and technocrats are often tied by technical knowledge and power and hence will have little room for representational space (op cit., 1991, p.50). Hence, the whole project for Lefebvre is to call for the reconstruction of spatial codes (p.64) through recognition of time , the most esse lived experience, the greatest good of all goods (p.95). Hidden in any spatial order is a social order, determining who can benefit and who are excluded from it (op cit., 1991, p.289). This usually would not be revealed until spatial contradictions appear and this can only be overcome if those who lived in space struggle to fight for their right to difference, their right to the city (op cit., 1991, p.391).

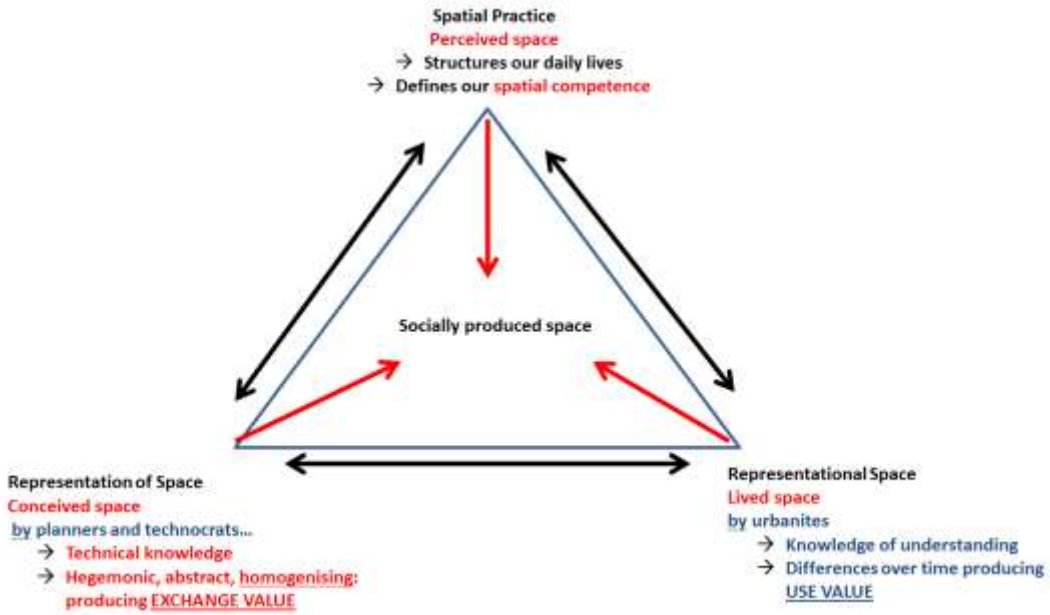



Figure 1. Lefebvre s Triadic Spatial Framework
(Source: synthesized from Lefebvre, 1991)

## 3. New Development Areas (NDAs) in Hong Kong

Hong Kong, a former British colony, did not flourish into a multi-million city until after the Second World War and the setting up of the People s Republic of China and the consequent transf industrialization (Ng, 1995). Figure 2 shows the growth of Hong Kong over the years and it can be seen that reclamation plays a large role in accommodating urban growth. However, since the 1990s, rising concerns for natural and heritage conservation and people s rights to pla development decision making have led to the birth of the Protection of the Harbour Ordinance as well as many protests against demolition of heritage sites and historical communities (Ku, 2012; Ng, 2008; 2011 and 2014). On the other hand, population growth has slowed down in recent decades and instead of developing new towns, the Planning Department and the Territorial Development Department jointly commissioned the Planning and Development Studies on North East and North West New Territories (henceforth NENT and NWNT Studies) in 1998 to identify new development areas to accommodate the then estimated population growth from about 6.8 million to 8.3 million by the year 2011 (LegCo, 1999).

The selection criteria for the new development areas were as follows (LegCo, 1999, p.2):

easy access to existing and planned railway networks;
should avoid as far as possible areas of high ecological and landscape value;
should be of a sufficient size, preferably with a capacity of at least 50,000 persons, for optimization and efficient provision of infrastructure;
should preferably be undivided by physical obstacles to enable the development of a coherent urban area;
should contain as few constraints on development and implementation (including capital, environmental and social costs and programming requirements) as possible; and
should preferably tap into the dynamics of the increasing cross-boundary interactions between Shenzhen and Hong Kong.

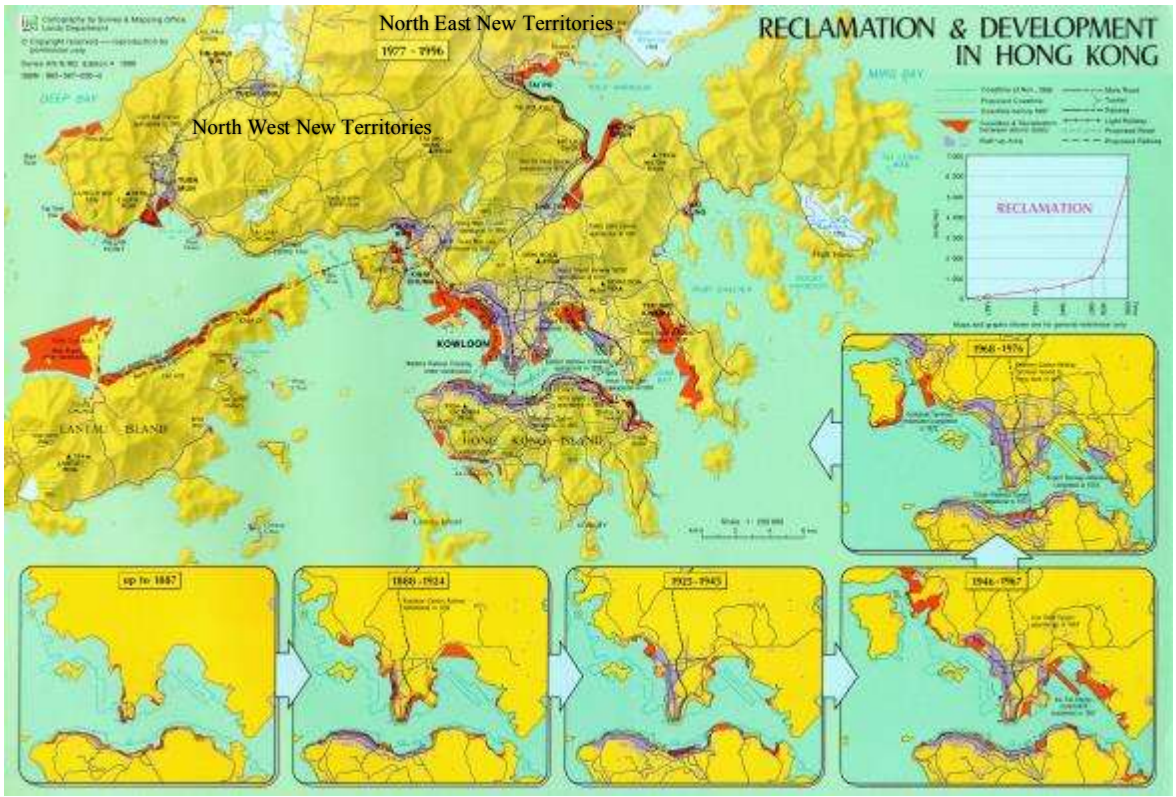



Figure 2. Growth of Hong Kong through Reclamation
(source: http://www.urbanphoto.net/blog/wp-content/uploads/2011/10/landreclamation.jpg)

And the recommended new development areas include three sites, two in Northeast New Territories and one in Northwest New Territories (op cit., 1999, p.3) (Figure 2), basically because they are next to existing new town development, with access to mass transit or strategic road networks, close to China and possess substantial development areas. It is interesting to take note of the selection criteria and the outcomes because as argued by Lefebvre (1991), time has been murdered by society (p.96) and there was no concern about the lived space or use valu alone the people living there. In other words, the whole process had been done technically, devoid of a thorough understanding of the history, heritage and culture of the place. Its use values accumulated over the years by generations of residents, the real wealth , has been neglected and ignored in this site identification process (Lefebvre, 1999, p.341).

The situation in these rural new development areas is complicated by the fact that there are two different types of villagers in rural Hong Kong. New Territories villagers are considered indigenous if their settlement existed before 1898, the year when the Second Convention of Peking was signed and the New Territories was leased to the British colonial government for 99 years. However, those villages formed after that year are called non-indigenous villagers or simply squatters and they have no right to the government land they illegally occupied even though their existence might have been tolerated for decades. The difference between these two groups of village marked material implications when the Government introduced the small house policy in 1972 entitling indigenous male villager from a recognised village who is 18 years old to build a small house (3 storeys not exceeding 8.23m in height and 65m$^2$ in area, by no means small by Hong Kong standard) in his life time. The original objective was to improve the housing conditions of rural dwellers in the New Territories but then it became a very convenient policy during the 1970s and 1980s when the Government implemented the 10-year Housing Strategy through the development of new towns after the riots in 1966 and 1967[2]. In the course of developing new towns in rural Hong Kong, new villages consisting of small houses were developed for the male descendants of the displaced indigenous villages. This privilege, however, is not extended to the non-indigenous villagers. This administratively defined right for male indigenous villagers to build a small house has been written into the Basic Law, a mini-constitution of the Hong Kong Special Administrative Region when China resumed sovereign rights over the city in 1997. Until recent years, few people have attempted to challenge this differentiation and some even mistakes this administrative policy as one that respects indigenous rights.

So, when one of the planning principles for the new development areas stated that all exi villages, burial grounds and buildings and features of historical and/or cultural significance are retained as far as possible (LegCo, 1999, p.5), the Government was actually ref indigenous villages. Other planning principles include: rail-based development, maximization of development potential, balanced community, network of open space and pedestrian walkways and provision of cross-boundary supporting facilities (op cit., 1999, pp.4-6). Put otherwise, nonindigenous farmers were invisible in the eyes of the planners when the NDAs were identified.

Table 2. Planned development scale of Kwu Tung North and Fanling North

| Land Use Zone | Kwu Tung North | | Fanling North | |
|---|---|---|---|---|
| | Area (ha) | | Area (ha) | |
| Land area | 498.5 | | 202.7 | |
| Population capacity | 100,000 | | 80,000 | |
| Employment | 17,000 | | 1,600 | |
| ***Land use budget*** | ***ha*** | ***%*** | ***ha*** | ***%*** |
| Residential | 55.0 | 11.0% | 42.2 | 20.8% |
| Village type | 14.5 | 2.9% | 6.4 | 3.2% |

[2] Because of the Cultural Revolution that started in China in 1966, there had been riots in Hong Kong too. To pacify the grudging public, the colonial government launched a 10-year housing programme. Given the shortage of land in the old urban areas, the Government had no easy choice but to have reclamation in the New Territories to build new towns to provide necessary housing sites.

| Land Use Zone | Kwu Tung North Area (ha) | | Fanling North Area (ha) | |
|---|---|---|---|---|
| development | | | | |
| GIC | 36.2 | 7.3% | 17.0 | 8.4% |
| Business use | 20.0 | 4.0% | 0.0 | 0.0% |
| Industrial (Gp.D) | 2.4 | 0.5% | 8.4 | 4.1% |
| Open Space/Amenity | 17.2 | 3.5% | 26.2 | 12.9% |
| Other specified uses | 0.8 | 0.2% | 35.8 | 17.7% |
| Green Belt | 161.1 | 32.3% | 0.0 | 0.0% |
| Agriculture | 75.0 | 15.0% | 0.0 | 0.0% |
| Roads, railway & drainage | 116.4 | 23.3% | 66.8 | 33.0% |
| **TOTAL** | 498.5 | 100.0% | 202.7 | 100.0% |

Source: Extracted from LegCo, 1999, pp.6 and 7.

## 4. NENT NDAs

***Representation of Space (Conceived Spaces the Evolving Plans)***

In 2003, the NENT NDAs proposal was shelved pending a comprehensive review of H overall planning under the Study on Hong Kong 2030: Planning Vision and Strategy (the HK2030 Study) (Development Bureau, 2012a, p.1). The HK2030 Study aimed to formulate a broad land use planning framework to guide the development of Hong Kong up to 2030 and it eventually followed the recommendations of the NENT and NWNT Studies. NDAs then were defined as small-scale new towns to provide housing, to meet other land use requirements and to offer an a living through the development of lower-density buildings in quality living environment, with convenient access to mass transportation and community facilities (Development Bureau, 2007, p.2). In the Chief Executive s 2007-2008 Policy Address, the planning for NDAs was identified as one of the ten major infrastructure projects for economic growth (LegCo, 2009, p.1). As can be seen from the planning principles, the existing communities and their lived space were again neglected (Table 3) though the same paper outlined the Development Bureau s promise to carry out comprehensive pub engagement programmes to consult relevant parties including the LegCo, the District Councils, local communities, environmental groups and other stakeholders.

Table 3: Planning Principles of the NDAs (2007)

| NENT and NWNT Studies | HK2030 |
|---|---|
| • Rail-based development | • Sustainable development |
| • Maximization of development potential | • Rail-based development |
| • Balanced community | • Effective and efficient provision of infrastructure and facilities |
| • Networks of open space and pedestrian walkways | • Environmentally friendly planning and urban design |
| • Existing villages and burial grounds | • Environmentally friendly transport measures such as building major roads at the periphery of the NDAs and providing sunken roads and environmentally friendly modes of transport |
| • Provision of cross-boundary supporting facilities | • Energy efficient measures such as encouraging non-fossil-fuel-based transportation and facilitating the use of renewable energy and recycled water for new developments |

Source: LegCo, 1999 and Development Bureau, 2007.

A new NENT NDAs Study began in June 2008 to formulate a planning and development framework for the NDAs through a three-stage public engagement programme to facilitate public discussions and consensus building (Development Bureau, 2012a, p.2). In the Stage One Public Engagement Digest (2008), only two short pages provide a sketchy picture of the existing population and land uses of the

NENT NDAs. Less than 10,000 people currently live in the three NDAs identified where mixed land users exist: small scale residential developments, scattered village settlements, a wetlands, open storages and rural industries (ARUP, 2008, p.2) (Figure 3). There is no information on how many of them are indigenous and how many of them are non-indigenous population. It is interesting to note that in one of the PowerPoints shown in the engagement process, aspirations of major stakeholders were listed and the aspiration of the non-indigenous villages was not even mentioned (Figure 4).

This NDA was taken out in the final stage of the Study. So this paper only focuses on the other two NDAs.

Figure 3. NENT NDAs (Source: ARUP, 2013, p.9)

Figure 4. Aspirations of Major Stakeholders (Source: ARUP, 2008b)

Nevertheless, as the engagement process advanced and with the mobilization of non-indigenous farmers and social activists, their voices were eventually heard. However, as can be seen in the following section, this does not mean that their right to farming is guaranteed. Instead, they face a two-front battle: they are constantly under the threat of being driven away by big developers who have

bought land from the indigenous population and accumulated land banks in the New Territories; and the farmers are often described as selfish individuals who are squatters and barriers to satisfying dire housing needs of the urbanites. Yet, as reflected in the changes of the planning principles and the planning parameters (Tables 4 and 5), social activism had indeed produced some impacts:

- While the public and private housing split was originally favourable towards the private sector, the portion of public housing has increased dramatically in the final Report.
- While the farmers and the non-indigenous population were invisible when the Study their concerns and needs were at least rhetorically addressed towards the completion of the Study.
- However, the implementation operation remains controversial as the Government continues to be seen as privileging the big developers in the development process.

Let us further examine these twists and turns of events.

Table 4. Planning Principles of the NDAs (2007)

| Stage 1 Public Engagement (2008) | Stage 2 Public Engagement (2009) | Stage 3 Public Engagement (2012) | FINAL (2013) |
|---|---|---|---|
| ***Regional*** | | | |
| Capturing cross-boundary opportunities | Coordinate with regional development and capitalise on the opportunities provided by border development | Industries that support regional development and integration with the Pearl River Delta | |
| | | | Form part of Fanling/Sheung Shui/Kwu Tung New Town |
| ***Economic*** | | | |
| | Reserve land for special industries etc. | Reserve land for special industries | |
| | A mix of land uses to provide diversified employment opportunities | Diversified employment opportunities | Meeting Hong Kong s economic needs and generate employment |
| Implementing infrastructure and development projects in a timely manner | | Adopt appropriate development approach to ensure timely provision of infrastructure | |
| | Explore arrangements for resumption, compensation and rehousing | Explore appropriate arrangements to rehouse the affected residents | A special ex-gratia compensation package for affected qualified households & one site in each of the NDAs is reserved for public housing for local rehousing purpose |
| | Feasibility of introducing private sector participation | Adopt appropriate development approach to ensure timely completion of development | Modification of land lease and in-situ land exchange |
| ***Social*** | | | |
| Promoting sustainable development by giving due regard to social, economic and environmental needs of the community | Review the boundary and coverage of the NDAs to accommodate existing indigenous villages & burial grounds | Respect existing and surrounding communities | |
| Ensuring balanced and integrated community by means of mixed and coordinated land use | New community facilities to benefit new and existing residents | Timely provision of community facilities | |
| Engaging the community in an open, continuous, inclusive and participatory fashion | Listen to and consider public views | | |
| | The overall ratio of public and private housing: 35-45% to 55-65% | A balanced mix of public and private housing | Meeting medium- to long-term housing demand |

| Stage 1 Public Engagement (2008) | Stage 2 Public Engagement (2009) | Stage 3 Public Engagement (2012) | FINAL (2013) |
|---|---|---|---|
| ***Environmental (natural and built)*** | | | |
| | | | Compact city form: mixed uses around railway station and public transport nodes |
| | Reduce reliance on road transport by introducing cycling tracks and comfortable pedestrian walkways | | Environmentally friendly transport network, main roads on the periphery and car free living environment |
| Providing quality living environment and ample open space with high quality public amenities | Restrict development density with plot ratio: 0.75 to 5; building height: not more than 35 storeys<br>Protect ridgelines, green and wind corridors | | Quality urban design: ridgelines & watercourses, stepped building height, open space network and greening |
| Creating an environmentally friendly and people-oriented community to meet territorial development needs | Green buildings, district cooling systems, water-saving strategies and re-use of treated effluent | Green and energy-saving initiatives | Green building design, planning and design to minimise changes to micro-climate<br>Renewable energy, effluent reuse, waste reduction, efficient use of water resources |
| Respecting, conserving and embracing existing natural and cultural heritage resources | Preserve existing villages, Fung Shui woodland and cultural heritage | Respect, preserve and optimise the use of the existing natural and cultural resources | Integrating old and new areas |
| | Conserve Long Valley with high ecological value, integrating ecological environment through private sector participation | | Designating Long Valley as Nature Park (about 37ha) |
| | | | Two pieces of land (about 45ha) north and south of the Nature Park and a piece of land in FLN NDA (about 12 ha) are designated as Agriculture zone to accommodate the needs of the affected farmers |

Source: ARUP, 2008, 2009, 2012 and 2013.

Table 5. Development Parameters of the NENT NDAs

| Development Parameters | Kwu Tung North NDA | Fanling NDA |
|---|---|---|
| ***Stage One Public Engagement (2008)*** | | |
| Total land area (ha) | 500 | 260 |
| Total developable area (ha) (excluding hills and river) | Government: 170 (49%)<br>Private: 180 (51%) | Government: 95 (47%)<br>Private: 105 (53%) |
| ***Stage Two Public Engagement (2009): Preliminary Outline Development Plan*** | | |
| Development theme | Mixed development node | Riverside township |
| Major land uses | Residential, commercial, R&D and Long Valley Ecological Area | Residential, government facilities |
| Population | Approx. 65,000 | Approx. 48,000 |
| Number of residential units (public: private housing) | Approx. 22,000 (54 : 46) | Approx. 17,500 (41 : 59) |
| Employment opportunities | Approx. 26,000 | Approx.6,200 |
| Plot ratio | 1-5 | 1-5 |
| Building height | Max. height of 35 storeys | Max. height of 35 storeys |

| ***Stage Three Public Engagement (2012): Recommended Outline Development Plan*** | | |
|---|---|---|
| Development theme | Mixed development node | Riverside township |
| Major land uses | Residential, commercial, R&D and Nature Park | Residential, government facilities |
| Population | Approx. 81,900 | Approx. 52,100 |
| Number of residential units (public: private housing) | Approx. 28,700 (55 : 45) | Approx. 18,600 (39:61) |
| Employment opportunities | Approx. 31,200 | Approx.6,000 |
| Plot ratio | PRH: 5<br>Private housing: 2-5<br>OU(CRD): 3<br>OU(R&D in support of border development): 1.5-3<br>CDA: 3-5 | PRH:5<br>Private housing: 2-5 |
| Building height | Max. height of 35 storeys | Max. height of 35 storeys |
| ***Final Report (2013)*** | | |
| Development theme | Mixed development node | Riverside township |
| Major land uses | Residential, commercial, R&D and Long Valley Ecological Area | Residential, government facilities |
| Population | Approx. 101,600 | Approx. 73,300 |
| Number of residential units (public: private housing) | Approx. 35,400 (58:42) | Approx. 25,300 (64:36) |
| Employment opportunities | Approx.35,400 | Approx.6,500 |
| Plot ratio | 3-5.6 | 2-6 |
| Building height | Max. height of 35 storeys | Max. height of 35 storeys |

Source: ARUP, 2008, p.6; 2009, pp.6 and 12; 2012, pp.11,15; 2013

***Striving for Spatial Justice and the Right to Differences***

The final stage of the planning of the NDAs coincided with perceived tightening of the Central Government s policy on Hong Kong and one indication was the election of a new Ch seen as having very close relationship with China. And China has been identified as the strong underlying force that privileges the developers and capitalists in Hong Kong after the political handover in 1997. Developers have been seen as the ruling class (Poon, 2005) and they land bank in the city. In NENT NDAs, farmers, many are non-indigenous villagers, were forced to leave their land and fertile farmland was then fenced off, left vacant and declared private property (Figure 5). While many mainlanders invested in Hong Kong s property market thus inflating an already ultra-expensive sector, the multiple entry permits for non-residents in Shenzhen have led to the booming of parallel goods trading, worsening the over-saturated use of the railway-related infrastructure between the two cities. Against all these background, the NENT NDAs were therefore seen as a plan to facilitate Hong Kong-Shenzhen Unification , a tool to sell o 2012, p.4), a plan to further fatten the hegemonic development sector.

Figure 5. Private Land, No Trespass
land bank of the developer
(Source: author)

One of the justifications for the Government in developing the NDAs is to satisfy rising housing needs in the public as well as the private sectors, due to escalating housing prices. According to the Housing Authority, as at end of March 2015, there were about 137,000 general applications for public rental housing and about 140,600 non-elderly one-person applications[3]. However, as can be seen from Table 5, the ratio of public housing was relatively small when compared to private housing and developing 760 ha of land to satisfy only 8% of the waiting list demand was totally not acceptable to the general public. As reflected in their comments in the Public Engagement process, many worried that the NENT NDAs will become the back garden of rich Mainlanders. To ensure that the new development will benefit local Hong Kongers, many suggested boosting the provision of public rental housing and urged the government to re-introduce the then suspended Home Ownership Schemes and move forward the policy of Hong Kong property for Hong Kong residents (op cit., 201 would be affected considered the Administration had not proposed an acceptable compensation and rehousing/reprovisioning package (op cit., 2012, p.9). These concerns perhaps explained the dramatic change of the ratio between public and private housing in especially the Fanling NDA from 39:61 to 64:36 (Table 5). This will meet at least 13% of the waiting list demand.

With the launching of many protests and varieties of activities (Figure 6), the voices of the farmer-squatters were finally heard in the third Public Engagement exercise though th be described as unlawful (op. cit., p.9). The concerns about existing agricultural activities and t adverse impacts on the livelihood of existing farmers as well as the lack of effective policy for sustaining and promoting local agriculture were also summarized in the engagement reports. And for a change, agricultural land was identified and reserved as Agricultural zone to farming practice (op cit., 2012, p.10). However while this seem to have addressed the concerns of existing farmers, there are at least two problems. On one hand, zoning land for agricultural use means very little. In fact, one identified agricultural zone consists of fish ponds and squatter huts and would not be useful for agricultural activities. Also the so called agricultural rehabilitation policy exists only in name because farmers have to talk to landowners to either buy or rent land and take care of all the related infrastructure needs, not to mention the expenses involved in developing a new farm and rebuilding their squatters , even when a short term waiver for building would (Development Bureau, 2012b, p.2). Hence, although the struggles by the farmers to fight for their rights to farm have yielded some results, the results are far from satisfactory.

Figure 6. Withdraw the Plan; We Want Our Farms and Fields (Source: https://hklawblog.files.wordpress.com/2012/10/blog-photo-cheung-oi-nei-21.jpg)

[3] Information obtained from: Hong Kong Housing Authority website: http://www.housingauthority.gov.hk/en/about-us/publications-and-statistics/prh-applications-average-waiting-time/.

While public housing supply and farmlands represent the genuine needs of many urban households who are living in substandard or subdivided flats and squatter-farmers respectively, the conceived plans, to many, continue to be a plan that attempts to privilege the developers. The Real Estate Developers Association, Heung Yee Kuk (the most powerful body representing the indigenous population in the New Territories) and some developers objected to the Conventional New Town Approach (CNTA) proposed by the Government, that is, government would resume, clear, form all private land planned for public works and private developments before releasing it to the market. On the other hand, the public and some Legislative Councillors had expressed concern that the implementation of the NDAs under a Public-private Partnership approach led by developers would compromise fairness and transparency in the implementation process (LegCo, 2012). The Development Bureau seemed to first concur:

> Upon careful consideration of the public comments received from the previous two PE exercises and balancing all relevant considerations, we consider the CNTA more desirable as it will enable synchronisation of various developments with provision of supporting infrastructure and public facilities. The CNTA will also ensure balanced development with appropriate mix of public and private housing, commercial and business uses, open spaces and G/IC facilities. We therefore proposed to implement the NDAs proposal by the CNTA during the PE3 exercise (LegCo, 2012, p.8).

However it is interesting to note that according to the news media, the Government, since early 2013, had decided to give up comprehensive implementation of CNTA and allow conditional participation of land owners in the development of NENT NDAs. One such policy is for those who owned 4,000m$^2$ or more of land in areas zoned for residential uses could negotiate for land exchange and it was reported that this would shorten the development period by one to two years (Apple Daily, 2013). Figures 7 and 8 and Table 6 list where and how much such land the big developers own in NENT NDAs. Figure 9 shows the worsening trade of housing affordability in Hong Kong. As the housing market has been monopolised by the big developers (Poon, 2005), this planning exercise is seen by many as another proof of the Government s biased policy towards the interests of the landed clas sector.

Figure 7. Who Owns What in NENT NDAs
(Source: http://www.scmp.com/print/news/hong-kong/article/1275542/new-world-henderson-land-be-major-winners-nt-new-towns)

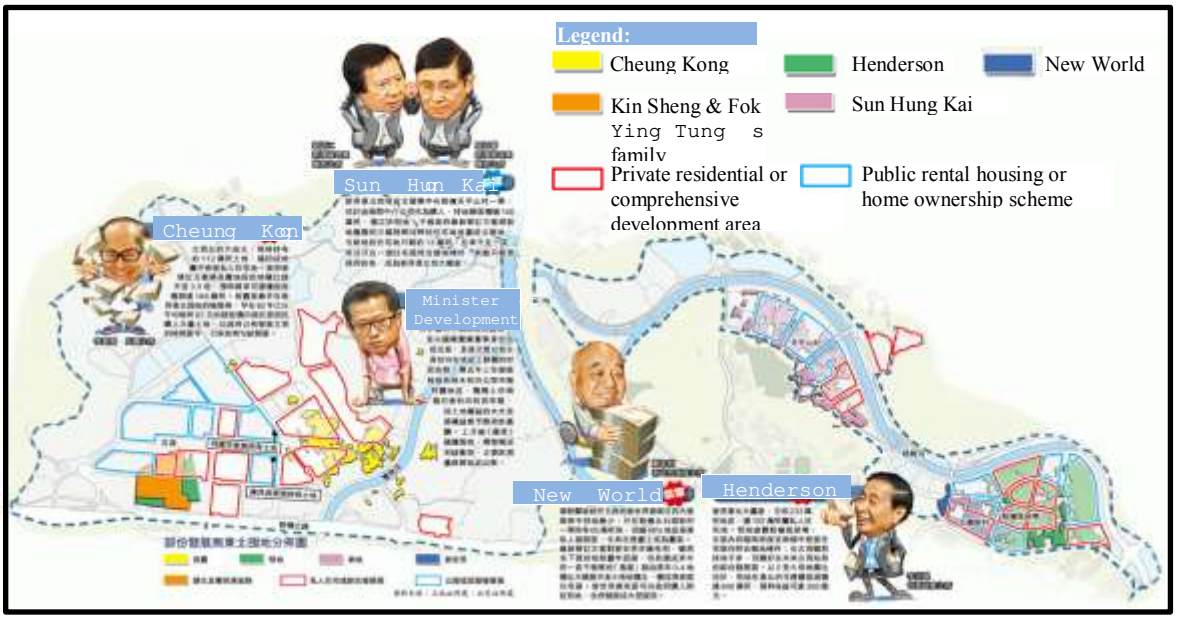
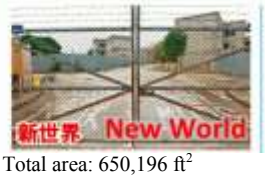



Figure 8. Who Owns What in NENT NDAs
(Source: Apple Daily: http://static.apple.nextmedia.com/images/apple-photos/apple/20130826/large/a0401a.gif)

Table 6. Land Banks of the Big Developers in NENT NDAs

| | | |
|---|---|---|
| | | |
| Total area: 2,332,275 ft$^2$<br>Eligible area for land exchange: 1,026,991 ft$^2$<br>%: 44.03% | Total area: 1,416,786 ft$^2$<br>Eligible area for land exchange: 133,134 ft$^2$<br>%: 9.40% | Total area: 1,124,864 ft$^2$<br>Eligible area for land exchange: 482,292 ft$^2$<br>%: 42.88% |
| |   | |
| Total area: 738,386 ft$^2$<br>Eligible area for land exchange: 153,175 ft$^2$<br>%: 20.74% | Total area: 650,196 ft$^2$<br>Eligible area for land exchange: 314,062 ft$^2$<br>%: 48.30% | |

Source: Synthesized from: Apple Daily:
http://static.apple.nextmedia.com/images/apple-photos/apple/20130826/large/a0501a.gif

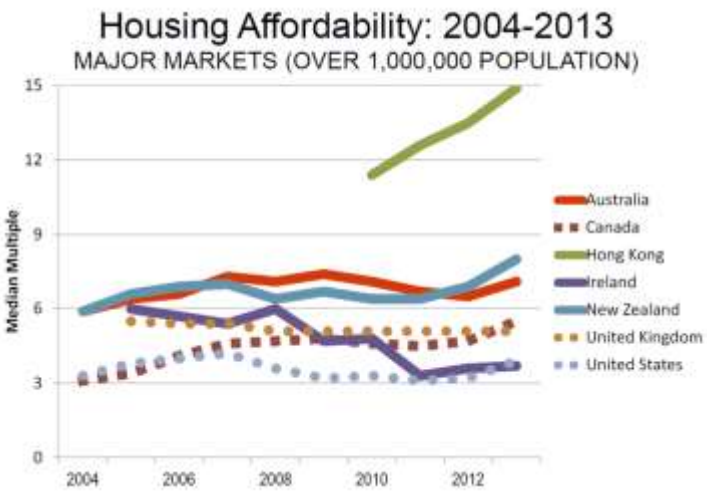



Figure 9. Worsening Housing Affordability in Hong Kong
Source:
http://www.macrobusiness.com.au/wp-content/uploads/2014/04/Afford2.gif

## 5. Conclusions

There are a number of lessons that we can learn as the Government wants to urbanise rural Hong Kong. The most obvious one is the limitation of top-down technically oriented urban planning that ignores the lived experiences of people who inhabit real places over time. It is surprisi how the various generations of the conceived NDA plans turned a blind eye to the multi-generation squatter-farmers, simply because they do not own the land that they and their family members have tilled for decades. This is the situation that Lefebvre has severely criticised that the representation of space aims to endow every piece of land with exchange value while destroying long-term relationships that have been built through time. To the planners, the history, culture and heritage in place are not important. Indeed not even one planning document focuses on the people and the communities that will be affected by the plan. Fortunately, unlike the silent space users in the past, some of the squatter-farmers, together with social activists, have become much more vocal in defending their spatial interests. If not because of all the protests and social activist movements speaking for the interests of the farmers, the squatter-farmers might be invisible throughout the planning exercise. However, this does not mean that spatial justice is done. Instead of ignoring them in the planning process, planners have tried to rezone some land for their continued farming practice. Yet, land use zoning without proper policies and assistance mean very little for farmers to re-establish their trade. In other words, their struggle to spatial justice and the right to farm (difference) still have a long way to go.

While the invisible squatter-farmers have tried to make themselves visible and their voices noticeable throughout the planning process, the other powerful stakeholder has kept a very low profile as an invisible hand to wait for profit-maximisation opportunities. Buying up land, out farmers and perhaps even negotiation with the Government behind closed doors, the developers and their aides have led to the disintegration of the farming communities in places such as Fanling North. They have eventually also succeeded in reversing the Government s decisio conventional new town development approach and allow them to apply for land exchange and participate directly in the development process. For a market economy, one cannot blame the shrewd developers to buy up rural land in anticipation of urban development. The question is for the Government of Hong Kong to have a more comprehensive development strategy in rural Hong Kong, the New Territories. While the ownership of the land may belong to the indigenous population, land, as a natural resource, should be considered as our society s natural commons. As we are in the 21st century facing many global challenges, it is no longer adequate for us to pursue economic development without considering social and environmental sustainability. How can we replan our New Territories, our new development areas as our future commons is a very important issue to be considered. Hence the current approach by the Government is considered to be not desirable. Indeed, the Government should at least start to consider involving the indigenous population themselves to co-develop the land, rather than always involving developers as a third party.

Hence, we can conclude that the NDA plans have not done full justice to the farmers nor those who have real housing needs because if not for the protests, objections and voluminous comments made by the squatter-farmers, social activists and the general public (over 10,000 comments were received by the planners when the NDA plan was turned in to a draft statutory plan), the needs of the squatter-farmers would not be recognised, the land would be used primarily for private housing and the number of public housing units will be a lot less than the current one (the difference amounts to 13,685 units). The unfolding of the planning process, the hoarding of land by the developers and the Government s apparent U-turn to facilitate their privileged participation in developing the NDAs all seem to prove that the NDA plans are just smokescreens to turn use-value saturated land into spaces for exchange value. If this is not the intended purposes of the Government, then it has a very important task to do in the future to exonerate itself from being seen as a state that perpetuates land hegemony in Hong Kong.

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# HOW TO PUT ENVIRONMENTAL INJUSTICE ON THE PLANNER S RADICAL AGENDA. LEARNING FROM THE LAND OF FIRES ITALY

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Keywords: Land of Fires, Environmental Justice, socio-ecological resilience

Known from ancient Rome as Campania Felix due to the fertility of its lands, the between the Provinces of Napoli and Caserta southern Italy has been lately national and international mass-media as Land of Fires. The phenomenon of fires iceberg that lies on illicit waste trade by the organized crime. Depicted as a b the consequences on human health and local economy, the case of the Land of Fire incapability of authorities in charge to cope with the new urban question that pose.
If we look at the Land of Fires as an unbalanced ecosystem in the face of socio- connected to the metabolism of waste, the insurgency of movements fighting for t the environmental damages sounds as a fair reaction to the lack of regulation.
Among activism, street science and creative ways to defend the right to health behaving as Environmental Justice Organizations by using the mix of struggles, w discourse of dissent that are usually associated to the marginalized communities
After analysing the kind of injustices local communities are living, the paper i looking at socio-ecological resilience of the Land of Fires in a radical plannin a strategy to help the urban region to bounce back.

## 1. Introduction

In present-day Italy, at the intersection of space and society, fueled by the cu financial crisis, unprecedented forms of conflict and cohabitation are emerging, the rise of a new urban question (Castells, 1972). The change in the relations labor, in the passage from known systems of production to uncertain scenarios, r questions about the demand for fairness in environmental management, calling upo address the social inequities it produces (Secchi, 2011, 2013). In the shift fro (Lefebvre, 1968) to the right to urban environments (Kaika & Swyngedouw, 2011) institutions are visibly hard put to adequately deal with the issues at hand bec regard are still too sectorial, and often merely symbolic.
Because of the universal values that the multiple demands for a healthy environm these new urban issues are at once tragically local, as regards damages, and rad ethical implications. Demands for public health and safety are arising ever more one hand, they influence the perceptions and behaviors of stakeholders living ne on the other they migrate across the web into the radical agendas of national, i mobilization.
According to the described trend, analysts and students of Political Ecology emp forms of elitist environmentalism promoting a cult of wilderness are gradually b the south of the world to the heart of a Europe debilitated by the crisis by t environmentalism of the poor (Martinez-Alier, 2002)[1], a phenomenon, due to an increasing awareness of the connections between nature[2], and human beings, the intersection of

[1] For further discussion, in the light of the classification of environmentalist approaches propose Guha, I refer the reader to Armiero (2014).
[2] The spread of the forms of marginal environmentalism can be assessed by consulting the vast databa environmental conflicts produced by the EJOLT Project – Mapping Environmental Justice and Spaces o

everyday work, health issues and dynamics triggered by the[3] effects of climate ch
To highlight the mechanisms whereby environmental dilemmas threaten the frail eq
metabolisms[4], shaping collective perceptions and imaginations through the aporiae of
lands and lives (Lynch, 1990), the case of the poisoning of Campania Felix was d
produced the ecological and social disaster of what is known as the Land of Fir
In a country like Italy, always struggling at the brink between legality and ill
safeguard of values, the cynicism of markets and the populism of leaderships, th
images of Campania Felix and stigmas against the Land of Fires can be assumed as
more general disruption of space and society and, hence, as a metaphor of the St
fight criminal entrepreneurialism, arbitrate in matters of public health and soc
generally, to deal with environmental justice issues.
Called Campania Felix[5] by the ancient Romans because of the fertility of its lands, su
known as Terra di Lavoro (the Land of Work) for the intense and fruitful farming
supported until the mid-twentieth century, the urban region between the province
Caserta has gained, from 2003 to the present day, the nickname of Terra dei Fuoc
due to the ill behavior of burning waste illicitly dumped in the countryside and
extending between patches of urban sprawl (Yardley, 2014).
This libelous designation, propagated by an unprecedented media campaign, has be
an indelible stigma which, after seriously damaging the Campanian agro-food sect
the area and undermining the local population s trust of public institutions.
Discordant voices affirm or deny, on the basis of the scarce available data, the
relationship between the dumping of toxic waste and the compromising of public h
are echoed by fragile, powerless attempts by the State and the local institution
degenerations.
Downstream from an overview of the facts that reconstructs its background, the t
Fires raises the question of the nature and timing of possible strategies to tac
problem, which appears unsolvable, at least until we shed light and this is ce
long time on the combinations of factors that have led to such a major disaste
At any rate, there are open wounds that need to be healed, by addressing, at lea
the injustices suffered by local communities. We need to think of a strategy to
cures over time, taking account of the answers to be provided in the immediate f
While the assessment of the ecological damage will inevitably take a long time
carry out judicial investigations, technical and scientific measurement of the p
of reparations the first thing to be done to halt the dissolution of Campania
Fires is to invest in the sociocultural components of the local ecosystem.
The narrations, images, rhetoric and symbols channeled by the media are disseminating c
uncertainties that are as harmful as the contamination itself. The first priorit
motion processes of communication, interaction and debate to break the spell of
stigma[6].

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www. ejatlas.org).

[3] The part of Europe that is investing in the Green Economy has also realized, as Secchi has often
that the ruinous effects of climate change will mainly concern fragile and marginal populations.

[4] Other Italian environmental conflicts that are equally significant, due to the complexity of the
involve, are the case of the digging of the tunnel for the high-speed railway (TAV) in Val di Susa, ar
environmental damage caused by the former Ilva ironworks in Taranto.

[5] In Roman times, the expression originally designated ancient Capua (present-day Santa Maria Capua
surroundings, and was later extended southward to include the Phlegraean Fields and the Vesuvian a

[6] To understand the origin of the designation Land of Fires, we have to retrace the history of th
Campania, which went through the following stages: first, between 2000 to 2006, the Domizio-Agro Aversano
Province of Caserta, was singled out by the Ministry of Environment as a Site of National Interest
degradation (perimeter: 77 town administrations). In 2013 The Land of Fires was the object of a P

In the destruens stage the web of dynamics which, by interacting with the sregu[7] of the urban region in question, have eventually led to its branding as Land of Fires will construens stage, instead, the forms of community resilience that could provide reterritorialization of Campania Felix will be emphasized.
In the conclusions the paper suggests some preliminary actions a planner could t together with the collectivity, to the new demands for environmental justice.

## 2. The key facts

The Land of Fires phenomenon is the tip of an iceberg which Legambiente[8] in the 1990s labeled ecomafia. According to the results of over twenty judicial investigations, the province of Caserta during the 1980s. It was the result, on the one hand, of the entrepreneurialism which today has spread throughout the country thriving on special waste, on the other, of the failure of the strategies whereby public institu since 1994, to manage the treatment and disposal of urban solid waste through th authoritarian regime that took the name of Commissariato per l emergenza rifiut (Commissariat for the Waste Emergency in Campania) (Iacuelli, 2008; Corona & For 2013). In spite of its local origins, the illegal traffic of waste particularl over time, a web of connections with the metabolism of the whole Italian penin
The waste emergency, which endured from 1994 to 2009, was addressed by setting u organization which not only failed to deal with the technical problem still uns had a further negative effect, namely, that of fueling the resentment of local p them from decisional processes.
This exclusion, while it failed its intent of preventing criminal infiltration, participation of the uncorrupted part of the population. The people remained tra militarization of their area by the national government and the spread of crimin engaged in the illegal quarrying of building materials, which later proved extre their quarries as unauthorized waste dumps.
The combined effect of governmental inability to manage the area, collusions bet professional world, and organized crime, and the worsening of the global financi Campania Felix became a dump of toxic waste for North, Central and South Italian for low-cost illegal solutions for their waste problems (Ausiello & Del Gaudio, Trocchia, 2010).
The imposition of an authoritarian decisional regime set off a long period of co communities and state authorities. These conflicts went through several forms an peaking in 2007 and 2008, they have left behind a situation of permanent tension
In parallel with the conflicts, and in a way as an unexpected side-effect of the network of associations and movements has arisen in the course of time. This net

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rule of law signed by 57 town administrations (33 in the Province of Naples, 24 in the Province of Caserta). This incohere group of areas (about 1076 Kmq) with a population of over 3,000,000 is what, up to present, ha designated as Land of Fires. Depending on contingent events, its limits oscillate following the media campaigns or symbolic policies by local or national authorities. Finally, by effect of Act 6/2/2014, originally iss manage the Land of Fire emergency, 31 more townships (22 in the province of Naples and 9 in that among the agricultural areas whose state of health needed to be assessed. Now including 88 towns, the pe of the Fires eventually ended up becoming connoted in the media as a vast Non-Place.

[7] The term is used here to translate the Italian sregolazione, a neologism introduced by the sociol to describe the degenerative effects that a lack of governmental control and inadequate rules and opinion, on the Italian landscape and society, generating forms of exploitation and abuse that oft private interests and illicit businesses.

[8] This is the most deeply-rooted and popular Italian environmental association, which has a nationa network of local circles.

heterogeneous and hard-to-interpret social capital (Petrillo, 2009), about which unless to portray it, too simplistically, as an ally of the Camorra. This oversi often used by state institutions to defend themselves from the attacks of a real more complex and multifaceted although its infiltration by Camorra groups inte conflicts cannot be ruled out (Iacuelli, 2008). This is one of the many lies, pr that have contributed to casting mud on the uncorrupted and participative part o Twenty years of conflicts, as the environmental historian Marco Armiero argues, vain. A significant part of these groups have developed new knowledge, competenc strategies (Armiero 2008; 2014c; Armiero & D Alisa 2012; D Alisa et al., 2010). Leaving the complex deconstruction of the crimes of the ecomafia to scholars in reassessing the object of our study in the light of this unexpected side-effect. In 2012, in Caivano, a town in the northern hinterland of Naples, the Coordiname was formed, by initiative of Don Maurizio Patriciello and with the support of hi and disowned population combined a grim cocktail of poverty, ignorance and crimi intelligence and competence in the management of their land.

At the peak of the rebellion – i.e., during the great demonstration called Ragi paraded in the streets of Naples on 16 November 2013 against the ravaging of Cam Coordinamento gathered almost a hundred movements and associations, which, in sp backgrounds and histories, felt the need to form a cartel, choosing Don Maurizio collectivity.

Many lay associations, even including some historically left-wing ones, found a platform in Patriciello s cry of grief for the wave of cancer and illness which, had struck the affected area.

Biocidio, the murdering of life" a neologism coined by a Neapolitan activist, epidemologists investigating the presumed weakening of the DNA of Land of Fires have been living in contact with toxic waste[9] (Cicatiello & Giordano, 2015) has become a catc in the common struggle undertaken by part of the local movements and association coming from distant cultures, such as Catholicism and Marxism. It is indeed a po evoking both the ravaging of the harmony of creation and the aberrant effects of capitalism (De Rosa, 2014).

In the course of time the process of slow violence (Nixon, 2011) inflicted on Caserta and Naples has heaped a heavy load of injustice and sorrow on common peo undermining the lifestyles of the communities involved and their relationship wi Fortunately, the mechanisms of local control and defense activated by local subj the nature of the disaster and react against it have been determining a social a significant part of the community (Armiero, 2014b).

## 3. The infrastructure, concealment, and stigmatization of waste

Struggles such as that of Warren County in North Carolina at the end of the 1970 the rise of environmental justice movements reacting against the contamination o enclaves, were triggered by political decisions based on the path of least resi activities with noxious effects on human health were located next to areas inhab were discriminated by race or class.

Leaving aside racial factors, which play a minor role in Italian society, simila

[9] The controversial sources about the oncological and degenerative illnesses allegedly proliferatin been made public especially by the doctors and pediatricians of the ISDE association of Naples and have been engaged in the dissemination of epidemiological studies commissioned by public institutions super-national research institutes. On the basis on the scarce available data, the most viable int Campania s morbidity rate is comparable to that of other Italian metropolitan areas, its mortality

to have inspired the decisions that led to the processes of abandonment, decline
things, lands and lives, the dark side of change (Lynch, 1990), bringing on th
disaster.[10]
Although the Land of Fires is an extreme case of marginalization, its story invi
permeability of forms of environmental injustice, which, by penetrating in the i
peninsula, could place the national metabolism at risk through the absorption
socio-ecological sregulation in other marginal areas.
The fabric of the waste-disposal infrastructure dotting the stretches of land be
towns offers services that, while less noble than those traditionally provided
themselves, are certainly no less indispensable for the vital balance of urban e
schools, parks and theaters, they house incinerators, landfills, waste-recycling
processing plants, etc. Along with former industrial areas awaiting reclamation,[11] the future
spatial ordering of Italian urban regions will depend on the organization of the
In Campania, public institutions inadequate regulation of waste treatment and d
followed by a concatenation of forms of criminality, poverty, and fragility of t
acting as a driver for improper land use. It is hardly surprising that the resul
mechanism that favored the concealing of waste or its stocking in open spaces, i
industrial, commercial, or, in any case, non-residential areas.[12]
Acting as an amplifier, media stigmatization has also played a role in the deter
land maintenance and control forms, triggering a proliferation of forms of unfai
social actors that has caused further deterritorialization.[13]
Not only in the case at hand, but also in other cases stigmas seem to be so powe
influence the decisions of institutional actors and bring further damage, creati[14]

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[10] The 2001 and 2011 Istat censuses have reported one of the highest unemployment in Italy in the u
Caserta and Naples, along with widespread poverty and low schooling. We are thus dealing with a ma
of both social class and income. As to the historical rooting of contamination processes with harm
in the area, least resistance considerations clearly apply here. To give an idea of the seriousn
cite the example of the town of Giugliano. Here a paradoxical situation has occurred, depending on
hand, a disproportionate quantity of still undisposed-of solid urban waste legally stocked on the
commissarial management of waste disposal, on the other, 10 million tons of prevalently special wa
disposed of and buried by the Camorra over the last 23 years (Legambiente, 2015).

[11] Between 2006 and 2012, by effect of Act 3/4/2006 n. 152, 57 Sites of National Interest (Siti di
were singled out for restoration. 18 of these were subsequently declassed to Sites of Regional Int
Regionale, SIR). The restoration of SINs falls to the Ministry of Environment, that of SIRs to the
and complexity of the administrative procedures involved, very little has been done to date to res

[12] For example, the landscape plan of the Province of Caserta approved in 2013 documents and maps f
land, described and measured as follows: critical urban areas (1617 ha), critical infrastructure
space areas (1502 ha), quarries (1345 ha), areas with accumulations of waste (153 ha), Chap. 9. Re
accompagnamento al PTCP, Il territorio dell illegalit , pp. 222-233 (ftp:// ftp. Provincia.caser
Apart from spaces and surfaces where polluting waste and other dangerous materials are illegally stored a
temporarily or persistently, in the Land of Fires there are different patterns of waste and wasted
stretches of agricultural land housing illegal dumps; porticoes of abandoned mass; private homes
national (Sni) or regional interest (Sri); housing or productive facilities confiscated by the sta
partially condoned unauthorized buildings that, being unregistered by the tax authorities, are class
buildings abandoned or soon to be abandoned shopping malls; urban waste treatment, disposal and recy
surfaces, areas and infrastructures designed to host marginal lives.

[13] As regards forms of unfair competition exploiting the Land of Fires stigma, we have been observi
effectiveness of forms of media discredit which are capable of ousting from the market whole categ
agro-food sector. This phenomenon has sparked a media war against the products of Campania, inaugu
low-cost marketing strategy that consists of discrediting the products of competitors rather than
Palestino, 2014).

[14] The ways in which national institutions are reacting to socio-environmental sregulation by pron
symbolic policies are currently being investigated by a research project funded by the national Ministr
Research, in the frame of the PRIN program Post-metropolitan territories as emergent forms of urb
sustainability, habitability and governance (coordinator professor A. Balducci).

It is hence possible to deconstruct the tangle of narrations produced and circula
the last few years, highlighting how, from 2012 to the present day, issues of he
security are being addressed by discourses which – depending on their targets –
scientific, legal, economic and market, populist rhetorics, taking a more or les
one of outright struggle against institutional planning models. Narrations and i
manipulated public opinion,[15] destabilized decisional processes, and even influenced inst
policies.
Each of these discourses often contains a part of truth, but none contains all th
their degree of truthfulness is not measurable, because there are no data, the a
insufficient for complex diagnoses, or the data are scattered among actors who a
them.
In the battle between hidden interests and collective values, the only opportuni
back appears to lie in the social dimension of community resilience, which provi
chance to convey images, however fragile, of a recovery of the area.

## 4. Ecological metaphors as a lever for new local geographies

As complex and adaptive socio-ecological systems, towns, cities and urban re
fundamental characteristics. The first is that, like natural ecosystems, of
artificial outgrowth (Whiston Spirn, 1984), they are endowed with resilience,
a system to absorb disturbance and reorganize while undergoing change so as to s
the same function, structure and feedbacks, and therefore identity (Folke et al., 2010, p. 20). The
second characteristic, consequent on the first, is that they feed on human actions,
abilities proper to communities, organizations and institutions, and convert
memories, emotions and competences into creative resources.
Within such a horizon of meanings, the ability of a local land system to maintai
build a new one, through synergies generated by investing on the local ecologica
organizational capital (Walker et al., 2004) can be reactivated starting from th
the genetic heritage of the system.
In this perspective, an analysis of the factors that have led to the deteriorati
opens a window on the new geographies of socio-ecological resilience that are fo
crossroads between the stigmatization of the area and the activation of organize
or informal reaction to this stigmatization.
The case study of the Land of Fires indicates that the viscosity of areas betwee
communities much more than cities themselves, which are increasingly relegated t
like romantic ruins. The explosion of fragments of cities like Naples, or towns
Afragola in their urban areas sets in motion new aggregation processes based on
sometimes temporary ones, that are as recognizable as those that once used to be
administrative boundaries, art-historical heritage, or natural features.
The urban region discussed here is made up of places inhabited by populations wh
and mobilize ever since the 1990s around issues of environmental justice raised
management of the Regional Plan for urban solid waste. Starting from an individu
private property, these movements have gradually become increasingly sensitive t
such as health, security, and democratic participation. From a Not in My Backy
Not in Anyone s Backyard one, these struggles and conflicts have reverberated
Acerra and Salerno areas, and to the northern suburbs of Naples. They have put t

[15] On the use of images as a strategy to manipulate and distort the public opinion, see the metapho
by Soja: ( ) a subtle form of social and spatial regulation ( ) that ( ) plays with the mind manip
consciuosness and popular images of city space and urban life to mantain order (Soja, 2000, p. 324

of aggregation, at once local and global, national and transnational, which are
apical powers and bottom-up movements (Castells, 2012).
Beyond a growing weakness of institutions, inversely proportional to the vitalit
entrepreneurs, colluded politicians and administrators, the outcome to emphasize
local communities which, in the transition from stakeholders to careholders, are
defend commons such as water, land, air and energy, or promote alternative ways
This situation highlights the demand for new profiles of local administration an
experiments in governance.
By regarding the Land of Fires as a complex mosaic of out-of-balance ecosystems,
apply the ecological metaphor of panarchy (Holling & Gunderson, 2002) to surveys
capturing new equilibria and alternative stable configurations. This means inter
of the Land of Fires as an opportunity to activate new life cycles, sharing the
which spatial orderings are based (Di Martino, 2013; Gasparrini, 2013).
In this perspective, once again, embedded forms of self-organized response and g
constitute the potential allowing the Land of Fires fragile ecosystems to bou
surviving antibodies to readapt.

## 5. For a co-evolutionary approach to the[16] Land of Fires

The Land of Fires has been the object of growing media manipulation of informati
disinformation. This phenomenon, compounded with the current economic and moral
helps to determine how to manage the area. If we look at the evolution of the ma
information and data, all the arguments put forward by politicians, technicians,
individual inhabitants appear, in one way or another, partially convincing (Merl
The media describe unspeakable and intractable situations, where everyone is in
everyone is right, in a paroxysm that pushes things beyond the edge of sustainab
possibility to make democratic decisions about the future.
Analysts especially oncologists, epidemiologists and agronomists are incredi
catastrophism and a wish to shed light on the situation and look[17] for some opportuniti
scholars in the latter camp are even being accused of negationism (Di Gennaro,
meantime, between 2013 and 2014, governments have sued national newspapers[18],
of transparent communication, entrusted the President of the Republic with merel
declarations and actions, promised effective solutions, and issued equally symbo
6/2/2014 to appease public opinion (Piccirillo, 2014).
At this point, we wonder what kind of planning is possible when environmental po
the attending conflicts) arise from an attempt to address the concatenation of d
environmental stress, capable of extending their deteriorative effects from the
sphere.

[16] In the last Aesop Conference, by introducing the Land of Fires as a paradigmatic case of plannin
that undertaking the environmental restoration of this area may require planners to accelerate the
evolution by interfacing with local society and cultures (see Palestino, 2014).
[17] As Laura Centemeri has effectively shown, these are cultural attitudes that are deeply rooted in
traced to ways of dealing with environmental controversies that have been to the fore ever since t
(Centemeri, 2005).
[18] In 2013, the weekly magazine L Espresso flashed the title Drink Naples and then Die (De Feo &
article reported, not without ambiguities, the results of test carried out by American investigato
forces stationed in the Naples area. The data mainly regarded the contamination of water in milita
Caserta, and only marginally the periphery of Naples and its surroundings. The title s artful forc
that Neapolitans were drinking polluted water caused a reaction by local authorities. The mayor of
decided to oppose the stigmatization campaign launched by the newspaper by suing it for libel.

When public health is threatened, as it is in Campania, it is the family and int
are at stake, and it is very difficult for institutions and the communities them
them. The reason for this difficulty is the irreducible, intrinsic incommensurab
connected to life (Boltansky &Thevenot, 2006).
Even in a lay perspective, the situation requires us to take account of the soci
done to local populations, in the awareness that it is the authorities task to
to immaterial values into the public arena.
A way, albeit an indirect one, to begin to construct forms of interaction and de
communities could be, for example, to combine the planning of new spatial orderi
disposal infrastructure with appropriate processes of democratic deliberation. T
39 Sites of National Interest is on the agenda of our Ministry of the Environmen
governments are to restore the 17 Sites of Regional Interest. This action, if un
strategic surplus value, because it would allow the testing of forms of socio-cu
through the active participation of local communities.
Implementing restoration projects within the dimension of participation in decis
least, beginning to offer those who have suffered the illness or death of loved
who have grown in the shadow of conflicts, the opportunity to participate in the
that has been their home for generations (Centemeri, 2015).
It is clear that this is very difficult to achieve, and even a scary perspective
we cannot always look for easy solutions, at least not for wicked problems such a
here (Kaika & Swyngendouw, 2011).

## 6. Resilience as a radical agenda

We are faced with the paradox that the government commissioner has declared a re
Giugliano area impossible (Ausiello & Treccagnoli, 2013). Judicial investigators
are warning against the risk of Camorra infiltrations in the land restoration bu
local producers in the agro-alimentary sector are staging protests (Sardo, 2013;
The population is, understandably, reacting emotionally (Limatola 2013). Politic
exploiting the media stage of the Land of Fires to construct unprecedented forms
leadership. The national government is undecided, and has repeatedly gone back o
without explanation. In the face of all this, what is the sense of appealing to
recovery?
The case study discussed here shows that, in the passage from the natural world
when using the concept of resilience we needs to take into account issues of equ
Herein lies the centrality of planning and, accordingly, the need to define the
In my opinion, the social dimension of resilience reveals how urgent it is to de
strategies to combine technically relevant arguments and knowledge with testimon
know how sedimented in local material culture, promoting cultures and narrations
collective sense of collaborative planning (Healey, 2007).
Increasing and making the most of the knowledge and desiderata (the software )
communities helps to interact with the peculiarities that individual contexts co
professional with, in terms of hardware as well as software. The daily scena
Fires is one of conflicts and covert particular interests, structural shortcomin
in managing economic resources, opacity and fragmentation of available data, gap
knowledge, and widespread manipulation. For the demand for regeneration to gathe
seeking leverage in a direct participation of social actors, based on an interpr
ecological resilience as a radical agenda (Shaw, 2012), may be decisive.
This hypothesis finds confirmation in the fact that, zooming in with the lens of
forms of resistance in the Land of Fires, we discover that the scholars in the ca

activists have pointed out, in some detail, the emerging of increasingly sophist
organization of environmental movements (Armiero, 2014a, 2008 cit.; Armiero & D
combining activism, street science (Corburn, 05), and creative ways of defendir
(De Rosa, 2014), social movements from the Campania Region are behaving as envir
organizations (Martinez-Alier et al., 2014). They are doing so by providing thei
the combination of struggle, ways of learning and discourse of dissent that lite
Environmentalism of the Poor (Martinez-Alier, 2002) usually associates with ma
communities inside or outside the globalized West.
These organizations have managed to keep together the cries of the Mamme vulcani
a country parson (Patriciello 2013), and the creativity of networks that have be
expertise. Their Nimby approach of the 1990s has given way to advanced knowledge
and innovative abilities (Armiero, 2014b). They are no longer merely struggling;
striving to take care of the places they are fighting for (De Rosa, 2014).

## 7. Conclusions

In addressing the catastrophe of the Land of Fires, we need to take account of t
the process of socioecological deterioration that has been going on in the area
and carefully time our reaction.
This paper emphasizes that the first lever for the recovery of the area is the a
uncorrupted components of local communities. In the short term, a first goal sho
of community resilience, i.e., the promotion of a local planning which, however
should be regarded as a resource for the recovery of this violated land.
In this regard, one of the priorities is to restore the image of the area to bre
its stigmatization. We need to counter the deterritorialization of the urban are
Caserta by granting recognition to, and reinforcing, the forms of active resista
actors oppose the libelous equation Campania Felix=Land of Fires in informal, se
quasi-structured ways.
This resistance, staged by temporary communities that aggregate to denounce, pro
their land, should be guided through a detailed assessment of competences and ab
rich and diversified offers of local forms of bottom-up reaction. This means res
of narrations and images of Campania Felix coming from the communities themselve
Interacting with communities during phases of significant change, in order to i
perspective in a radical urban planning agenda (Shaw, 2012), calls for investmer
actors in a system to influence resilience (Walker et al., 2004, p. 5), so as
a framework for policy and practice (Shaw, 2012, p. 308).
Such a context would necessarily require the planner to adopt a stance which,
tradition of Advocacy Planning in the light of the case at hand, it would be ap
Advocacy. I am referring to a cultural and political approach not far remove
present circumstances from the one adopted during the period of the so-ca
Clinics set up by American universities. In this case, however, since current
defense of the fragile equilibrium between the land and the human resources tha
preferable to replace the adjective architectural with the adjective socio-ec
In substance, what we need is experimental laboratories, Socio-ecological Clini
teams of planners and University students could exercise a leading ethical funct
dealing with the questions that socio-ecological resilience poses to society thr
justice and ethics. In collecting stories that challenge dominant narratives we
advocate the role of enabling community dialogs and communicate collective image
shared futures, many of which are not yet visible in dominant representations of
regions.

Of course, this would be only a first important step in a broader rehabilitation actors working at different speeds. I think that a third actor could take this f necessarily issue either from governmental institutions or from the damaged comm reason why although as Kaika and Swyngedouw argue: « intellectual engagement wit environmental justice struggles remain limited » (2011, p. 100), I propose unive

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# HIGH-SPEED RAIL IMPACTS ON SHANGHAI S URBAN FRINGE COMMUNITIES: AN INTEGRATED APPRAISAL FROM SOCIAL SUSTAINABILITY AND ENVIRONMENTAL JUSTICE PERSPECTIVES

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## 1 Introduction

High-speed rail (HSR), the advanced rail system normally operates at a speed of new tracks or 200km/hour on conventional tracks, is advocated as an effective tr with dwindling energy supplies, severe air pollution, and increasing traffic con of this transit system includes: increasing traffic efficiency; improving spatia logistics connections; promoting regional equity and economic coordination; and alternative to air transportation in regions where geography allows competitive railway (GutiØrrez, J. 2001 Givoni, 2006; Albalate and Bel, 2012). For China, H essential considering the country s massive population that needs efficient trav regions demanding for equal connection, and the state goal of city-region integr by rail upgrade (Takagi, 2011).

On July 1st, 2004, China s Ministry of Railway developed a Middle- and Long-term Plan and announced investment targets through 2020 (Fridley, Zheng, and Aden, 20 components include:

- Total operational railway track of 120,000 km with a 50% share of rail elect double-tracking;
- 12,000 km of dedicated high-speed passenger railway tracks with speeds of 20 above;
- Four north-south and four east-west high-speed passenger rail networks to li hubs; and
- Three regional intercity rail networks.

China s interest in HSR construction is rooted in the desire to improve the connection and economic productivity. Although there are sound economic incent development, given its very recent implementation and controversial impacts, fur the quality and problems with HSR development should be undertaken. Different fr lens of spatial-economic impacts and accessibility analysis (Kim, 2000; Chen Chen, 2012; Chen, 2013; Jiao et al., 2014; Shaw et al., 2014), this study sheds perspectives of HSR impacts at a local community territorial scale by inves excluded, marginalized, and disadvantaged groups of population (i.e. farmers, el who live with HSR s daily operation in Shanghai s urban fringe. The research un everyday life has been affected by the HSR projects, utilizing an integrated co linking social sustainability and environmental justice. Guided by this integra research will answer three major research questions: (1) What are the major communities in Shanghai s urban fringe? (2) Who are the main recipients of th and how has their every day life been affected? (3) What political institution procedure have led to the current situation?

The rest of the paper is organized as follows: first, a literature review of ar framework will be provided to lay the theoretical foundation for analysing HSR

and social impacts on surrounding neighbourhoods. The next section will introduc
area and present our research methodology. Then the research findings and ar
presented in three sub-themes: (1) the unfair distribution of environmental bur
inequity in compensation arrangements; (2) procedural concerns for environmenta
social inequity in relation to public consultation inadequacy and social exclusi
institution manifested by local pro-growth governance. Finally, a conclusion
research findings and offer policy implications.

## 2 An Integrated Conceptual Framework

Since the Brundtland Report of Our Common Future (WCED, 1987), there has been a
literature devoted to the general topic of sustainability. The 1992 Rio Decla
suggests that sustainable development keep the balance and achieve certain trad
pillars of sustainability, namely ecological, economic, and social sustainab
considerable academic and political attention has been paid to the discussio
development, social dimension of sustainability is the least conceptually exp
practically under-implemented among the three pillars (Littig and Grie ler, 200
Dillard, 2009; Cuthill, 2010). In addition, comparatively insufficient studies
theoretical connections and interplay among the three pillars of sustainable dev
Grie ler, 2005; Bostr m, 2012).

Just sustainability proposed by Agyeman and his colleagues (Agyeman, Bullard,
2002 and 2003; Agyeman and Evans, T., 2003; Agyeman and Evans, B., 2004) con
further exploring the social dimension of sustainability and advocates an int
framework that link environmental analysis with anthropocentric concepts. They
recent years, environmental justice campaigns globally are being reformulate
sustainability, and vice versa (Agyeman and Evans, B., 2004, pp.160). Para
egalitarian conception of sustainability (1999), their definition of just sustai
common ground between human rights and environmental issues and highlights fo
concerns on: quality of life, present and future generations, justice and
allocation, and living within ecological limits (Agyeman, Bullard, and Evans, B.

Based on the just sustainability discourse, we aim to structure an integrated co
connecting social sustainability and environmental justice in assessing HSR in
communities. There exists an area of theoretical and practical compatibility bet
an integrated conceptual framework can provide a more inclusive approach to as
changing built-environment affects people s daily life.

### 2.1 Conceptual Origins and Definitions

Social sustainability is an open and contested concept (Bostr m, 2012) that a
develop schemes to define it. Based on an experimental research in Australia
identified an interdependent and self-reinforcing relationship between four k
social sustainability: (1) social capital that provides a theoretical start
infrastructure that provides an operational perspective; (3) social justice and
ethical imperative; and (4) engaged governance that provides a methodology
together . Littig and Grie ler (2005) extended the fairly vague notion of needs
report to a linkage of political pragmatism and social theory. According to the
sustainability is about a quality of societies , and it signifies the nature
mediated by work, as well as by relationships within the society (p.72).

Similar to social sustainability, environmental justice has multiple definitions
Environmental Protection Agency (2008), Environmental justice is the fair
meaningful involvement of all people regardless of race, colour, national orig

respect to the development, implementation, and enforcement of environmental la
and policies . Bryant (1995, p.6) referred to environmental justice as the cul
rules, regulations, behaviours, policies and decisions to support sustainable
people can interact with confidence that their environment is safe, nurturing
Looking beyond time and space, Stephens et al. (2001) maintained that to guarant
justice is to ensure a healthy environment for future generations and to ensure
one region will not cause negative externalities for other people s health. Fo
the responsibility of carrying on this value requires us to transcend individu
vision (Beckerman and Pasek, 2001; Beckman and Page, 2008).

## 2.2 Conceptual Common Ground

Among the definitions provided by governmental officials, grassroots associatio
scholarships, we can find common ground between social sustainability and enviro
The overlaps indicate an opportunity for incorporating the two concepts in acces
on local communities.

Anthropocentric Perspectives: both social sustainability and environmental jus
anthropocentric perspective. Until recently, eco-centric models have dominated
sustainable development and environmental issues. Heavily influenced by e
movements, these models highlight the negative impacts of human interventio
environment and emphasize the need for more efficient use of resources. The ad
centric models reflects people s anxieties about environmental collapse, limite
and threats to biodiversity. In contrast to an eco-centric model, an anthropoce
more on impacts of natural or built environments on human beings. Caring for h
relationships, life quality issues, as well as environmental impacts on huma
sustainability analysis often takes an anthropocentric perspective (Littig and G
Lloyd-Jones, and Allen, 2010). Different from ecological justice, environmental
mainly focus on the justice concerns of people, regardless of their social, e
background (Low and Gleeson, 1998; Agyeman and Evans, T., 2003; Schlosberg, 2007

Substantive and Procedural Characteristics: Both social sustainability and e
justice concepts include substantive (what) (i.e., equal right, justice, and
procedural (how) (i.e., meaningful involvement, social inclusion; citizen
characteristics. Bell (2004) held that environmental justice has both procedur
components. A substantive component of environmental justice underscores a fair
sharing of environmental burdens (e.g. harm and risk) and benefits (e.g. resourc
To achieve that, three questions need to be answered: (1) Who are the recipients
distributed? and (3) What is the principle of distribution? Procedural perspecti
justice includes the pursuit of justice for all people regardless of their back
meaningful involvement of these people in decision-making process (U.S. En
Protection Agency, 1998; Bell, 2004; Schlosberg, 2004). As a concept with pri
social equity, as well as equal access to resources, participation and soc
sustainability has both substantive and procedural characteristics. (Manzi, Lloy
2010). A critical aspect of social sustainability is social justice and equity
This substantive perspective provides an ethical foundation when formulating so
policy or strategy, and when implementing operational initiatives (Cuthill, 201
substantive characteristic of social sustainability cannot be guaranteed without
enforcement. Additionally, Bostr m (2012) pointed out how procedural aspect
sustainability affect its substantive aspects ought to be pondered through a lon
which is also true for environmental justice.

Two Inter-related Political Dimensions: The major actors involved in the two co
both perceived in two inter-related political dimensions (Littig and Grie ler,
Jones, and Allen, 2010; Bostr m, 2012). On the activist level, individuals a

capitalize on social sustainability and environmental justice to pursue politic
mobilization, and rightful resistance. On the government level, these concepts a
policy guidelines to ensure that no public action would disproportionately
specific social group (Agyeman and Evans, B., 2004). Social sustainability is
tackle the relationships between individual actions and the created environment
between individual life-chances and institutional structures (Jarvis et a
Environmental justice exists along with intense interaction between political au
root forces.

## 2.3 Conceptual Significances for the Chinese Context

In recent years, the Chinese leadership has made sustainable development an impo
recent Five Year Plans. The central governments strong promotion of sustainab
policies and environmental protection is buttressed by a renewed public
consciousness, a newly formed domestic environmental civil society, and ar
international aid (Lam, 2006, pp. 362). Witnessing frequent natural disasters a
outcomes, Chinese are increasingly concerned about the environmental conditions
places. However, concepts such as environmental justice and social sustainabili
ordinary Chinese people, and grass-roots social mobilization has not included
their campaigns.

In China s planning system, economic growth enjoys priority. The concerns for s
justice have not been explicitly raised and addressed in planning implementatio
makers believe that sustainability and justice could be achieved later (Wu,
pointed out that Chinese scholars have been conspicuously absent in addressing
of social and environmental justice. For example, the existing discussions o
impacts in China mainly focus on the spatial and economic aspects. Few of them
the scope to include work that critically analyses social and environmental in
surrounding neighbourhoods and further explores how the growth-centred in
construction has affected the socially excluded, marginalized, and disadvanta
integrated conceptual framework that connects social sustainability and enviro
imperative for assessing China s growth-oriented urban transition driven by
projects such as high-speed rails.

In Shanghai s particular social, economic, and political context, the empirica
examine the applicability and power of integrating social sustainability and en
in analysing HSR impacts on nearby neighbourhoods. In particular, it examines
socially excluded, marginalized, and disadvantaged who live with HSR s daily
Shanghai s urban fringe.

## 3 Case Study and Methodology

Informed by an integrated conceptual framework of social sustainability and envi
employ a case study in Shanghai s urban fringe. The reason we focus on urban
because this particular geographical setting is the most contentious location
where competition for land has been intensified and social conflicts have fre
2009; Hsing, 2010). In urban fringe, low land acquisition compensation rates ar
scale infrastructure development (Dai et. al., 2013). In the case of Shanghai,
HSR stations are located in central city and two of them are sited in the city
(Figure 1).

The case study fieldwork was conducted from June to August in 2012 in two v
Shanghai-Hangzhou HSR line. The data collection method included participant obse
surveys, and in-depth interviews. As residents perception of HSR might vary
socioeconomic circumstances, we chose two villages for comparison. With about 8

in an area of 2.88 square kilometres, Xuejia Village is located in Songjian
undergoes the fastest economic development among all the suburban districts i
2013). The majority of young people have left the village for better job opport
centres, and the remaining elders take care of their household plots. During th
industrial parks have been developed near the village, attracting an influx of
rent rooms from the villagers. The other case study site Weixing Village
approximately 600 households in an area of 3.27 square kilometres. Almost all
local residents with rural household registration status (hukou) (Jinshan Arc
village shares some similarities with Xuejia Village such as the out-migration c
However, the economic development of Weixing village is slower than that of X
Jinshan district, where Weixing Village belongs to, is one of the three district
subway connection. The Weixing villagers think their village might be the poores

The structured questionnaires were completed through face-to-face interviews. Th
were designed to identify what social groups form the recipients of the HSR s environ
social impacts. The surveyed households were asked to provide each family member
education attainment, household registration status (hukou), residency time,
monthly household income. This was followed by more detailed household intervie
village members perceptions of and reactions to the HSR operation from the pers
sustainability and environmental justice. In total, we collected 30 valid qu
which 10 local households were from Weixing Village, 10 local households from X
and 10 migrant households from Xuejia Village. The selected households are locat
areas closest to the rail tracks, with the assumption that the closer the resi
tracks, the more visible and remarkable the HSR s perceived impacts might be.

Figure 1. Research Sites in Shanghai s Southwest Urban Fringe (Source: Authors

# 4 Findings and Analyses

## 4.1 The unfair distribution of environmental burdens and the social inequ arrangements

We found the co-existence of the unfair distribution of environmental burdens a in compensation arrangements after the HSR construction. This is certainly not s rapid urbanization always prioritizes economic pursuit, compromising its social influences (Ma, 2007; Wu, 2015). The Shanghai–Hangzhou HSR service runs 177 tr (including 128 trains from Shanghai to Hangzhou and 49 trains from Hangzhou to the beginning of the HSR operation, residents in Xuejia and Weixing Villages h from various sources of disturbance including noise caused by passing trains, v electro-magnetic interference, flashing-headlight pollution, and increasing ai Among those negative externalities brought by the HSR, noise is the most sever dwellers. The sound waves produces a sound pressure level (SPL) that is gene decibel A-weighting (dBA). The rapid approaching of a high-speed train is accom increase in noise. Commonly, sounds of approaching vehicles carry a sense of co greater annoyance than receding sounds (US Federal Railroad Administration, 19 Japanese Ministry of Environment promulgated regulations to control HSR nois surrounding areas. Tested from the nearest residential areas, the maximum SPL o be no more than 70 dBA. In China, the relocation red line for HSR construction households whose residence units are within 30 meters from the rail centrel relocation to avoid severe noise disturbance. In our cases, the majority of hou lines still have to endure the noise because the distance of their housing unit over 30 meters. Table 1 is a sample of SPL results obtained in Xuejia Village meters from the rail centreline. When an HSR train is passing by without slowi over 80 dBA, which is not safe for human beings according to the Japanese standa

Table 1. Maximum HSR Sound Pressure Level at the Distance of 90 Meters

| Test # | Time | Type of Operation | Decibel (A-weighted, dBA) |
|---|---|---|---|
| 1 | 15:32 | Passing by | 83.1 |
| 2 | 15:35 | Passing by | 83.1 |
| 3 | 15:42 | Passing by | 83.7 |
| 4 | 15:49 | Passing by | 82.9 |
| 5 | 15:51 | Slowing down for Station | 65.8 |
| 6 | 15:55 | Slowing down for Station | 65.7 |
| 7 | 15:57 | Slowing down for Station | 68.0 |
| 8 | 15:59 | Slowing down for Station | 66.0 |

Source: Authors.

Two social groups shoulder the environmental burdens, especially the noise caus local elders and the young migrants. They both have limited social and economic difference between the two social groups is that the local elders have lived years while the average residency length for migrant household heads is about Without convenient transportation and adequate urban facilities, most local you and Xuejia Villages prefer to move to city centres. As the economic situation better than Weixing Village s (in terms of average monthly household income per the elder population situation is more remarkable in Xuejia Village. The other s from HSR disturbance is migrant workers and their families. Different from the l 70 per cent of the migrants are young or middle-aged adults. Many choose to live because rent is much cheaper than that in urban centres, landlords are friendly, industrial parks are close by.

Education levels of the surveyed adults over 18 years old are lower than those
Half of the local dwellers have only obtained primary education or even lo
interviewed migrants have obtained higher education such as a university degree
typically farmers and workers in nearby factories. Male migrants are usually
physically demanding or dangerous lines of work, most notably in construction. F
either in factory production lines or in service industry. The per capita month
urban residents in Shanghai is 3,349 yuan (around $536), and the per capita
income of rural residents in Shanghai is 1,450 yuan (around $232) in 2012 (S
Yearbook, 2013). The average of the surveyed households (rural in our cases)
abovementioned rate, which indicates that the recipients of environmental injus
sties comprise an economically marginalized social group.

Table 2. Demographics of Surveyed Households

| Socioeconomic Attributes / Household Type | Age Distribution (%) | | | | Education Attainment of Adults over 18 (%) | | | Residency Length Average for Household Head (Years) | | Average per capita Monthly Household Disposable Income (Yuan) |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0–20 | 21–40 | 41–60 | >60 | Primary & Below | Middle & High | University | | | |
| Local Households (Weixing Village) | 9.8 | 26.8 | 29.3 | 34.1 | 54.4 | 40.5 | 8.1 | 13 | 30.9 | 27 |
| Local Households (Xuejia Village) | 10.5 | 18.4 | 42.1 | 29.0 | 50.0 | 47.1 | 2.9 | 15 | 25.3 | 25 |
| Migrant Households (Xuejia Village) | 30.3 | 48.5 | 21.2 | 0 | 25.0 | 75.0 | 0 | 2 | 0 | 1170 |

Source: Authors.

Mohai, Pellow, and Roberts (2009) provided socio-political explanations for
environmental injustice in social or economically marginalized communities by ar
industry and government do not want to generate controversy or experience delay
plans, they try to avoid confronting communities with abundant resources. Poo
therefore, become a preferred target for environmental burdens. Lacking soci
political resources, village members are vulnerable to the current environmental

Besides the environmental burdens, affected residents also complained about th
compensation arrangements. China s Ministry of Railways sets 30 meters as t
compensation and relocation arrangements, which led to social inequity within t
For those who lived within the 30-meter areas, they were able to enjoy the benef
Xue used to believe that her family might never be able to move into an expan
central area of Songjiang district. Along with other relocated families, they
developed neighbourhood that is close to the Songjiang district centre. The
difference to the life of her family. Her daughter no longer needs to spend muc
between her company and home. She felt quite grateful to the HSR construction ar
life quality was truly improved.

However, the HSR compensation is unevenly distributed. Very few households were
Xue family. In the meantime, the compensation for agriculture land is much
residential properties. Some interviewees stated that the compensation for fam
was around $ 160 U.S. dollars per mu (1 mu is equivalent to 666.7 square meters
whose family agricultural plots were expropriated for HSR construction felt th
treated compared to their neighbours whose housing unites were expropriated. Mo
relocated and non-relocated, the current HSR seldom benefits the village m
preferential price policy. One of the major complaints from HSR users in China i
and beyond the affordability of a majority of passengers in the country (Chuang
The village members are reluctant to take the expansive train and actually ba
service.

The co-existence of social inequity and environmental injustice severely harms
within the communities. Village members can be divided into three camps: (1) th
compensated and relocated to nearby new towns or urban district centres; (2) those wh
the rail tracks and still suffer from the negative impacts of HSR without any
those who live farther away from the rail tracks and care much less about
illustrates how the change of built-environment, in the context of China s cu
urbanization, has resulted in unequal and unfair societal consequences.

## 4.2 Procedural concerns for environmental injustice and social inequity i consultation inadequacy and social exclusion

As discussed in the section 2.2, besides substantive meaning, both social
environmental justice concepts are closely related to procedural analyses. In ou
the environmental injustice has been reinforced by the social exclusion, signif
sustainability. Faber (1998, p. 14) emphasized, the struggle for environmental
distributing risks equally but about preventing them from being produced in
remarkable fact of limited procedural justice lies in the public consultation i
are involved in the decision making process, they are more likely to be support
and implementation (Potapchuk, 1996). Wu et al. (2010) revealed that Chines
reluctant to arrange negotiation that involves various stakeholders because t
negotiation slow down urban development. The state dominance in mega urban pro
public consultation is more at the stage of policy implementation rather than p
2015). Lack of community participation prevented the HSR project in those villag
being endorsed by the local residents. Ms Zhang mentioned that she had never he
project until one day when she saw large trucks carrying construction materials
while for Mr Xun to understand what was going on, No one ever asked our feeli
uncertain about the potential HSR impacts at its early construction stage. It w
the whole process of HSR construction, there was no meaningful and transpa
participation. Mr Zhu concluded three points regarding the decision making
construction was conducted without any hearing process in the communities; (2)
arrangements and negotiations were not open to the public; and (3) the final com
not released to the affected communities.

Manzi et al. (2010, pp. 10) maintained, The general idea of social exclusion i
social, political and economic processes erect barriers that prevent specifi
participating fully in the society in which they live. The effects of these ba
conjunction of material poverty and the processes that define particular group
barriers also prevent people from improving their circumstances through their ow
protests, as a response to social exclusion, are not tolerable in China. From t
numerous stories about how the local authorities set barriers that discouraged
from protecting their rights. To counteract villager resistance, local governmen
deployed public security, and required village committees to intimidate or plac
Mr He shared a story of his petition for relocation:

> Our family went to Yongfeng Sub-district Office many times to consult abo
> decision. Our house is very close to the rail line, just three meters over the
> time we went there, the officials asked us to write down our case and then pe
> home and wait for the result. For half a year, we frequently visited the Office
> at the fact that nothing would happen. One day, my son and I declined to leav
> our discontent. The officials contacted my factory to call me back. My son was
> the Office by the security guards. When he came back home, I saw wounds on his

For the grassroots, social exclusion is somehow doomed because civic social r
sufficiently strong to fail the launch of urban mega projects in the name of pu
the land-related rural protests are increasingly frequent and violent, peasant
largely fragmented and localized (Hsing, 2010). In our case study, village membe
cautious in expressing their discontent with the HSR project. They were afrai
proactive in resistance, they might be deprived of the potential compensation bene
they were afraid of being punished if they participated in resistance activitie
organized protest against the HSR s negative impacts was rarely over ten people
jurisdiction boundary. Scattered expressions of discontent persisted but lac
insufficient to draw media attention or impose any significant pressure on lo
situation was even worse with the absence of clearly articulated regulations and

The social exclusion was not only perceived by local residents, but also by
families who lived in the villages. Agnew (1987) pointed out three elements of p
and sense of place. A place has a physical location that includes the materi
relations, and a sense of place that represents people s emotional attachments.
research, we assumed that the migrant households did not have strong attachment
might not care much about the HSR impacts as the locals did. However, such
oversimplified. The migrant families we interviewed were worried that they woul
other places because of the HSR construction following their landlords volunt
arranged relocation). Originally from Anhui Province, Mr Li earned his life by c
recycling. His family had lived in Xuejia Village for many years. His two grand
the village. He felt gratitude to his landlords and regarded the village as his
interview, Mr Li expressed his emotional attachment to the village and concerns

> Being a scavenger is not easy. Fortunately, my family is not looked down here.
> annoying, but we migrants are more worried if local households will move away.
> need to leave this peaceful village. Renting a place in suburban regions is g
> difficult nowadays. Construction and relocation are everywhere.

Similar to He s situation, many migrant families had lived in the study areas fo
and considered the places as their second hometowns. However, rapid infrastru
urban fringe forced them to move more frequently in recent years. Constrained b
they were not entitled to any compensations or subsidies. Worrying about being a
short notice without government support, the migrant families we interviewed
sense of social exclusion. When asked to make choice between leaving the place
HSR s daily disturbance, most of them intended to stay.

### 4.3 Political institution manifested by local pro-growth governance

Local pro-growth governance has driven the discussed social unsustainability
injustice. The devolution of state power to lower-level governments and the in
from fiscal decentralization have combined to push local authorities to advoca
economic activities with high revenue returns. Local officials play an entrepr
making activities. Eaton and Kostka (2014) argued that Chinese local government
growth-centred administrative manner without long-term vision is similar to t

maximizing and rent-seeking behaviour of the roving bandits described by Man
Chuang s study (2014) about the local government s bureaucratic absorption mech
farmers from their lands portrayed how local cadres came up with strategies to
growth development. Tricky land expropriation conducted by local authorities i
interviews such as the following one.

> In 2000, we heard that our Cangqiao Town would become a sub-district next yea
> village residents hukou would change from rural to urban status. The village
> came and asked us to sign for returning our lands to the village collective.
> after the procedure we would soon become urban residents and receive social we
> district. We agreed. On one hand, our young generations work and live outside
> don t have enough labourers on our lands. On the other hand, the promised wel
> us believe that we would be taken care of by the government. Ten years later,
> came to our villages. As our previous lands were already acquired by the vil
> rented to individuals who were either village committee members or outsiders, we we
> the recipients of the land expropriation compensation and what we received w
> along with all sorts of annoying disturbances from the trains.

Land rights transfers in urban periphery are very profitable for cities (Dai et
China s Land Administration Law, 70 per cent of land lease premium goes to muni
and 30 per cent to the central finance (Land Administration Law, Article. 5
conveyance fees, land lease fees, and sales or business taxes that local offici
developers and users make up a significant portion of local revenue. Ong (2014)
government maximizes construction land quota by relocating farmers from their si
rise apartments. In our study, we found compared with former village houses, new
relocated farmers have minimized open space and green areas for the purpose o
costs (Figure 2).

Figure 2. Two relocation sites: Yongfeng Garden for relocated residents in Xueji
Garden for relocated residents in Weixing Village (right). (Source: Au

Ms Mei, one of our interviewees, wanted to show me a creek at the northern edge
we reached the site, there were only just construction trash and grasses
Embarrassed, Ms Mei emphasized that the creek was there before. Along one side
highway was built in 2005 and a high-speed rail was constructed along the o
Compared with this landscape change, the disappeared creek is probably not remar
The changes that have occurred in our village in recent years make me feel the
me. In our experience of places there is a close attachment, a familiarity tha
being known in a particular place. It is such attachment that constitutes our
familiarity that it involves is not just detailed knowledge, but also a sense of
place (Tuan, 1974; Relph, 1976). Unfortunately, the local pro-growth governa

disturbed the local dwellers  deep attachment to their places, an important y
socially sustainable society.

## 5 Conclusions

City development is not merely about concrete and glass. People s perception a
equally important. Even when only a small group of citizens suffers from urban d
means that they should be taken for granted for the wellbeing of the rest. Ba
conceptual framework combining social sustainability with environmental just
illustrates how the HSR construction has negatively affected the daily life of t
and disadvantaged such as farmers, local elders and migrants who live in subu
integrated conceptual framework helps to have an inclusive understanding of the
and political institution of HSR development in suburban neighbourhoods.

Social equity coexists with the distributive justice concern. The environmental
by social exclusion, impeding social sustainability. Lack of meaningful public
hinders the achievement of environmental justice. Such procedural deficiency in
is exacerbated by the social exclusion of rightful resistance. The pro-growth lo
the major institutional drivers behind social unsustainability and environmental

Finally, it is worthy to note that the purpose of the research is not to offer a
framework, but to help generate more innovative and better-developed discourse
environmental appraisals. Urban transformation and its outcomes can be under
tripartite analysis of the control of environment, the power involved to enfor
institutional flows that direct the process.

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# TRACK 18

# Complexity, Planning and Fuzzy Responsibilities

## Track description

Co-chairs: **Peter Ache**, Maro Finka

Cities and regions are facing increased complexity and fuzziness of their spatial and functional structures. Their institutional and managerial systems, including planning, are expected to manage it, but their capacities are limited. Moreover, additional new structures have appeared, which may rather contribute to the complexity on the management side, many of them making responsibilities becoming even fuzzier than before. Perhaps, we perceive such a situation more intensive with the recent economic and political disturbances being confronted with the question: Can planning respond to both, the challenges of complex issues and of ties?

The track invites academic and practice referring papers reflecting current concepts and practices in urban regions, like metropolitan or city regions, both inside and outside Europe. Specifically, the papers are expected to address the following questions:

- Which new forms of governance are evolving in functionally closely related urban regions? How can they be described and understood in their operation? What are our theoretical or conceptual tools to support our understanding and maybe also our attempts to improve their management capacities?
- The attempts to manage complex urban regions on the basis of distributed responsibilities and resources are mostly understood as expert realm. How can a cit tive or the proto-professional world help create the necessary innovations in our management approaches?
- Planning and its organisational structures are just one player in the management of complex urban regions. How can we understand the interconnected system of policy making and implementation that shapes the framework conditions for the operation and the planning challenge of complex urban regions?

While focusing on above topics, the papers should also make sure that the audience/readers have a good understanding of the region under consideration, relevant historical and actual development trends, and relevant politico-administrative aspects of national and urban planning systems.

# Re-scaling of the state in Turkey: The case of villages

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## The Abstract

This paper uncovers the main economic, political and social drivers of state rescaling in Turkey through historical and comparative comprehension. It touches upon the transformation of the state and its development trajectories to examine in what ways the triad of local, national, global scopes, along with their main actors, roles and policies evolve. The discussions will provide hints of the evolution of local government structure of Turkey while particularly depicting the position of village administration during the heyday period of metropolitan municipalities and regional formations. For the Turkish case, it is possible to classify the drivers and motivations of rescaling under certain themes which are promotion of democracy, tackling identity issues, fighting corruption, generating economies of scale. More importantly, rescaling notably takes place for its professed close local units to confront uneven development (Smith, 1986) which could be defined as contradiction of capital (O'Connor, 1981).

**Keywords**: state rescaling, Turkish local administration, village

## Introduction

The re-conceptualization of the state space stands for the rescaling processes multi-scalar hierarchies of state institutional organization, political authority and regulatory conflict are being generated. (Brenner and references therein, 2004, p.71).The idea of dispersing urban populations and economic activities across the territories of the country has taken its source from diverse and mutant legitimising or compulsive factors. In reference to Poulantzas comprehension this derives from the nature of ephemeral capitalist spatial formations, which are both the precondition and the reification of social relations. (Poulantzas, 1978) Soja stated this is the material form of social relations. This perpetual course of social production of space is highly e ideological and political stances. ( Soja, 1985).

Although rescaling as a processual response, either in proactive or reactive ways, is orie political and social matters, its vigour is substantially affected by the dynamics of economy. The states also experience difficulty in terms of their technological competence, informational proficiency and adjustment capacity. (Eisenschitz and Gough, references therein, 1998) Therefore, the states appeal to internal spatial realignments. These re-formations include federalist readjustments, administrative amendments, gerrymandering practices, metropolitan jurisdictional fragmentations together with dissolution or incorporation of the legal entities of local units (Brenner, 2004, references therein). By employing these novel formations, the states target to arbitrate, propagate and entrench when desired the everyday power relations of a particular locality (Brenner, 2004).

In this context, this study ultimately aims to uncover rescaling process of Turkish state with its new geographical scales and territorial contours, giving particular emphasis to the case of villages during the post Law no. 6360 era. It is credible to point out the existence of a tendency towards larger units metropolitan and regional within states. (Soja, 1985; Brenner, 2004; Swyngedouw, 2004;

2006) To this point, Swyngedouw highlights the contingent threat for the groups with less negotiating capacity as the technocratic-managerial-entrepreneurial state grows up at the citizen's state (Swygedeouw,1996).

## The state rescaling in Turkey

During the 1950 election, Turkey took a step into the democracy scene (Rustow, 1991; Szyliowicz, 1963). With the transition to a multi-party system, the Democrat party became competent to represent the discontent groups comprised of landlords (whom were severely affected by the Land Reform Bill of 1945), the merchants and also rural groups whom felt estranged by the secul policies (Aydin, 2004). Despite the fact that Turkey initiated a multi-party regime, the relationship between local units and the central state continued to carry the traces of the single party period (Tekeli, 2009; Bayraktar, 2007). Regarding the question of central state`s position in Turkish nascent democracy, it should also be noted that the elections of 1950 strengthened the hands of bourgeoisie to tackle and confront the autonomy of the state . While this emergent tension h for anti-elitist bourgeoisie segments to gain seats in the political scene, w obliged to hover in an unorganized complexion with no other option than depending on a patro client affiliation (Ayd n, 2004 and references therein). Concerning the state spatial tenets of the 1961 Constitution widely preserved the constructed administrative organization, though with certain amendments. Alluding to a regional pattern, a new spatial unit was Article No.115. According to this article, the adhesion of multiple provinces with the purpose of fulfilling certain public services is permitted. ( Bayraktar, 2007).

Beginning from the first Five Year Development Plan, designed for the years of 1963-1967, the emphasis on and the expectations from small and medium sized enterprises gained a momentum in development plans and programmes of Turkey. Later, this inclination was revitalized once again with the notions of the Washington Consensus and also by the European Union agenda ( zar, 200 year of 1963 is also important as Turkey put its signature to the first contractual agreement, an Association Agreement known as the Ankara Agreement with the European Economic Community (EEC). The path from 1960s towards 1980s was shaped both by internal occurrences and international developments. Until 1980, Turkey adopted the capital accumulation model of import-substitution under auspices of national developmental state. This model is based on the assumption that the regulatory role of the state is necessary to promote industrial bourgeoisie and to ensure their international engagements. The Turkish state also took the principal role of allocating credits and foreign exchange through its administrative structure and instruments. To illustrate this by means of the Iller Bank since 1945, the state played an active role not only through the transference of resources but also through handling the construction and industrial sectors at local levels (Tocci, 2012; nar, 2009 and references therein).

In this regard, the maturity of the Turkish bourgeoisie was also determina towards 1980 coup d Øtat, which marks a breaking point in the social, politica of Turkey due to its definite repercussions on Turkish state`s spatial reorganization. It is not possible to point out the specific stage or time to which Turkish state rescaling dates back to due to the process nature of state rescaling. Still it could be stated that, especially in the aftern coup d Øtat, Turkish state has begun to devise rescaling to handle, alleviate the existing obstacles and disputes while tackling the derailed political and economic situation, by paving the way for integrating Turkey in the global capitalist economy ( ni , 1994) The urban places, in terms of their form and composition, were not immune to prevalent transformations. One of the striking outcomes of this period is the conviction that the real estate sector set out to winning a seat at the core of Turkish economy.( Erman, 2012; Bu ra , 2014)

According to Article no. 127 of the 1982 Constitution, provinces, municipal districts and villages are considered as units of local administration. It is noteworthy that the Constitution regulates for the first time that special administrative arrangements may be introduced by law for large which forms legal basis for metropolitan administrations. Besides, Article no. envisagement by stating that central administrative organizations comprising several p be established to ensure efficiency and coordination of public services . This served to envision larger urban units, which turned over a new leaf in Turkish state spatial organization.

The ascendance of the Motherland Party to power in 1983 carried the agenda of market economy and decentralization with itself. With respect to decentralization, it should be highlighted that this agenda was not exclusively but substantially covered with *metropolitan* content. The rescaling policies and regulations of this period were undertaken for the sake of promoting democratization and economic efficiency. At this point, it is pertinent to slightly touch upon a vast and growing literature regarding the relationship between early and late capitalist countries in terms of implementations with their administrative and economic facets. Concerning the extent and nature of rescaling, the mainstream tendency is to put emphasis sheerly on the over-accumulation crisis of the former group of countries and their inclination towards other/new geographies. In the case of Turkey, being content with such focus could neglect the ascendant propulsion from maturing national capital groups for internationalization. This limited approach also amounts to neglect the decisive capacity of these propulsive forces in terms of rescaling (Ercan and O uz, 2006). Thus, Er state that the scale issue in Turkey can be traced through the intersections of these two groups: the international-advanced and the national-emergent (Ercan and O uz, 2006). In order to dep internal economic dimension of this discussion, attention is due to the emergent small and medium enterprises (SMEs) which focus mainly on labour intensive manufacturing businesses. Their fame as Anatolian Tigers proceeds from their success on transnational and retail ch expansion of their demands and increase of their negotiation capacities both contributed to the state rescaling process as they were configured as the soaring hubs of industrial gr the issue of rescaling and the positions and positionalities of the actors of these emergent cities, Jessop puts forward the concept of scalar forms of representation as an alternative political representation, namely parliamentarism, corporatism and clientelism (Jessop, 1990, pp. 119-121). In this sense, Brenner's statement is also illuminative: the prolifer approaches to urban governance represents a key expression and outcome of the place- and scale-specific types of state spatial projects and state spatial strategies that have been mobilized by post-Keynesian competition states. As such, entrepreneurial urban policies have been closely intertwined with contemporary processes of state rescaling. (Brenner, 2004, p. 177).

In that respect, the heading of Motherland Party towards decentralization could be interpreted as a complementary mechanism to its gravitation towards market economy. In the year of 1984, two-tiered metropolitan municipal structures were launched in Istanbul, Ankara, Izmir and district municipalities were initiated under their roofs in accordance with Law no. 3030 (Heper, 1987). By means of this law, the room of district municipalities to manoeuvre was restricted in extent, as they were put under the tutelage of Metropolitan Municipalities. Thus, the decentralization appeal became short of a board implementation and could only stretch out territorially and functionally from the centre to th Metropolitan level by disregarding the district level. Metropolitan municipalities and metropolitan mayors were turned into new-fangled formidable fortresses. They formed the novel *central configurations within locality* through their intimidating tutelage power and impressive revenue generation capacity by productive and unproductive methods. In other words, this decentralization attempt was a cautious one (Heper, 1987). As Erg der mentions, the state still governments on the scene with the intention of controlling the periphery rather than service delivery and democratization ( Erg der, 1987). This period also marks the begging of th

mayors equipped with ad-hoc duties and areas of action (Heper, 1987,p.55). Despite this, the monopoly of Ankara in terms of authority and resources remained as a prevalent and Danielson, 1985). In last instance, as municipal debts intensified, debt payments have almost gained a character of direct resource transfer to financial capital ( nal, 20 therein). This is critical to indicate the expansion of financial capital`s embeddedness to the municipal system and to show their prevalent mutual interdependencies. ( nal, 2009)

In the meantime, on January 1st 1996, the Customs Union Agreement with the European Union came into effect in Turkey. This marks a milestone not only for big business groups but also had a profound effect on small and medium sized enterprises of Anatolia. It includes provisions that elimination of tariffs on manufactured imports originated in the EU, the adopti policy toward third countries and the elimination of many of Turkey s exiti programs ( zar, 2009). These provisions have all served the purpose of inte markets with enormous reflections on state rescaling and the prominence of urban places. In December 1999, Turkey`s candidacy to the European Union was recognized by the European Council, while in October 2005, negotiations commenced (Tocci,2013).

The amendments merged under the title of the Turkish Public Administration Reform (2004), which remained on the top of the agenda from 2003 to 2006, can be considered as milestones in the Turkish rescaling process and are worth to take note. The Greater Municipality Law no. 5216 in 2004, the Municipality Law no. 5393 and the Provincial Administration Law no. 5302 in 2005 as well as the legislation enacted regulating the foundation of Regional Development Agencies in the NUTS-II areas in 2006 all fall under this reform package (Ata v and Erayd n, 2011; Y lmaz an

With this scenario in the background, and a couple of decades after the initial law on Metropolitan Munipalities, Law no. 5216 was enacted in 2004 concerning metropolitan municipalities. Under this law, the issue of district municipalities and their confined role and underprivileged position in terms of income-sharing remained (O uz and S nmez, 2014). Four years later, in 2008, by no. 5747, changes were issued regarding first-level municipalities under metropolitan municipality boundaries. Additionally, the scale of Metropolitan municipalities was amended. Leaving functionality out of the scope of required conditions and relying on the 750.000 inhabitants to form a metropolitan municipality under Law no. 5216 also faced criticisms. Furthermore, this law was still destitute of the tenets and norms regulating the means of public participation. The non-existence of arrangements on public participation is in contradiction with its initial purpose, which originally set forth to be closer to the public. (O uz and S nmez, 2014). Certain allegations and reservations exist regarding the award of the metropolitan title to the municipal units whom voted for the political party at power in previous elections. Besides, it also led to criticisms by allegations of gerrymandering. Also, reform initiatives altered the population criteria for municipalities and reduced the threshold from 5000 to 2000 inhabitants. In the sequel of this regulation, municipalities with a population below 2000 were disincorporated in 2008. Yet again, this exemplifies the motivation subservient to generating economies of scale in delivering services. (Y lmaz and G ner, 2013)

## The Evaluation of State Rescaling in Relation to the Law No. 6360: The Case of Villages

Turkey`s current rescaling report takes up a new position with its proposed severances from well-established and historic settings. One striking example is the disincorporation of the village entities under all Metropolitan Municipalities, including both the former and recent Metropolitan epithet entitled ones. It alters not only the political and economic structure but also the social and physiological mould of citizens. Even considering the fact that Turkey is urban-biased in terms of countless measures and perceptions, the metaphor of village still remains adamantine in national

psyche. That is to say that the village unit is still weighty as a founding component of identity ( zt 2012).

In his interview for the Marxism and The Question of Scale issue of the Tur concerning the fading prominence of neighbourhood and village/countryside formations and patterns within developed countries, Jamie Gough clearly states that under current conditions, just a limited extent of daily social, political and economic interactions and socializations occur within such small-scale settlements. Gough relates this issue with the decisiveness of qualitative distances which could contain interdependencies and enable forms of societal cooperation for generating the reproduction of labour and capital. This enabling congruent size also forms the required scalar-level through which the state could intervene (Gough, 2006). Turkey, with its endeavour to become a developed country, has also been adopting similar legal, administrative and economic initiations which are worth to elaborate on.

There are numerous motivations behind the ceasing of village s legal entity where agricultural a concentrates and rural populations dwell. In the aftermath of 1980s, heading towards export-oriented strategies with the integration of low technology and labour intensive production exposed the need for low waged or clandestine workers (B l kba ,2012 and references therin). In the mea population of rural areas begun to face decline due to both dissolution of the agricultural sector and\or internal displacement due to security reasons. Thus, without much option, rural/village communities became suited to this worker role with minimum salaries and informal employment. Meanwhile, the gradual entry of companies to the agricultural sector has also generated a change in rural reality by contracting of agricultural labour (B l kba , 2012) In that respect, it pertinent to mention about gradual and on-going process of de-agrarianization in conjuncti de-peasantization in Turkey. It is not wrong to claim that rescaling as a too boosting these two interpenetrated processes. To be more precise, de-agrarianization as a process stands for a gradual occupational (re)orientation, income source modification, estrangement from the agricultural mode of livelihood as a dominant way of making a living and drifting apart from the rural places (Bryceson et al.2000, Ayd n, 2009). Ultimately, this dwindling demographic trend, due to a waning economic capacity, caused the de-peasanization as a derivative of the de-agrarianization process (Ayd n, 2009). The former and the latter processes rescaling by causal and correlational relationships.

A critical reading certain articles of Law 6360, issued on 12 November 2012, with its concurrent and deep-seated fallouts in political, social and economic spheres is a must. scholars, the amendments made to the constitutionally guaranteed legal entity status of the village are problematic and can even be considered as unconstitutional. G zler states t amendment is compulsory to readjust the status of villages. (G zler, 2013,) Within the borders metropolitan cities, newly designated or not, Law 6360 envisages the termination of the legal entity of villages by converting them into neighbourhoods with no legal entity Under the constitution, villages are public corporate bodies established to meet the common local needs o (Constitutional Article No.127). Thus, one needs to bear in mind that the needs of village inhabitants differ from the needs of neighbourhood, district and metropolitan municipality inhabitants. In the cases where necessary measures are not taken, casting the responsibility towards upper level units would be unfeasible under current circumstances. More importantly, ceasing the legal entity of villages forces them to desist from the right of litigation for claiming their rights in case of discontent with the policies and decisions regarding their civic life At the same time, it puts village communities into a relatively passive position as they can no longer lean on their own capability to respond for their needs and necessities, meaning they might have to wait for the services rendered by the municipality.( G zler, 2013)

On the other hand, the law states that erstwhile granted rights on meadows, quarters to the villages are transferred to the neighbourhoods which they evolve into Article:16),This is problematic in the sense that transferring rights is not enough to make village/rural people avail of these rights as the inhabitants lost their right to sue due villages legal status. It is also important to note that the status of police and gendarmerie forces is estimated to undergo a change within villages. According to Law No: 2803, Article: 10 (Gendarmerie Organization, Duties and Authorities), the areas within provincial and district borders fall into the responsibility of police forces whereas in the areas falling outside these jurisdictions, the gendarmerie is entitled as responsible. However, Law 6360 leaves no area out ; as municipal borders overlap wi provincial borders, it could be interpreted that police forces will be incumbent on all areas within the jurisdiction of the Metropolitan territory. This might create a need for rearranging the tools, organizational capacity and structure of police forces while a change might also be necessitated in the areal deployment of the gendarmerie forces. Considering the Turkish rescaling experience solely through this aspect of village rearrangements is sufficient to indicate that it is hard to naively underestimate the state s role within rescaling process. (G zler, 2013)In tha perspective is explanatory: the state has the monopoly of the legitimate u enforcement of its order (Weber, 1918). Thus, the state is the only entity capable to adjust the guardian forces of the reorganized sub-state units.

Another issue is that the dissolution of the legal entities of villages would be disputable in terms of ecological concerns and identity politics. Duru states that although the enforcement of Law 6360 granted the groups who have been internally dislocated due to security concerns (namely Kurdish communities) a right to return to their earlier abandoned villages, it beca fact that their villages were disincorporated. Even though the Village Law of early Republican times - still in effect - is equipped with pioneering tenets, those were sacrificed for the sake of unity and integrity reflexes during Republican times with certain exceptional periods. For instance, during the legislation process of the Village Law No. 442 (the year of 1924), the deputy o is crucial to decentralize beyond the province level; only if further decentralization is realized could it be possible to prove the intimate intention of founding a regime on behalf of t Although this is a quotation from early Republican discussions, decentralizing *beyond the province* still maintains its importance in the Turkish political and administrative scene considering the fact that metropolitan administrations have become the symbols of centralization within 2012)

From an economic perspective, the motivations behind the alteration of villages legal status can be elaborately explained in reference to the theories, discourses and debates commons , primitive accumulation and accumulation by dispossession .(Harvey current situation, meadows, pastures, winter quarters, grasslands and rivers within urban areas have already been depleted under utilization, whereas in rural areas, there are still common areas and fields allotted by laws to villages or municipalities that have remained quite untouched. Even though the orthodox Marxist discourse claims that the dispossession of commons as a phenomenon precedes the capitalist development, Massimmo De Angelis asserts that the processual implementation of both the separation of people from their means of production and the enclosure of commons are embedded in all stages of capitalism, including today s form. Thus, rather than being a periodically-c phenomenon or a precondition for capitalist development, the new enclosures as the encroachment of land, water resources and rural livelihoods for the sake of industries, energy infrastructures, real estate developments and for other development projects and purposes. In case counter measures are not designated, it is not far-fetched to claim that these processes could have conduced to poverty, migration and criminalization and therefore bear risks for the future. (De Angelis and Stavrides, e-flux)The states legitimize these processes by putting forward their developmental stance or by relying on the concept of the tragedy of the commons . The latter conce

Gerrit Hardin in 1968, is based on the belief that to make common resources sustainable, either privatization or direct state inclusion is necessary.

From his point of view, it could be assumed that Turkish villages are experiencing the compound of enclosure of commons; the enforcement of disincorporation of villages legal en the *magnum opus* of this process. The motivation behind rescaling towards larger units at the expense of small and historical components can be understood by employing the primitive accumulation practices studied by Harvey. As briefly stated above, these practices may include commodification and privatization of natural resources in their entirety; the land, streams and labour power are at bull`s eye. The amendments made to property rights by converting common and collective ownerships into exclusive private property rights , the elimination of indigenous methods by schemes and the transcription of debt and credit systems fall under this conception. There is no doubt that Turkey is not an exception, but a representative element of the set of applications (Harvey, 2009).

To ponder upon the notion of dispossession, MacPherson points out the acclaimed indissoluble bound between the individual and possession: there is no possession of property if (MacPherson, 1962). Hence the presence and absence of a person binds upon the condition of being a man of property . In this sense, Butler presents the essence of dispossessed ensuing derivative condition of enforced deprivation of land, rights, likeliho belonging (Butler, 2013, p. 5). Butler takes one step further to crystallize the functionality of dispossession which is critical for interpreting post-dispossession beneficiaries and losers/payers. In her words, *dispossession works as an authoritative often paternalistic apparatus of controlling, appropriating the spatiality, mobility, affectivity, potentiality and relationalitly of (neo)colonized subjects* (Butler, 2013, p. 5) Moreover, Butler states that the political fibre is converted into technocratic, corporate and post-political governance at the expense of hist components (Butler, 2013, p.40).

In parallel, 10th Development Plan of Turkey for the years of 2014-2018, under Article 898 envisages that metropolitan areas will henceforth be entitled as responsible for the rural areas. This rearrangement is believed to have the potential to contribute to the development of Turkey, generating high commitments and expectations. Official documents pledge that the spread of urbanization could bring solutions to problems of technical and humane capacities, quality standards and productivity (10th Development Plan 2014-2018). On that note, Article:914 of 10th Development Plan predicts that in the year 2018, the urbanization rate might reach 76.4 per cent in Turkey. Putting the rural-urban dichotomy and urban limits discussions aside, it should be noted that if this rate is reached, it will not be as a result of free-will nor of an evolutive trend.

Within this context, Turkey is experiencing two confounding situations at the same time. On the one hand envisaging the one single blueprint for all metropolitan municipalities by solely relying on the population criteria neglects the complex and locally variable nature of the development issue. On the other hand, disincorporation of villages under Metropolitan Municipalities while leaving villages under other cities as they are has caused duality and discord across the coun have the potential to cause problems for the status of villages and equality before the law.(Duru, 2012)

There exist widely-accepted assumptions and certain reported facts that, more fragmented local units could hamper service delivery and foment troubles for reaching collective decisions. Besides, more fragmented formations are also not favoured due to claims that their structure is relatively higher cost-generating than the systems composed of large-scale sub-state units with no further sub-level ramifications (Pagano, 2013, pp. 37, 114). However, it is neglected that transformations in this direction bear the high risk of serving the sake of built-environment`s suppression on natural

environment. Thus, ceasing the legal entity of villages under a Metropolitan municipality could be comprehended as an *outcome* of preceding resolutions rather than being a *motive* for future contemplations to succeed development. As Duru proposes, this could be perceived as the outcome of the pursuance of lands and natural resources` commodification for further construction, infrastructure and development purposes (Duru, 2013). Additionally, there is also apparent anxiety regarding how villagers might respond to estate taxes in the sequel of the five years of legal exception granted to them (G zler, 2013). Backing up village communities in socio-economic terms appears a order not to sacrifice them by adding new burdens onto their shoulders.

The current condition is not the debut of urbanization without cities (Duru, in Turkey. Quite the contrary, urbanization in Turkey has had a long-established history of urbanization without industrialization , as Erman defines, which indicates th the urbanization experience of Europe and Turkey. The former came along as a derivative of industrialization whereas the latter ensued that the intervention of the agricultural sector, which rendered the vast number of communities in rural places redundant. Yet again, the imposition of the (metropolitan) *model* to cities and the recognition of urban places and local entrepreneurs as able to generate production capacities and economic boom proves that the tradition of effect relationship concerning urbanization and industrialization prevails in the Turkish experience (Erman, 2012).

Still, it is not surprising that the cities converted into metropolitan municipalities pretty much greeted their new status with happiness. In this regard, the image of metropolis in determinant, given the fact that particularly Ankara, Istanbul and Izmir are considered the Turkish equivalent to the land of opportunity (Erman, 2012). Nevertheless, this could a na ve imposed and/or self-persuasion at least in the short term prospect. It is also worth to note that a townsman has always been considered as being inventive and contributing to the wellbeing of the country while the metaphor of living in a metropolis has been enough to be gratified (Erman, 2012 and references therein).

It is significant to note that, as the legal status of 29 provincial local governments, 1.591 municipalities and 16.082 villages were altered, it would be pertinent to consult the local public consent by means of a referendum. This would fall in line with Turkey`s commitments to the European Charter of Local Self Governance, under which Article. 5 articulates on the protection of loca that changes in local authority boundaries shall not be made without prior co communities concerned, possibly by means of a referendum where this is permitted by statute. pursuance of such approach would also comply with Turkey`s recent undertakings for further democratization and its prospective democratization agenda. Besides, if Turkey is committed to green development in line with the European Union candidacy prospectus, one of the fulcrums is engendering participation and self-determination, which requires taking all measures to guarantee the participatory approach. As Adams (1992) stated greenness of development is to concern with ecology or environment per se, but in its concern with control, power and self-determination (Adams, 1992, p. xiii; Arsel and Adaman, 2012, p. 317).

## Conclusion

Turkey, in its official rhetoric, puts forward diverse political and economic motives for its course of action to explicate and contextualize its rescaling venture. In that sense, it is pertinent to touch upon the achieved and failed fields. It should be noted that rescaling applications have been undertaken to tackle corruption. However in February 2014, Transparency International called attention to the issue of the accountability of politicians and the transparency of their relations w in times when lucrative construction contracts are brought to the table. Strengthening th

mayors in consequence of the rescaling process and failing to care for the necessary precautions properly to prevent corruption might lead detrimental results. (Transperancy International, 2014)

In 2010, nder and zy ld r m put forth a paradoxical display of the state regional development. According to their findings, state-owned banks make more positive contributions to developed regions through the means of credits when compared to less developed ones while private bank credits have equal contribution to GDP (Gross Domestic Product) of both developed and the less developed regions. In the last instance, their study su their purpose of existence state-owned banks did not reduce economic disparity among Turkish provinces ( nder and zy ld r m, 2010, p. 975). Taking the findings of this role of efficient allocation of financial capital, it could be estimated that reconsidering the priorities and conditions for credit extension in the banking sector could have a constructive effect on less developed regions.

On the other hand, pushing for alternative proposals should also be promoted. Brenner, in his commentary on Lefebvre's autogestion , reveals how dissenting and confrontin parties, civil society members and communities all sing the same hymn sheet concerning rescaling and decentralization. (Brenner, 2001, p.789 and references therein). In that sense, being incapable to propose any alternative options causes deadlock in the social, political and economic spheres which could be summed up as the perils of consensus .( Rodrik, 2014)

Within the context of rescaling, it is also critical to discuss how the participation is presented as a heroic recipe not only for development and democratization but also to boost investme other hand, giving credence to the myth of a single, indivisible local community acting in concert is na ve (Cleaver, 2001, p. 44). The recurrently stated expectations from partic the procedural and technical means (as only these means deemed appropriate) for civic engagement to the process while precluding the ways of radical or critical engagement. In that sense, participation is limited within proposed and permitted methods which are mostly individualized and depoliticized. As an example, public availability sessions for hydroelectric power plants projects are allowed while other patterns of participation are mostly condemned to be underwhelmed (Cleaver, 2001).

It is also critical to lay the way open for local actors and their actions to address *non-local* subjects, affairs, situations and the concepts. Local actors should be promoted to address the issues transcending their respective localities. Only in the cases where local appeals go beyond the range and limits of locality by overarching issues such as feminism, anti-capitalism and anti-imperialism can the signs of upturn and progress in social, political and economic spheres. (Kothari, 2001, p. 166). Concerning the social movements, and much like with a compass, it is essential to keep one foot with a strong support foothold on locality while allowing the other to draw across the upper-tiers. Thus, it is important to note that social movements strategically and discursively construct and refra Sandberg and Gilbert, 2009 p. 249) This illustrates that even for peasant movements success, having claims transcend to the spheres of the states and elites is fundamental. (O Brien and Li, 2006, p.2; Borras, 2008, pp. 282-283)However, it is crucial to remember that in order to make use of the latter strategy it is necessary to preserve the competence of the local socio-political core, which in the Turkish example corresponds to villages. Finally, it is cardinal to note that although the narratives of hyper-mobility, globalization, and multi-level governance command the various spheres of life, people still live in localized contexts and with predominantly local-scale sets of re interactions (De Filippis, 2001, p. 368).

The rescaling process has become a potent symbol that entitles power to certain groups and classes while concurrently incapacitating the others, ultimately generating winners and losers (Miller, 2009; Y lmaz 2006). This process mostly results in a greater size and degree of control on human ca

other potentialities attached to a particular locality for the winning group sense, Lefebvre's notion of autogestion, which proposes the affirmation of gr an on-going limitless project at all geographical scales and within all sectors of social and political life including state institutions themselves , could be put forward (Brenner, 200 embracing tenet could be enriching for any country as such an approach is not limited in duration, as in the case of development plans or reform packages, and is not confined by a deadline, as encountered in accession schemes.

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# EXPLORING ALTERNATIVE METHODOLOGIES OF SPATIAL PLANING IN WESTERN BALKANS

The case of Albania 2030 National Strategic Visioning

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## ABSTRACT

*One of the biggest challenges of our country still remains the consideration of urban planning as a management tool for controlling the development, in order to achieve territorial, social and economic cohesions. The transition from a centrally planned economy, where everything was controlled by the government, towards decentralization and market economy caused many consequences, among which uncontrolled and fragmented urban development, loss of agricultural land due to urbanization, concentration of population and dense urbanization in the major cities, abandonment of western lowland and eastern parts of the country etc.*

*This research work tries to build against the vacuum that is created in Albania by the lack of tradition of national spatial development policies and plans, on the conditions of market economy and freedom. Previous elements of national visioning have not been sustainable in the long run, due to the fact that they have been imposed by authoritarian means and not understood as a real need of the country and society, facing growing competition among nations at global scale, and the need for creative solution, facing economic recession and waste of national resources. Therefore this work is a modest practical and theoretical contribution for Albania with a hope that could be useful also for the Albanian authorities, while undertaking action at such level. In return the Albanian case of national spatial visioning might serve as an interesting learning laboratory for the new science of spatial planning in Europe and beyond.*

## INTRODUCTION:

### Albania: Urban Development Models 1945-1990:

From the beginning of the 90s Albania was one of the most centralized planned economies, where government practically owned everything and controlled all forms of territorial developments. Two main criteria characterized the urban development and the whole process and structure of urbanization in the country: the combination of concentration and centrality (Aliaj, 2003, Making Cities Wor
The main planning instrument during this period was the so-called Regulatory Plan for living urban areas, which was very rigid and did nothing more than showing where and what was the use of each building, with very poor appliance of architectural standards. Even though an official national spatial plan was still not to be mentioned, the interventions and policies taken by the authorities of the time were somehow the first steps toward a national spatial planning conception. Although, this was done on the basis of top-down principles and centralizing objectives. This was represented by the government s aims on the economy of the country, which were directly related with territoria and development. The government s top aims were to set-up and prioritize the development

industries. Based on this economic policy, the main principle for taking the decisions in relation with the industrial allocation, were by setting up these industries nearby raw-material and thermo-energy sources, as well as near the consumption centers, which in most of the cases was followed with the foundation of new industrial cities. On this context the main priorities of the government of the time were to ensure the harmonious development of industry and agriculture, in favor of the general progress of the countryside, and the support of the intensification of agricultural production. Related to this last intervention, the government aimed to use it as a barrier for preventing urbanization. Authorities neither wanted, neither could afford quick urbanization and its consequences. But this accumulated and exploded after the 80s. Meanwhile before this period the go improve the living conditions in less-favored agricultural areas, and to concentrate the resources in well-suited regions of high productivity, in order to keep the population there and occupied with the agricultural activities. But during the 80s the sustainability of such centralized spatia system collapsed totally.

Figure 1: Urban Development models 1945-1990

**Albania: Transition of Planing System 1991-2014**

From the beginning of the 90s Albania became a more open and a democratic country, so on the following years the Albanian Parliament approved two planning laws, namely Laws of Urbanism No. 7693 (1993) and No. 8405 (1998), which changed many times on the later years. Both these laws presented the general regulations for the development, location and architecture of the structures, based on the land use. Even though the second law made some new changes and improvements compared to the first one, it still didn t succeed on recognizing the recent changes of the territory informal developments and the ownership transference, from the state to the private sector, otherwise known as the privatization process . Therefore, yet, failing to set national spatial planning an development objectives. However it must be specified that until 2006 territorial planning in Albania

was mainly based on the tradition of the so called Urbanism, with culture of authoritarian planning, mainly with physical objectives. In 2006 the government decided to reform legislation and move towards more abstract rules and principles of decision making related with spatial planning, regional planning and national policies, influenced by two main forces: (i) the bottom up pressure coming from the local initiatives, mainly represented by Co-Plan, Institute for Habitat Development, a local NGO inspired by the Dutch Planning Schools; (ii) and political influence of the international partners/donors in Albania, mainly represented by the development assistance programs like World Bank, UNDP and USAID, and the Dutch and Austrian Technical Assistance in Albania. The 2006 Legalization Reform, for the first time articulated the term Spatial Planning, but despite the recognition of such need, no Spatial Plan was draf policy document was drafted, but never turned into a legal document and a spatial plan. Furthermore, capacity building programs did not associate the initiative, in order to prepare the un-experienced local/regional governments, which were not yet able and trained to cope with the new spatial concepts (Toto, 2012).

However, despite the new reform law, which was approved by the parliament, in 2007 a law for the formalization and integration of the informal settlements in Albania was approved, also associated by a process of self-declaration of the informal constructions. In addition, a national aerial survey, and the respective GIS applications developed into a national system, including a national registry of planning initiatives and development permits. In 2009 the parliament approved the new Territ Planning law, which was a framework law for emerging spatial planning concepts and developm processes, but it was still very detailed on some other aspects, and its implementation was totally depended by the relevant bylaws and specific regulations, which were yet not fully completed. It s also important to recognize that the present Territorial Planning Law is a legal instrument, which brought new spatial development concepts and practices in comparison to the previous laws. These new concepts amongst other include the introduction of new compulsory development instruments such as the detailed local instrument/ plan (Albanian: PDV/ IDV); in order to avoid the plot based development and allow for the transference of development rights; etc. Few changes were made to this law for electoral purposes during 2013, but there still remain the same concepts for territorial planning law for Albania (Toto, 2010). On 2014 the new government has initiated the reform for the administrative and territorial reorganization of the country, which started with proposals to consolidate existing local governments and reorganize regions. So far the government has been on favor of the proposal with the 35-47 LGU and there is still no decision made regarding the reorganization of the country in regions, although several proposals have been taken in consideration. However it is very important to mention the three main priorities that the government has: (1) drafting the National Plan of Albania; (2) drafting the Integrated Coastal Zones, (3) drafting the Durrana Plan.

As a conclusion, after the changes of early 90s till now-days, Albania practically shifted to an extreme. It has been one of the most liberal economies of the former Eastern Europe, with practically no spatial planning policies and no control of authorities over the territory. Despite several attempts to reform the planning legislation, almost nothing has been working on the ground level, especially at national scale. In spite of efforts made over the last decades, territorial development and administration still remain misunderstood by professionals and mishandled by politicians. (Aliaj, Dhamo, Shutina, 2010). The planning system will continue to go into further changes, because of

regular political changes and economic recession. Therefore its instability will remain a main issue for the coming years, until a balance is reached from inertial pressures of transitional developments. However the big urbanization and construction boom, as well as consequences of informality are becoming at ease, thanks to the relatively small size of the country and completion of urbanization as well.

**Planning Problems and Consequences:**

During the last 20 years the so considered traditional urbanism , in the sense of strict ap the principles of codes and distances , has become more a kind of administrative corruptive over-exploitation and densification of land, rather than an urban management tool. People have taken matters into their own hands, undertaking extreme individualistic solutions, and aiming to avoid inflated prices and often corrupt procedures of public administration (Aliaj, Dhamo, Shutina, 2010). So in the overall, this led to chaotic initiatives and informality, which spread all over the country. Practically 90% of businesses and 80% of properties are considered to have at least certain degree of informality (Albanian Government, ILD Peru/UNDP, 2007). This resulted in serious environmental concerns, development of an arbitrary property system, over-densification of the main living centers, and loss of agricultural land. Therefore, efforts of spatial planning, especially at the urban scale have been failing, among others, because of the lack of planning instruments and lack of national/regional visioning, as well as confusion among different ministries over such competency. Such a radical process of changes has been promoting further urbanization and displacements/changes of economic structures, while threatening irreplaceable spatial and natural potentials of the country.

**New Territorial Realities and Challenges**

On these conditions, Albania met with a new reality over its territory at the brink of EU accession. According to the latest INSTAT, Population and Housing Census of 2011, peripheral regions in the north and south of Albania have been nearly abandoned, while the central and western ones, although have been more dynamic on the urban growth perspective, they still have not kept apace with population growth. Whereas the population has tripled in the capital region, and developed land has doubled without proper physical and social infrastructure, thereby creating a problematic urban model (Aliaj, Dhamo, Shutina, 2010). This in return harms future development of the country, especially high expectations on tourism, agriculture and energy developments (Aliaj, 2008). On top of that, more than 2 decades after the social-political changes of early 90-s, Albanian administration has not been able yet to develop and approve a spatial vision at the national scale, not mentioning the total lack of professional capacities on the way this vision must develop and be visually represented. This consequently harms economic growth and prosperity and is worsened by the failure of authorities in establishing a stable property registration system, and fair property restitution inherited by the past. Authorities need to also learn how to formulate understandable policies and translate them properly into policy and cartographic representations, in order to ease their implementation and easily address them to their aimed institutions and audience. So far no one has been contributing to these aspects, so it s crucial to work on both directions: the instruments of visioning and techniques of visualizing. includes the use of statistical basis, with a constructive dose of creativity , in order to synthesize and reach to aimed trend-scenarios and proposals regarding the national economic, environmental and spatial development.

In conclusion, despite the fact that Albania has entered a radical and quick process of change, and that there has been a combination of a set of inherited problems, it must be emphasized that the lack of national spatial development policies and plans has been seriously harming the sustainable growth of the country. This is a result of both, lack of understanding at political/ decision-making levels, as well as poor professional capacities at specialized institutions. Therefore the sustainability of future growth and the solution of the accumulated problems need now a qualitative jump at strategic level. The drafting and implementation of a national spatial development plan is considered as the next strategic step to be undertaken by Albania, to adapt to the standards of the EU family.

**Research Proposal & Aims:**

National governments in some countries, take the lead in creating a proactive and integrative spatial planning system that can encourage investment and facilitate more sustainable development *(Alterman, 2001; European Commission, 1997).* Indeed it is a common fact for most of the Southeastern European countries (including Albania) that lack of such initiative, results nowadays in sufferings from chaotic growth and informal developments manifested in sprawl of urbanization. Inspired by the Albanian context and its need for future sustainable development, this thesis project aims to help on drafting a series of national spatial concepts, which will be used to formulate an overall national spatial development vision for the territorial development. Since there is a lack of understanding of planning policies regarding the poor communication and poor cartographic language, which also affects their implementation, the product of this research paper will be followed also by some guidelines on how to make a proper and understandable translation, through the presentation of a set of recommendations and principles, the introduction of a spatial development vision and the visualization all of these documents with respective cartographic material.

**Methodology**

So far, there has been no research work done to address or support the creation of a spatial development vision for Albania, so it was quite essential to first start the work with the observation of other cases, where spatial development policies have been implemented. In order to collect this information, the work was based on two types of research methods:

- Field study (interviews, group discussions, meetings, conferences, etc. also considered as primary data);
- Reading and reviewing of local/international reports and literature (secondary data);

The revision of the specialized literature on the applied spatial policies in the EU countries and other cases, which are leading on this aspect, gave input on learning how spatial planning works, and how to apply it on our context. At this point, evidencing the progress of such debate on the national scale, by interviewing key-stakeholders, professionals and decision makers was very crucial. An integral part of this phase was also the participation in conferences, workshops and meetings organized in Albania on this subject, or related issues, on the framework of EU integration of the country, and national spatial development policy related. The reading and reviewing of local/international reports and literature, was particularly important for identifying the international efforts made on this subject. Regarding the Albanian situation related with this topic, despite the published written materials, there were also two main local sources that provided the necessary information: (i) *Statistical instruments*

from the official data since the 1990 s; especially the 2001 and 2011 popul censuses; (ii) *Maps and areal images* before the 90s and up to date, especially the maps of during late 80-s of the *National Institute of Military Topography* ; and the national areal surve during legalization process undertaken by ALUIZNI (albinfo.al).

**A NATIONAL SPATIAL DEVELOPMENT VISION FOR ALBANIA**

Developing a national spatial vision and formulating spatial concepts in a context like Albania, on which no previous attempts have been made, and planning has not been working, makes it challenging. It s very important to take into the account the fact that during the economy, territorial policies aimed mainly at agricultural purposes, while anti-urban policies were regular practices in the country. On top of such tradition, during the last 2 decades Albania was also pushed by the international partners towards an assistance, which aimed the use of agricultural potentials and natural resources (like energy and mining). Practically at this moment are considered only development issues of agriculture, forestry and tourism, but they have not been fully addressed and considered, as a complete set of potentials. Let alone they were never seen interrelated with the urbanization process. At this point, the national spatial development vision should address specifically such issues, formulating policies and related spatial concepts for protecting and using them properly, in order to provide territorial, social, economic and sustainable development. At this point working on the basis of ecological planning concepts, which offer practical blueprint for relationship between the built environment and nature, is quite essential *(Ian McHarg, 1969).* On the other hand, having put to practice the comparative planning theory (Faludi, 19 and helpful.

**Issues to address on a national scale -** In order to establish a national spatial vision one might address several critical issues:

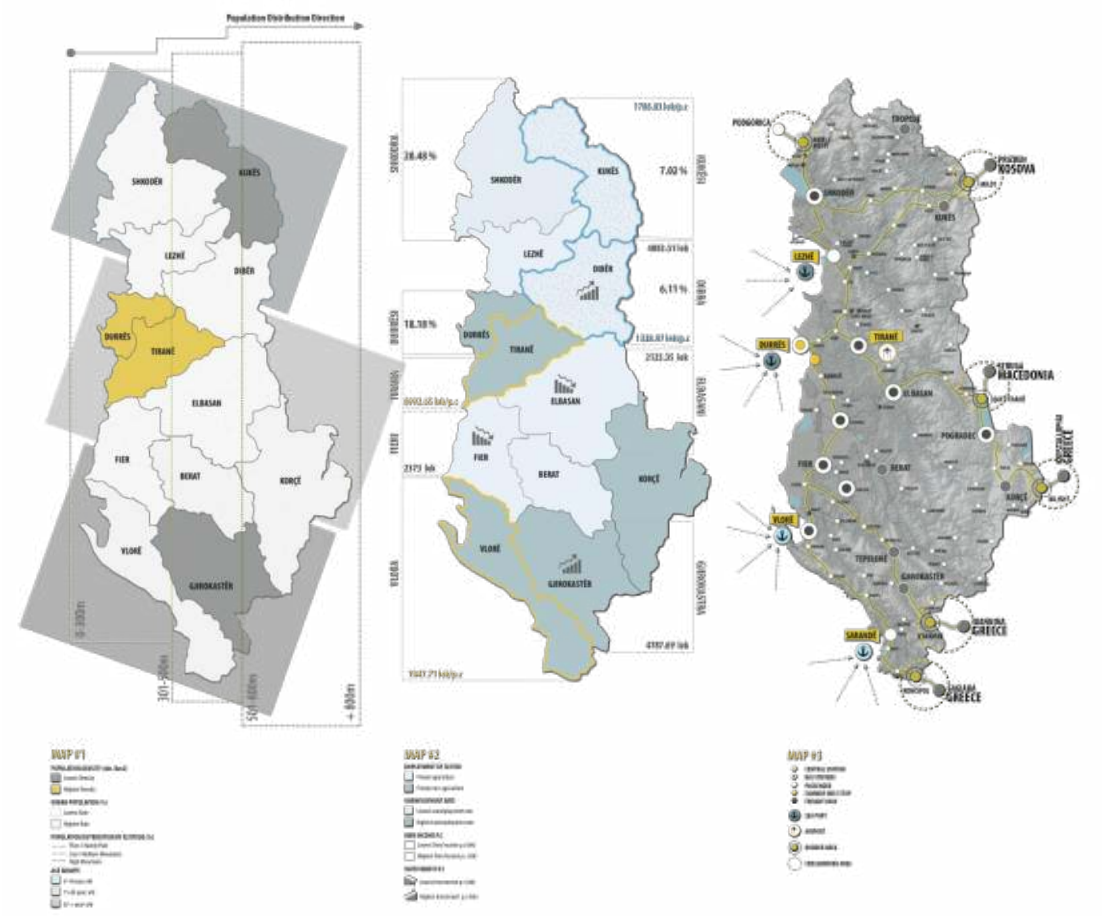
- The need to establish a good system of statistical database, based on the same indicators, which can allow professionals and decision makers to make research and on that basis to take the right decisions to address existing problems;
- In order to establish a long term spatial system is necessary to establish also good geographical information systems, which allows drawing different graphical outcomes, which are helping better management of territorial and spatial potentials.
- The national planning legislation and procedures must encourage and enforce the design and implementation of national visions, which serve as an instrument for central, regional and local governments for good spatial governance.
- Therefore the planning practice needs also to have a school and tradition on how to draft, design a national spatial plan, on basis of well accepted technical and graphical tools. This is important because professionals at national scale and decision makers must establish a common language and understanding of such instrument.
- Last but not least the spatial plan at national scale must be associated with sub plans of spatial importance for the country, which treat in details sectorial issues like: national trunk infrastructure plans, land use plans, environmental and sustainable development plans, social economic development plans etc. However it does not mean that the importance of spatial national plan can overshadow the importance of planning at other levels of planning (regional and local), because a

combination and complementation of planning tools at three levels, can be the only solution for a long term sustainable development and positive social economic growth.

**Context analysis -** In order to start setting up a set of principles and then visioning, is very important to understand the context in Albania, regarding the social-economic-and territorial components. The research work took in consideration several main indicators for each interest field, and for each group of analysis there was made a synthesis with conclusions (more detailed information on part 1 of the annexes).

- The Social Development
- The population density is higher on the central parts of the country, mainly in the metropolitan area;
- Based on the altitude, the population distribution increases from the low plain areas (0-300m) towards the low and medium mountainous (301-800), and the high mountains of over 800m;
- The urban population is higher mainly on the central and southern parts of the country;
- According to the age groups, the group of 15-64 years old dominates in the whole country, but however the higher rate of 0-14 years is more accurate on the northern regions, while the higher rate of 15-64 years on the central parts, and the last group of over 64 years old has a higher rate on the southern regions.

- The Economic Development
- The population of the south-west and the metropolitan area works mainly on the non-agricultural activities;
- These areas have also the highest rates of own income;
- Meanwhile the highest rate of investments p.c is mainly on the north-east and south-east areas (which are poorer, but with touristic, landscape and cross border cooperation potentials);
- Unemployment is higher on the north-west (agricultural and touristic values), and lower on the northeast areas.
-
- The Territorial Development
- Sea ports play a crucial role on the import/export of goods and also on the touristic flows;
- From these focal points the main national roads distribute the flows (of goods or/and people) towards the other parts of the country, where the metropolitan area, the seaside west and south and the mountainous north and south are the most famous ones; the central inlands of the country are more abandoned, less developed and not well integrated with the rest of the country;
- The railway system could play a crucial role on connecting the less developed areas, but this infrastructural system is outdated and old, and does not play its role properly;
- The cross border areas are very important, because of the activity they generate and the opportunities they present for both parts of the territory, Albanian and/or not.




Map 1: Social, Economic and Territorial Development Profiles of Albania

**Set of Principles -** The formulation of a spatial vision for Albania needs to be supported by a set of principles, which build on existing potentials and ensure sustainable development. These principles will be then explained and translated through a series of spatial concepts.

1. Regionalism

Based on the foundation of regions of different importance within a country, which consists on the creation and implementation of institutions that express a particular identity and shape collective action within a geographic region, and also as a political ideology that focuses on the interests of a particular region or group of regions, whether traditional or formal.

2. Polycentrism and Growth Poles:

- Polycentrism, based on the theory of Palmiro Togliatti refers to the organization of a region around several political, social or financial centers. A county is said to be polycentric if its population is distributed almost evenly among several centers in different parts of the county.
- The central idea of the growth poles theory is that economic development, or growth, is not uniform over an entire region, but instead takes place around a specific pole, or cluster (Rodrigue, Comtois, Slack, 2013).

3. Development Corridors and Free Economic Areas:

- Development Corridors provide connections between different nodes or hubs of urbanized and economic agents along a defined geography, and they work as a system, or in terms of the network effects, that they include.
- Free Economic Areas refers to designate areas, well equipped with infrastructure and services, in which companies are taxed very lightly, or not at all in order to encourage economic activity.

4. Sustainable Development through the consideration of Natural Potentials and Green Corridors

- Sustainable Development stands for a good balance between the three components economy-environment- society, and promotes the preservation of natural and cultural heritage on long terms.
- On the other hand green corridors represent areas of habitat, which connect wildlife populations separated as a result of urban development and human activities.
- On this last principle is very important to also consider the ecological component that stands for those planning concepts, which will ensure a healthier relationship between the built environment and nature (McHarg, 1969).

**Albania 2030, a Spatial Vision for the Country -** Albania 2030 describes the development policies for the coming 15 years, based on the growth scenario of the four main economic pillars: tourism, agriculture, energy and mining. This is achieved by taking in consideration several spatial instruments, including:

- Controlling the growth of urban centers against sprawl and informality, by consolidating urbanized areas, metropolitan regions and complementary urban centers;
- Identification of industrial and economic priority areas to support employment and economic growth;
- Increasing the regional competitiveness of the country by strengthening the international hub, national and regional networks and regional gateways;
- Identification and completion of national and regional importance infrastructure of roads, sea ports, airports and energy;
- Identification of 6 main regions of the country which are specialized based on their social-economic resources;
- Identification and strengthening of polycentric and cross border regions, growth poles and free economic areas, aiming to establish a new economic model which is based on a better regional balance and corrects the effects of radical urbanization, disparities and segregation;
- A special focus on environmental issues and sustainable development by identifying projects of hotspots rehabilitation, protection of forestry and green space, extension and consolidat Albania ;
- Recognition and cultivation of the big potentials of the country as regarding landscaping, historical and natural routes, eco-tourism etc.;
- Achieving national development goals by considering with special importance the neighboring Albanian speaking territories as well as coordinating with western Balkans and Adriatic sea region, not forgetting the process of EU integration;
- Improving the social-economic efficiency and effectiveness by providing integrated and equal access between the center and periphery based on a ring radial system. Therefore achieving an important

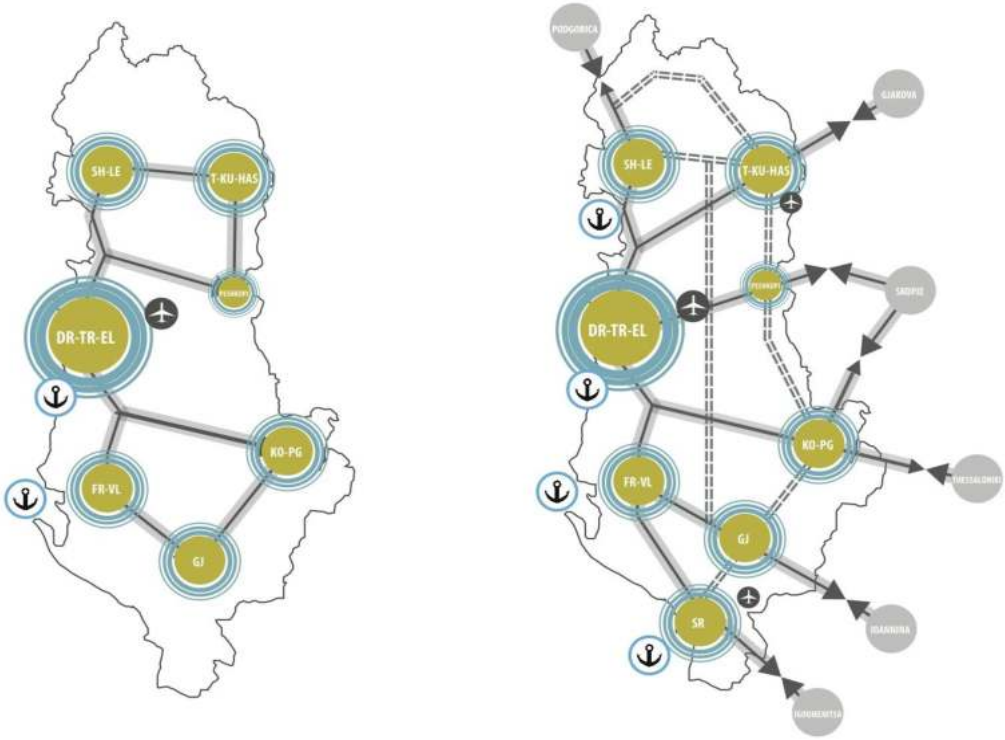
objective, transforming Albania from an isolated economy, on a regional and European actor of economy.

## CONCLUSIONS AND RECOMMENDATIONS

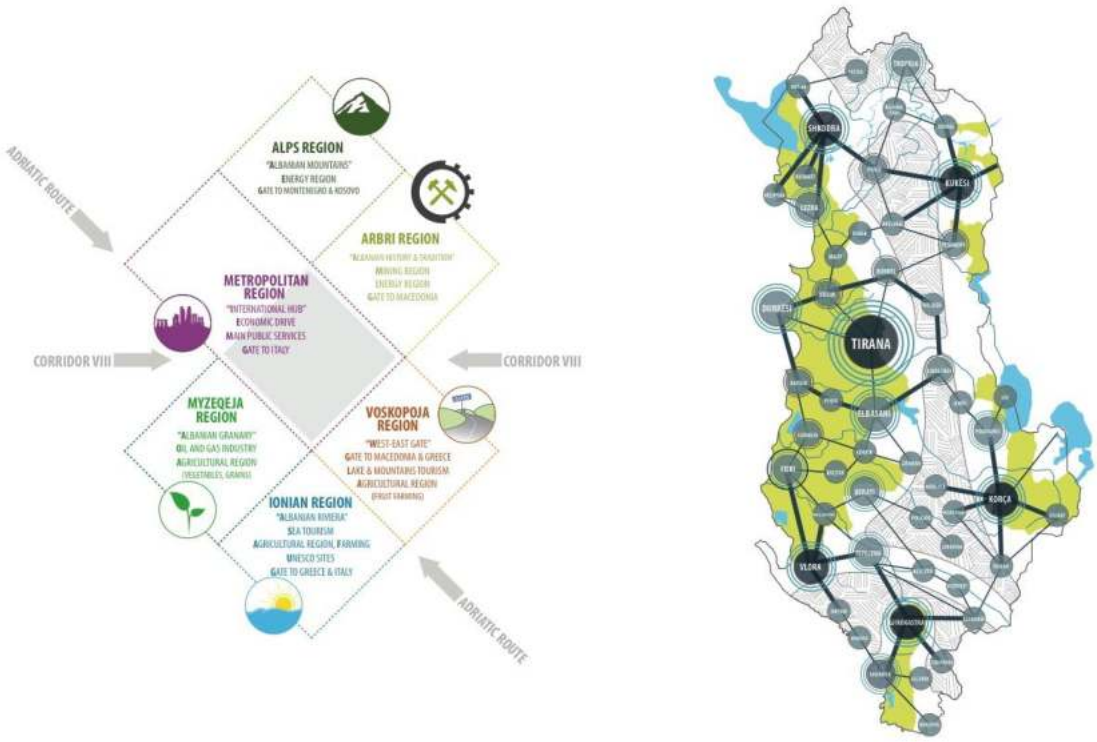
**Conclusions -** This research has been dealing with spatial planning and its role to boost social-economic growth of the country. The problem is that Albania so far has not been able to develop a document that has the full meaning and role of a national spatial development plan. On the other hand EU, which is the political objective of Albania, has not imposed a law on territorial issues and a directive, because this is considered an exclusive function of the national authorities of each country. But EU has introduced its own perspective (ESDP) on this subject and has established a network like ESPON, which is trying to use the statistical data produced by each country and by the EU institutions to analyze, research and draw conclusions that help policy making and decision makers take the appropriate decision for the best use of national territory and resources in accordance to national and European interests. At the end a spatial development plan must be an instrument for better governance and better quality of life for people and communities.

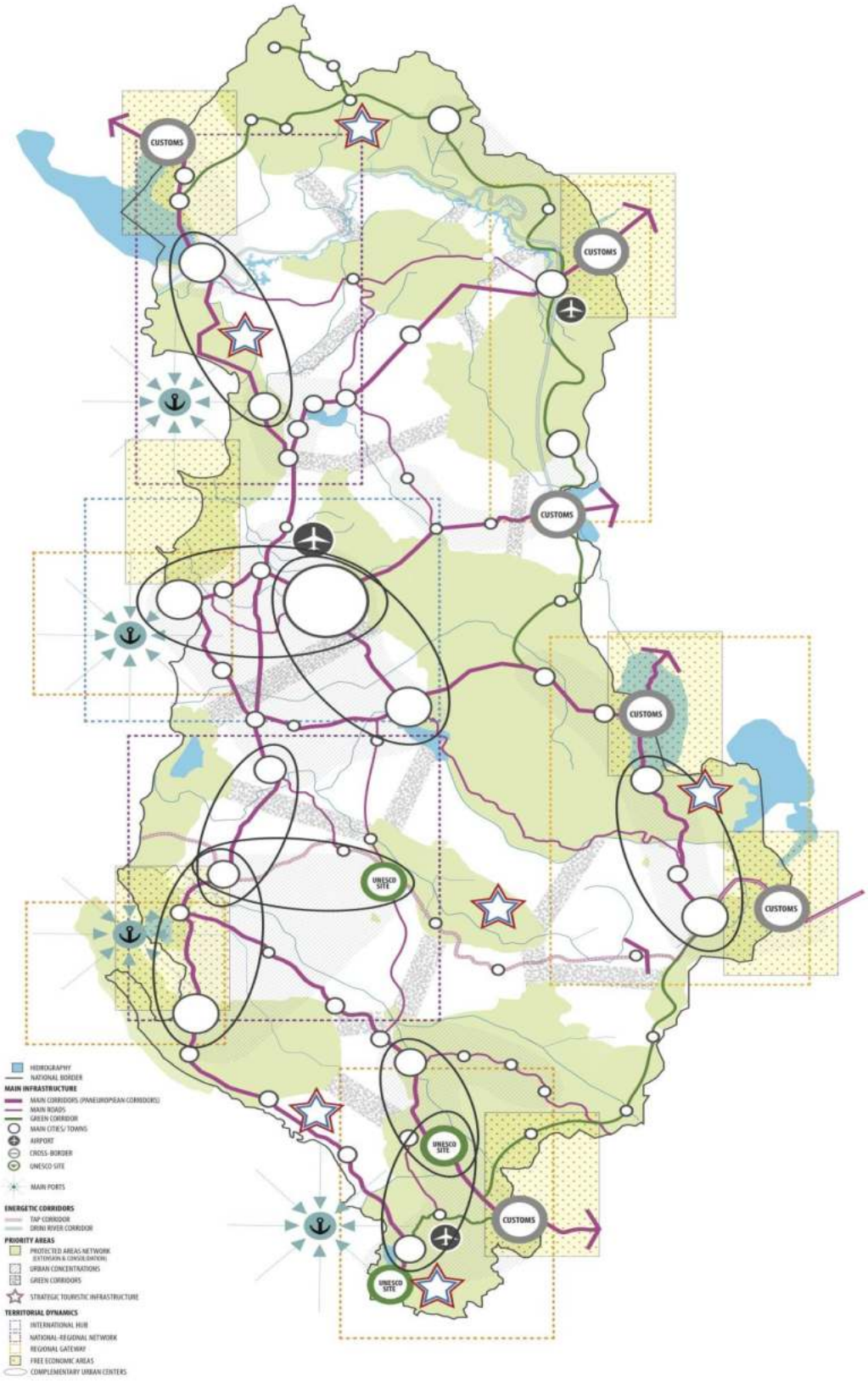
- As a first conclusion we can say that nowadays, when European integration is a national priority for Albania, spatial development also becomes a priority issue. And when we talk about spatial planning we mean a key instrument for establishing long-term, sustainable frameworks for ***social***, ***territorial*** and ***economic*** development, both within and between countries (UNECE, 2008).
- A second conclusion is that spatial planning although highly praised, it s rela very few countries implemented it in the real meaning that it has.
- A third conclusion is understating what are the visualization techniques and graphical instruments of representation to prepare the cartographic data of the national spatial plan. Since many countries have features of national spatial planning policies, but there is no common ground for the their translation into cartographic documents for the broader public, building a common reference system of visualization manners is quite essential.
- The fourth conclusion is that in order to develop a national spatial development vision for the country is necessary to refer to several scientific arguments. Throughout the context analysis and case studies four main principles were considered as crucial for the national spatial visioning. Each principle was then explained through a series of analysis and spatial concepts. The four main principles list as below:

Map 2: Connectivity before 90s; Connectivity according to Albania 2030 Vision.




Map 3: Agriculture, Mountains and Growth Poles




CUSTOMS
CUSTOMS
CUSTOMS
CUSTOMS
CUSTOMS
UNESCO SITE
UNESCO SITE
UNESCO SITE
HIDROGRAPHY
NATIONAL BORDER
MAIN INFRASTRUCTURE
MAIN CORRIDORS (PANEUROPEAN CORRIDORS)
MAIN ROADS
GREEN CORRIDOR
MAIN CITIES/ TOWNS
AIRPORT
CROSS-BORDER
UNESCO SITE
MAIN PORTS
ENERGETIC CORRIDORS
TAP CORRIDOR
DRINI RIVER CORRIDOR
PRIORITY AREAS
PROTECTED AREAS NETWORK (EXTENSION & CONSOLIDATION)
URBAN CONCENTRATIONS
GREEN CORRIDORS
STRATEGIC TOURISTIC INFRASTRUCTURE
TERRITORIAL DYNAMICS
INTERNATIONAL HUB
NATIONAL-REGIONAL NETWORK
REGIONAL GATEWAY
FREE ECONOMIC AREAS
COMPLEMENTARY URBAN CENTERS

- Regionalism - There was made an adaptation of the proposal of Co-plan 2014 for the re-organization of the country on 6 regions. This concept supports the efficiency and the effectiveness of the economic growth of the country, considers environmental sensibilities by considering the concept of river basins, and brings central government near local communities and authorities without extra costs in terms of infrastructure and services. The further analyses of this research work have evidenced the cultural historic identities and economic specializations of each of these regions, as an instrument for promoting regional development balance, for fighting regional disparities and promoting balance.
- Polycentrism and Growth Poles - On this aspect there were identified 6 main growth poles, which have two patterns of polycentric development each. Within the country they are interrelated on a radial system because of the existing patterns of infrastructure and services, with the exception of Tirana, which is interrelated on an annular system. The second pattern of polycentric interrelations has to do with the cross border perspective and in this case all the growth poles interrelate on an annular system, again with the exception of Tirana, which has a radial interrelation with the European and global markets.
- Development Corridors and Free Economic Areas - The development corridors are strongly related with the infrastructural and services corridors. Most of the Albanian economic corridors are located on the western plain of the country and few of them in the peripheral growth poles. There were identified the economic specializations of each corridor, promoting the concept of clustering areas and recommending strengthening of such specialization, in order to avoid competition and promote complementarity. The economic corridors are strongly related to the free economic areas, airports and seaports. Therefore there were identified 5 types of development corridors, 7 free economic areas, 3 strategic airports and 4 sea ports, trying to explore also the geo strategic position of the country.
- Natural Potentials and Green Corridors. - Albania is rich on natural potentials. There were outlined several green, historic and landscaping corridors, which can promote a national identity, environmental education and boosting of tourism industry. These corridors are part of a networking strategy that was added to the existing agricultural land and protected areas. On the first step is planned an increase of the existing surface of protected and green areas, and then the consolidation of this network through several linking green corridors. This goes in line not only with the conservation needs, but also with the rehabilitation of the environmental hotspots in the country, which are mainly concentrated on the western plain of the country. This green framework corrects also the negative impact on environment, because of rapid infrastructure development.

**Recommendations -** Albania should move from the inherited spatial framework of centralized economy that was promoting self-isolation culture towards a new society, which is open and competitive towards regional and global markets. Therefore from an enclosed 8-shaped concept of the main national infrastructure, the spatial development vision on this research paper promotes shifting towards a ring radial system, starting from the capital region towards peripheral growth poles and cross border areas of interests. All infrastructure and services should be oriented towards such concept, where radials improve national and international connectivity, and rings increase national economic efficiency and courage prosperity of the Albanian speaking territories in the neighboring countries. Another recommendation is the enforcement of the creation of 6 regions with clear social economic patterns and specialized identities. Therefore the Metropolitan Region and Voskopoja Region will be focused on the regional and international strategic infrastructure and services, the

Northern and Southern Regions will be focused on the sea and mountainous tourism, while two other remaining regions will focus on the main economic activities like agriculture, mining and energy. The final recommendation is that Albania 2030 spatial vision for the country must foresee a development perspective for at least 15 coming years, and it should promote a sustainable economy, based on the four economic pillars.

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Keywords: Planning, innovation, collaboration, institutions

# COLLABORATIVE INNOVATION AND INSTITUTIONAL CAPACITY IN NORWEGIAN PUBLIC SECTOR

**Abstract**

Norway experiences that the administrative public sector structure with municipalities, counties and regions are not suited to handle the problems in the more functional territorial structure rising from urbanization and zooning of industry, services and housing areas etc. Problems with infrastructure, housing, industry, public health, commuting etc. are related to each other and interact in a functional process and structure across the administrative boarders. These problems are often complex and sometimes as even wicked, and there is a growing understanding on national level that the existing administrative structure must be changed and adapted to the functional territorial structure. The preferred political solution at national level is to amalgamate municipalities, counties and regions and make them bigger unites and more territorial similar to the functional activities and structures. This national policy implicates great changes, and is met with reluctance and opposition at the local level. However, there seem to be an agreement across the governing levels that collaborative innovation is needed in order to handle the complex problems, but the existing mismatch between the administrative and the functional spatial structure, and the influences of New Public Management seem to create a blurred responsibility, an institutional egoism and make collaborative planning and innovation very demanding. To have a local and regional institutional capacity becomes a decisive demand. In this paper, I will present several cases trying to cope with the complex problems and fuzzy responsibilities, and I will discuss their planning activity and their institutional capacity and legitimacy as political actors.

## 1 Introduction

Successful innovation in the public sector means creating and implementing new processes, goods and services, and implementing new delivery methods that lead to appreciably improvement in productivity, efficiency and quality (Mulgana and Albury, 2003:3). In this paper, we discuss seven public sector development cases against this theoretical concept of innovation. We distinguish between the linear and interactive understanding of the concept, which also can be found in planning theory as instrumental and communicative planning, and learning theory as instrumental and communicative learning. The discussion of these notions reveals that the main challenge in both

theory and practice is to combine them. This is no new knowledge, and it is discussed in many fields of science, not least in planning theory (Allmendinger, 2009; Healey, 1979; Healey, 2005; Sager, 1992 etc.). By using the concepts instrumental and communicative rationality, we tie the different understanding of innovation to planning theory and learning theory. In the planning discipline there seem to be a growing understanding that planning, reporting and learning should be tied together in a management system with institutional, strategic, tactical and operative levels, and that such a systematically and continually management work can promote innovation (Amdam, 2014).

There are similarities between systematic innovation in the private and public sector. It is expected of both sectors that they are innovative in own organization and showing social responsibility by contributing to innovation in society otherwise. For the public sector, this responsibility for promoting innovation in society is far more pronounced than what it is for the private sector. Moreover, there is still no reason to exaggerate the difference between the private and the public sector when it comes to innovation as a process. The typical innovation processes and the driving forces in the processes seem to be much the same, and much of the innovation research today is about how to stimulate collaborative innovation where both private, public and voluntary actors participate (Sørensen and Torfing, 2011a and 2011b).

Only one of the cases in this paper, the Forus Business Park, can be said to represent collaborative innovation across the public and private sectors. The other cases are also collaborative, but mainly between public actors. The selection of cases is based on available master thesis from over planning and leadership master program, and represent development work in width and insight, and the different levels in the planning and management system. The purpose is to show examples of how innovation is conducted in the public sector**.** The strength of this approach is that the reader can see the width of the innovation effort in the public sector, and that the cases to some extent discuss the decoupling between levels, for example between wished development at the strategic level and implement actions at the operative level. This phenomenon is referred to in the organizational theory (DiMaggio and Powell, 1983; Meyer and Rowan, 1991; Røvik, 2007). The phenomenon is also featured in the planning theory by Kleven (1990) which uses the concepts Sunday theory and Everyday theory to characterize the decoupling of goals and practices in result oriented planning in a municipality.

**2 Summary of the cases**

*Communicative school development.* In this case, Moltudal (2012) discusses the collaboration between different actors and levels at a Secondary school during implementation of the national reform Knowledge Promotion (Kunnskapsløftet). The case is an example of change work at institutional level and illustrates how the context in the form of a national reform affects a school, and promotes both process and organizational innovation. In this case, there are implicit and latent tensions between

instrumental and communicative rationality. This is a polarization which the author uses pervasive in the study, both to position the theoretical perspectives, but also as theoretical terms to shed light on both theoretical and empirical approaches to problems. The cases show how the instrumental and communicative rationality collide in schools as an arena when reforms are implemented, and show the essential role teachers have to fill in the space between the top down and bottom up forces. The author summarizes the empirical data writing that the teacher section, through its cultural, geographical and academic "outsider position" in relation to the rest of the organization, largely had to take responsibility for implementing the reform using a communicative process. This deliberative process put critical light on existing practices, and the process uncovered, to a greater extent than before, that every teacher had individual knowledge, qualifications and values. The process led to a distinct culture in the teacher section where experiential learning and planning stand strong, and that takes care of both the individual and collective autonomy that is rooted in the overarching reform guidelines from the Ministry.

*Shared values in municipal management and leadership.* In this case, Vikhagen (2012) presents how a municipality worked systematically to develop common values. The case represents process innovation at a strategic management level and shows how the value debates may support the municipal planning and the goal and results based reporting. The author writes that the reason for developing core values can be related to a number of organizational issues. She stresses that a characteristic of a municipal organization is that the employees ultimately receive its mandate from the municipality inhabitants. Leadership processes can therefore not be independent of the municipality as the basic political organization. The political rationality is an important part of the context. She points out that it is in a value debate important to clarify the purpose of a municipality. It is expected that a municipality shall realize human, academic and economic values. Users expect to be treated with respect, care, justice and equality. Structures and systems for feedback and a broad willingness in the organization to participate in these processes are therefore necessary. To open up for debate of values, let inhabitants and users take part in the debate through surveys or other dialogue is a way to reconcile identity and reputation. The author shows that in a value based leadership, the leaders are important in the change work, but the author found that her informants deduced the decided common values differently, and interpreted their role in influencing the municipality identity and reputation differently. In conclusion, she writes that in an increasingly more complex society, interaction skills and ability to handle disagreement are crucial competence needed for an organization in order to create belonging to a community.

*Municipal economic four-year plan as an innovation promoter*. In this case, Haraldseide discusses to what extant this economic plan promotes innovation. This case is an example of planning at the tactical management level, and is about process, organizational and product innovations. The author writes that the economic plan shows that the municipality uses more resources on schools than

average, and less than average on health care available for older, and that her informants not were willing to reduce the school budget, but rather cut the health care budget "to the bone" if necessary. This political willingness when it comes to schools seems to be guided by values that are tied to the term "living communities". The informants argued that schools through centuries have been cultural lighthouses in the villages and made small communities livable. Her informants say that they see that the teaching and learning at the small schools need to be improved, and that the costs of special education heightens, something that may indicate that the schools are in a "vicious circle", but still they do not want close down the small schools. Haraldseide concludes that value standpoint related to the education sector in a municipality obstructs needed changes and innovations. Health and care in the community is not marked by such conserved values, and here the change and innovation rate is far higher.

*Interactive patient care in cancer care*. Lindseth (2012) has interviewed different people with cancer about how they experience the everyday live after attending a rehabilitation residence. The case stands as an example of process and product innovation at operational level. Capacity and capacity building are central concepts in the study. The author writes that new treatment methods have increased the number of cancer patients that survive the diagnosis and can be cancer free or live with the illness. However, late effects after cancer treatment, such as fatigue, affect the quality of life and thus the opportunities to self-mobilization, and are perhaps the biggest factor that prevents capacity building. He finds that rehabilitation leads to a self-mobilization, but that there is a great need for individual adapted support afterwards. The great majority has learned useful lessons, or has become aware of possibilities, especially physical possibilities. However, it is revealed a need for maintenance of knowledge and sustained motivation after coming home. He writes that experiences from cancer survivors are varied and contrasting, and that the degree of capacity building for participants after rehabilitation depends on an individual approach and follow-up in the home environment and the municipality. The case shows that there is a need for rehabilitation long after ended treatment at a residence. The new national cancer strategy outlines a linear "cancer proceeding", but the author argues for a more continues and interactive proceeding where private, voluntary and public actors are engaged in collaboration and reflection on social practice. He argues that the actors must cooperate more and they must see patient care as an interactive and not a linearized process. If so, the potential for successful individual and institutional capacity building certainly is true.

*Planning, reporting and learning in hospitals*. In this case Sandersen (2011) discusses how planning and the reporting function in a clinic at Oslo University Hospital, and how leaders use processes to promote learning and innovation. The case is an example of both process, organizational and product innovation and emphasis the relationship between institutional, strategic, tactical and operative planning and management levels. Major changes and restructuring has occurred through the past 20 years in Norwegian hospitals and health care in general. Last, but not least, is the merge between

hospitals in Oslo; Rikshospitalet, The Norwegian Radium Hospital, Ullevål University Hospital and Aker University Hospital, which came into force 01.01.10 under the name Oslo University Hospital, also called OUS. She writes that her informants feel that changes and restructurings have become an common part of the hospital everyday life, and that it is therefore crucial that leaders at all levels have a reflective and conscious relationship to processes of change. Simultaneously with restructuring or precisely because of the restructuring, leaders are in a cross-pressure between the requirement for financial savings and satisfactory quality services provided to the patients. She finds that the strategic plans to a small degree contribute to learning and change at section level, because section leaders who will organize and implement changes do not feel that they have had the opportunity to participate in the strategic planning. Only one-half of section leaders at the Woman and Child Clinic regard visions and strategies as usable objectives in their daily work. The other half believes that the strategic plans are only fine words on paper and even hinder daily operations. Inadequate connections between vision, strategy, organization and operations, seem to have significance for learning and thus for opportunities to implement changes. On tactical and operational level where the planning of the organization and implementation of changes shall be done, the informants experience limited rooms of action. They have observed that different forms of reporting is useful and that they learn much that is important for further planning, organization and implementation at the tactical and operational level, but that this is not learning in a broad sense. They feel that the reporting largely requests numbers and measurable data. The section leaders say that these data are important, but that they only describe parts of the reality. They experience that they receive little response when they report the quality of services for those patient groups they serve. Sandersen concludes that more dialogue and participation in the processes can legitimize the plans and reports and stimulate innovation.

*What kind of learning happens in planned change processes at three university colleges?* In this case, Furnes (2012) focuses on what kind of learning, or more correctly, on which learning level one can register learning in a planned learning processes. The case is an example of the link between planning and learning in management, and is about process, organization and product innovation. With a qualitative approach, she wishes to elevate the voices of the participants in such processes. Informants are both leaders and teachers. She finds that the participants have learned that external pressure was what was needed to get started and implement the organizational change processes. In two colleges, there were a real threat to the existence of the nurse education program. The outer pressure gave the leadership the opportunity to amalgamate the two programs. A general trend towards larger unites within the graduate education seems to have reinforced this external pressure. The informants learned that processes of change create commitment and that this commitment is a driving force in change processes. Informants have otherwise learned that traditions are important into processes of change, and that the process creates an increased need for information. However, at the same time the capacity to absorb the information seem to be reduced. Both leaders and employees learned about increased

expectations regarding firm leadership of the process, but they have also learned how difficult it can be to meet these expectations. The local leaders learned that they could calculate with good but general support from their leader, and that the employees expected a great degree of participation in the process. When Furnes with a few words sums up what in general can be learned from this planned organizational change processes, it becomes apparent how complex and demanding change processes are. This complexity implies that most aspects of the organization are involved, in particular the values and cultural aspects, but also the regulating and practical aspects. She stresses the that participants have learned that these various aspects of the organization go into each other, affects each other and must be seen in context. Furthermore, they learned both what plans are needed, but also what kind of value-based planning processes that are needed in such processes of change.

*Forus Business Park - a force for democracy or a loose cannon for regional planning?* In this case, Bjelde (2014) discusses the historical battle about the locations for Statoil Head Office and the development of Forus as an industrial site, and later on, the Forus Business Park as a company and regional development actor. This collaboration between private and public parties, and the unity between the actors over time, has become crucial for the region s ability to meet challenges and find solutions for the benefit of the region. Perhaps especially within the industrial development, but also within transportation and infrastructure, and not least the University of Stavanger can be deemed as the product of this strong partnership. The aim of her study is to get more insight into the interaction between the involved actors, the legitimacy of this intermunicipal collaboration, and to gain knowledge about how power and status of the various actors affect democratic processes. Starting with (Scott, 2013) she operationalizes legitimacy in three institutional mechanisms; regulative, normative and cognitive which constitute the institutional environment. In addition comes the pragmatic legitimacy representing the technical environment. Bjelde concludes that the company's success is tied to the pragmatic legitimacy; the company works and is regarded as useful. The company has managed to implement activities and cerate output legitimacy and has a strong regulative support from its owners (the municipalities). There is now a strong legitimacy based on regulative and pragmatic legitimacy, while there are weaknesses in the cognitive and normative legitimacy. It appears that the company's activities and strategies are not adequately anchored, or have achieved sufficient legitimacy in the region. This causes that the company might not take out the legitimacy potential that can be found among other actors in the region. When it comes to regional planning, the business park is regarded as a private company, and is expected to influence the planning from the outside, as an ordinary actor that can react on the official plans. It may nevertheless by mentioned that the company has a strong political power from the outside, through agenda control and influence on democratic decision-making processes, through relationships, networking and the status of key players in the company. There are indications in the data material suggesting that this power, because it takes place outside the ordinary democratic processes, may lead to a reduction of input legitimacy, because some

actors may perceive the process as illegitimate lobbying, or some actors may experience not to be included in the processes.

**3 Increased need for acceptance and legitimacy**

Innovation is not a goal being directly mentioned by the actors in the cases, but all cases have potential innovations in themselves through implementing new processes, services and delivery methods. However, in order to be defined as innovations, the changes need to make improvements in productivity, efficiency and quality **(**Mulgana and Albury, 2003:3). What we can say, is that the cases represent public sector change work, and that more thorough systematic evaluations are need in order to say to what extent the cases can be deemed as successful innovations. It may not be desirable that this evaluation only is conducted as an instrumental research missions, because the assessment of the results in the public sector may vary from person to person. In order to have a good mix of quantitative and qualitative data, a collaborative evaluation and learning with an open a transparent discussion of how the data can be interpreted, need to supplement the instrumental evaluation and learning.

We will say that these cases have in common that innovation in the public sector aims to safeguard theese public sector unites' existence by increasing their acceptance and legitimacy. Thus expressing that the welfare state is currently facing major challenges, something that has led to an extensive change wave in the public sector (Kettle, 2000). However there are few evaluations trying to measure the effect of these changes in the public sector (Pollitt, 2002), and the evaluations conducted show a complex pattern of both positive and negative effects (Pollitt and Bouckaert, 2000).

Public sector existence is not just based on law, regulations, decisions and allocated money (input), but is also based on assessments of how the public sector actually delivers in relation to objectives and expectations (output and outcome). In the actual situation the solution is not automatically more input when the society asks for better output and outcome. The increased focus on acceptance and legitimacy is a logical consequence of the introduction of goal and performance management in the public sector (Veggeland, 2004 and 2009).

If we take the public schools as an example, it is now much talk about rebuilding the status of the teachers by among other efforts, to give them a longer education (masters). This is what we can call the input legitimacy. Nevertheless, how the government system works today, this is not sufficient. The teachers must deliver outputs and outcomes that meet the production target and expectations. Low scores on national and Pisa tests as well as many school leavers lowers the general acceptance and legitimacy of the teachers and the public schools. Here we use schools as examples, but the situation is equivalent in many other parts of the public sector, which the cases above show.

Thus change work and innovation becomes an important tool. Low output and outcome legitimacy can be caused of lack of resources and expertise, lack of appropriate structures and processes, and not

least, lack of change culture and change stimulating management. Something that cases in this paper show may be the case. We also notice that these change works are marked by incrementalism and small steps forwards. However, the municipal reformer with new large municipalities can become a radical change. Larger regions and municipalities imply that regions and municipalities must organize themselves otherwise. If so happens, the reform without doubt can be called destructive construction in the term of Schumpeter (1949).

Furthermore, it is important that legitimacy can be based on both instrumental and communicative rationality and logic (Weber, 1971). Instrumental rationality can justify the public sector by technical and economically efficient production of goods and services (output legitimacy). For the public sector, this is not enough (Eriksen, 1993). Legitimacy must also be based on communicative rationality. This means that the process through communicative logic must make the public sector more democratic, transparent, fair and humane (outcome legitimacy).

In the modern society the instrumental logic dominates the communicative, but Habermas (1995) and many with him (for example Dryzek, 1990; Friedmann, 1992; Forester, 1993; Healey, 1997 and 2005) believe that in a political legitimating process, the communicative rationality must override the instrumental rationality. It is the better balance between the two logics that Habermas (1995) argues when he writes about several different discourses, which together form his process model for political legitimating. The combination is also clearly seen in Scott's contribution to new institutional theory when he distinguishes between technical and institutional environments. The institutional environment is threefold: regulative, normative and cognitive mechanisms, and coexist with the technical environment, which in sum give organization their legitimacy (Scott, 1998: 134).

1. Regulative mechanisms. These requirements in societies have a legal basis that is decided by the politicians. Here we find the laws and regulations that the organizations have to follow for not being judicial punished. This is also called legal and regulative legitimacy and can be promoted with Habermas' legal discourses.

2. Normative mechanisms. This is rules for what is expected of organizations and what organizations can do, that is to say the norms and values that convey what is right and wrong and what is ethically and morally accepted behavior. This are called normative legitimacy and can be promote with normative discourses.

3. Cognitive mechanisms. This is thought constructions in terms of models that conveys what an organization is and how it should behave. This also includes the image the organization gives of one's self. This is also called cognitive legitimacy and can according to Habermas, be promoted with ethical-political discourses.

4. Technical Environment is where the organization's production of goods and services takes place, where goods and services are paid for, and where productivity and efficiency are evaluated. This involves assessment of benefit and the calculation of benefit versus cost. The activity is all about pragmatic legitimacy and coincides with Habermas' pragmatic discourses.

Suchman (1995) discusses the different approaches to how an institution can create, maintain and develop its legitimacy. Suchman distinguishes between pragmatic, cognitive and moral legitimacy. The regulative legitimacy is in his model a part of the context. What is useful for us to take further is what he writes about strategies to achieve and to maintain legitimacy. He regards legitimacy construction as a proactive process where leaders are important (Suchman, 1995: 587). His strategies constitute a continuum from relatively passive conformity to active change. The logic of this approach is that changes can be interpreted as measures to adapt to expectations in the environment, and thus help to increase the acceptance and legitimacy. Several other authors have contributed to the development of this perspective. DiMaggio and Powell (1983) emphasis that changes may be the result of desire or pressure to achieve conformity in relation to the environment. Meyer and Rowan (1991) emphasis symbolic and ceremonial changes, and a Norwegian contribution by Røvik (2007) emphasis that changes are expressions of dominating ideas and trends that are tradable and moved between contexts. These contributions convey that there are two ways an organization can assert its existence: (1) either through the creation of technical, rational and effective or (2) by satisfying the expectations that are in the environment about how the organization shall perform.

**4 What make a change an innovation?**

What do these cases tell us that may be useful to take with them further in the public sector innovation? Firstly, we highlight the fact that the knowledge and experiences that we have from planning and development studies of communities and organizations are relevant and may be used in the innovation processes. Changes and improvements do happen continuous and more or less random or planned based on new insights and knowledge. Concepts and models developed to understand, explain and improve planning and learning process can be used to understand, explain and improve innovation. According to (Mulgana and Albury, 2003: 3) public sector changes can be called innovation, when changes in processes, goods, services and delivery methods satisfy one or more of these four requirements:

1. *The change should lead to increased productivity.* Innovation in the public sector must have users and providers who consider the services as helpful for them, which simplify their work or save time and resources that they can use on others tasks. Furthermore, all new products and services that involve costs of developing and operating them must be regarded as cost

efficient. This means that productivity must be good, and preferably better than before the innovation. Increased productivity will contribute to increased pragmatic legitimacy.

2. *The change should result in increased efficiency*. Good productivity is to produce without unnecessary waste of resources, and good efficiency is to produce the right in relation to specific objectives. Objectives can be called mental models of what is accepted pattern of behavior, organizational structures, culture, and processes. If the objectives are unclear, the mental models also will be unclear, and allow for interpretations and adaptations that can foster conflicts. Anyway, increased efficiency can lead to increased cognitive legitimacy.
3. *The change should result in increased quality.* The term quality is unclear and is used differently in many contexts. We use an understanding of the concept that defines quality as the totality of features and characteristics of a product or service that on its ability to satisfy given needs (Evens, 2011: 5-6). Quality has both an objective and subjective component. It make sense to measure quality objectively using indicators such as for example inhabitants per doctor, survival five years after an operation, drop out from schools, etc. These quantitative indicators need to be supplement with the service recipient s subjective perceptions of quality and thus how their needs and expectations are being satisfied. Real quality assessments need arenas where one discusses both how the situation is perceived and how the situation should be. Only a process that combines indicators and discussions can decide if changes are innovations in the way that they have resulted in increased measured and perceived quality. Good quality can increase the normative legitimacy of the provider.
4. *The change should be within the contextual framework.* All innovations are contextual, and laws, regulations, plans, programs, projects etc. are regulative elements in this context. Changes cannot normally be in conflict with the context in order to be considered as innovation. Changes in the law and regulations can be an innovation. Changes and reforms in the public sector often require changes in laws and regulations. Thus, changes in laws and regulations may be the result of an innovation and become the start of other innovations.

Finally, we will add that when Lundvall and Johnson (1994) discusses the concept of *learning region* , he emphasis that knowledge is the fundamental resource and learning the most important process in the global commercial competition that no exist. I see no reason why this argument not also applies in the public sector. The interactive learning process should contribute to learning at the operational, tactical, strategic and institutional levels and should contain pragmatic, ethical-political, moral and legal discourse. Several of the cases presented in this paper show that changes at one level is almost impossible because they depend on changes at the level above. For instance, the strategic value of small local schools overrun the well-documented and needed change at tactical and operative levels. In that case, we will say the organization lacks innovative capacity. This conclusion leads us into a discussion of the necessary conditions and preconditions for successful innovation.

**5 Structural powers and innovative leadership**

How well the involved actors are able to do collaborate in planning, acting and learning, are crucial for the organization s capacity to innovate. Based on research and our cases we believe that the way we manage public sector makes a structural force on the actors, and therefore it becomes an important leadership task to promote innovation given the actual structural forces. Hartley (2005: 28 and 29) identifies three competing paradigmatical concepts for public management and leadership that are structural forces that influence public sector s ability to innovate:

1. *Traditional Public Administration* organized as Weberiansk bureaucracy with a hierarchical and commanding leadership function that implies a separation between expert and client.
2. *New Public Management* based on an order and provider model, a result oriented leadership function and a separation between provider and customer.
3. *Network Governance* based on organized networks of interdependent and equal actors. Here citizen participation is emphasized and the important leadership function is to create good and inclusive processes of reflection and learning.

Public sector is large and the regimes exist side by side, and they partly overlap in each other. This is both functional and desirable since the three regimes have different characters and thus have different options to function optimally in various organizations and environments. Hartley (2005: 33) stresses that actors are important in innovation, but that are also groups, teams and critical mass of support. Therefore, it is important to supplement the traditional hierarchical model of innovation (Traditional Public Administration) with a clear understanding of what constitutes innovation and how public leaders can work together with others to promote innovation (Network Governance).

Sørensen and Torfing (2014: 2) write that insight into innovation calls for reflection about public management and administration, and a change of the total public management system. They argue that a stronger emphasis on New Public Governance, or what Hartley calls Network Governance is needed because New Public Management to some extent have failed to stimulate innovation.

All the cases we have analyzed above have collaborative processes, and the cases seem to imply that New Public Governance is a prerequisite for improving productivity, efficiency and quality through innovation. Sørensen and Torfing (2014: 9) argue this view based on Nyhan (2006) who have found that trust based leadership based on collaboration, mutual evaluation and empowerment, motivate public employees to solve problems and encourage collaboration and innovation. Furthermore and based on Wart (2013) they write, that collaborative leadership emphasizing creation of good, constructive and purposeful processes can counteract organizational and sectoral boundaries, and can stimulate transparent planning and transformative learning. They further refer to one's self and write

that collaborations unlike competition will promote the exchange of knowledge, ideas and resources and generate support for new and innovative strategies (Sørensen and Torfing, 2011c).

## 6 Conclusion

Successful innovation, learning and planning need systematic work over time and combination of instrumental and communicative logic. Innovation in public sector requires interactions that include critical acknowledgment and new practices. Leaders can stimulated innovation, but innovation needs processes that manage to combine quantitative calculations and qualitative stories. Such processes have the planning profession been studying for many years and we know a lot of how such processes successfully can be organized in the public sector. If such planning shall serve collaborative innovation, public sector must be organized more by ideals for New Public Governance. The emergence of this network administration can be deemed as a reply to the weaknesses of the Traditional Public Administration and the New Public Management. In contrast to New Public Management, the New Public Governance consider complexity, fragmentation, silo thinking and selfishness entities that are part of the problem. This entails that the interacting actors must acknowledge that they are mutually dependent on each other and trust each other, in order to solve wicked problems and satisfy the needs. This has to a certain extent occurred in the public sector, but the challenge, or more correct the paradox, is that actors working in public sector organizations dominated by the Traditional Public Administration and the New Public Management regimes, are so structured by these regimes that they find participation in network governance very demanding. Therefore it is important that public leaders contributes to design and implement governance structures, planning and learning processes, and create cultures with values, attitudes and actions that promote collaboration and more public sector innovations.

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# AMBIGUOUS RISKS, FIXED RESPONSIBILITIES: URBAN PLANNING IN JERUSALEM

Roni Bar[1]

**Keywords**
urban planning urban design risk ethics resilience

**Abstract**

*Urban resilience has been widely adopted by planning scholars and practitioners as a framework for managing complexity and contingency. However, the term is not only over-ambiguous, but is also frequently adopted a-critically into planning policies. Therefore, the paper uses the concept of risk (rather than resilience) in order to investigate the way planners define, prioritize and respond to risks. This is explored as a normative decision (and action) with ethical implications, rather than a purely professional one. Acknowledging the need to investigate both the planning process and the physical* environment, the paper focuses on the prioritization of risks, planners res *concretization of risk perceptions in the urban environment through urban planning and design.*

*These issues* are investigated in Jerusalem s city center, an area that has witnesse *attacks and has been going through a process of densification and renewal. Findings reveal that planners assume a fixed responsibility and distinguish between two types of risk: (a) economic-demographic risks, which are seen as central, and (b) security risks, which are disregarded as irrelevant and were not considered in the plan. Despite this distinction, the analysis reveals correlations between economic and security interests, demonstrating the connection between security practices and neo-liberal urban regeneration. The last section of the paper acknowledges the importance to resist the fortification of urban spaces, yet warn that ignoring certain risks in a conflictual arena may reflect a dismissal of the* conflict itself, as well as urban planning s role in perpetuating unjust circumsta

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***Since this is an ongoing research, the findings and analysis are not final.***
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## A. Scope

During the last decade, the preparedness for unexpected risks has become a central theme in planning literature and practice. In this "period of crisis" (Larner, 2011), planners have been searching for theoretical frameworks that hold a promise for understanding and managing complex systems (Welsh, 2014). This is especially apparent in cities, which are viewed as the most pressing (and promising) sites for addressing the uncertain future (Wakefield and Braun, 2014). In light of this search, the idea of "urban resilience" has emerged as the main framework for dealing with unexpected disasters and events (Vale and Campanella, 2005; Coaffee, 2013). The resilient city is often expected not only to "bounce back" after a disturbance but also to bounce forwards (Shaw, 2012), in a process that is described disaster betterment (Olshansky, 2006). These expectations reflect the frequent non-critical and passive reception of the term (O hare and White, 2013), evident mainly in policy papers (e.g. UNISDR, 2012; City of New York, 2013). Thus, an a-political epistemology is being used in order to deal wi political of questions [ ] the causes, distribution and effects of differentiate (Welsh, 2014, pp. 21). Acknowledging this paradox, scholars have been recently emphasizing that resilience is a normative concept (Vale, 2014), and therefore needs to be investigated and employed from a critical perspective, taking into account questions of definition, power, politics, jus (Davoudi, 2013, pp. 5).

Indeed, the preparation for future risks is far from neutral; rather, it reflects a normative decision regarding the way risks should be defined and confronted. For instance, current preparedness strategies stress the importance of individual accountability (Joseph, 2013), arguing that communities and individuals should self-organize in order to deal with risks, while the state s role mediation and support (Rose, 2000; Wakefield and Braun, 2014; Welsh, 2014). However, despite this responsibilisation of risks, the public is not an active participant in deciding *which* risks should be confronted and ho*w* (Coaffee and Rogers, 2008). Thus, planning for future risks may prevent democratic access to public spaces (through physical barriers) and to decision-making processes (by promoting a discourse of experts). Moreover, since planning translates risk perceptions into a physical space using public resources and spatial tools, it concretizes certain risk perceptions that may not be shared by all.

In light of this debate, the paper suggests using the concept of "risk" rather than "resilience", which is not only over-ambiguous and in danger of becoming an empty signifier (Davoudi, 2012) but also already holds an inherently a-political character. While the debate around resilience explores ways of dealing with unexpected risks, the debate around risk investigates the way certain events are framed (Stanley, 2013) and acted upon. This is based on the premise that when confronted with a state of uncertainty, i.e. lack of knowledge about an unwanted outcome (Ericson and Doyle, 2004), different groups not only prioritize different risks, but also set different modes of action in response to the perceived risks. Therefore, the paper uses the idea of Risk Cultures for describing planners attitudes and actior Risk Cultures is used here not only to indicate that risk perceptions are socially constructed and

embedded in cultural values (Douglas and Wildavsky, 1982) but also to explore the way in which planners actively (and often deliberately) prioritize and respond to certain risks.

Furthermore, since major events such as the 9/11 attacks, Hurricane Katrina, Superstorm Sandy and the Fukushima nuclear disaster were catalysts of the discourse revolving risk and resilience, empirical studies tend to focus on major events (for example: Campanella, 2006; Gotham and Greenberg 2014; ULI 2013; Zhang and Peacock, 2009). However, the focus on major catastrophes may ignore many other cases that are not shaped by a single occurrence but rather by multiple events and chronic crises. This research, then, responds to the need to prepare for sudden emergencies as well as for more gradual changes (Vale, 2014). Therefore, it expands the notion of risk by defining it not only as an anticipation of a potential catastrophic event, bounded in space and time, but also as an anticipation of a more gradual crisis, without a clear beginning or an end.

Using these definitions as a point of departure, the paper is comprised of five sections, proceeding from an empirical case to a theoretical discussion. The first section describes the conceptual-methodological framework that is used to understand the relationship between the prioritizati responsibility and the urban environment. The second section introduces the case study: the urban regeneration of Jerusalem s city center, an area that has witnessed numerous terror attacks an going through a process of densification and renewal. The third section analyzes the case study in relation to two types of risk: (a) economic-demographic risks, which are seen as central, and (b) security risks, which are considered by planners as irrelevant, although present in the everyday reality during the time of planning. The subsequent section summarizes the findings and identifies correlations between seemingly different risks. The last section of the paper is organized around three core questions: Why do planners perceive their responsibility as limited and address only certain risks while disregarding others? Why is it possible to identify correlations between different risks? What are the ethical implications of planning for future risks while disregarding others?

## B. Goal and research framework

The goal of the paper is to understand the way risks are defined and confronted when facing a chronic and prolonged state of risk and uncertainty. It explores the way planners define and respond to risks as a normative decision (and action) with ethical implications, rather than a purely professional one.

In order to investigate the relationship between planning, risk and ethics, the paper addresses a key theme in ethical debates the distinction between teleological and deontological approaches; the former is concerned with whether the outcome by itself is good or bad, while the latter focuses on the rightness of the action (Campbell and Marshal, 1999). Acknowledging the need to investigate simultaneously the action (i.e. the planning process) and its outcome (i.e. the physical environment), the paper is based on two-stage research framework (see figure 1):

i. **The planning process** is analyzed with an emphasis on prioritization (i.e. which risks are being confronted and which are being ignored and why?) and responsibility (i.e. how do planners perceive their role and responsibility regarding these risks, the city and the public?). These aspects are explored using in-depth interviews with planners in the public and private sectors, observations in relevant meetings and roundtables, as well as a survey of plans, reports documents and transcripts.

ii. **The physical environment** is analyzed with an emphasis on resources and tools (i.e. how are these perceptions of risk concretized in the urban environment, through urban planning and design?). This is explored through a spatial analysis of plans and the built environment, using three spatial parameters that reflect questions of power, politics, control, equality and representation:

The built form, including land uses, anchor institutions, typologies and regulation, which reflect issues such as the distribution of municipal resources and the promotion of certain target audiences, activities and goals.

The urban language, including the urban design of public spaces and street furniture, which reflect issues such as place making, branding, creating a desired image, memory and history.

Connectivity, including motorized and pedestrian traffic, public transportation, the relationship between different areas and the movement through space, which reflect issues such as accessibility, freedom of movement, boundaries, restrictions, mix and separation, security and control.

This framework is employed in order to investigate the urban regeneration of Jerusal

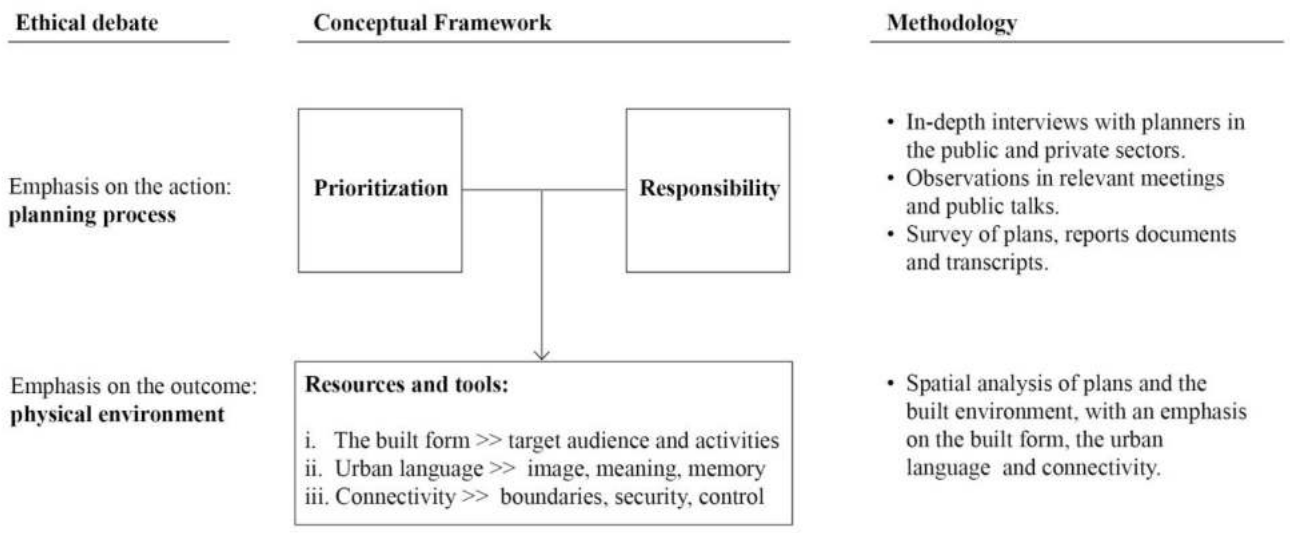


**Figure 1.** conceptual-methodological framework

## C. Case study

Jerusalem is Israel s largest city, with a population that exceeds 800,000 (appro 36% Palestinians).[2] The city has grown substantially since the annexation of East Jerusalem in 1967. During the annexation, 28 Palestinian villages and towns were incorporated as neighborhoods in Jerusalem (B Tselem, 1995). They have expanded significantly in the last five decades, and at the s time, Jewish neighborhoods were constructed in East Jerusalem as a way to modulate this growth and to prevent an urban continuum of a future Palestinian city (Braier, 2013).[3]

Jerusalem was selected as a case study for two main reasons. First, as a city under dispute, Jerusalem is not shaped by a single major event but rather by multiple risks and uncertainties. Second, as a contested urban environment in an asymmetrical power balance, Jerusalem does not only represent a case of uneven vulnerability but also a case in which one man s risk may be another man's desire

The paper focuses on the changes that were planned and implemented in the city center in the last fifteen years. Attempts to reinforce the geographic center of Jerusalem were made since the annexation of east Jerusalem in 1967, in an effort to construct a "united city" (Ramon, 2011). However, these were unable to stop the deterioration of the area. The deterioration reached a pinnacle point in the late 1990s and early 2000s, when dozens of people were killed and hundreds were wounded in over ten suicide bombings.[4]

At the same time, two consecutive plans for the urban regeneration of the city center were submitted, the first in 2000 and the second in 2003. The plans were integrated into the Jerusalem 2 (2009) and its introductory reports (2002, 2004). These plans attempted to *"inject new life to the streets of the city center"* (Urban Regeneration Plan, 2003, pp.15) and focused on densification and diversification of land uses in the city center, improving transportation and accessibility, creating employment opportunities, construction of anchor institutions and upgrading the public space. In 2001, the Jerusalem Center Development Company ("Eden") was established as a sub-company of the Jerusalem Development Authority, with the purpose of initiating and implementing both physical projects and economic initiatives. During these years, the city erected a light rail along Jaffa Street, the city's main commercial axis that connects the city entrance with the Old City. Apart from connecting the city center to remote (mostly Jewish) neighborhoods, the light rail project re-shaped the city center itself: The main section of Jaffa Street was completely renovated, vehicular traffic was banned, the street was re-paved, light rail stations were constructed and new street furniture was installed.

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[2] The majority of the Palestinian population in Jerusalem holds a permanent residency status and not a full citizenship. This status entitles them to vote in the municipal elections but not in the national ones. Furthermore, their status is dependent on their place of residency and may be revoked if they move out of the city (Braier, 2013).

[3] The Jewish urban growth is characterized by the construction of new neighborhoods, which are usually autonomous and spatially isolated. Palestinian urban growth, on the other hand, is characterized by the expansion of existing neighborhoods.

[4] From 1989 to 2003, Jerusalem has witnessed 73 terror attacks, which killed 283 people and injured 2067 more than in any other city in Israel (Savitch, 2005). In the second half of the 1990 s suicide bombings have become threat in the city. Suicide attacks mainly targeted the city s central areas, such as Jaffa Street as ( Yehuda pedestrian mall (09/04/1997, 5 deaths), Mahane Yehuda market (07/30/1997, 16 deaths) and the Central Bus Station (25/02/1996, 26 deaths).

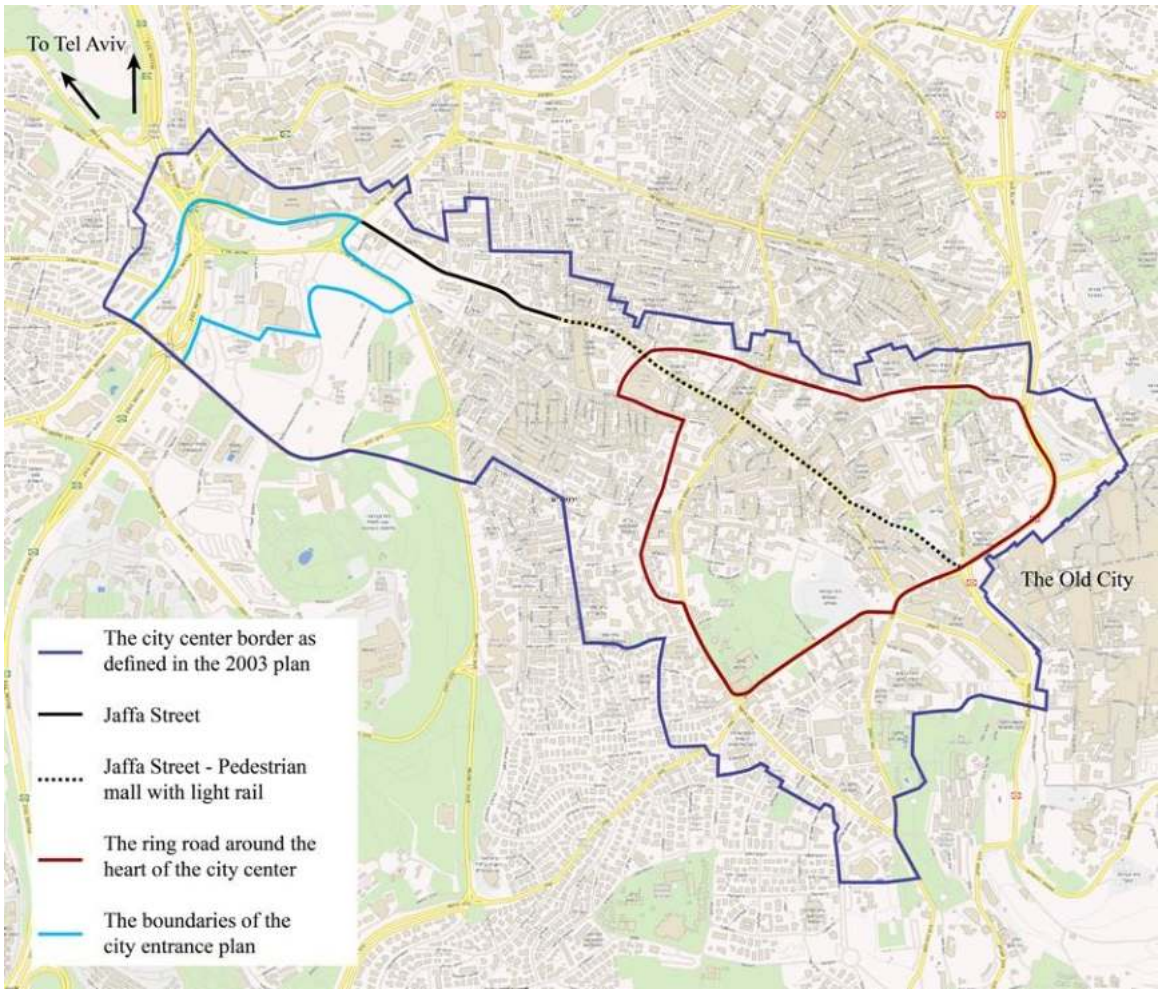



**Figure 2.** Jerusalem s city center as defined in the 2003 plan

The trigger for the urban regeneration of the city center may be traced back to a double paradigmatic shift. The first shift occurred in the planning paradigm. Following decades of suburbanization, planners and decision makers re-discovered the city center as the main anchor of the city. While a senior planner stated that this decision is purely professional (interview, March 2014), it is also tied to a change in the political paradigm. The suburbanization of the 1970s and 1980s was characterized by a construction of new Jewish neighborhoods in East Jerusalem. Today, the municipality's ability to sprawl to the east is limited for political reasons. While planners insist the policy did not change officially, they often also state that the decision to build (or to sustain from building) new projects in East Jerusalem is determined by national and international dynamics and is ex-territorial to the planning establishment and to the municipality itself (interviews, March and May, 2014). In light of these limitations, the city promotes urban regeneration and densification of the inner city, as stated by the city s c *towards urban regeneration. [If] anyone thinks that we will continue to go for another hill and another hill and another hil*l, it will not happen (Israeli Planners Association annual conference, February 2014).

Given the violent history of the area and the unstable political climate in Jerusalem, the urban regeneration of the city center raises several questions: Were security risks considered in the plans? Were other risks taken under consideration? How do planners perceive their responsibility towards different risks and how do these risks influence the urban environment? The next section will respond to these questions and analyze the Risk Culture that emerges out of the city center regeneration plans.

## D. Findings: between security and economic-demographic risks

In accordance with the conceptual framework that was presented above, the findings are presented in two stages: the first stage analyzes the way planners prioritize risks and perceive their professional responsibility. The second stage analyzes the concretization of these risks in the urban environment, based on three spatial parameters.

### Planners priorities and responsibilities

The planners that were interviewed were asked to name the most significant risks that pose a threat to the city s future. At the same time, based on the definition of risk as an anticipatio crisis, further perceived risks were extracted from interviews, reports, transcripts and plans. These accounts do not use the term risk directly yet they do express a state of em upcoming disaster or crisis. Findings do not portray one unified image but rather uncover multiple risks that can be divided into two groups: (a) security risks, namely terror attacks and violent eruptions; (b) economic-demographic risks, namely the escalation of social conflicts and loss of balance between different social groups, and in particular, the out-migration of economic activities and Jewish secular residents. As this section shows, although both risks are perceived as important, planner's responsibility towards them differs significantly.

*Economic-demographic risk: high responsibility*

In general, the Jewish Ultra-Orthodox and Palestinian populations are often described as unproductive in terms of labor and subsequently as one of the main causes for Jerusalem s low socio-economic status. Therefore, planners view the growth of these populations and the out-migration of the Jewish secular population as an economic risk to the city's future.[5] While for the Palestinian population the Master Plan does acknowledge some growth (from 30% to 40%), the Ultra-Orthodox Jews are seen a real threat for the city's economic independence, with Jerusalem facing a destruction *in twenty years this could be a backward frontier town supported by the state"* (interview, March 2014). The secular Jewish population is described as feeling threatened (interview, May 2014) and as a minority group on decline (Master Plan

[5] According to the Israeli Central Bureau of Statistics, the percentage of orthodox Jews in Jerusa grown from 26.5 in the years 2002-2007 to 31.2 in the years 2008-2014. The percentage of secular Jews has dropped from 22.5 to 19.4 in the same period of time (CBS, 2014).

Report 4, 2004: 223). While the language in the official documents is neutral, in interviews and talks planners use blunt language to describe the Ultra-Orthodox population, for instance: *"entire neighborhoods are falling", "they are most likely to spread south and conquer Jaffa Street"* (interview, March 2014) and *"the sprawl of the Ultra-Orthodox population is shredding the city"* (high ranking former public official, "The Challenge of Jerusalem" conference, March 2014). [6]

The head of the 2003 urban regeneration planning team confirmed that these issues were on the agenda *all the time. The intention was to revive the city center* for everyone there was a sort of feeling *emergency, that if the city center continues to deteriorate it will become an Ultra-Orthodox residential* neighborhood and will cease to be a place for everyone (interview, December 2014). An Ultra-O majority in the city center is expected to change the situation in Jerusalem, by allowing one *group to transfer the center* from the hands of the public to the hand of a community ( Report 4, 2004: 223). Demographic and economic issues are constantly intertwined. For instance, the 2003 regeneration plan lists a set of problems, the first of which states that Jerusalem is a relatively poor *city (economically), its population is polarized, and out-migration is carried out. These problems are reflected also in the state of the city center"* (Urban Regeneration Plan, 2003, pp. 13).

This type of risk is seen as integral to planning. One senior planner states that environmental or economic risks are risks that *"planning can completely control. Moreover, I think that these things are a result of planning, I mean that if you allow the city to be built in a non-*balanced way this is something that i *completely in the hands of the planners, in my opinion. Of course it is also influenced by other things, but 80-90% of it is in the hands of planners and planning can change it"* (interview, May 2014).

*Security risk: low responsibility*

The terror attacks are described in interviews and publications as the heaviest burden on the city center and a significant factor in its deterioration (interview, December 2014; Vitman, 2011), transforming it into a ghost town, devoid of people (interview, July 2014). Yet, although security instability peaked when they drafted the plans (in the early 2000's), planners assert that they did not address any security risks in the planning process. As a senior planner explains: It wasn t a consideration at any moment. It wa *reality, painful, bitter, an everyday reality during those weeks. [You] go to the city center, sit in a café,* and one week later, this cafØ explodes it was the center of the conflict [7] (intervie This understanding of security risks as irrelevant or to planning has not changed in recent years, although the discourse revolving urban resilience has become more prominent in planning literature and practice (interview, July 2014).

[6] A demographic-driven policy is not new to Israel. Criticized as "demographobia", these types of policies often see the Arab population as a threat to Jewish existence (Khamaisi, 2011). The discourse in Jerusalem exposes an additional economic-religious demographobia targeting Orthodox residents, as part of a neo-liberal agenda that promotes "productive" populations.

[7] It is important to note that the plan occasionally addresses the need to create a sense of comfort and personal safety (Regeneration Plan, 2003, pp. 15).

Findings reveal two possible explanations for this disregard: first, planning is not considered to be an effective measure to treat security risks, as a senior planner explains: *"some things you can deal with, some things you can't, for instance a security threat to tell you that this is responsible for or to greatly influence? no"* (interview, May 2014). Similarly, the city architect expressed skepticism regarding urban design's ability to eliminate terrorist threats, since erecting fences and protective measures might only transfer the risk from one place to another (interview, July 2014). This reflects an understanding of security risks as constant, while planning actions merely relocate it and not abolish it altogether.

Second, since these were long-term plans, planners describe looking into the distant future from an optimistic point of view, *"as if this cloud will lift from over our heads"* (interview, March 2014). All planners interviewed in the research state that they are optimistic, and the planning profession is characterized *as "optimistic by definition"* (interview, December 2014). Being optimistic is described as a mission (interview, December 2014), without which "we don t have a right to exist as plann (interview, July 2014).

**Resources and tools**

The previous section illustrated the different attitudes towards economic-demographic and security risks. The current section analyzes the concretization of these risks in the urban environment by analyzing the spatial changes that were planned and implemented in the city center. It will show that although the security risks were officially disregarded, some of the changes can be understood as addressing security issues, either indirectly or in retrospect. Based on the conceptual framework presented above, the changes are analyzed using three spatial parameters: built form, urban language and connectivity.

*Economic-demographic risk: "creating a modern city for a liberal population"*

As mentioned, the urban regeneration of the city center is part of an attempt to stop the area's economic deterioration, which was feared to be followed and accelerated by the further sprawl of the Ultra-Orthodox population. The first component, the built form, is the most significant tool in modifying these trends. An emphasis is put on encouraging commercial activities, employment and tourism, while housing remains a relatively minor land use. This is evident in the plan for the city entrance, which was not yet implemented and is expected to consist of 12 high-rise buildings containing offices, hotels, congress halls, entertainment and commercial activities (see figure 3). The area will not contain any residential units (district planning committee meeting, 29/07/2008;). The suggested plan is expected to encourage economic activities and to change the overall orientation of the city center towards the west, i.e. towards Tel Aviv, Israel's financial center (see figure 2). Furthermore, based on the assumption that *"in an urban area there is no void"* (Report 4, 2003, pp. 223), the lack of residential units would prevent Ultra-Orthodox residents from moving into the area. Since this is a sensitive subject, this is often only implied rather than stated explicitly. For instance, in a district planning committee meeting (29/07/2008), one of the participants implied that adding residential units in this area would create a continuum between two

neighborhoods, Romema and Giv'at Shaul (both characterized by mainly Ultra-Orthodox and religious residents, R.B.).

Nevertheless, the plan does recommend increasing the number of residential units in other areas of the city center. Although the plan s official goal is to attract a variety of populations, it recommer enhance the following housing mix: small apartment for students and young families; unique units in historic neighborhoods, and luxury apartments for an affluent population (Regeneration Plan, 2003: 70-71) all of which do not address the needs of the Ultra-Orthodox population, which is characterized by large families and relatively low income.

These attempts were surfaced more directly in interviews, in which planners describe high-rises and luxury apartments as unsuitable for Ultra-Orthodox populations. The head of the Master Plan planning team summarizes these attempts:

> *"We tried to build a plan that would create a modern city fit for a liberal* population We wanted high construction throughout Jaffa Street, why? *Because we said that high construction is the barrier preventing the Ultra-Orthodox population from penetrating into the area. We said that if the city loses its center, then there would be a problem. And we said that since they have reached Hanevi'im Street they are likely to continue to spread south and conquer Jaffa Street as well. That is why we said that Jaffa Street needs to be mainly offices, commerce and employment, not housing, and high construction" (interview, March 2014).*

Not all of the densification plans have been implemented, yet recent projects in the city center follow these lines. Several luxury apartment buildings and boutique hotels were (and still are) constructed just north of Jaffa Street and south of Hanevi'im Street. The momentum in the city, said one planner, *"has created a sort of market that is also and this needs to be said carefully but yes, it is definitely a market that appeals to a higher economic status than the one in the heart of the Ultra-Orthodox city"* (interview, December 2014).

The second component, the urban language, is used in order to create an attractive commercial street that will be conceptualized and managed as a shopping mall (Urban Regeneration Plan, 2003, pp. 70). In addition to the joint management, the "mallification" of the street is supported by a cohesive high-quality urban design, which is meant to re-brand the street in a new image (see figure 4). The beautification of the public realm is an explicit part of the plan s aim to compete with the suburbs an attract young families and visitors and to increase the property value of adjacent properties (Urban Regeneration Plan, 2003, pp. 71, 81). As part of this goal, the main section of Jaffa Street and additional 20 streets were completely renovated, and transformed from an urban space that *"looked like garbage ten years ago"* (interview, May 2014) to *"the most attractive and beautiful street in the country"* (the city chief architect, round table, May 2015).

These planning actions are tied to the third component, connectivity. The renewed public sphere in the heart of the city is pedestrian-friendly (see figure 4). It is encircled by a ring road, with multiple parking lots spread along the perimeter. The light rail connects the city center to residential neighborhoods (Jewish and Palestinian) and improves accessibility to the area. These changes can be analyzed from two points of view. On one hand, these actions have re-created the city center as a shared space for diverse populations. On the other hand, the same Jaffa Street or the planned city entrance are mentioned and constructed as a barrier, preventing the Ultra-Orthodox population from sprawling any further.

**Figure 3. (left)** a rendering of the planned entrance to the city (Farhi Zafrir Architects)

**Figure 4. (right)** the renovated Jaffa Street

*Security risk: "it's in everyone's interest to keep the peace"*

As elaborated above, although they admitted that the terror attacks do indeed constitute a significant factor in the city center's deterioration, planners stated that these security risks were not a consideration during the planning process. Yet, it is possible to identify three different ways in which security risks influence the urban environment: compensation (via the built form), negation (via the urban language), and regulated movement (via the connectivity).

The first component, the built form, was used as tool to compensate investors and encourage new construction in times of high security instability. In order to do so, potential investors were offered increased building rights, for instance when contracting or renovating hotels. Two senior planners from the district planning committee have spoken of these practices:

*Planner A: "When we see [in] approved plans, suddenly a huge building that does not fit, we say: 'oh, it was during the Intifada*

*Researcher: Why?*

*Planner B: "To compensate the people"*

*Planner A: "It was a terrible period, all the cafés closed down, people were scared to walk in the street, and every investor that came, they caught him and begged: 'build whatever you want'."*

(Interview, May 2014)

This wish to increase the tourist activity is tied to another form of economic compensation, as planners view the increased tourist activity as creating a shared economic interest and thus reducing security risks: *"This is also connected to the economic resilience, because it's a place of employment that provides income to low-income populations as well, Arabs and so forth... It's in everyone's interest to keep the peace, because they make a living"* (interview, May 2014).

The second component, the urban language, reflects a different approach towards security risks, one of negation and intentional disregard. The new urban language of Jaffa Street and the surrounding area is not based on security measures. On the contrary it opts for an open, barrier-free urban design. For instance, the light rail stations are completely open to the street, without any fences, despite earlier suggestions to construct them as enclosed structures with a security perimeter (interview, July 2014; see figures 5 and 6). As a design philosophy, the urban design of the public sphere is based on what the city chief architects describes as "universal urban design" (interview, July 2014), which is based on accessibility, coherence and cohesiveness of the public space. The universal nature of the urban design is also manifested in numerous references to Europe and the United States as precedents and as justifications for planning decisions (Urban Regeneration Plan, 2003). Creating a completely new image (and a universal one) may also have helped to disassociate the city center from its recent violent history, dimming old memories and images of the place. *"When the city changes its appearance, I'm sure it has an effect"*, argues the city architect, "*they forget it was dirty and that things were terrible here"* (interview, July 2014).

The creation of a well-ordered and cohesive urban space is further supported by the third dimension, connectivity, which has a potential to regulate the movement through space, especially within the ring road, due to the moderate vehicular traffic within its perimeter and the absolute ban on cars along Jaffa Street. Furthermore, the light rail line is the only form of public transportation along the street, replacing the buses that passed there in the past. Its stations are under constant surveillance, using CCTV, security guards and public announcement systems. It is important to note that while this regulated movement can potentially be used for policing and security purposes, it was achieved unintentionally.

In addition, planners and public officials from the municipality's emergency management department describe the increased accessibility to the city center, the shared infrastructure and the subsequent social

mix as potentially diminishing security risks.[8] They offer two explanations to this argument. The first, more optimistic, views the city s heterogeneity as contributing to its resilienc Similarly, the city center is described as *"the place to meet, the place for dialog, the place for tolerance"* (interview, December 2014). The second, more pragmatic, is based on the premise that that if Jews and Palestinians share the same space they also share the same risk: *"if the train explodes they need to understand that everyone explodes*. Fatma and Shoshanna explode together. (interview, May 2014).

**Figure 6, 7.** light rail stations along Jaffa Street, completely open to the street.

[8] In this respect, it is important to note that only two Palestinian neighborhoods, Shuafat and Beit Hanina, are connected to the light rail line. Both are considered to be of relatively high socio-economic status in comparison to other Palestinian neighborhoods in East Jerusalem.

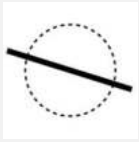
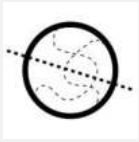
| **Risk culture emerging from the city center regeneration plans** | | | | |
|---|---|---|---|---|
| | **Planning process >> priorities and responsibilities** | **Physical outcome >> resources and tools** | | |
| | | **Built form** | **Urban language** | **Connectivity** |
| **Economic-demographic risk** | Can be neutralized or diminished; central to planning and an integral part of planners' professional responsibility | Land uses: less housing, more commercial activities.<br><br>Housing typologies: high rises, small apartments, luxury buildings. | "Mallification" of the street (reorganizing and designing the street as a mall) | Jaffa Street and the city s entran e as a barrier to the sprawl of the Ultra-Orthodox population<br><br>  |
| **Security risk** | Constant, cannot be neutralized (at least not by planning); exterior to the planning field and its professional responsibility. | Building rights: flexible regulation<br><br>Economic activities and shared economic interests as diminishing security risks<br><br>**> Compensation** | Rebranding the city center image, disassociating the place from its violent history<br><br>**> Negation** | Diverse groups share the same space and same risk.<br><br>Potential to regulate the movement through space.<br><br>  <br><br>**> Regulated movement** |

**Figure 7.** summary of findings

### E. Summary of findings: fixed responsibilities, overlapping interests

What is the Risk Culture that emerges from the urban regeneration of Jerusalem s risks perceived, defined and confronted by planners? At a first glance, it seems that the risk culture clearly distinguishes between economic-demographic and security risks. Furthermore, planners assume responsibility towards the former and disassociate themselves from the latter. However, when analyzing their temporal and spatial characteristics, the distinction between the two risks becomes more ambiguous.

The temporal characteristics of these two risks share some similarities. The economic-demographic risk is a gradual process, without a clear beginning or an end. Likewise, planners also view the security situation in Jerusalem as a chain of events; a state of constant risk that cannot be completely neutralized. This challenges the distinction between event and crisis as distinct concepts. Here, the event does not represent a critical rupture or a sudden break from the status quo (Gotham and Greenberg, 2014), but an extreme occurrence in an already erratic sequence. This view of risk as constant has some common grounds with the idea that it is best to accommodate natural risks, i.e. to go along with rather than to try to defeat ecological processes (Fainstein, 2015). Here, however, the attitude of acceptance is extended from natural to man-made risks, and in particular to security ones.

The spatial analysis uncovers further points of conjunction between security and economic interests. First, in order to address the economic-demographic risk, planners aimed to create a social mix and encourage economic activities. Yet, these are also seen by planners as a means to diminish security risks, since they create a shared space with shared risks, shared opportunities and shared (economic) interests. The economic growth and increased tourist activity are hoped to prevent violent eruptions. Furthermore, the renovation, "mallification" and re-branding of the public sphere were done in order to increase the street's competiveness and attractiveness. However, these actions may also have helped to create a well-organized, regulated and potentially delineated space, as well as to disassociate the area from its previous image, which was tied to disorder, violence and terror.

Another correlation between the two risks emerges from the attempt to frame Jerusalem as a "normal" city, with "normal" population (liberal, secular), "normal" goals (economic growth), and without extreme risks (terror attacks). Planners insistence on normality is demonstrated by their emphasis o and the multiple references to cities in Europe and the United States. By doing so, they challenge the idea of Jerusalem as a particular event in space. This echoes their perception of risk as constant, which can be understood as a way to challenge the idea of "risk" as a particular event in time.

## F. Debate

The last section of the paper is organized around three core questions. First, why do planners perceive their responsibility as fixed, addressing certain risks while disregarding others? One apparent explanation is that security risks are much more controversial than the allegedly neutral goal of economic prosperity. While a terror attack targets one population (either Palestinian or Jewish), an economic crisis threatens to harm the city as a whole. Another possible explanation can read this insistence on normality as a resistance to the centrality of risks in Israeli political discourse and daily lives, as well as in current planning literature. According to this thesis, urban planners are trying to create shared infrastructures and to enable normal routines, assuming that the political and security risks will be resolved on the national-political level. As opposed to the first explanation, which sees planners as passive and avoiding confrontation, the second type of explanation assigns them a much more active role. Their desire to create a normal and global city, which is regenerated as an economic and tourist center, surpasses the frequent tendency to fortify the urban space and to erect defensive cordons around strategic sites (Coaffee and Rogers, 2008). This is a significant statement especially in light of persisting security threats in Jerusalem, and although terrorism tends to target places with strategic or symbolic value such as city centers (Savitch, 2005).

This dismissal of security risks leads to the next question: if security risks were not officially considered in the plans, why some spatial changes can be understood retroactively as addressing them? In other words, why is there a correlation between economic and security risks? The plan to create a mall-like urban space in the middle of Jerusalem was initially meant to attract capital and economic investments. Yet, it shares a common logic with security interests. The mallification" of the urban environment as a controlled and well-ordered space, demonstrating the connection between policing practices and entrepreneurial urbanism, with security and order being a necessary precondition for neo-liberal urban regeneration (Samara, 2010). Thus, the regeneration of the city center can be understood as "post-crisis re-branding" (Gotham and Greenberg, 2014), which creates a pleasant and unintimidating urban environment as a means to suppress the harsh reality and to avoid the root causes of the problem for as long as possible (Ellin, 1997).

What are the ethical implications of planning for certain future risks while disregarding others? On one hand, it can be argued that ignoring certain risks has its benefits. It can allow planners to overcome the obsession with imagining the worst-case scenario (Neocleous, 2013), in which crisis is ubi the disaster-to-come is inevitable (Wakefield and Braun, 2014: 5). The fixation on risk may be then replaced with a positive vision and a conflict of principles can be reinstated as a conflict of interests, as a way to facilitate compromise (Sanyal, 2002).

On the other hand, while the paper acknowledges the importance to resist the fortification of urban spaces, some words of caution are required. Planners should be aware that the aspiration for normality is legitimate, and perhaps even beneficial, but it is also far from neutral. As Susan Fainstein argues: "normality tends to be what is in the interests of property owners [...] What ap

ontological security for many, even while exacerbating the insecurity of others" (Fainstein, 2015). In Jerusalem, the so-called normal vision of a universal and economically dependent city promotes a certain economic-demographic profile, while ignoring two thirds of the city s population, struggles and political conflicts.

Moreover, planners perception of certain risks as stemming from exterior, complex and uncontroll forces may lead to a denial of existing power relations (Swyngedouw, 2010). In other words, since planners do not see themselves as part of the problem they do not see themselves as part of the solution either. However, ignoring risks in a conflictual arena may reflect a denial of the conflict itself, as well as urban planning s role in perpetuating unjust circumstances. By disassociating from controversial risks and assuming a fixed responsibility, planners are in danger of assuming a professional and neutral fa ade in an extremely political and conflictual arena.

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## Interviews and observations

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Interview, head of the Master Plan planning team, March 2014

Interview, senior planner (a) at the District Planning Committee, May 2014

Interview, senior planner (b) at the District Planning Committee, May 2014

Interview, senior planner at the Municipal Planning Department, May 2014

Interview, the city chief architect, July 2014.

Lecture, high ranking former public official, "The Challenge of Jerusalem" conference, Netanya Academic College, March 2014

Lecture, the city chief planner, The Israeli Planning Association Annual Conference, Bezalel Acaademy for the Arts, Jerusalem, February 2014

Round table, "Jerusalem 2020: Five Years Plan for Competitiveness and Economic Growth, Jerusalem" Conference, Israel Museum, Jerusalem, July 2015.

# 25 YEARS AFTER TRANSFORMATION: CHANGES IN SPATIAL DISTRIBUTION OF PRODUCTION ACTIVITIES IN THE CASE STUDY OF WROCLAW, POLAND.

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Keywords: industry, suburbanisation, spatial distribution of activities

**Abstract**

*In the post-industrial, free-market economy, the ability of spatial planning to truly influence the location choices of business owners is limited, while the vast majority of means of production are in non-public hands. On top of that, coordinating spatial policies and decisions between administrative entities is a major challenge in numerous places in Europe. This paper offers a convenient case study of a medium-sized European city (Wroclaw, Poland) and an analysis of the spatial management complication which has observable consequences for the spatial structure and economic functioning of the city.*
*The paper examines the situation through the lens of production and manufacturing activities (with a cautious approach to the term industry). The case is analysed in two inseparable ways: spatial and economic; parallel to that, the discussion is developed on the issue of the interconnection of policy-*
making in the metropolitan area (the city vs its surrounding rural communes).
*the changes in employment in subsequent sectors of the metropolitan area in the 25 years since the political transformation of Poland while keeping an eye on the physical, spatial changes of the aforementioned metropolitan area.*
*The secondary output of the paper is outlining the suburbanisation processes of large Polish cities, however as seen not from the most frequently presented perspectives (such as housing or transportation), but from a more economy- and spatial responsibility-focused one.*

## 1. Introduction.

Poland, along with all post-communist countries of Central Europe, has been subject to major changes in its spatial structure, and the functioning and growth of it, in the period of the twenty-five years which had passed since the political transformation. Due to the totality of change the switch from planned economy to free market and from fa ade citizen rights to direct democrac space management can hardly be called gradual or well-groomed. This paper examines a very narrow fragment of the otherwise massive topic, as it focuses on only a minute portion of the territory of Poland Wroclaw, the country s fourth largest city, and its agglomeration and just c economic phenomena which has its exemplification in spatial phenomena the industry sector or, in more precise words, production activities (the terminology challenge is discussed shortly later in the paper). This paper is a stub of research conducted at the Department of Spatial Planning, Faculty of Architecture, Wroclaw University of Technology, touching on the issue of spatial behaviour of production activities in middle-sized cities of Central Europe and will include three more cities similar in size and history to Wroclaw: two Polish ones (Poznan and Szczecin), and one Eastern German one (Dresden).

## 2. Background.

In order for an outlook of the very specific case, which is the focus of this paper, to be understandable better, a picture of underlying phenomena is worthy of being painted. This includes observations of extremely general nature as well as ones of more particular, local character.

The fundamentally good and desired value of the ability of societies and communities to make their own decisions collectively, through their representatives, instead of ones made in an arbitrary way by any type of officials, has a trade-off side. The existence of private property means that citizens are free to fully own material goods, among which land, and therefore space, is a prominent feature. In fact, elements of space, as buildings and plots of open land may be dubbed, have throughout the history of human civilisation been considered one of the topmost valuable and tradable goods, in the realm of material ones rivalled perhaps only by food. The free real estate market means that individuals are able and free to make their own, singular decisions concerning the land and buildings they own, which in multitude of owners and decisions builds up to a great challenge in coordinating the transformations of the common space – a difficulty significantly reduced by limitations in private property and commonality of decisions: an obvious feature of any semi-free political system.

A surprisingly unknown realisation is the one that space, in all scales considered together, is the arena for literally all that happens and can be named – outside of the human mind. This lies at the fundament of why the construction of laws and regulations concerning space is an inexplicably complex task: legal provisions dealing with space in fact indirectly touch upon most facets of life. All over the world, spatial regulations are far from perfect, especially if their functioning is relatively young and the ability of the public to influence it hardly has an established nature, which is the case in Poland. Among numerous shortcomings of the Polish spatial law, the following can be named in an attempt to clarify the setting of the spatial changes of the last 25 years:

- soft and imperfectly consistent strategic documents:
    - a regularly-updated national spatial development plan is in force, but its power and efficiency in executing spatial transformations are limited;
    - regional spatial strategies are well-thought-through, but similarly may be accused of containing provisions which are soft and difficult to apply in conformity with the original intent or scope;
    - on the lowest administrative level there is a harmful gap in the power of the general planning document which every commune has in force and updates every several years (the so-called *Study of conditions and directions of spatial development* of a commune) and the specific, smaller-area *local land use plans*;
- all levels of planning have been marked by unimpressive public participation standards. However, currently a new *Act on spatial planning* is being drafted and it is to have public participation mechanisms inscribed in planning processes incomparably more thoroughly.

The Studies of conditions and directions, independent of quality, do not carry executive or punitive power, and are in fact well-informed guidelines which local land use plans are supposed to follow (but not have to); the *local plans* are the only documents in the Polish planning system which have actual executional power. The difficulties, however, do not end here, as *local plans*:

a) do not cover 100% of the surface of all communes (in other words, only a minority of communes is fully covered with *local land use plans*);
b) do not sum up to any regional or sub-regional larger picture;
c) may be changed or originally created in a way which suits short-term or particular goals of local politicians or outside investors (and frequently that is the case, especially in less privileged areas).

This leads to perhaps the most natural explanation of decisions made by local authorities: the economic factors. It is clear that just a minuscule proportion of communes, and not even always, is able to afford choosing and picking its investors. In the vast majority of scenarios, communes race to attract investors and if they succeed, they largely conform to the investors wi to no surprise, taking into account the post-transformation reality of radical, rapid change and the need (or necessity) to secure the economic fundamentals first (such as jobs, tax base, territorial brand), and viewing the quality of space as a desirable, but undoubtedly secondary goal.

An additional argument could be made here concerning the psychology of the post-communist societies. It might be possible to defend a claim that due to being for five decades deprived of such seemingly natural privileges as private property, freedom to travel, move home, or change jobs, citizens of these countries, in collective, are prone to compensate on the ability to consume. If such an assumption is followed, then correlation can be made to the drive to own material goods therefore the preference for private cars over public transportation or for (often suburban) home ownership over (mostly in-city) apartment rental. This, globally, contributes more to *urban sprawl* phenomena than *compact-* or *slow-city* ideas.

Moreover, the reverse from the local scale i.e. the global one has come into play in the last two decades with a challenging effect. First of all, two sides of the economic landscape have opened colossally widely: the competition and the opportunity. The scope of what local authorities may think of achieving has broadened to an extent, and that sometimes puts a serious strain on the communes resourcefulness and imaginativeness. Meanwhile, the very-open and very-free market makes everybody equally eligible for the investment sweepstakes, therefore pushing competition to new levels; this competition, naturally, brings both good results (such as creation of better conditions for investors, which leads to successful investment, which benefits whole regions) and bad ones (lowering the investment conditions too low or stepping away from other standards, thus hurting the regional employment market more than helping it). With all of this in mind, the communes of the region in question Lower Silesia weigh their strengths and weaknesses in their strategies and in negotiations with potential investors. In a generalised description, among strengths of Lower Silesian communes one could name the region s international and interregional location, relatively network and external transportation connections, relatively attractive workforce understood as a product of cost and qualification, and low salary requirements (for Western-world standards). Among weaknesses, one could point to the frequently-reminded time limitation of the low-salary advantage (as it will stop being an advantage along with the gradual overall increase in wealth of the Polish society), and a relatively small internal market.

Finally, the general national policy in the realm of transportation needs to be commented on. In Poland, the whole post-transformation era has been marked by extensive effort to develop vehicular traffic[1], unparalleled in attempts to improve or maintain, as they were operational in the socialist era railways[2] and inland navigation. Undoubtedly, the development and improvement of the road network in Poland, highlighted by the ever-expanding length of motorways, is more than significant for the country s economy and the quality of life; it does, however, benefit spat residential and commercial which favours perimeter locations over downtown ones. The above general description is particularly true in the case of Lower Silesia, which had the luck of being equipped with a long, existing stretch of a pre-war German motorway (A4), which later was among

[1] The number of cars in Poland grew from 5,26 million in 1990 to 17,24 mil. in 2010. (Zdanowski 2012)
[2] The number of passengers of the railway transportation in a year was at 1 billion in 1985, 0,79 bil. in 1990, 0,36 bil. in 2000, and 0,26 bil. in 2010. The average citizen of Switzerland travels by train 43 times in a year (European high); of the Czech Republic (also a post-communist country) 17,5 times; of Poland 7 times. (Zdanowski 2012)

the first to be extended further east and west; that was coupled with a significant decrease in available regional railway connections and a decline in the capabilities of the waterways.

## 3. Resulting situation.

The background described above bears consequences which strongly influence the challenges the Polish planning system faces. Primarily, territorial competition is born, which, although fundamentally healthy, is easy to skew towards chaos. This type of competition naturally leads to *territorial marketing* which is a phenomenon significant enough to be a separate class taught to spatial planning students of Polish universities. Territorial competition and marketing accompanying it do not help the cause of territorial cooperation or cohesion. The higher the level of strategic spatial plan, the easier the cooperation is to envisage and assume; the more local the level in question is, the more neighbouring administrative entities are likely to fight each other instead of cooperating.
Clearly, the lack of truly executable coordination of spatial development results in chaos and conflicts in transportation (a city vs. its suburbs and agglomeration[3]), in taxation (the situation where a majority of residents of areas just outside city limits use numerous services, including these financed from the public [municipal] treasury, in this city, while paying their taxes in the neighbouring commune they live in), in the quality of work and free time (time spent on commuting, increased difficulty in accessing recreation and culture), or image-wise (the arguable visual appeal of 1990s 2000s suburban urbanisation, and the embarrassing reputation of an agglomeratio traffic jams). To make things more challenging, all above is being said with no attention paid to whether the metropolis itself is working well or not.

## 4. Industry[4] and industrial suburbanisation .

In Poland, between only 2004 and 2010, the number of jobs in predominantly urban regions[5] (to which the Wroclaw agglomeration belongs as one of several in Poland) rose by 20% (Adamczyk 2014). Although the direction of change growth is not surprising, the dynamic of it may be. This figure illustrates the fast urbanisation and the power of the largest settlements in the country. Between 1987 and 2007, the industrial and construction sector employment decreased from 36,3% to 29,0%, but on the way it observed a dip (25,2% in 2001), after which it bounced back a couple of percentage points. The figure for the year 2006 (29,6%) has Poland above the EU-27 average (25,0%), but, for instance, at the exact same share of this sector as in Germany (Zajdel 2010). Two main conclusions can be drawn from here: 1) that the sector of industry and construction still provides for a lot of jobs despite the perceived crash resulting from the decomposition of obscure, heavy socialist-era industry; and 2) that the move towards the western-type economy relying strongly on the so-called services and self-employment is fuelled largely by shift from traditional forms of economy, mostly from agriculture-related professions[6]. The relatively large proportion of industrial jobs is a topic for discussion from a few points of view, particularly in the strategic economic aspect (the idea of reindustrialisation of

[3] In this paper, as well as in all discussions about Polish urbanisation, the word agglomeration is used merel in its everyday, semantic sense, and not in any concrete way meaningful for spatial planning. Poland has no legislation which would establish any structure for major cities and their surrounding settlements. For this and other reasons, local attempts to create agglomeration associations are only subject to their internal success or failure, with no help possible from external legal provisions or mechanisms.
[4] The paper focuses on all production activities of the economy and postulates using the word industry in a broader (ironically, post-industrial) sense than its traditional, relatively pejorative one. Moreover, in the current technological and globalised era, the border between the industry and the service sectors is more blurry than ever.
[5] As classified by Eurostat.
[6] This share still was the highest in Europe in 2006, at 15,6%.

Europe; the question of sustainability of industrial economic growth), and the aspects of ecology and image (the good reputation of green industries vs. the bad classical reputatio general). For the 25 post-transformation years of Polish history, however, the number of available industrial jobs seems even too low for the economic needs of the country, keeping in mind the most dire unemployment phases (20,0% in 2002) and the current, moderate unemployment rate (11,6% for April 2015).

In the regional scale, research shows Wroclaw and Lower Silesia being in an average-to-good situation concerning the industrial sector of the economy. Work efficiency research shows the region as one of the leaders in the country (fig. 1) (Rachwa 2010).

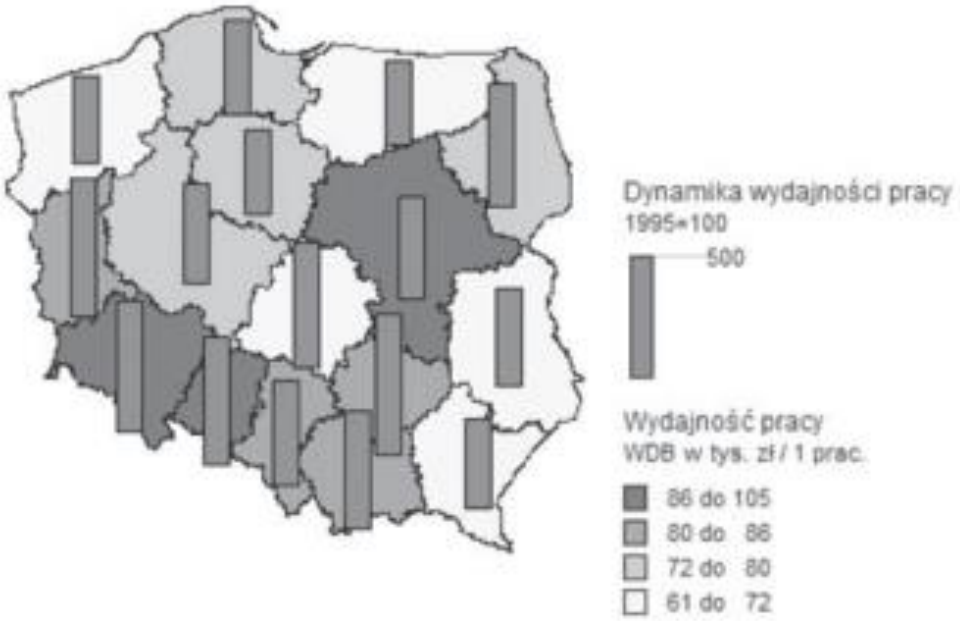


*Figure 1. Work efficiency in Polish regions (2007).* (Rachwa 2010)
*Bar chart: work efficiency dynamics, base value: 1995=100.*
*Colours of regions: work efficiency in thousands of PLN per worker.*

This couples with the region s convenient geographical location in attracting foreign and domestic investment. In a research focusing on innovation potential, Wroclaw was classified as type II: equipped with a well-developed R&D base and weak industrial resources (fig. 2); the referred research points to significant growth of the service sector in this type of cities (Si k

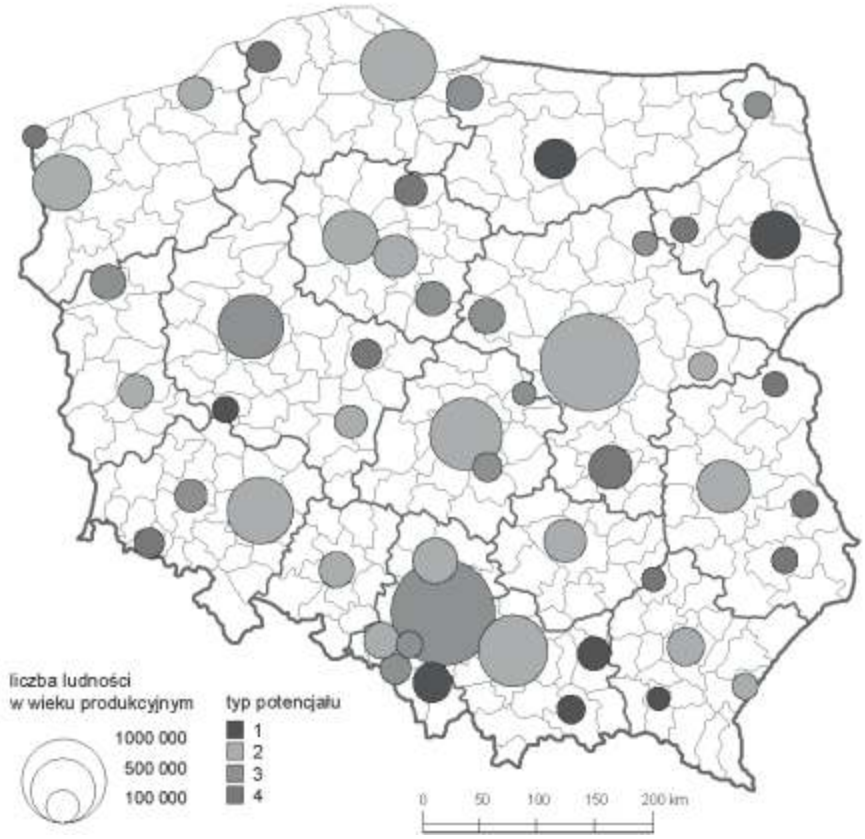


*Figure 2. Classification of Polish cities according to innovation potential type (2008).* (Si ka 2012)
*Circle radius: population in working age.*
*Circle colour: potential type.*

Another reason might be found in the collapse of old, large-scale industries of the previous era and the rise of more modern industries, many of which have geographically settled outside the city limits. With the administrative constraints in mind, in a study of the number of foreign investments attracted by Polish cities between the transformation and 2012, Wroclaw ranks second in the country after Warsaw[7] with 55 of them, and experienced a 6,7% increase in that number between 2008 and 2012 (G bocki 2013). Numbers for all cities would be certain to grow if investment vicinities were taken into account, and in the case of Wroclaw the increase in the count may be significant [future work within this research will explore this topic]. Finally, studies of the economic base of major Polish cities point to Wroclaw as having a solid industrial workforce foundation with some surplus in this sector, despite noticeable industrial job market already in 2008; Przyby a, Gonda-Soroczy ska 2013).

In order to shed some light on industrial suburbanisation , as well as on the difficulties i a cohesive agglomeration spatial policy, and in order to keep the particular focus of the city of Wroclaw in mind, a number of explanations need to be provided. A look on production companies located in downtown areas of cities may serve as a convenient starting point. Primarily, they are subject to their own technological regime, as well as to norms and regulations. When faced with a must to modernise, companies calculate whether it pays them better to invest in modernisation in their

[7] However, the capital drew exponentially more investments than any other city 509 and more than the next 25 cities in the ranking combined. This, again, is an imperfect count due to the seats of multiple companies being located in the capital, which does not necessarily fully represent their geographical business focus.

current location or in construction of new facilities in a new location. Often, the result favours the latter solution, especially since it additionally poses an opportunity to switch to modern, prospective technologies and hopefully make a technological leap. This scenario is particularly more probable in the case of space-consuming industries, which find perimeter locations more comfortable and affordable. The more modern, high-tech ones which frequently means less materially productive ones mostly need less space and can afford staying in more attractive, central locations. This is coupled with the aforementioned efforts of communes in vicinity of large cities to attract investors, which by far does not mean only external ones; luring in a company from inside their own metropolis is just as good, if the final result is as desired.

Most (non-global) companies, even if they decide to move their seat, prefer to stay in their regions. That is the case for example due to the already-established contact network or the well-known market. The move, then, takes them to suburban communes. The regional connotation remains, however, frequently along with an office or a branch in the metropolis. Such a company needs to dispose of the property which it had occupied before the move, and faces the question for what use the property is suitable. Continuation of industrial activity is unlikely, because then the original company might not have moved at all; therefore, such real estate undergoes change according to the fashion of the time, be it petrol stations, residential estates, cheap or regular supermarkets, etc.

As far as efforts to create and maintain a cohesive spatial plan for an agglomeration are concerned, a division line between the main city and its neighbours is clearly visible. The metropolis, naturally, cares for the best possible balance between the number of available jobs, the number of available and affordable homes, transportation capabilities, cultural/entertainment offer, and multiple other factors. In consequence, the city tries to keep any production (industrial) company wanting to move away from it; if that fails, it tries to work towards a scenario in which the replacing business is also from the industrial realm (or from a different but work-related one). This is due to a number of reasons, but primarily due to the need of sustaining the jobs the leaving company vacates, and due to the resulting spatial conflicts (for instance, between a newly-introduced residential use and the pre-existing unfriendly uses, such as industry or a railway line). At this point, the aforemen difference in the power of the two documents the Study of conditions and the local land use plans can be traced: municipalities have incomparably more influence on spatial turnover if they had managed to install a local plan into an area before it underwent change.

All the described spatial struggle, however, is being played out on the stage of single communes; no documents exist which would coordinate a larger number of them. As it has been said earlier, a national spatial plan and regional plans are there, but they mostly include the most serious public initiatives; agglomeration-scale postulates present in them are either not executable or are too so stand the clash with everyday practice. If there even existed a mechanism for creation of such documents, then a new tension would emerge: who would be supposed to draft them (what kind of body), and what would be the roles of the parties (especially of the metropolis) and the division of votes among them. The nature of this tension is clear: the administrative entities surrounding the metropolis would fight tooth and nail for a non-weighted split, and the metropolis would want the opposite.

In general, the difficulty in keeping industrial activity inside large cities is serious. In order to name a handful of particular Wroclaw cases, the following could be brought to attention:

- the massive former rail infrastructure repair facilities (ZNTK) in the north of the city have long been divided into numerous smaller businesses;

- the historic Piast brewery, partly preserved due to conservation protect dismantled, and partly unused, were supposed to be converted into attractive loft apartment complexes, which has not happened;
- the so-called burgher brewery , located in the eastern part of downtown, has transformed into a cultural centre;
- the large former meat production facilities, west of the city centre, have been partly conserved in terms of historic architecture and converted into a large shopping centre;
- the refractory materials production facilities, located in the westernmost district of the city, remain undeveloped until today;
- the PaFaWag railway production plant pose a rather positive case but largely due to the presence of local land use plans; from a major industrial facility, they have first turned into a rental area for all kinds of businesses, then (as part of another market fashion) into a private universities hub, to finally reach the stage of hosting technology parks and some smaller production companies.

Areas which the city has allocated for industry or production activities are als extent under land uses, which only may convert to something else in the future such as allotment garden complexes. Moreover, it should be mentioned that with the acknowledgment of the existing trends and with the use of the available planning tools, many areas in Wroclaw have been secured for production activities. However, these of them located close to the border of the city will stay empty as long as plots a couple of hundred metres away, outside the city limits, are simply cheaper to buy or rent.

## 5. Conclusions. Future work.

A crucial notion needing attention in this discussion is that the challenge lies in the continuous nature of industrial activity. A developer who has completed a residential estate aims at selling the apartments; if this succeeds, the company moves on to another project. An industrial company, in turn, needs to have its operation safe for years, and therefore calculates differently than other businesses.

The described situation is similar in other post-communist countries, but the authors of this paper are unable to offer a comparison with proper scientific responsibility. The opened research will, as mentioned in the introduction, include a case from outside of Poland (Dresden, Germany). The next stages in the research will focus on hard statistical data (numbers describing production activities in the selected cities), and on spatial representation of the changes of the last 25 years (mapping).

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  - Strategy of the Lower Silesia Province;
  - Act on spatial planning and spatial development;
  - Act on real estate trading and management.

# Keys to Unlock Fragile Urban Landscapes

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Abstract
In Sweden large city perspectives dominate policy and the discourse on economic
production and accumulation of capital, distribution of power, risk and lifestyl
situations for small cities and municipalities regarding decreasing and ageing po
uneven conditions call for initiatives and methods that intervene with existing
and project transformations potentials.

This paper present key urban projects as complementary planning tools that: 1) i
strategic interventions, 2) constitutes bridges between planning and implementat
platforms for critical negotiation that assemble available resources, skills and
and 4) combine private and public resources.

The research is developed by design-based research methodology through extensive
local-regional planning in the Skaraborg region in Sweden, here presented by two
The complexity of potentials for sustainable development of urbanised landscapes
of concentrated and extended Urbanisation networks, decision-making and
accumulation result in local lock-ins of future transformation. Fragile situations
urban landscapes pose emerging vulnerability for sustaining local social, political
processes with substantial consequences for development of both societal and ind
Results from cases are presented with focus on describing the key project capaci
transform fragile urban landscapes and outline the roles, functions and responsi
regional actors. This stresses structural, political, discursive and situation-specifi
Triggering change in material, topologic and relational qualities on both local
enhances resilience and adaptation.

Keywords: key urban projects, fragile urban landscapes, urban ecologies

## 1. Introduction

This paper focuses vulnerable local-regional urban situations suffering from neg
regional imbalance, discussed here as fragile urban landscapes. The main aim is to bet
the planning problems of such landscapes, and especially to explore how key urba
developed as an operative planning method to transform such situations.

Urbanisation, urban competition and increased mobility have changed administrati
networks between cities on both global and regional scale (Harvey 1989; Sassen 2
Massey 2007), blurring specific characteristics of, and division between, urban
periphery. New approaches are needed in order to understand how urban systems, f
meaningful coherences amalgamate on local, regional and global scales (Mostafavi
Brugmans and Strein 2014) and to bridge local-regional gaps in planning (SKL 201
It is also necessary to tackle uneven geographical development with increasing d
population, economy etc. between growing and shrinking regions (Massey 2004; Tie

Sweden's strong planning tradition from the 1960s has undergone a shift from 'go
governance' with consensus-driven modes of participatory planning processes pair

ambitions for sustainable development. At the same time, urban concentration, vi
and entrepreneurial tactics drive cities and municipalities to attract dwellers
in order to secure welfare and local services (Tunstr m 2009; Fredriksson 2014).

According to sociologist and geographer Neil Brenner, current urbanisation must
both concentrating and expanding processes, the first being a clustering process
containing diverse socio-spatial changes working across territories and scales a
mechanisms of today's capitalised and industrialised economy. (Brenner 2013, p.
differences in urbanised landscapes must not be understood as a dichotomy betwee
but as an 'explosion' of changing patterns and potentials in a densifying textur
This challenges traditional conceptualisation of towns and cities as defined cen
rural (non-urban) contexts (Brenner 2013, pp. 99-101), and calls for systematic
reinvention of urbanisation from both specific material contexts and the 'contex
structural geopolitical and geo-economical processes of change (Brenner 2013, p.

With outset in Brenner's understanding of urbanisation, we speak here of 'urbani
critically recognising what Harvey (2006) and Massey (2004, 2005) discuss as gro
regional development, which threatens to be socially discriminating and regional
argue, that current planning suffers from stereotyped city models, with focus on
'regional blindness' that disregards the potentials of the regional landscape as
formations (Nielsen 2004; Tietjen 2011). Our research also responds to a recent
land use planning to better meet with societal challenges (Swedish Government 20
need new planning approaches, and an emerging interest within the Swedish planni
proactive design-based research.

Our focus of investigation has been to identify, develop and enhance the key pro
the operative capacity of key urban projects at various stages of urban planning
processes, especially concerning fragile urban landscapes. The work includes: to
theoretical framework for key urban projects; to develop and discuss key urban p
planning tools to handle fragile urban landscapes; and to test these tools in re
processes. The research has oscillated between theoretical studies and collabora
local-regional planning situations, exemplified in this article through two empi
ambition has also been to formulate a conceptual and methodological framework fo
local-regional planning, primarily concerning fragile urban landscapes.

The study is part of a practice-based PhD-project in architecture, conducted by Nils
supervised by Catharina Dyrssen, with the overall aim to enhance local-regional
possibilities in urban development. The paper first presents central concepts an
overview of relevant research and practice approaches to key urban projects. The
methodological framework is outlined followed by a description of two cases refl
landscapes, and in which Bj rling has actively participated as an architect and
student.

## 2. Fragile urban landscapes

The mechanisms of urban competition and its inequality effects may lead to formi
defined as fragile urban landscapes, i.e., local situations that suffer from wea
more important, find themselves locked in their existing circumstances, physical
positions and identity.
Our empirical and theoretical studies have discerned four interdependent conditi
landscapes: (1) The local situation, lack of resources, planning competences and decision mandat
handle local-global change and meet with new demands about sustainable conditions and

to adapt the current situation to new needs and possibilities; (2) the current si
physical structures that are resource-demanding to adjust to new possible use; (
have affected the local position and function within regional and global networks; (
situations are augmented by the use of idealizing and unrealistic future images,
of the successful city classify the fragile urban landscape as problematic or ir

The lack of power and capacity in relation to ideals and expectations for develo
situations vulnerable to the impact of ongoing political, social, cultural, econ
this often hinders them to recognise new meaning and potentials in resources (ma
well as in the physical landscape. Therefore, it is necessary to approach the si
systemic level, as a physical-structural problem, and from a sense-making perspe
understand this as an integrated topographical, topological, systems related and
densification, of importance both to the local and to the regional contexts.

To meet with new demands, fragile urban landscapes need to transform and be prov
accessibility to urban functions and increased collaboration (between municipali
sectors, areas and actors) in order to strengthen the local-regional possibiliti
resilient urbanised local-regional landscapes. It is therefore crucial to study
and meaningful relations can be developed, and how new combinations of existing
bridge the lack of built density.

## 3. Key urban projects

Key urban projects are defined here as projects that can open, lock or change di
transformation processes. This includes to make visible, question, generate and dr
specific, local-regional, relational conditions; to bridge gaps between local an
make operative the transformations by gathering resources, competences and decis
We use the concept of project in regard of its projective capacity, where the ar
tool to assemble relevant knowledge, give it coherent form so that it can be dis
stakeholders, and suggest a direction for a transformation process (Cuff and She
conceptualization of 'project' is always inscribed in continuous transformation
may have far-reaching impact in both space and time. Thus, the single project is
part of systemic urban processes. Key urban projects shall have a projective cap
and design processes and an operative role in the actual urban redevelopment. The cor
indicates that the project needs to have the capacity to either open, lock or ch
transformation, and that it shall be able to meet with existing conditions of ea
'urban' refers to the extended urbanised landscape that humans shape and form in
develop societies.

Thus, key urban projects shall be able to manage step by step transformation of
landscapes and form a fruitful method to handle planning situations. Accordingly
through what they are, but through what they can do; what they can make visible
process, how they operate in decision making, and what processes they open or lo
projects-capacity should include to: (1) handle relations between center and per
contingencies with onset in space as interconnected processes between urban and
make visible driving forces for the development (change) of society; (2) operate
spatial and planning conditions to identify available resources, skills and poss
(3) support dialogue and critical negotiations; (4) develop diverse perspectives
available resources into alternative directions of development; (5) develop and s
making relations, positions and networks; (6) intervene in local-regional situat
and relevant meaning; (7) make possible alternative strategies for regional and
where Key Urban Projects provide concrete steps to strengthen fragile urban land

Investigating key urban projects sets focus on the possibilities to rather densi
co-productive relations than urban space as such, that is, to reveal conditions
densify relational networks, i.e. increase connectivity in scattered urban forma
realistic and resilient visions of the future urbanised landscape. It is assumed
qualities and values can be improved as conditions for transformation, and used
different scales and qualities of the urbanised landscape.

## 4. Urban acupuncture and projective prototypes

During the last thirty years several efforts have been undertaken to develop the
that can initiate urban transformation at different scales. Early examples are t
Sol –Morales, with Urban Acupuncture where specific small scale interventions
coordinated strategy to trigger urban transformation (de Sol –Morales 2008, 24).
through a detailed understanding of spatial formations, possibilities can be rev
making relations in apparently meaningless and abstract urban landscapes.

Correspondingly, Raoul Bunschoten demonstrates how Projective Prototypes can b
operative mapping-tool to reveal hidden potentials and possibilities in urban la
2001). Through interactions between the documentation of existing conditions and
alternatives, a number of options are created, in turn identifying liminal bodi
actions that are needed to transform the current situation in new directions. Af
critical negotiations, alternative changes are tested through the prototypes wit
flows and reveal both the material conditions of urban formations and the underly
sustain them.

On a regional scale, Emscher Park in the Ruhr region (Sieverts 2003; Waldheim 20
strategic plan for Flanders (Stalenhoef and Geldof 2007) are examples of how sma
coordinated through overall frameworks to step by step transform regional landsc
formed a flexible structure that connected and facilitated new regional networks
existing potentials through a large number of individual projects. Flanders focu
economic driving forces in a national perspective. Both cases contributed to giv
landscape new meaning from available resources, skills and mandates.

Relating to these examples, we argue that there is a need to see key urban proje
mapping tool and a mode to establish collaboration and critical negotiations, wh
be identified and obviated, and existing qualities combined in order to build me
productive networks for lasting strength.

## 5. Theoretical-methodological framework

The knowledge production in our studies moves forward by continuously shifting b
theoretical framing, comparisons to relevant reference projects, and development
Theoretical models have been tested and remodeled in actual planning situations
mapping processes that oscillate between defining problems and outlining concept
spiraling process gradually forms strategies for negotiation and implementation
situations, with the intent to assemble resources, skills and mandate in adequat

To support the systemic and operative logics of key urban projects it was necess
correspondingly flexible, multi-faceted theoretical-methodological framework, of
components are: (a) design based, proformative strategies (Corner 2006; Cuff and
constructed around (b) an understanding of the urban landscape as layers of urba

2001 (1971); Guattari 1989; Reed & Lister 2014), (c) diagrammatic layers (Deleuz
1987; Deleuze 2006) of urban form, (d) a discussion on space as absolute, relati
(Massey 2005; Harvey 2006), and (e) assemblage (Deleuze amd Guattari 1987; DeLan
Dyrssen 2010) as design-based tools to elaborate sense-making relations.

a. Design-based, proformative strategies
Dana Cuff argues for proformative methods, i.e. future-oriented approaches opera
complexities rather than abstract models (Cuff and Sherman 2011, pp. 24-31). The
approach can be understood as a type of action-oriented, design-based research,
an investigative methodology with concrete steps and close feed-back loops betwe
mapping, construction of problem settings and theoretical reflection (Dyrssen 20

b. Urban ecologies
In 1971 Reyner Banham characterised Los Angeles as based on four ecologies ( Sur
Foothills , The Plains of Id and Autopia ), deriving from the city as layered
aspects of climate, topography, water-supply and infrastructure etc., which incl
cultural systems forming the premises and intricate mechanism for development (B
pp. 117-121). Movement and mobility in all scales and with all kinds of infrastr
preconditions for urban life in a double process of what can be made possible (B
Combining space with time and speed, Banham questions traditional notions of den
structures and urban identity, arguing that the concept of urban ecologies can b
definitions of what composes the urban landscape, and to indicate new relations
and social life (Banham 2001, p. 218f).

As a conceptual basis for our work, Banham's material ecologies need to be suppl
dynamic interplay between mental, social and environmental ecologies, as introdu
Guattari in The Three Ecologies (1989) and which, he argues, constitute a contin
process for individuals and their habitats through a logic of intensities rather
(Guattari 1989, pp. 134-136). However, as biopolitical processes, ecologies need
producing and forming concept of power, shifting between producing and being pro
and being controlled, distributing and being distributed, thereby articulating c
and normative processes (Foucault 1998, p. 15, p. 33).

Hence, production of space is always related to a power perspective concerning w
produces spatial norms and meaning, at the same time as space in its material co
subjects and produces societal frames. Spatial design with its capacity to deal with ph
meaningful structures and historical layers is one of the most useful tools we h
change of society (Reed and Lister 2014, p. 98). Urban ecologies can bridge the
urban and rural, culture and nature etc., and are therefore crucial for a sustai
understand and handle the interplay between systems to position the social condi
centre of discussions on urban transformation.

c. Diagrammatic layers
With onset in the biopolitics of Michel Foucault, the spatial configurations o
seen not only as the result of advanced capitalism, urbanisation, the welfare society
essential tools for producing and ordering modern society (Wallenstein 2009, p.
Deleuze's reading of Foucault, normative identities, hierarchies and relations o
through the spatial context where the layered relations that constitute power fo
discloses the mechanisms producing order and control embedded within all institu
all physical typologies (schools, supermarkets, highways, intersections, apartme
coding and un-coding mechanisms of the diagram, society can be changed (Deleuze
Diagrammatic layers are in constant modulations and can thereby be seen as relat

compose and assemble sense-making networks (Deleuze 2006, p. 69) in an ongoing c
process of control of and control by, production of and production by etc. Hence
diagrammatic layers key urban projects can trigger, accelerate, block or break t
processes and open up for new productive combinations.

d. Absolute, relative and relational space
The notion of urbanised landscapes as overlaid and combined ecologies can explai
transformation can be triggered by apparently small changes. The potential of th
connected and transformed through both physical and narrative changes. In order
foundations of, and trigger points for, qualities of a certain urban ecology, we
spatial aspects presented by geographer David Harvey (2006, 2009): absolute spa
material, topographical, Euclidian spaces), relative space (topological relati
as well as individual interpretations and abilities), and relational space' as
sense-making relations of space. According to Harvey there is no such thing as
of the processes that define them , and these processes do not occur in space b
spatial frame (Harvey 2006, p.123).

Both Harvey and Cuff argue that planning using predefined understandings of what
should be produces static spatial solutions to planning problems (Harvey 2006; C
2011) and has resulted in urban landscapes of typologies, specialised for progra
have difficulties to handle diversity and change over time. In order to grasp th
urban landscape, architects and urban planners need tools that work through all
relational) notions of space. The consequences otherwise are urban landscapes un
shifting processes coursing through and across the urban field: terra fluxus . T
be space as process rather than space as form (Corner 2006, pp. 28-30).

e. Assemblage
The concept of assemblage is important in order to structure and handle the spat
operative and flexible way. Manuel DeLanda, transferring the theory of assemblag
and FØlix Guattari towards a design theory, stresses that a relevant assemblage
linkages between components as well as mechanisms of change, interaction between
interior-exterior contingencies in which one may discover triggers and catalysts
p.20, p.32). The assemblage is a flexible composition of content and expressi
ongoing processes of territorialisation and deterritorialisation through cod
condition and develop the assemblage (DeLanda 2006, pp.12-21, pp.28-31).

To deal with the complexity of the urbanised landscape, we need to replace the t
cause and effect by the assemblage as a sense making, relational, evolving and t
composition (DeLanda 2006, p.20). This can be regarded as a design approach to k
evolving mappings of key points, links and qualities of relations in specific si
With urban ecologies, connecting also to diagrammatic layers and space as absolu
relational, assemblages can be constructed as evolving models of thought that op
both to transform the urbanised landscape and to change normative identities of
or large scale operations. Essential here is the design competence to handle and
temporal-material complexities, and the recognition of evolving, non-linear processe
with ecologies, assemblage is also useful to map active processes that constitut
situations.

## 6. Empirical contexts

In this section we will describe two projects and how their capacity to transfor
landscape can be used as key urban projects. It is discussed how they may addres

continuities rather than hierarchies, how they develop as sense-making rather th
and how they may have the capacity not only to produce solutions in a local situ
trigger change of relative and relational qualities and networks. The projects c
fieldwork included in the doctoral studies, and have promoted the understandings
capacity and the construction of the framework (also see Bj rling 2014).

Project 1: Beneath the pavement is a beach , Mariestad
The town of Mariestad in Sweden used to be an important local center as capital
inland port for regional and national transportation of grain and oil. The main
Mariestad as a fragile urban landscape are the topological changes in trade-flow
being the county capital to a position in the geographic periphery of V stra G t
region in Sweden), which affects the notion of what Mariestad is and can be in t
structure is also locked into reproducing existing spatial relations between its
therefore has problems to adapt to new needs.

In 2004 the architect office AIM Architecture Is Made won a competition about th
brief was to find a strategy for how to transform the area into a residential an
town and thereby add a considerable number of new housing and activities in the
Mariestad. The motto was Beneath the pavement is a beach . With the aim to esta
transformation process that could evolve over a long period of time, the proposa
describing relations instead of physical form. Scale and details of public space
given specific positions but were described as relations to the surrounding area
as between buildings and streetscape in both a short and long time perspective.
outlined relational and topological principles for future change that would impr
That far it was a process-oriented urban design project. Later, as part of pract
studies, it also initiated a methodological framework for key urban projects fro
perspectives:

a) A changed narrative: First, the project suggested a new beach. The future saga
created has been very important both for the waterfront project to evolve around
new position of Mariestad as the town by the lake in a regional context. It ha
administration, politicians and the public in order to move forward with the pro
waterfront. The beach illustrates the relational perspective and the impact of t
creates a common future narrative that changes relational space and plays a powe
transform local identity and spatial sense making.

b) Temporary projects: Mariestad struggles with the backside effects of global e
stagnated population and a small annual investment budget, changes of absolute s
pace. It has therefore been important to identify projects that focus on change
aspects. Art projects, small commercial booths and a new playground have been te
in the harbour area to activate the boardwalk and make it a strong public space.
along the river now evolves as an additional recontextualisation project. The te
two main focuses; first to show immediate change and, second, to involve people
are seen as laboratories that through additions, like Bunschoten's projective p
existing potentials, include a diversity of individual initiatives and relative unde
future relational memories of the waterfront and the town.

c) A future context: Also (more) permanent projects need to be dealt with as too
possibilities. During and through the design process the existing situation is c
future context that in return generates guidelines for how to further develop th
architectural projects. In this way the planning process takes its onset from bo
historical context and a modelled projective future situation.

These three perspectives relate to alternative and interlinked ecologies, from w
not developed towards a final master plan but opens up for a number of parallel s
slowly transform the fragile urban area and change the conditions for Mariestad
strategy needs to be open for limitations that, instead of blocking the transfor
new ways forward. At the same time the project itself, through temporary actions
new common and personal memories, create additional layers of meaning that estab
narratives. This process transgresses the borders between urban planning and urb
a flexible framework within which small scale projects can be implemented and in
overall plan, whether this is a comprehensive plan, structural image, strategy o
exemplifies how the planning process is extended through the use of key urban pr
of de Sol –Morales, small scale interventions are used in order to establish new
scale of the human body and the urban spatial context.

In 2009 the design-process of the waterfront area was expanded into a new Compre
for Mariestad, with the understanding that the waterfront project was, in fact,
issues concerning relations within the whole town and relational and relative ne
scale. The plan was managed as a research project run by AIM and Chalmers in col
municipality in order to further investigate key urban projects as a planning to

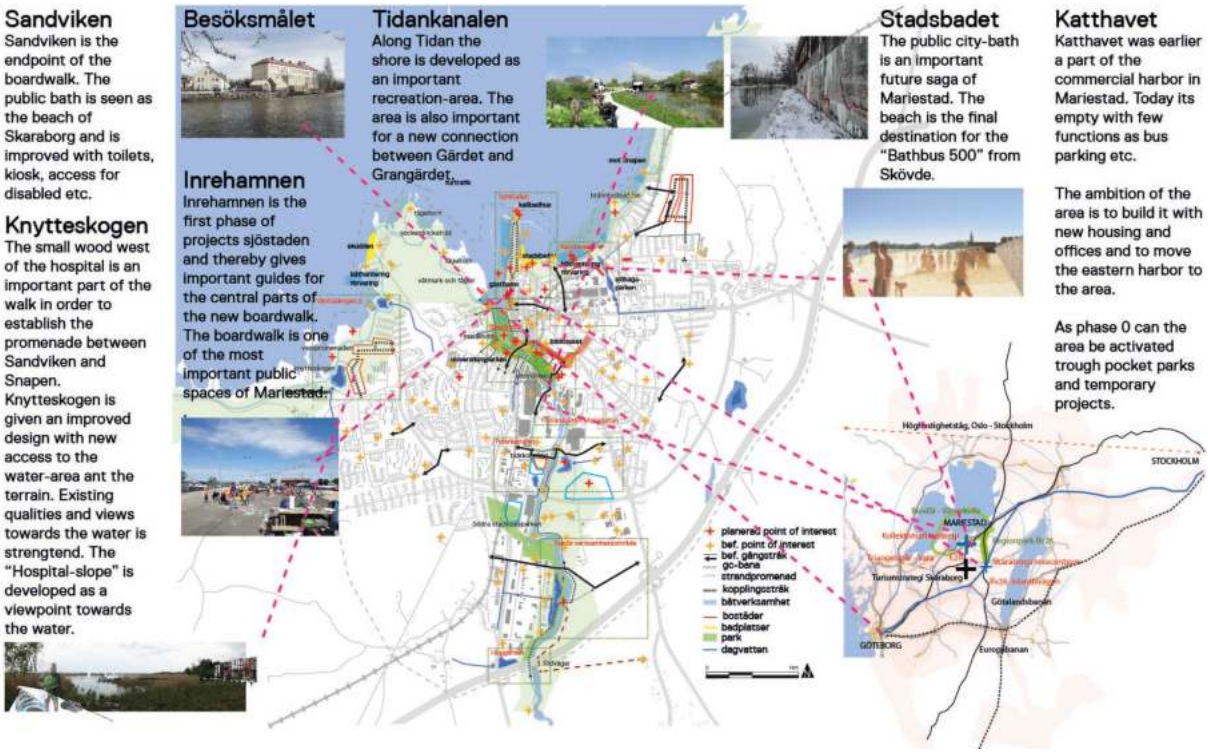



Figure 1: A strengthen public boardwalk is one of the main principles in the CP situation is overlaid by future alternatives key urban projects that link existi the promenade can be identified.

The CP continued as a transformation process that moved between different perspe
Consequently, maps representing absolute space were modified with additional lay
relational aspects. Alternative interpretations of the local and regional contex
translated into relative and relational networks. The infrastructural and topolo
modelled as future scenarios in local and regional scales, and additional progra
preparatory projects to reveal hidden potentials in the existing urbanised lands

reprogramming and reconfiguring process is a design process where temporary proj
contexts guide and move the planning process forward. When these articulated lay
mapped, key urban projects have been identified as intersections of issues of di
themes, and as a strategic mode of modelling with the potential to trigger trans
These intersections, or key points, have been investigated concerning relevant c
blockers, and by sorting, categorising and combining these aspects the key urban
further defined. The Mariestad project is ongoing and the next step is to start
the identified projects, in return providing the process with new conditions for
project development.

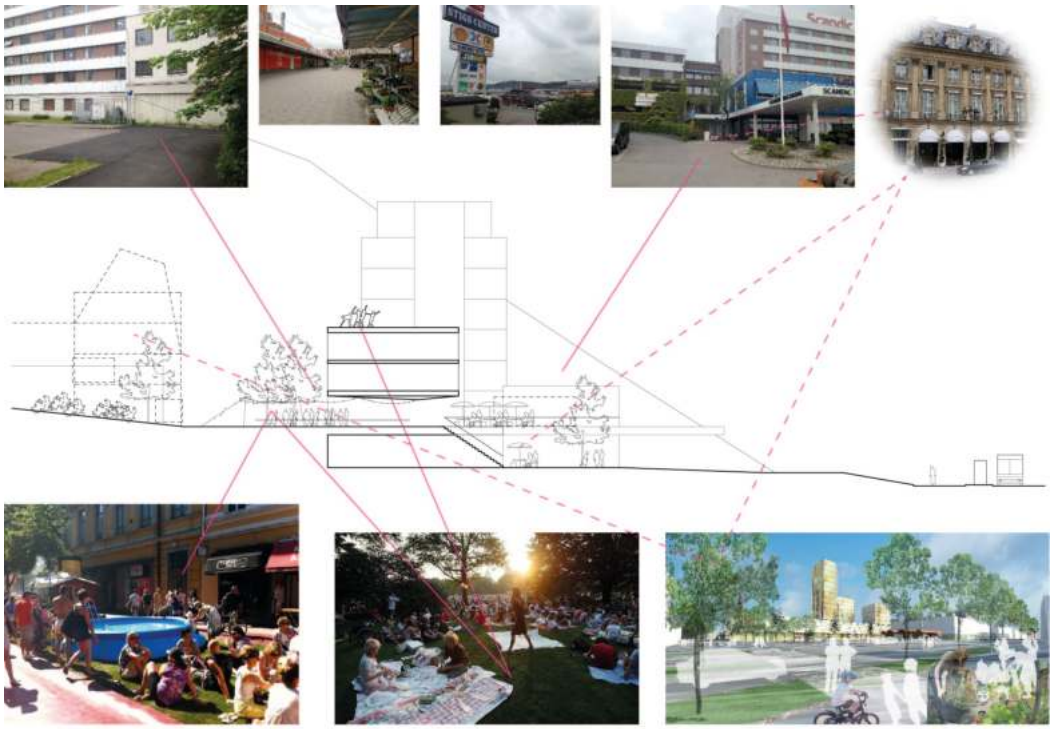
With small economic resources it is important for a municipality such as Mariest
effective and relevant strategies working with concrete aims and interventions.
relational change and densification of sense-making relations can be tools to in
exchange, break social and mental barriers and establish strategic linkages, thu
topographic network of streets and pathways, and the topographical network posit
connections between people.

Project 2: Selma, G teborg
Another example of a fragile urban landscape is the transformation of Selma Lage
the G ta ˜lv river valley in Gothenburg. The valley can be described as both par
interconnected systems of different urban ecologies. In collaboration with Noema
Mapping, AIM made an invited competition in 2011 about how to regenerate the are
square. The competition program presented the square as a problem area that coul
diverse mix-used urbanised landscape. This makes the area s current values, prog
fragile for future development. The proposal by AIM and Noema was presented as a
with its point of departure in the existing social situation, qualities and pote
tried to start processes of transformation and densification from local conditio
approach was to combine potentials from different urban ecologies into new possi
development by adding new functions and at the same time sustaining existing pro
ambition was to work with a stepwise densification of both buildings and new rel
feed into the overall revitalization process for the area.

Selma Lagerl f square is a local square surrounded by residential areas about 7 k
centre of Gothenburg. From a traditional perspective it relates to the city peri
the main motorway entrance from the north to Gothenburg (road E6), and thus the
places today, relates to double and complex center-periphery conditions. The highway
Stig Center, close to the square has a characteristic program with gas stations,
and workshops. So depending on scale, issue and perspective, the square and the
can be seen as nodes, either central or peripheral, as part of the local ecology
structure from the central city or as part of the regional ecology that connects
the regional network of Gothenburg. It is important to recognise this flexible i
understand the specific site conditions and potentials; depending on perspective
ecologies change the articulation and qualities of the topographic and topologic

These ecologies are in several ways interconnected but at the same time they are s
physical design of the urban landscape, a relationship in which Scandic Hotell
point (Figure 2). The hotel was built in 1971 as a motel including restaurant, b
station. Even if the building mainly served travelers from the motorway, it turn
entrance-zone towards both the regional and local ecology. However, since the se
been extended with rooms and parking and the entrance-zone has been redirected o
motorway, turning its backside to the residential areas with weak connections to
the same time the main entrance towards the motorway does not have a satisfactor

appearance of functions and programs connected to the regional ecology. With a s
wintergreen plants and a large cherry-tree it rather communicates an ambition to
metropolitan surrounding. By reworking the hotel area, its entrances and connect
link could be formed between local and regional, old and new structures.



**Future memories**
The regeneration process of Selma Lagerlöfs torg is important for creating a future saga about the local situation and create a will to reopen the closed fasade.

The narrow green space around the main entrance can then be delevop as a passage where a part of the parking-space is rebuild as a small workshop or office-space. maybe a barber? or a gym.

On the west side a small "silent" park can be a part of the open air café.

**Temporary projects**
As a project to create common memories the garage can be used for a street-dance festival to connect the hotel to the local dance-school.

**Future context**
When the area around Selma Lagerlöfs torg is regenerated new buildings will be added and old buildings replaced. New housing will give more people to the area and bring more activitities. But it is important that new additions are seen in relation to the two ecologies and that new buildings contain programs that support the relation between The square and the intersection, between Selma and Stig.

Figure 2: The passage from the local to the regional scale is re-open

This split situation has been the context for elaborating ideas about how the ec
different programs and functions can be connected in new ways in order to use th
potentials to deal with related urban issues. What we want to stress here is tha
transformation needs to build on different perspectives of centrality, grow as i
find key solutions, sometimes small interventions, that can unlock the conflictin

Several other projects have been conducted, also coordinated within the ongoing, Structural Image for the Skaraborg Region, conducted in collaboration with fifte municipalities and West Sweden at large, and for which Nils Bj rling is the proj means both an opportunity to upgrade the methodology development to a larger com challenge more extreme polarities between perspectives on centre and periphery ( West Sweden's major city), and to test possibilities of local-regional effects o their potential capacities.

## 7. Results

Our results so far show that the capacities for key urban projects as an operativ fragile urban landscapes need to develop in coherent, flexible, adaptable, inven refined in accordance with urban ecologies, assemblages and multiple spatial und where design based thinking-making forms the basis for knowledge production. Mor planning processes, the key projects' capacity includes to:

(i) operate mappings processes (topographic, topologic and relational) to invest contemporary urbanised landscape as overlaid systems, model alternatives and inc diversity of perspectives on needs and opportunities; (ii) identify, analyse and processes that maintain, open or block conditions for urban formation; (iii) mak specific interventions that change the local position and function in networks, of meaning, and establish spatial relations between the urbanised landscape and Establish platforms for critical negotiations and set up dialogue to discuss dif long-term sustainable development; (v) Form co-operations that gather a diversity relevant actors, and combine available resourses, skills and mandates to secure

## 8. Discussion

To qualify as key urban projects, planned interventions need to trigger or open transformation process. This capacity depends on situation-specific qualities an but adapted to various contexts.

As described through the projects in Mariestad and G teborg, transforming the ph fragile urban landscape is often characterized by slow pace and lack of economic this landscape needs tools able to reveal keys that start or turn the direction qualities can be improved and combined in new ways.

In order to distinguish key urban projects within the planning process, mappings identifying relevant issues and relevant contexts (ecologies) and the constructi part of constituting the framework. To reveal what is relevant it is necessary t models that reach over and interact between scales, with assemblages simultaneou micro and macro-scale. This, in turn, can guide how the concepts of site and pla understood as a combination of all Harvey's spatial aspects. Such mappings can r conditions for, and significance of, a site, with its specific qualities and pos transformation. Further, key urban projects can be used to visualize implementat shown in the Mariestad case. In order to formulate future visions and aims, key been used to trigger critical negotiations and support decision making. So in order t urban projects they need to gain the capacity to transform both relative and rel reconfigure its own typology, question existing normative images of the urban, o Stig, connect urban ecologies challenging preconceived understandings of center

Through assemblage thinking, and with the complex urbanised landscape as articula
urban ecologies in mind, we may turn back to the critique of strategic planning,
introduction, of space as form rather than space as process. It is then clear th
some cases no longer make sense. Short term problem solving needs to be replaced
of normative identity. It is also important to work with the urbanised landscape
own site specific and regional networking capacities in order to develop long-te
resource efficient conditions and to expand the notion of what the urbanised lan

## 9. Concluding remarks

It is through the material reality that relative and relational aspects of space
play. The characteristics of these processes are an ongoing search for the relat
assemblages that reveal significant issues which, in return, may open up new fie
combinatory possibilities to develop. Here key urban projects can wedge in betwe
catalytic and proformative potential to transform urbanised landscapes by connec
revealing relative and relational qualities, visualising strategies and triggeri
mechanisms for implementation. This must always be accompanied by an awareness o
and unstable conditions in the understanding of the urbanised landscape. Deleuze
DeLanda's theories of assemblage and Guattari's and Banham's definitions of ecol
these compositions are never stronger than their relations. New knowledge and ch
always require that the whole assemblage is revalued. The relevant assemblage is
to identify key urban projects and a composition that helps to also reveal and d
the specific key urban project.

We argue that key urban projects, by taking on these active roles, can be used to streng
form strategies for incremental densification of sense-making networks in urbani
lack resources, skills and mandate to meet with current competitive modes of str
key urban projects are also developed as diagrammatic additions to change unde
de-coding of assemblages, they can also increase the capacity to change the me
relational networks and qualities, and to trigger synergy effects and produce ne
Through such understandings, sustainable strategies can be projected as guidelin
transformation and densification of fragile urban landscapes.

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**Two decades of urban dispersion in Lisbon Metropolitan Area or the failure of consensus in urban and regional planning**

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## 1. Introduction

### 1.1 The subject and its context

The dispersion became part of the urban lexicon applying a binary understanding: the dispersion is a problem and urban concentration is good; the first is inefficient, the second monetizes; the low density generates weak territorial cohesion, compactness is a sign of life and dynamism. One is always applicable; the other is always to refuse. There are alternatives to these dichotomous keys or gradations that can be applied. There are - apparently - enormous facilities that these binary reading processes provide to urban planners as to politicians or to academics.

And this, apparent clearness, is essentially based on three components:

The urban design where there is the urban form (said rational) that mobilizes technicians, politicians and academics;

The territorial classification, it is the line between urban land and rural land that separates and groups;

The dimension of the application of cost-benefit system where continuous and coherent urban form allows distributing the costs and benefits among a set of well-defined owners.

Otherwise is the diffused and blurred urban form which makes uncertain the demarcation of the urban perimeter and the urban dispersion, generating costs, do not easily allow:

The representation of the urban shape that appoint the evocation of an identifiable and classified city model;

The demarcation of a line establishing the territorial classification;

The distribution of costs and benefits conferred by applying a cost-benefit system which aims a fair distribution of capital gains generated in the territorial transformation process.

Always the shape, the line and the rule as if they were absolute truths emptying any criticism that could be made. Almost never the process, the dynamics, the cultural identity and the strength of multidimensionality. And rarely, the incorporation of chance and unpredictability, of conflict and uncertainty. The work is done with a cut in space and time and it is in this section, which crystallizes the time and suspends the action of agents (natural and anthropogenic) in the territory, that decisions are taken and rules are set out.

### 1.2 The problem(s), the purpose and the concept

The problem of no variety: the consensus, near the single discourse, on the problems of urban dispersion and about the virtues of compactness, which disrupts the (various) evidence arising from the reading of the actual transformation of the use and occupation of land in recent decades in Portugal.

The problem of the concept: the urban dispersion is indisputable evidence and takes in Portugal (as in other countries) very different approaches in time, in formal and dimensional aspects, typological diversity or legal issues (Ulied *et a*l, 2012). This diversity and the difficulty in categorizing the phenomena(s) associated with this dispersion carry, even today, a lack of consensus on their own definition and corresponding impacts. But this vagueness widens mainly to the perplexity on the very occurrence and strength of urban sprawl and the lack of understanding of how to act facing this reality.

> "The urban sprawl in Portugal is not a possible choice. It is, first of all, a territorial reality with social economic and cultural diversified contents. For this reason, it should be the starting point for any territorial organization model for the development of 'new urbanities "and" new residential areas " that do not necessarily have to reproduce standardized and urban pre-determined forms." (Soares, 2002 quoted by Vaz, 2009).

The Objective

This Communication puts forward a double check on urban dispersion: i) its territorial extension; ii) the (in) capacity of power in dealing with the phenomenon. We intend to show between 1990 and 2010 and in a precise spatial horizon, the Lisbon Metropolitan Area (hereinafter LMA) - what is the relationship between the intentionality of technical and legal discourse on urban dispersion and the effective occurrence of this dispersion in the territory[1] [2].

The issues to be addressed to meet the goal:

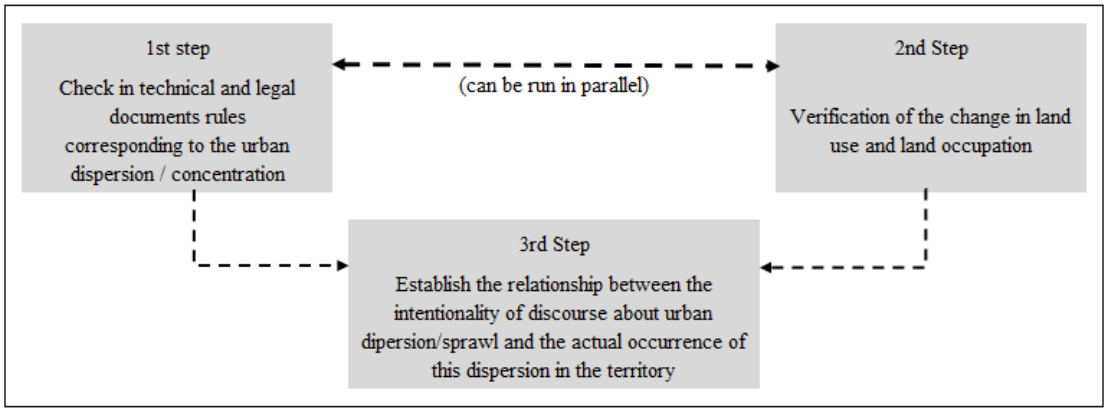
i) Verification of the rules regarding to the dispersion/urban concentration contained in the key documents of urban and regional planning in Portugal and in the territorial management `tools` (the plans) of national / regional level covering LMA;

ii) Verification of the land use and the changes regarding to artificialized territories landscapes and, in these, the territories allocated to the urban fabric (continuous and discontinuous).

## 2. Methodology

The definition of the objective and the statement of the issues to be addressed determine the methodological process of the studies presented in this Communication (Scheme 1)

Scheme 1: Linking the 3 steps of the methodological process




[1] Although the temporal focus is the past two decades some data records to the 80s of XX century .

[2] Space horizon of the study is LMA (always taking into account the municipalities currently covered by metropolitan area) but in some issues will be considered national data.

## 2.1 First step: the reference standard

A set of technical and legal documents focusing on the most decisive specific rules that express the intention about the urban dispersion/concentration was studied.
A first component addressed to the key legal documents of Portuguese urban and regional planning system.

- Land Law, Decreto-Lei n.º 794/76 de 05-11;
- Lei n.º 48/98, de 11-08, sets out the bases of spatial planning and urban and regional planning policy,
- Legal Regime of Urban and Regional planning, Decreto-Lei n.º 380/99 de 22-09;
- Criteria for territorial classification and reclassification, Decreto Regulamentar n.º 11/2009 de 29-05;
- Lei 31/2014 de 30-05, sets out the bases basis of public policy for spatial and urban planning;

A second component to the two land management plans of national and regional level with a focus on the Lisbon Metropolitan Area.

- PNPOT - National Programme for Spatial Planning Policy, Lei n.º 58/2007 de 04-09 e Resolução de Conselho de Ministros n.º 41/2006 de 27-04;
- PROT AML, Regional Plan of the Lisbon Metropolitan Area, Resolução de Conselho de Ministros n.º 68/2002 de 08-04;

## 2.2 Step two: the land use and his transformation

It was found the land use and his transformation in the last two/three decades in the Lisbon Metropolitan Area taking into account three different and successive levels:

First level, taking into account the territory classified as artificialized;

Second level considering the artificialized territory classified as urban fabric and, within this, the land classified as discontinuous urban fabric

Such verification was based in the work developed from the Corine Land Cover[3] and Landyn projects[4] and the Census data[5]. Such records of the land use were weighted with the evolution of the resident population and building stock in the same time period (1990-2010) and in the same space horizon (LMA). For consistent verification a first task would be the correct perception of the lexicon used both in in projects Corine Land Cover and Landyn - for the good understanding of which areas are the so-called Artificialized territories (Table 1).

[3] The Corine program (Co-ordination of Information on the Environment) was created in 1985 by the European Community in order to develop an information system on the state of environment in Europe. The Corine Land Cover 2000 project (CLC2000) in Portugal is developed under the initiative IMAGE and Corine Land Cover 2000 (I & CLC2000) of the European Commission (EC).

[4] This project based in the Direção Geral do Território - focus the analysis of land use and land cover (LULC) in three moments (decades of 1980, 1995 and 2010), which allows to get an original and unique vision of land use and land cover changes (LUCC) on the past and present and preview the future in Continental Portugal. This project has adopted a strategy based on the Eurostat guidelines - Land Use and Cover Area Frame Survey (LUCAS) on sampling to estimate the spatial land use and land cover changes (LUCC).

[5] Censos 1981, 1991, 2001 e 2011; INE Portugal.

Table 1: *Numenclatura* Articulation for determining the use and occupation of land affects the artificialized territories

| Código COS | Nomenclatura COS | Código Landyn | Nomenclatura Landyn |
|---|---|---|---|
| 1.1.1.01.1 | Tecido urbano contínuo predominantemente vertical | L1 | Tecido urbano contínuo |
| 1.1.1.02.1 | Tecido urbano contínuo predominantemente horizontal | L1 | |
| 1.1.1.03.1 | Áreas de estacionamentos e logradouros | L1 | |
| 1.1.2.01.1 | Tecido urbano descontínuo | L2 | Tecido urbano descontínuo |
| 1.1.2.02.1 | Tecido urbano descontínuo esparso | L2 | |
| 1.4.1.01.1 | Parques e jardins | L2 | |
| 1.4.1.02.1 | Cemitérios | L2 | |
| 1.4.2.01.2 | Outras instalações desportivas | L2 | |
| 1.4.2.02.1 | Parques de campismo | L2 | |
| 1.4.2.02.2 | Outros equipamentos de lazer | L2 | |
| 1.4.2.03.1 | Equipamentos culturais e zonas históricas | L2 | |
| 1.2.1.01.1 | Indústria | L3 | Indústria, comércio e equipamentos gerais |
| 1.2.1.02.1 | Comércio | L3 | |
| 1.2.1.03.1 | Instalações agrícolas | L3 | |
| 1.2.1.04.1 | Equipamentos públicos e privados | L3 | |
| 1.2.1.05.1 | Infra-estruturas de produção de energia renovável | L3 | |
| 1.2.1.05.2 | Infra-estruturas de produção de energia não renovável | L3 | |
| 1.2.1.06.1 | Infra-est. de captação, tratamento e abastecimento de águas para consumo | L3 | |
| 1.2.1.07.1 | Infra-estruturas de tratamento de resíduos e águas residuais | L3 | |
| 1.2.2.01.1 | Rede viária e espaços associados | L4 | Redes viárias e ferroviárias e espaços associados |
| 1.2.2.02.1 | Rede ferroviária e espaços associados | L4 | |
| 1.2.3.01.1 | Terminais portuários de mar e de rio | L5 | Áreas portuárias |
| 1.2.3.02.1 | Estaleiros navais e docas secas | L5 | |
| 1.2.3.03.1 | Marinas e docas pesca | L5 | |
| 1.2.4.01.1 | Aeroportos | L6 | Aeroportos e aeródromos |
| 1.2.4.02.1 | Aeródromos | L6 | |
| 1.3.1.01.1 | Minas a céu aberto | L7 | Áreas de extração de inertes |
| 1.3.1.02.1 | Pedreiras | L7 | |
| 1.3.2.01.1 | Aterros | L8 | Áreas de deposição de resíduos |
| 1.3.2.02.1 | Lixeiras e Sucatas | L8 | |
| 1.3.3.01.1 | Áreas em construção | L9 | Áreas em construção |
| 1.3.3.02.1 | Áreas abandonadas em territórios artificializados | L9 | |

***Fonte:***

Adaptação de *Anexo 1: Tabela comparativa da nomenclatura Landyn e COS* de DGT (2013) - Relatório Anual 2012-2013 (Junho de 2013) LANDYN – Alterações de uso e ocupação do solo em Portugal Continental: caracterização, forças motrizes e cenários futuros.

Uso e Ocupação do Solo em Portugal Continental: Avaliação e Cenários Futuros Projeto LANDYN. Coordenação do Projeto: Maria José Vale (Direção-Geral do Território). Projeto Landyn. DGT. Edição digital. Julho 2014, página 17.

### 2.3 Step three: the confrontation between the rule and reality

The results of the previous steps - the study of documents and verification of soil transformations where weighted in order to verify the degree of adherence, or divergence, between the technical-legal intention to regulate the use and transformation of the land and the real expression of this transformation in the last two/three decades in LMA.

## 3. Analysis and discussion of results

### 3.1 The regulatory framework

Since the Land Law (published in 1976) until the recent law review on public land policy, spatial planning and urbanism (Law 31/2014 of 30 May) that all the studied documents, and they are the most relevant for the construction of political, administrative, technical and legal structure of urban and regional planning in Portugal, have rules that, in essence, aimed at (see Table 2):

i) To counter both urban sprawl as the scattered building (though the fight against the latter phenomenon is more marked in the plans than in general laws;

ii) To favor urban concentration being evident that intentionality, although with different strength in two territorial levels: the national level favoring the competitiveness of metropolitan areas in the European context; the regional level favoring the so-called "medium size cities"[6] [7];

iii) Restricting, complexifying (more markedly from 1998/1999) land classified as urban and/or the reclassification of rural land into urban land;

iv) Enforce rules of land classification and occupation that strongly limits the spread of existing urban areas and virtually preclude the occurrence of scattered building;

In short, all the studied documents are revealing a determined intentionality towards containment and combating urban dispersion, urban sprawl and scattered building and, in the other hand, to stimulate urban compaction. The reasoning of that intentionality has several facets: i) the argument of cost, which are higher in urban dispersion/sprawl; ii) the argument of rationality in locating public facilities, absent when it includes urban dispersion/sprawl; iii) the argument of the protection of natural values, which is weaker when considering urban dispersion/sprawl; iv) the argument of the consolidation of the urban network, called into question by urban dispersion.

[6] Term that in Portugal became more consistent in the last decade of the XX century from the PROSIURB program that had, among other its purposes, the consolidation of an urban network of me

[7] In a later part of this process of research on urban dispersion should be studied the contents of the Municipal Master Plans of the 18 municipalities of LMA. In order to understand if the level of municipal plans anti-urban dispersion intentionality is also present. It should be noted however that it is agreed that, in general, taking into account both the national scene as the LMA, these municipal plans (especially the so-called 1st generation run in the 90s of the twentieth century) turned out to be very permissive on urban expansion, urban dispersion and scattered building.

Table 2 Legal and technical documents within the urban and regional planning system
Part 1: key legislation published between 1976 and 1999

| **Diploma** | | | | **Disposições sobre a dispersão urbana e/ou a edificação dispersa** | |
|---|---|---|---|---|---|
| **Descrição** | **Identificação** | **Data de publicação** | **Promotor** | **Normas** | |
| **Lei de Solos** | Decteto-Lei n.º 794/76 | 05-11-1976 | Ministério da Habitação, Urbanismo e Construção | Capítulo III - Zonas de defesa e controle Urbano; Artigo 14.º | *Serão constituídas zonas de defesa e contróle urbano, destinadas a evitar ou controlar as actividades nos solos circundantes dos aglomerados ou nele incluídos, e as alterações no uso dos mesmos que possam ser inconvenientes para os interesse colectivos da respectiva população e para o adequado funcionamento do sistema urbano...* |
| | | | | Capítulo VIII - Operações de loteamento por particulares; rtigo 32.º | *As operações de loteamento urbano podem não ser autorizadas, ainda que correspondam a empreendimentos previstos em plano de urbanização aprovado, desde que a sua próxima ou imediata realização seja inconveniente para a programação adequada da execução daquela plano ou planos de interesse geral, ou para o desenvolvimento ordenado da região.* |
| | | | | Capítulo XII - Expropriações e obrigatoriedade de construção; Artigo 48.º | *Podem ser expropriados por utilidade pública: a) Os prédios rústicos que, após as obras que justifiquem o seu aproveitamento urbano, não sejam assim aproveitados, sem motivo legítimo, no prazo de dezoito meses....; b) Os terrenos próprios para construção adjacente a vias públicas de aglomerados urbanos, quando os proprietários, notificados para o aproveitarem em edificações o não fizerem, sem motivo legítimo, no prazo de dezoito meses....* |
| **Lei de Bases Estabelece as bases da política de ordenamento do território e de urbanismo** | Lei n.º 48/98 | 11-08-1998 | Assembleia da República | CAPÍTULO I - Princípios e objectivos; Artigo 6.º Objectivos do ordenamento do território e do urbanismo | *e) A adequação dos níveis de densificação urbana, impedindo a degradação da qualidade de vida, bem como o desequilíbrio da organização económica e social;*<br>*f) A rentabilização das infra-estruturas, evitando a extensão desnecessária das redes e dos perímetros urbanos e racionalizando o aproveitamento das áreas intersticiais;* |
| | | | | CAPÍTULO III - Artigo 15.º Classificação e qualificação do solo | *b) Solo urbano, aquele para o qual é reconhecida vocação para o processo de urbanização e de edificação, nele se compreendendo os terrenos urbanizados ou cuja urbanização seja programada, constituindo o seu todo o perímetro urbano.* |
| | | | | CAPÍTULO III - Artigo 18.º Compensação e indemnização | *1 — Os instrumentos de gestão territorial vinculativos dos particulares devem prever mecanismos equitativos de perequação compensatória, destinados a assegurar a redistribuição entre os interessados dos encargos e benefícios deles resultantes, nos termos a estabelecer na lei.* |
| **Regime Jurídico do Urbanismo e do ordenamento do Território** | Decreto-Lei n.º 380/99 | 22-09-1999 | Ministério do Equipamento, do Planeamento e da Administração do Território | Preâmbulo | *São delimitadas as responsabilidades do Estado, das autarquias locais e dos particulares relativamente a um modelo de ordenamento do território que assegure o desenvolvimento económico e social e a igualdade entre os Portugueses no acesso aos equipamentos e serviços públicos, num quadro de sustentabilidade dos ecossistemas, de solidariedade intergeracional e de excepcionalidade, face ao desaparecimento de pressão demográfica dos anos 60 e 70, da transformação de solo rural em solo urbano.* |
| | | | | CAPÍTULO I; SECÇÃO II Interesses públicos com expressão territorial; Artigo 9.º Graduação | *3 — A alteração da classificação do solo rural para solo urbano depende da comprovação da respectiva indispensabilidade económica, social e demográfica* |
| | | | | CAPÍTULO II Sistema de gestão territorial; SECÇÃO IV Âmbito municipal; Artigo 72.º Classificação | *3 — A reclassificação do solo como solo urbano tem carácter excepcional sendo limitada aos casos em que tal for comprovadamente necessário face à dinâmica demográfica, ao desenvolvimento económico e social e à indispensabilidade de qualificação urbanística* |

Table 2 Legal and technical documents within the urban and regional planning system
Part 2: key legislation published between 2000 and 2014

| **Diploma** | | | | **Disposições sobre a dispersão urbana e/ou a edificação dispersa** | |
|---|---|---|---|---|---|
| **Descrição** | **Identificação** | **Data de publicação** | **Promotor** | **Normas** | |
| **Critérios de classificação e reclassificação do solo** | Decreto Regulamentar n.º 11/2009 | 29-05-2009 | Presidência do Conselho de Ministros | CAPÍTULO III Qualificação do solo; SECÇÃO II Qualificação do solo rural; Artigo 19.º | *b) Áreas de edificação dispersa, correspondendo a espaços existentes de usos mistos, devendo ser objecto de um regime de uso do solo que garanta a sua contenção e o seu ordenamento numa óptica de sustentabilidade e serem infra -estruturados com recurso a soluções apropriadas às suas características;* |
| **Lei de bases gerais da política pública de solos, de ordenamento do território e de urbanismo** | Lei 31/2014 | 30-05-2014 | | TÍTULO I Disposições gerais; CAPÍTULO I; Objeto, fins e princípios gerais; Artigo 2.º Fins | *c) Reforçar a coesão nacional, organizando o território de modo a conter a expansão urbana e a edificação dispersa, corrigindo as assimetrias regionais, nomeadamente dos territórios de baixa densidade, assegurando a igualdade de oportunidades dos cidadãos no acesso às infraestruturas, equipamentos, serviços e funções urbanas, em especial aos equipamentos e serviços que promovam o apoio à família, à terceira idade e à inclusão social;* |
| | | | | TÍTULO II Política de solos; CAPÍTULO I Estatuto jurídico do solo; SECÇÃO III Estruturação da Propriedade; Artigo 19.º Estruturação da Propriedade | *4 — Os proprietários do solo rústico podem, individualmente ou em associação, promover a reestruturação da propriedade, nomeadamente para reduzir ou eliminar os inconvenientes socioeconómicos da fragmentação e da dispersão da propriedade.* |
| | | | | TÍTULO VII Disposições transitórias e finais; Artigo 82.º Norma transitória | *3 — Nos procedimentos de elaboração, alteração ou revisão de planos territoriais a que se refere o número anterior, os terrenos que estejam classificados como solo urbanizável ou solo urbano com urbanização programada, mantêm a classificação como solo urbano para os efeitos da presente lei, até ao termo do prazo para execução das obras de urbanização que tenha sido ou seja definido em plano de pormenor, por contrato de urbanização ou de desenvolvimento urbano ou por ato administrativo de controlo prévio* |

Table 2 - technical and legal documents within the urban and regional planning system
3rd part: national and regional plans covering LMA

| **Diploma** | | | | **Disposições sobre a dispersão urbana e/ou a edificação dispersa** | |
|---|---|---|---|---|---|
| **Descrição** | **Identificação** | **Data de publicação** | **Promotor** | **Normas** | |
| **PNPOT - Programa Nacional da Política de Ordenamento do Território** | Lei n.º 58/2007 e R.C.M. n.o 41/2006 | 04-09-2007 e 27-04-2006 | Assembleia da República e Presidência do Conselho de Ministros | Região de Lisboa e Vale do Tejo - Opções estratégicas territoriais | *...Valorizar a concentração do desenvolvimento urbano á volta dos nios/terminais do sistema de transportes públicos* |
| | | | | AM Lisboa - Opções para o desenvolvimento do território | *Promover o desenvolvimento urbano mais compacto, contrariar a fragmentação urbana e estruturas e qualificar os eixos de expansão* |
| **PROT AML: Plano Regional de Ordenamento do Território da Área Metropolitana de Lisboa** | R.C.M. n.º 68/2002 | 08-04-2002 | Presidência do Conselho de Ministros | Preâmbulo | *A proposta de PROTAML visa os seguintes quatro objectivos fundamentais: A contenção da expansão da área metropolitana de Lisboa, sobretudo sobre o litoral e as áreas de maior valor ambiental, bem como nas zonas consideradas críticas ou saturadas do ponto de vista urbanístico* |
| | | | | I — Introdução<br>1 — Enquadramento | *Entre as orientações que resultam destes instrumentos de política com particular incidência na área metropolitana de Lisboa salientam-se: A reorganização das áreas metropolitanas, com destaque para a área metropolitana de Lisboa (AML), reduzindo a expressão dos fenómenos de suburbanização, promovendo a contenção urbana e caminhando para a consolidação de estruturas territoriais multipolares* |
| | | | | 3 — Estrutura metropolitana de protecção<br>e valorização ambiental | *A especificidade desta unidade obriga a adoptar um conjunto de orientações no sentido de: Conter a edificação dispersa* |
| | | | | IV — Normas orientadoras; 1 — Normas gerais; 1.3 — Orientações territoriais | *1.3.9 — Espaço de transição nascente: Controlar os fenómenos de edificação dispersa, em especial nas áreas de ocupação agrícola*<br>*1.3.13 — Interior norte agrícola: Contrariar o fenómeno da dispersão da edificação promovendo a concentração em núcleos e em áreas devidamente planeadas*<br>*e infra-estruturadas* |
| | | | | IV — Normas orientadoras; 2 — Normas específicas<br>2.1 — Ordenamento territorial e planeamento urbanístico | *j) Promover a contenção da edificação dispersa e do parcelamento da propriedade em meio não urbano, mediante a definição de normativas restritivas, ajustadas às características específicas de cada local, que fundamentem e, selectivamente, condicionem e reorientem a construção para os diversos fins* |
| | | | | IV — Normas orientadoras; 3 — Acções urbanísticas; 3.6 — Área de dispersão urbana a controla | *Os IPT devem:*<br>*a) Definir mecanismos que impeçam a habitação dispersa e concentrem o alojamento, designadamente segundo padrões de habitação de baixa densidade, nas proximidades de núcleos urbanos ou rurais existentes, desencorajando o fraccionamento da propriedade, regulamentando o destaque para construção e definindo a dimensão mínima da parcela edificável por categoria de espaço* |

### 3.2 Land use

Between 1980 and 2010 the artificialized territory in LMA expanded almost 60%, which corresponds to an increase 1.5 times the increased number of housings (about 38%) and 4.5 times greater than the increase of resident population (less than 13%). This divergence (see Table 3):

- It is emphasized in the last two decades (since 1995), during which the expansion of artificialized territory deepened while the increase of population slowed;
- It reflects a general decrease in urban concentrations since both the population density (in 2010 it has become 2/3 of that in 1980) as the dwelling density (which decreased from 29 to 25 houses/ ha in 30 years) decreased markedly;
- It tends to reinforce the urban dispersion as population, building and dwelling density decreases with the consequent increase in the consumption of artificialized land per inhabitant (in 1980 each inhabitant "consumed" 148 m2 of artificialized territory and in 2010, 209 m2);

Note however that in 2010 the artificialized territory of LMA accounts for just 20% of the total territory (throughout the country this value is around 5%), which denounces the Lisbon Metropolis or is too large and/or is too sparse.

Taking into account the specificity of the land uses of artificial territories proceeded to an analysis that allows the perception of the changes observed in the various components of the urban fabric (see Table 4):

- In the last 30 years the territory identified as urban fabric rose nearly 50%, but their share in all the artificialized territories has gradually decrease which indicates a substantial increase in this period of the territories dedicated, among others, to industry, networks of transport and/or spaces associated with these infrastructures;
- Introducing in this context the notion of "net" density it appears that, taking in consideration the the urban fabric, population density and especially the dwelling density decreased strongly since 1980[8];
- The continuous urban fabric as nearly doubled between 1980 and 2010 while the land classified as discontinuous urban fabric had a residual increase in the same period.
- This record, which could indicate a tendency for the containment of urban sprawl, is contradicted by the fact that, since 1995, the discontinuous urban fabric have increased about 30% while the continuous urban fabric have increased 20%. This record suggests, rather, a recent trend (in the last two decades) to the greater weight of discontinuity and urban sprawl in the transformation of rural land into urban land;
- Note also that the designated areas under construction tripled between 1980 and 1995 but between 1995 and 2010 decreased by 10%, which seems to reflect a significant drop in the process of urbanization and construction in Portugal since the beginning of the 21st century[9];
- The discontinuous urban fabric data in LMA are divergent with respect to the data checked for the all country: i) between 1980 and 1995 this tissue type LMA decreases more than 20% while in Portugal increased by 6%; ii) between 1995 and 2010 in the LMA discontinuous urban fabric increased nearly 30% while in Portugal increased by only 2%. These records suggest that in the last two decades allocated to discontinuous urban fabric virtually stagnated in Portugal but in LMA, this kind of urban dispersion is in constantly extension (over 3,390 ha between 1995 and 2010).

[8] Net population density = Total Population in LMA / urban fabric and net dwellinc dwellings in LMA / Urban Fabric.

[9] It includes: construction areas and abandoned areas in artificial surfaces territories.

Table 3 - Artificialized territory, Resident Population, Dwellings, population density and dwelling density

| | | Data do registo (*1) | | | Evolução temporal | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1980-1995 | | 1995-2010 | | 1980-2010 | |
| | unidade | 1980 (*2) | 1995 | 2010 (*3) | valor | % | valor | % | valor | % |
| Total do território da AML | ha | 294.021 | 294.021 | 294.021 | *na* | *na* | *na* | *na* | *na* | *na* |
| Território Artificializado (*4) | ha | 37.055 | 45.781 | 58.893 | 8.726 | 23,5% | 13.112 | 28,6% | 21.838 | 58,9% |
| | % total AML | 12,6% | 15,6% | 20,0% | | | | | | |
| População Residente (*5) | habitantes | 2.500.798 | 2.668.280 | 2.815.851 | 167.482 | 6,7% | 147.572 | 5,5% | 315.053 | 12,6% |
| Parque residencial (*5) | número de alojam. | 1.075.343 | 1.200.741 | 1.483.717 | 125.397 | 11,7% | 282.977 | 23,6% | 408.374 | 38,0% |
| Densidade populacional (*6) | habitantes / ha | 67 | 58 | 48 | -9 | -13,6% | -10 | -18,0% | -20 | -29,2% |
| Densidade habitacional (*7) | fogos / ha | 29 | 26 | 25 | -3 | -9,6% | -1 | -3,9% | -4 | -13,2% |
| Total do território Nacional | ha | 8.893.482 | 8.893.482 | 8.893.482 | *na* | *na* | *na* | *na* | *na* | *na* |
| Território Artificializado (*4) | ha | 266.804 | 337.952 | 444.674 | 71.148 | 26,7% | 106.722 | 31,6% | 177.870 | 66,7% |
| | % total AML | 3,0% | 3,8% | 5,0% | | | | | | |

***Observações***

* É efetuda uma comparação com os registos do território nacional para os territórios artificializados

*1 As datas dos registos derivam dos documentos do projeto LANDYN (DGT, 2013 e 2014)

*2 Adotados para os registos da População e do Parque Residencial os valores dos Censos de 1981 (considerando o total dos concelhos atualmente abrangidos pela AM Lisboa)

*3 Adotados para os registos da População e do Parque Residencial os valores dos Censos de 2011 (considerando o total dos concelhos atualmente abrangidos pela AM Lisboa)

*4 Códigos 1.1 a 1.4 da nomenclatura CORINE Land Cover (Segundo tradução e adaptação de: Caeteno, M. e A. Nunes, 2009. CORINE Land Cover 2006 for Continental Portugal, Relatório Único, Instituo Geográfico Português

Integra:

1.1 Tecido urbano (incorporando 1.1.1. Tecido Urbano Contínuo e 1.1.2. Tecido urbano Descontínuo)

1.2 Industria, comércio e serviços

1.3 Áreas de extração de inertes, áreas de deposição re resíduos e estaleiros de construção

1.4 Espaço verdes urbanos, equipamentos desportivos, culturais e de lazer e zonas históricas

Códigos L1 a L9 da nomenclatura do Projeto Landyn (DGT)

*5 Considerando que a população e os alojamentos "residuais" não têm expressão significativa na área de estudo (menos de 1% do total)

*6 Densidade Populacional = Total da População Residente na AML / Território Artificializados AML

*7 Densidade Habitacional = Total da Alojamentos clássicos na AML / Território Artificializados AML

***Fontes:***

INE (1981) - XII Recenseamento Geral da População, II Recenseamento Geral da Habitação. Lisboa: Instituto Nacional de Estatística.

INE (1991) - XIII Recenseamento Geral da População, III Recenseamento. Geral da Habitação. Lisboa: Instituto Nacional de Estatística.

INE (2001) - XIV Recenseamento Geral da População, IV Recenseamento da Habitação. Lisboa: Instituto Nacional de Estatística

INE (2011) - XV Recenseamento Geral da População, V Recenseamento da Habitação. Lisboa: Instituto Nacional de Estatística

CORINE Land Cover for Continental Portugal (Instituto Geográfico Português, 2009)

Projeto LANDYN (DGT, 2013)

Table 4 - Artificialized territory, urban fabric, construction areas, net pop
net dwelling density
Lisbon Metropolitan Area *, between 1980 e 2010

| | | | unidade | Data do registo (*1) | | | Evolução temporal | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1980-1995 | | 1995-2010 | | 1980-2010 | |
| | | | | 1980 (*2) | 1995 | 2010 (*3) | valor | % | valor | % | valor | % |
| **Total do território da AML** | | | ha | **294.021** | **294.021** | **294.021** | *na* | *na* | *na* | *na* | *na* | *na* |
| **1** | **Território Artificializado** (*4) | | ha | **37.055** | **45.781** | **58.893** | **8.726** | 23,5% | **13.112** | 28,6% | **21.838** | 58,9% |
| | | | % total AML | 12,6% | 15,6% | 20,0% | | | | | | |
| **1.1** | **Tecido Urbano** (somatório de 1.1.1 e 1.1.2) | | ha | **27.923** | **33.307** | **41.129** | **5.384** | 19,3% | **7.822** | 23,5% | **13.206** | 47,3% |
| | | | % territ. Artificializ. | 75,4% | 72,8% | 69,8% | -2,6% | | -2,9% | | -5,5% | |
| 1.1.1 | L1 | Tecido Urbano Contínuo | ha | 13.232 | 21.633 | 26.065 | 8.401 | 63,5% | 4.432 | 20,5% | 12.833 | 97,0% |
| 1.1.2 | L2 | Tecido Urbano Descontínuo | ha | 14.691 | 11.674 | 15.064 | -3.017 | -20,5% | 3.390 | 29,0% | 373 | 2,5% |
| População Residente (*5) | | | habitantes | 2.500.798 | 2.668.280 | 2.815.851 | 167.482 | 6,7% | 147.572 | 5,5% | 315.053 | 12,6% |
| Parque residencial (*5) | | | número de alojam. | 1.075.343 | 1.200.741 | 1.483.717 | 125.397 | 11,7% | 282.977 | 23,6% | 408.374 | 38,0% |
| Densidade populacional "liquida" (*6) | | | habitantes / ha | 90 | 80 | 68 | -9 | | -12 | | -21 | |
| Densidade habitacional "liquida" (*7) | | | fogos / ha | 39 | 36 | 36 | -2 | | 0 | | -2 | |
| 1.3.3 | L9 | Áreas em Construção | ha | 673 | 2.292 | 2.065 | 1.619 | 240,6% | -227 | -9,9% | 1.392 | 206,8% |
| **Total do território Nacional** | | | ha | **8.893.482** | **8.893.482** | **8.893.482** | *na* | *na* | *na* | *na* | *na* | *na* |
| **1.1** | **Tecido Urbano** (somatório de 1.1.1 e 1.1.2) | | ha | **227.073** | **270.583** | **311.130** | **43.510** | 19,2% | **40.547** | 15,0% | **84.057** | 37,0% |
| | | | % territ. Artificializ. | 85,1% | 80,1% | 70,0% | | | | | | |
| 1.1.1 | L1 | Tecido Urbano Contínuo | ha | 62.322 | 95.888 | 132.934 | 33.566 | 53,9% | 37.046 | 38,6% | 70.612 | 113,3% |
| 1.1.2 | L2 | Tecido Urbano Descontínuo | ha | 164.751 | 174.695 | 178.196 | 9.944 | 6,0% | 3.501 | 2,0% | 13.445 | 8,2% |

***Observações***

* É efetuada uma comparação com os registos do território nacional para os territórios artificializados

*1 As datas dos registos derivam dos documentos do projeto LANDYN (DGT, 2013 E 2014)

*2 Adotados para os registos da População e do Parque Residencial os valores dos Censos de 1981 (considerando o total dos concelhos atualmente abrangidos pela AM Lisboa)

*3 Adotados para os registos da População e do Parque Residencial os valores dos Censos de 2011 (considerando o total dos concelhos atualmente abrangidos pela AM Lisboa)

*4 Códigos da nomenclatura CORINE Land Cover (Segundo tradução e adaptação de: Caeteno, M. e A. Nunes, 2009. CORINE Land Cover 2006 for Continental Portugal, Relatório Único, Instituo Geográfico Português

*5 Considerando que a população e os alojamentos "residuais" não têm expressão significativa na área de estudo (menos de 1% do total)

*6 e * 7 Considerando que a população e os alojamentos se localizam exclusivamente no Tecido Urbano

*6 Densidade Populacional "Liquida" = Total da População Residente na AML / Tecido urbano

*7 Densidade Habitacional "Liquida" = Total da Alojamentos clássicos na AML / Tecido Urbano

***Fontes:***

INE (1981) - XII Recenseamento Geral da População, II Recenseamento Geral da Habitação. Lisboa: Instituto Nacional de Estatística.
INE (1991) - XIII Recenseamento Geral da População, III Recenseamento. Geral da Habitação. Lisboa: Instituto Nacional de Estatística.
INE (2001) - XIV Recenseamento Geral da População, IV Recenseamento da Habitação. Lisboa: Instituto Nacional de Estatística
INE (2011) - XV Recenseamento Geral da População, V Recenseamento da Habitação. Lisboa: Instituto Nacional de Estatística
CORINE Land Cover for Continental Portugal (Instituto Geográfico Português, 2009)
Projeto LANDYN (DGT, 2013)

Checking the progress on changes in land use and occupation affection to artificialized territories and more specifically the land classified as urban fabric (continuous and discontinuous) now it is important to cross this evolution with other variables. This crossing took into account the artificialized territories in Portugal between 1990 and 2010 (see Chart 1).

Between 1990 and 2000:

i) mortgage loans (both in terms of amount and in terms of the number of beneficiaries) and the number of completed dwellings explode and the number of housing units completed in LMA (in which lies 1 / 4 of the population of Portugal) was substantially 1/10 of the total national which shows a strong reduction of the LMA weight in the particular context in relation to the dynamic building[10];
ii) the national GDP also recorded an exceptional increase but the resident population stagnated whereas in LAM, GDP growth generally followed the national trend but the resident population increased slightly;

In the late twentieth century the overall picture in Portugal suggested: a developmental spurt with significant increases in consumption capacity and access to credit and a strong property market which by a brutal increase in the number of dwellings (increased from just over 4 million in 1990 to about 5 million in 2000) and an increasing expansion of artificialized territories (from 3% to 4% of the national territory).

Between 2000 and 2010:

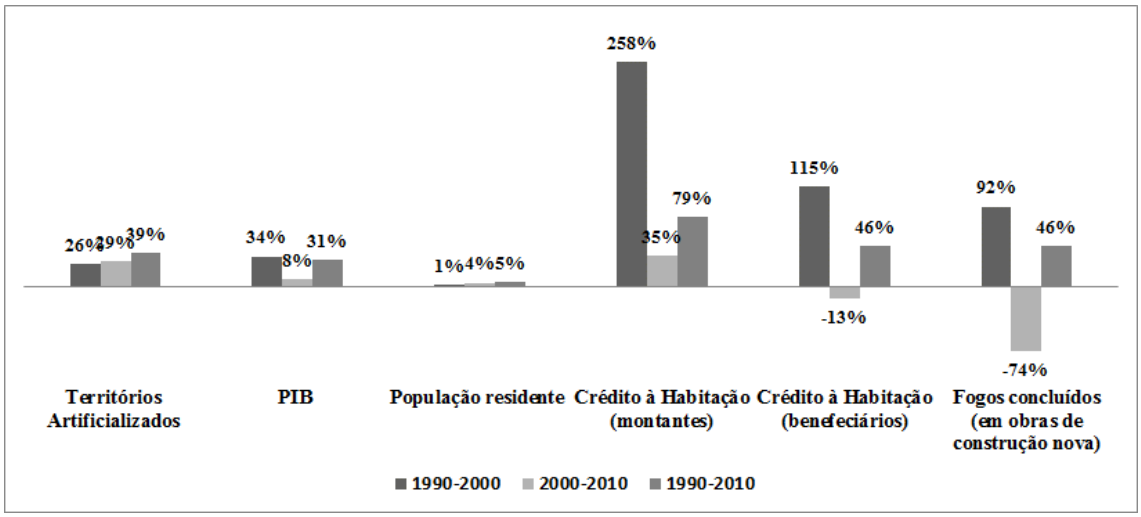
i) mortgage loans and the number of completed dwellings fell sharply (but only since 2003) and in this period, the number of housing units completed in LMA was significantly quarter of the national total which discloses a recovery weight of the LMA in the particular context in relation to the dynamic building[11];
ii) ii) the national GDP virtually stagnated and the resident population increased slightly and that the LMA GDP growth and resident population generally followed the national trend;

At present the overall picture in Portugal suggests: a prolonged stagnation of economic activity with breaks in access to credit capacity and a strong downturn in the real estate market with a a brutal decrease in the residential building dynamics (in 2013 it is concluded 1/10 of housing units completed in 2002). But despite this, two phenomena deserve attention: the residential market has a dramatic oversupply (about 800,000 empty homes in 2011) and artificialized territories continue its expansion trend (passed in 4% to 5% of the national territory).

[10] In 1991 the number of dwelling slightly exceeded 60,000, in 2001 were completed over 117,000 and in 2002 it recorded the highest value ever when it concluded almost 122,000 dwellings.

[11] In 2010 they were completed just over 30,000 dwellings and depressive trend has strengthened in recent years and in 2013 were completed less than 20,000 dwellings

Chart 1 - Crossing other variables with artificialized territories
Portugal, 1990-2010




Fontes:

Áreas Artificializadas, Fonte: Projeto Landyn

PIB e PIB per capita a preços constantes (base=2011)
Fontes de Dados: INE|BP - Contas Nacionais Anuais (Base 2011), PORDATA

Fogos concluídos (em obras de construção nova), Fonte: IHRU (2015)
Dados para 1990 são de 1991

População residente (milhares): INE, Censos 1991, 2001 e 2011

Crédito à habitação: montantes concedidos e beneficiários (1994-2007)
Crédito à Habitação: montantes concedidos [Preços Constantes, IPC - Base 2011] (milhares de euros)
Fontes de Dados: DGTF/MEF e PORDATA

## 4. Work Limitations and future developments

This oral presentation, by their own limitations in length and thematic range, deals with a fundamental aspect of the research process on urban dispersion: its verification in terms of use and transformation of the land. It is assumed that the questions not to treat in this oral presentation and determinant to have accurate answers to the questions regarding urban dispersion - respond to aspects to be discussed in futures developments:

The question of diversity, about the different types of urban dispersions and the respective characteristics that determine these differences (differences between scattered building and urban dispersion, between urban dispersion and urban sprawl or between suburbanization and urban dispersion);

The question of formality, about the (legitimacy) of land tenure and the (i)legality of the phenomenon(s) associated with urban dispersion;

The question about the process in the transformation of rural land into urban land (private promotion vs. public promotion, systematic building vs. subdivision property, municipal planning vs. sum of urban developments);

The metropolitan uniqueness about the specifics of urban dispersion in a me
the Portuguese s context;

The national uniqueness about the specifics of the Portuguese urban dispersion context.

## 5. Conclusions

In the last two/three decades there is a huge difference between:

a) The dominant policy and technical intent supporting the urban concentration (and regulating the use and transformation of the land to restrict strongly the reclassification of rural land into urban) and fighting the urban expansion, the urban dispersion/sprawl and the scattered building and
b) The real dynamics of land use in which it appears that the urban sprawl not only was not reduced or stagnant as, in some aspects, even strengthened, particularly in LMA in the early twenty-first century.

The entire political, technical and academic powerful consensus regarding the benefits of urban concentration and systematic revision of key laws is driving policies, legal framework and manuals towards a direction that is not being followed by the agents that act in the territory. Understanding this gap is urgent, necessary and possible and the university is central in the search of this knowledge.

In the last decade there is a paradox in LMA:

a) When the crisis reaches Portugal smashing the building dynamics, break credit and locking GDP growth; when the resident population slightly stagnates and 800.000 dwellings are empty
b) The artificialized territories, and specially the discontinuous urban fabric, continue its expansion.

All signals are regarding to a country in a deep crisis specially in all the with building industry (that almost stopped) but in tough times the urban disp the discontinuous urban fabric, goes on its territorial expansion. Again, understanding this apparent contradiction is urgent, necessary and possible.

Then we understand that beliefs , technical certainties and fiery speech shape reality. At this last finding still joins the national trend (cultural? historic?) for a little disciplined land occupation as can be seen in large areas of the portuguese territory, LMA included. Regarding land use transformation in LMA the reality is far away from what the politicians want and proclaim, the urban planners draw or the academics think it´s best.

Faced with these phenomena seem to be necessary to be valued knowledge of the processes and dynamics of land use in order to determine possibilities of using and manipulating sustainably towards deemed the most adjusted in economic and financial but also cultural perspective.

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# ZwischenInnovation: Actor-Network Theory through Temporary Use in Bremen

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Keywords: Actor-Network Theory, Urban Studies, Temporary Use, Performative Planning

**Abstract**

*The Actor-Network Theory (ANT) is born out of a discipline that is far beyond the spatial and theoretical borders typically associated with Planning. Since the theory's inception in the mid-1980s, ANT has been debated and ultimately shared across technical and social disciplines because of its concepts transferability. Despite its origins, it is hailed as a re-definitive, richer, active, transcendental idea and perhaps useful tool for urban studies including planning theory and practice. As a means of exploring how ANT can add value to planning by bridging theory and practice, this paper introduces and deploys ANT in the temporary use case study of Plantage 9 in the German city of Bremen, Hansestadt Br to highlight potential contributions to planning. Practitioners use various forms of temporary strategic and tactical instruments for urban regeneration. Opportunities for affordable and acceptable experimentalism presented by temporary use activate urban regeneration and development. Temporary Use sets a background of shifting stability ideal for Problematisation and sets ANT in action. Research in this area is key to furthering the epistemological development of ANT in urban studies, and rooting the concept in planning theory and practice. As a theory that outlines methodology, ANT is a hybrid concept new to planning that lends itself as a heuristic benefit. The contributions of this research would help question and understand the processes, roles and competencies of an emerging and performative planning addressing urban decline.*

## 1 Introduction: The Planning Exigency

Both scholarly and professional planning experts suggest a need for new approaches to fusing scientific insights with professional practice. As of late, critics question the legitimacy of planning practice due to its weakness as an evidence based discipline, and argue that it should sh stigma (Laplante, 2010; Fecht, 2012). Both academic and popular sources discuss aspects of planning practice that can benefit from more substantiated practise. Writers with both professional and academic backgrounds highlight the convoluted and disjointed processes that facilitate planning, the lack of engagement between practitioners and research, and converse challenges that motivated urban scholars to publish and not participate with their research in practise, or limit practitioners from information sharing. (Laplante, 2010; Taylor and Hurley, 2015). Consequently, meaningful knowledge exchange between scholars and professionals is compromised. In response to the professional and academic concerns introduced above, this article endeavours to explore and illustrate a potential approach that could help support practice-based cases studies with scientific methodology. This potential is the *Actor-Network Theory* (ANT) approach which advocates for a scientific study of how networks emerge by following the actors that construct them (Latour, 1987, 1996, 2005), and also providing a synergistic solution to both academic and professional needs and a better alternative to remedying the weak science in planning.

## 2 Actor-Network Theory in Planning: Theoretical Background

As a technology and science based approach, ANT is gaining ground in planning theory and practice (Selman, 2000, p. 110; Doak and Karadimitriou, 2004, p. 7; Crawford, 2005, p. 3; Wessells, 2007,

p. 351). In a 2010 urban studies collection featuring ANT, Bender details ANT capacity to bring a different level of empirical transparency [to] planning sci diligence, richness and innovation that reveal transforming networks complex Bender, 2010). Other ANT research concludes that it releases planning theorists and practitioners from traditional and rigid means to making sense of complexity and urban change is perpetuated when human actors as opposed to non-human actors are privileged or recognized (Beauregard, R A., 2012). Consequently, ANT provides an alternative approach to exploring and articulating the agency and arrangements within new institutions, procedures, and concepts that con changing world that is hidden when understood through traditional ways of knowledge production (Latour, 2005, p. 11; Rocheleau and Roth, 2007, p. 436; Wessells, 2007, p. 352, 2007, p. 352). On account of ANT s compelling potential as a tool for planning practice, the work pr to answer the research question: *How is knowledge derived from ANT significant to planning practice?*

*2.1 Actor-Network Theory*

ANT is growing a following for its unique approach to articulating current socio-urban development (Selman, 2000, p. 110; Bender, 2010; Beauregard, R. A., 2012). ANT attempts to take advantage of commonalities between science, technology and social studies, by recognizing that it is no longer the natural influencing the technological but a mutual cycle in which both realms influence each other. For instance, Beauregard contextualises ANT in practice by discussing how place, setting and tools legitimize planners arguments, technical positions, formality and general impo development review process (Beauregard, R. A., 2012, pp. 184 185). ANT work encroaches further on planning theory and practices with its presence in studies on architectural practice, brownfield regeneration, wetlands conservation and management, rural political conflicts, real estate and housing development, gelleable space to political ecology, regional economics, and planning reform. (Healey, 1994; Burgess *et al.,* 2000, p. 131; Selman, 2000; Doak and Karadimitriou, 2004, 2007, pp. 72 74; Guggenheim, 2010; Tironi, 2010; Rydin, 2013, p. 26). The vast amounts of research and publications that explore science and urban development through the ANT lens undoubtedly demonstrate that ANT has already made its mark in planning theory. The information provided only partially demonstrates how information derived from ANT is significant to planning.

*2.2 ANT: Relevant Concepts*

ANT is an attractive social theory because of its descriptive and articulate characteristics. These advantages are channeled through the paradigm s key elements and principles that e that both human and non-human actors are equally recognized. The first key concept that is central to this article is that of the *actant*, which Latour introduced and other ANT scholars use to denote all network actors both human and non-human (Latour, 1987, p. 84). Actants can emerge in specific roles as an ***intermediary*** or ***mediator***. *Intermediaries* transport meaning or force without transforma simply by transporting or supporting an original meaning without alteration (Lat Rydin, 2013, p. 26). In comparison, *mediators* create associations and enrol other *actants* but modify the meaning and message that is transported (Avrahampour, 2007, p. 358; Latour, 2005, p. 39). An excellent illustration of *actants*, *intermediaries*, and *mediators* is provided by Beauregard through the description of various planning vignettes within which objects such as site plans, models, and photographs are introduced into discussion (Beauregard, R. A., 2012, p. 184). These tools play communicative roles (as *actants*) in the discussion. These *actants* sometimes provide neutral visuals such as photos and mock-ups (as *intermediaries*) that ensure all participants share the same visualization of the site on which they are working Equally important is the concept of a *translation* which refers to an act or interaction that induces two mediators into coexisting (Latour, 2005, p. 108). A transla

contribution to ANT emerges in two different forms. The first definition of a *translation* is fixed as a material outcome and the second meaning expresses the act of how a *translation* occurs within the ***Translation Process*** (Latour, 1987; Crawford, 2005; Latour, 2005). It is easiest to begin by considering an initial ***claim*** or ***statement*** that sets a series events into place. The new interpretations of the initial interests reiteratively render themselves into adaptations of the first *claim* that is now either simplified, referred, and eventually legitimized. How the interpretations finally appear as a ***fact*** depends on the modalities through which actants receive and further perpetuate the *translations*. To illustrate the progression of a claim towards a *fact*, Latour s *Controversy Ladder* schematic (Figure 1) breaks down conditions and elements that advance and hinder claims from becoming facts. As outcomes of *translations,* ***inscriptions*** are concrete examples of how later statements confirm the status of earlier statements. *Inscriptions* help in the ordering of things and provide durability to actor-networ (Doak and Karadimitriou, 2004). Another important ANT concept with technological origins is a ***black box*** (Latour, 1987; Crawford, 2005; Latour, 2005). A *black box* is a simplification of a concept or arranged network or assemblage where relevant information is reduced to inputs and outputs, or transfer characteristics (Latour, 1987, p. 3). Concepts or entities are *black boxed* o become a *black box* when they achieve of stability or legitimacy, are taken for grante counted as a resource (Latour, 1987; Crawford, 2005, p. 2). *Black boxes* as reductions of complicated information, however, may be reopened (Crawford, 2005, p. 2)

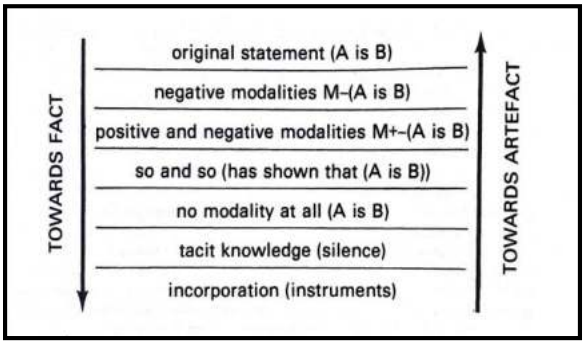


*Figure 1 Latour's Controversy Ladder*

*2.3 ANT: Relevant Principles & the Translation Process*

The ANT approach is interested in human and non-human participants, both of which are equally recognized for the as network participants. Beauregaurd explains this best when describing things as participants of sorts . . . [that] carry with them information, arguments, and commitments that shape talk and action (2012, p. 186). They empower and they disempower . . . [and] in the absence of things, there is silence. And, as things are modified . . . deliberations are transformed (Callon, 1986a, 1986b; Callon, M., Law, J., Rip, A., 1986; Latour, 1987, 1987, 1987, 1996, 2005; Law, 1992; Beauregard, R. A., 2012, p. 186; Rydin, 2013). This constitutes ANTs first principle of ***agnosticism*** *or* ***radical relationality***. Under the aegis of this principle, actants are empowered to define their respective identities, their individual range of actions . . . [and the] choices which are researchers and analysts (Callon, 1986b; Burgess *et al.,* 2000; Rydin, 2013). Following the first principle is the second principle of ***generalized symmetry***. This tenet pleads for the use of a common con repertoire to describe and explain the relations between humans and non-humans in order to understand how change happens (Latour, 2005, Farias and Bender, 2010, p. 3, Rydin, 2013). Simply put, a single set of terms and vocabulary is set to describe the objects and their processes of knowledge construction across social and technical fields. The third and final principle is that of ***free association*** (Callon, 1986a, pp. 3 4; Latour, 1987; Law, 1992; Burgess *et al.,* 2000, p. 123; Crawford, 2005, p. 2). This methodic principle corresponds to the belief that all ***a priori*** distinctions should be discarded before following actants paths.

Guided by the three principles explained above, ANT advances that actor-networks are traced through the *Translation Process*. This process is broken down into the four phases of 1) ***Problematisation,*** 2)

***Interessement***, 3) ***Enrolment***, and 4) ***Mobilisation***. ***Problematisation*** is the initial phase in which researchers frame how to investigate an issue. Callon also notes that in reality, the *Problematisation* phase is not often clear as entities are formulating their [identities] and goals in a totally inde manner (1986a). The next stage of the process is that of ***Interessement*** within which various actions negotiate and develop stability between currently and potentially involved actors (Callon, 1986a; Doak and Karadimitriou, 2004). During this process, the identity of new actors are established and join the identity of the initial alliance formed during the *Problematisation* stage (Callon, 1986a). What is important in this stage are the range of strategies and mechanisms through which new links that interest new actors are formed. Just as relations can be forged, they can also be disrupted. Following is the ***Enrolment*** phase which only happens if all means of stabilizing associations in the *Interessement* phase are successful (Callon, 1986a). At this point various transformations take place. Not only is there a transformation in the modality of the claim from a question into a statement or fact, but the actors have been transformed through the attribution of new or different roles (Callon, 1986a; Doak and Karadimitriou, 2004). The latter usually happens with the help of a mechanism or non-human actant, and results in a consensual resolution (Callon, 1986a; Doak and Karadimitriou, 2004). Lastly, the final stage of ***Mobilisation*** completes the *Translation Process* (Callon, 1986a; Doak and Karadimitriou, 2004). In this stage, a combination of human and non-human actions and materials fulfil the negotiated aim and the network stabilises (Callon, 1986a; Latour, 1987; Doak and Karadimitriou, 2004).

## 3 Temporary Use as a Translation Process

The *Temporary Use* context in planning practice is a suitable ANT backdrop as there is still a gap in knowledge about the ways in which temporary projects should be incorporated into planning, and the relationship that planners should have with various other t 2013, p. 2). The progressively familiar term *Temporary Use* (TU) is a general means of describing the popular method of incremental, and short-term approaches to producing urban interventions (Hollander *et al.,* 2009; LocusLab, 2009; Lydon, 2012; Glick, 2013, p. 5; Pfeifer, 2013). Despite its new-found allure in the urban settings, TU has been a major part of historical urban development, and also continues as it has been in developing cities and countries for a long time (Lydon, 2012, p. 2). TU is a low-risk way for both community members and municipalities to improve neighbourhoods (Pfeifer, 2013, p. 2). Over a decade ago, studies documented how economic changes in the 1990s hastened German cities to find solutions for increasing inner city vacancy and growing number of brownfield sites (Zehner and Hoffmann, 2007). The result of economic and political changes was that the clas instruments developed mainly in the 20th century [were] not only no longer applicable but restrictive to planning innovations necessary for the transition into the 21st century (Altrock, 2012, p. 16). TU emerged as a strategy recognized in mostly German cities to revitalize vacant and dead zones that had become liabilities (Hollander *et al.,* 2009). Short-term, temporary methods, unlike long-term strategies do not require tedious bureaucratic processes, large up-front investment, and . . . little public input, but instead aim for sustainable improvement through non-threatening, affordable, short-term opportunities (Glick, 2013, p. 10; Lydon *et al.,* 2012). More recently, scholars describe TU as a new style of performative planning [that] offers a novel planning perspective that ir planning theory facilitate that both productive and responsive roles for the pra (Altrock, 2012, pp. 21 22). The *temporary use* projects discussed in Altrock s performa interpretation feature the development of a new culture that is distinctly more inclusive with emerging arrangements of non-traditional actors. The participation of a wide range of characters including everyday citizens, artists, and other professionals shifts the planning culture away from its prescriptive roots to a voluntary culture that impels a community (as opposed to a select few) to take onus for the complex change in their urban settings (Altrock, 2012).

TU rallies citizens with emerging planning actants and *problematizes* land use, economic and community challenges that urban settlements face. It is important to examine the participants of

*temporary use* projects not just because of how and why actors and networks emerge, but because urban scholars agree that a majority of *temporary use* projects are successful because of the non-planning participants involved (Altrock, 2012; Lydon *et al.,* 2012). Because of the latter, *temporary use* events not only share similar conceptual emphasis as ANT on modalities and strengths of relations based on action that arises from the forming of (temporarily) stable links [between h actors] within networks (Rydin, 2013, p. 25), but also an awareness of what agency empowered within non-human actants. Since the ANT approach is most suitable for exploring how and why questions, it becomes an appropriate means of considering the actants, characteristics and linkages in TU networks and relationships as a Translation Process that not only identifies an issue but emerges and develops through *interessement*, *enrolment*, and *mobilization*.

As a previously industrial, port city, Bremen experienced post-industrial challenges in the 1980s and 1990s as shipyards, ports, and other industrial areas along the Weser River closed (URBACT Pilot Transfer Network, 2015). Like other German cities facing urban shrinkage and post-industrial challenges, the city of Bremen took advantage of the Stadtumbau or federally funded Urban Renew program supporting urban regeneration and renewal projects (Froessler, 2010; ZZZ Bremen, 2010, Zwischennutzungsagentur Wuppertal [Wuppertal Temporary Use Agency], 2014; Elisei, 2014; Hollander *et al.,* 2009). Since Bremen is featured as a model with the URBACT *Temporary use as a tool for urban regeneration* (TUTUR) program that promotes TU in European cities (URBACT Pilot Transfer Network, 2015), this article will feature the case study narrative of a project facilitated by the city s temporary use agency *ZwischenZeitZentrale Bremen* (ZZZ) as a means to articulate new arrangements embodied in TU through ANT concepts and principles. This particular case study was a part of a research the evaluated TU through ANT in four different case study cities in Germany, Canada and the USA.

## 4 Methodology

The preceding elaboration on theoretical work demonstrates contributions to planning theory. Further work is necessary to evaluate potential contributions to planning practise. Thus a mixed methods approach that allows for flexibility and exploratoration is needed to set up the practical research evaluating ANT in temporary use case studies. To facilitate this, the Case Study approach in combination with Narrative Research guided the research design. ANT objectives encourage the analysis of how networks are constructed. Appropriately, case studies help describe and understand research questions focussing on how and why phenomena take place at individual and detailed le (Yin, 2014; Flyvbjerg, 2011, p. 301). The unit-based design of case studies structured the work to focus on developmental factors, events over time, and also the unit relates to its environment (Flyvbjerg, 2011, p. 301). In addition, Narrative Research is an ethno-methodological technique in social research strengthens the mixed methods approach by making use of stories and accounts as instrument scientific investigation (Cihodariu, 2012, pp. 29 30; Yin 2014). Adding to the descriptive advantages of case studies, narratives provide a general means of framing [the] interpretation and renderi events and things (such as discourse, frame, mental model) used (Lejano *et al.,* 2013, p narratives in the form of accounts, Latour s appeal to trace social connection action is achievable (Latour, 2005, p. 122). Stories that inform narratives not only express the identities of their owners, but help model complex realities around us (Lejano *et al.,* 2013, p particularly relevant to the ANT approach as narratives reflect the concerns, hesitations, and amb of people as they react to, shape and are shaped by their environment (Lejano *et al.*

### *4.1 Research Process: Mixed Methods*

In order to capture the localized detail of Bremen s best-practise TU examples qualitative i facilitated the chance for studying subtle nuance in attitudes and behaviors and for examining social

processes over time (Babbie, 2004) through the narratives that respondents provided. One semi-structure interview that lasted for over two hours was conducted for this research with Oliver Hasemann and Daniel Schnier of ZZZ in Bremen on the 5th of January 2015 after extensive literature and background research. The interview format allowed for the discussion of TU as a general topic and also the freedom to follow up on specific topics raised by the respondent (Babbie, 2004, p. 300) with regards to their best-practise project. The interview intended to capture details such as black boxes, actants, interaction modes and strengths contributing to a final ANT coding and analysis of TU. Narratives provide another means for understanding networks. Agreeing with Mark Granovetter, scholars supporting the use of narratives in environmental network research describe how trust embodied through shared information can be transferred through shared narratives (Lejano *et al.,* 2013). In light of this, narratives are not only instrumental to qualitative interviews but also to the modalities of interactions they describe and consequently key elements that construct a network (Lejano *et* Transcriptions and interview notes contributed to the data-collected and were offered to interviewees both during the meetings and after the meetings so that accuracy and transparency of the information collected was assured. With the information provided through the interview, key human and non-human actors were identified and considered. This process informed the coding of the collected data. Following this, a narrative context was induced to describe the case studies pre- and post-TU projects. Recognizing that narrative can illuminate insights for event-centered and experience-centered accounts (Andrews *et al.,* 2013, p. 5), the combination of Narrative Research and the ANT approach was justified. According to the ANT approach, the act of recording accounts is a form of tracing social connections and agency (Latour,2005, p. 122). By taking the narrative data and identifying the ANT elements (i.e. black boxes, actants, translations, intermediaries, mediators etc.), the network tracing advocated by Latour is codified. Subsequently, the data collected is analytically digestible and easier to organize into tables and other visualizations.

*4.2 Bremen: Awakening Second Hand Space*

In the wake of Bremen s post-industrial development, interest turned to reactivating vacant buildings and sites and supporting entrepreneurial projects as a means of reviving the city. Compared to other post-industrial cities, Bremen s vacancy opportunities lay not in urban neighbourhoods, outskirts (URBACT Pilot Transfer Network, 2015). The city saw the vacant buildings, and brownfields as chances for economic development and revitalization. As the city lacked a specific agency to manage the redevelopment objectives, they created the temporary use agency *ZwischenZeitZentrale* Bremen (ZZZ) in 2009 with funding from the National City Development Policy (*Nat* *Stadtentwicklungspolitik*) (URBACT Pilot Transfer Network, 2015). This event constituted the problematisation of economic degeneration and supported a claim that TU could help with economic regeneration through partnerships and projects specifically supporting local businesses. With further support from local level partners such as the Senate for Building, Environment, and Traffic, the Senate for Financial Affairs, the Senate for Economic Affairs, Labour and Ports, *Immobilien Bremen* (IB), as well as the local economic development agency *Wirtschaftsförderung Bremen* (WfB), Oliver Hasemann and Daniel Schnier from *Autonome Architektur Atelier* (AAA) initiated the agency (Plantage 9, ZZZ Bremen, 2010; URBACT Pilot Transfer Network, 2015).

From the onset, policies such as the new land use plan and municipal programs such as (Soziale Stadt) were enrolled to the networking of people and places (ZZZ Bremen, 2010; Elisei, 2014, pp. 31 32). Furthermore, the soft urban policy represented by the ZZZ crossed all otl policies to build project-based synergies, encourage meaningful urban transformation through bottom-up collaborations through alternatives means of socio-economic and cultural behaviours (Elisei 2014, pp. 31 32). So began the enrolment of administrative actants and the interessement with local actants. Further actants such as a website and a steering committee were organized from the start TU movement to inventory and guide projects and further enroll interest (Elisei, 2014, pp. 31 32).

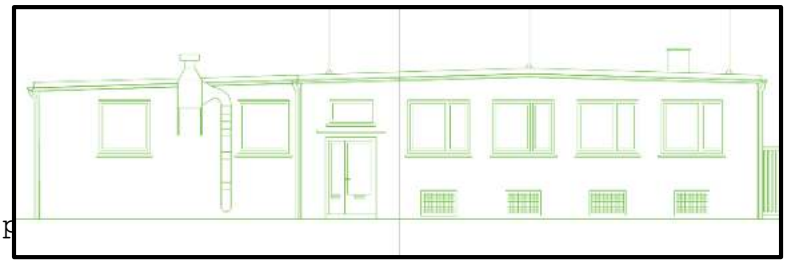

*Figure 2 Building Façade Sketch (Plantage 9)*

Additionally, conference events were organized to help establish and construct a temporary use network and also enrol additional support for TU in Bremen. Oliver Hasemann describes the significance of the first event, 2nd Hand Sp Sustainable Design for Urban Change through Temporary organized in 2010 was vital for the network enrolment and mobilization with other TU projects, and foundational to the success of their initial projects (ZZZ Bremen, 2010). While the website served as an early intermediary for TU in Bremen by providing summaries of potential temporary use spaces for potential owners and users (URBACT Pilot Transfer Network, 2015). The Steering Committee and informational events and relevant materials became mediators in the course of TU in Bremen. By bringing a diverse representation of experiences together and also publishing their own knowledge to share with other municipalities, ZZZ actively participated in the creation and shaping of policy claims that TU is an effective method and solution for economic development through the aforementioned mediators. At the same time, the ZZZ initiated further enrolment and mobilisation of other networks. The majority of initial projects began on publicly owned sites and facilitated TU while incubating many entrepreneurial projects. One of the most successful and earliest example is the *Bricolage Plantage* that would later be renamed *Plantage 9* also the address of the building site (Plantage 9; URBACT Pilot Transfer Network, 2015). *Plantage 9* began as an abandoned store house with a rough area of 1,600 m² originally built in the 1950s for a textile factory that was later home to a fire protection company (ZZZ Bremen, 2012b, pp. 68 69). Once the municipality acquired the building in 2009, zoning and development plans illustrated plans for the building to be demolished despite its good structural quality and a road in its stead to be built (ZZZ Bremen, 2012b, pp. 68 69). According to Hasemann, however, it would not be until meetings on creative centers in Bremen in 2009 that an actant in the form of a photo emerged and mediated the eventual change of the building s use and space for the successful tempor use project. Hasemann details, that a few city officials at a creative centers meeting shared photos of a building space that was intended for demolition due to its vacant status and plans for a new road, members of the ZZZ caught a glimpse of the space and realized the contingency embodied in the space. This realization impelled the temporary use agents to visit the site and confirm that a specific characteristic of the building and its space could facilitate temporary and creative and entrepreneurial development. As a part to the Bremen s temporary use narrative, Hasemann undersco of the spirit and character of this space that was conveyed through the photo without it, there would have been no contingency for their best-practise project.

### *4.3 Plantage 9: Extending* Bremen s *Temporary Use Network*

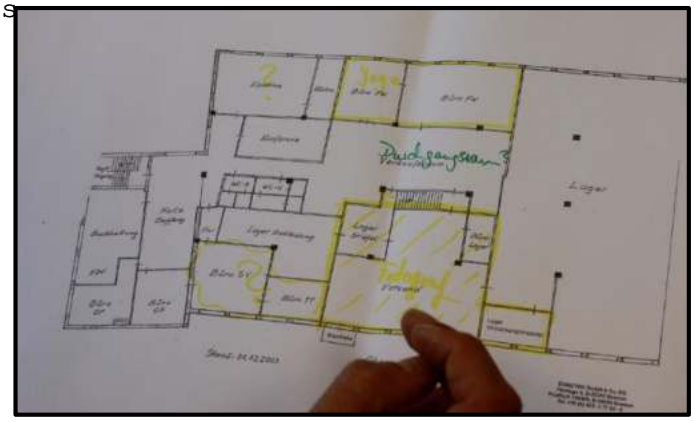

*Figure 3 Workshop Visuals (ZZZ Bremen, 2010)*

As of July 2010, *Plantage 9* became the working home for 30 artists, photographers, university graduates and also teachers enrolled and mobilized by artists interested earlier. Its heterogeneous combination of spaces turned into offices, warehouses, workshops, social space and canteen facilities that responded to the needs of the diverse group of users (ZZZ Bremen, 2012b, p. 68). With the help from the first conference from

2010, feedback as well as a workshop organized before users moved into the building aided in the design and transition of the project from temporary to sustainable community workplace (ZZZ Bremen, 2010, p. 19). The representatives of ZZZ explained that their initial role as a middle manager ended after explaining the rental conditions and passing responsibility of building on to the tenants. Hasemann further explains that once the year was complete, the users formed their own tenants association and initiated the process of transferring the responsibility for building management. In addition to this transfer, the tenants formed their own collective and officially renamed the temporary use project as *Plantage 9*.

By this point, the group of human actants enrolled and mobilized as renters evolved into mediators that further translated TU claims into fact. The act of establishing their own association and taking over the rental agreement with the WfB concluded this process in April of 2012 (ZZZ Bremen, 2012b, p. 68). In addition to the many mediators and intermediaries involved in this successful case study from Bremen, the creation and construction of trust as a part of the temporary use network was pivotal (ZZZ Bremen, 2010, p. 20). Not only did the trust strengthen the relations in the network, but it for exchange and learning that strengthened the group dynamics (URBACT Pilot Tran 2015).

Policies such as building codes and zoning maps presented hurdles to the implementation process of TU. During the interview, Hasemann and Schnier describe the opportunities for TU difficult as has only recently been permitted on various sites due to a tacit acceptance or tolerance despite building code restrictions. Hasemann further explains that the local government managed the project as if the plans for a new road did not exist as officials could not technically make any building improvemer with the zoning plan still in place. As for building improvements to bring the site up to standard, ZZZ contributed 10,000 to improvements while the remaining estimate of 100,000 was new three year-long contract between the new renters association and Bremen City. Not only did the policies and contracts in this best-practice example emerge as actants, but they defined themselves as actants with negative modalities around which other actants had to manoeuvre.

Beyond the key influence of non-human actants, the Bremen case study illustrates a successful process for actants in the form of heterogeneous spaces, documents, visuals and people who collaboratively construct networks. The temporary use agency in Bremen developed a legacy recognizing TU (URBACT Pilot Transfer Network, 2015). Early reactions to TU were also uncertain, but the commitment with which Bremen City and the ZZZ pursued TU as a generator for grassroots economic development resulted in the black boxing of TU as a means for testing potentially sustainable uses for difficult spaces (ZZZ Bremen 2010, 2012b; URBACT Pilot Transfer Network 2015). Moreover, the role of space and place is significant in the Bremen example and appears boldly as an actant that facilitates the cohesion of network extensions. According to the ZZZ and other temporary use academics, the key is to find and select the [spaces and] places to put in the game of the re-use and allow the second hand places to be found again with new opportunities as drivers for business, qualitative features that improve the civic fabric of the city (ZZZ Bremen, 20 Hasemann and Schnier, 2014; Elisei, 2014, pp. 31 32). Through this emerges a clear process of problematisation, interessement, enrolment, and mobilisation through which diverse actants with distinct capacities and competencies, strategically and sustainably address urban decline through tactical interventions.

## 5 Discussion

The process of illustrating ANT through TU concluded that ANT is in fact a useful tool to planning. The theoretical approach s unique interpretations and means of articulating

environment offers an approach that dismantles and investigates networks and the process through which they emerge and extend. Furthermore, the recognition and agency that ANT allows for human and non-human network participants, surfaces truths regarding existing weak planning actants that are impede or hinder planning processes as was the case with building codes and zoning maps with *Plantage 9* in Bremen. Traditional planning and development policies and regulations that are supposed to support urban change suddenly emerges as an outdated inscription that challenges and ultimately hinders planning processes and the actants pursuing TU. Conversely, new potential planning actants also surface such as temporary use agencies, tactical and improvised experimentation (as opposed to strategic policy making), second hand places and new entrepreneurial collectives that regenerate declining spaces. What is innovative is that they do not appear as traditionally planning practices or instruments, but have the potential to be adapted and integrated for planning practise once the identified weaknesses and barriers such as grandfathered policies and instruments are addressed or updated. This innovation illuminates the shifting arrangements and evolving actors that collectively constitute TU from and policy and practice level for urban redevelopment. Thus a moment and space to bring scholars and practitioners together as weaknesses in existing practices and instruments are revealed and the potential and contingency to experiment and adopt new practices and instruments emerge.

*5.1 Challenges*

While ANT is highly useful for understanding the processes in which actants emerge, and enroll others in the extension of a network, it does not provide a certain explanation of the cause and effects of events. This potential area for confusion must be heeded and noted as the ANT approach seeks to describe and explain the relations of the events in the form of actants. In detail, the illustration of ANT through temporary use narratives strives to show this by narrating the situational assemblage of actants that come together, enact each other and create contingency for new situations. This point of note is also highly relevant to critiques of ANT regarding power. ANTs approach is not meant to explain power and domination as structural framework to which most are accustomed society (Murdoch 1994, Farias and Bender 2010). Indeed its inability to explain power in such a way, is in fact as Murdoch states, its strength as it means to interpret power as outcomes ( in potential ), as acts of exertion ( in a (Murdoch, 1994), and also what this study proposes as measures of contingency. In this sense, the research presented here confirms the work of others that use ANT to perceive power as performative flows and effects in networks, and not on a compositional arrangements (Latour, 1987, 2005; Murdoch, 1994; Rocheleau and Roth, 2007; Rydin, 2013, p. 26). Nevertheless, this thesis presents an introduction of how such research can be forwarded in other facets of planning practice and deservers further investigation.

This study initially outlines increasingly popularized and academic interests to substantiate the science in planning. While corresponding possibilities to respond to this call to better ground planning practice in science are endless, the ANT approach presents valid and appropriate philosophy and methodology as a solution to this concern. Its historic roots in technological science present direct methods and procedures that scientifically substantiate findings. Additionally, its applicability to all contexts of network and knowledge creation make it accessible to scholars and practitioners alike. The fact that ANT is adopted in fields of research outside of planning demonstrates an effectiveness for research. The next step is that we learn from the ANT tenets to translate its claims to tr facilitate the access for planning practitioners. The principles and concepts of ANT are veritably radical and innovative, but difficult to adopt without commitment and time. To articulate *agnosticism*, *generalized symmetry*, and *free association* requires that first complete understanding and secondly, discipline to trail both human and non-human actants and record their performative legacies without *a priori* assumptions. Resources such as time, patience and energy to follow through with the process are in most planning practices limited. However, the willingness of planning scholars to collaborate with

practitioners facilitates opportunities for fruitful results if not an altered ontological perspective. The concepts such as *actant*, *black box*, *translation*, *inscription*, and with which ANT communicates its *Translation Process* are also a new vocabulary the non-technological scientist must learn.

Beyond this initial hurdle, ANTs language presents a distinct way of regarding urban environments and portraying the observations in a way that is extremely relevant with the increasingly technological world. Latour s argument to dispel the exclusivity of agency embodied in humans is fair. As desc Avrahampour, Latour s campaign to correct social theory and its anthropocentri indeed an attempt at fixing faulty attitude (Avrahampour, 2007, p. 358). While it may have seemed that the radical extension of agency to all things is silly, the growing interest in ANT demonstrates that is no longer so. It is only a matter of time before such a philosophy is fully embraced by planning practitioners and legitimized. The current status of urban studies scrutinizing ANT in planning theory and furthermore in planning practice is still preliminary. Nevertheless, the opportunities to study ways to improve or adapt ANT for planning theory and practices are many. Specifically, more precise means of distinguishing and characterizing the phases of the translation processes as well as the typology of actants and modalities could improve the robustness of ANT s contributions. generousity of the concept lends itself well to a range of varied interpretations. This, however, undermines the general operationalization of the concept as it exposes vulnerabilities to bias and extreme interpretation. Nevertheless, like many other theoretical concepts, ANT is characterized by theoretical abstraction. The new contingency that is brings is its unique methodic approach that behooves scholars and practitioners to collaboratively refine and polish ANT s potential, planning policy and practice.

## 6 Conclusions

Through the fusion of ANT and planning practise, both scholars and practitioners are provided the opportunity to be humble and acknowledge that humans are not the drivers of change in the world. It is in fact many and all things that affect change (with)in varying degrees of magnitude or separation. The illustrative context of TU is one example presented in this thesis. This, however, does not mean it cannot be transferred to other practice based scenarios. This research has examined and presented ANT through one temporary use case study. The information provided here adds to the range of existing ANT research in urban contexts, and thus highlights the range and adaptability of ANT. The research also presents the strategic and tactical evolution of TU as a response to urban decline.

This article has demonstrated ANT facilitates the examination how TU is developed and implemented. Additionally, ANT facilitates and analysis of the network participants and how they come together as conditions for change. The contingency illustrated here is clearly evident in the presented case study and could also be so for all planning in general. As such, there is still much for ANT to contribute to planning, and conversely much for planning to contribute through ANT. Despite the early stage of progress with research integrating ANT and planning, this article presents a step forward and demonstrates ANT can positively contribute to both planning theory and practice. The work present here is a chance for further problematisation, interessement, enrolment and mobilisation in a greater scheme of ontological and epistemological understanding in the planning. Further testing and improvements on the operationalization of the *Translation Process* and the ANT principles must be further experimented and adapted. And so this work concludes with the expectations that ANT contributions further be debated, falsified, [and] repla himself also finally encouraged (Latour, 1987).

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# Self-organization and Spatial Planning

## The foundations, the challenge, the constraints and the consequences

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**Draft**

### 1. Does self-organization matter to planning?

Spatial Planning and self-organization: A perhaps somewhat unexpected combination of these two themes, one being a collective manifestation of intent , the other representing a spontaneous ph Nevertheless this combination is recently getting serious attention by the planning community. There are a few empirical incentives such as the spontaneous but devastating global housing, mortgage and financial crisis which are a challenge since 2008 to critically assess traditional practices and to develop alternative strategies. The repeating failures of large planning projects are another trigger. These projects cannot be treated as isolated activities, as the planning community is confronted with a highly interconnected world which evolves through unprecedented non-linear chains of causes and effects. There is a growing awareness of a world beyond the planners control, evolving in various This abstract notion of our world developing non-linearly is an incentive to explore further emerging theories addressing complexity, non-linearity, adaptivity, co-evolution, transition and self-organization.

Notwithstanding the recent interest, the world in which planners operate in has always had self-organizing processes. These processes were around in the traditional, coordinative era of command-and-control policy making and in the controlled reality of technical and functional planning. Also in the communicative era of planning and policy making processes of self-organization are very much there. These processes were not seen, were taken for granted, never got much attention and therefore never became part of mainstream planning. They were just there and did not relate much to the planners language of control, regulation and rationality or the planner s drive to reach consensus and a shared responsibility.

Therefore the question is: Does self-organization matter in understanding spatial development processes and will it be in support of the planner to address a world which is progressing beyond our control?

Here we take the stand processes of self-organization do matter and are relevant to planning. We consider the understanding of these processes to be supportive to an understanding of a reality which evolves spontaneously and autonomously from humans intent, their purposeful actions and control and their desire for consensus. At this very moment these processes are hardly understood. In this contribution we aim for a better understanding of self-organization combining planning thought with reasoning within the various disciplines which too relate to self-organizing processes and with theoretical arguments such

as those from the complexity sciences. This is the route we are willing to take, exploring characteristics and mechanisms of self-organization and how these can be seen in relationship to the planners de theory and practice.

## 2. What if assumptions fail?

Quite some planners were showing interest in non-linear processes way before 2008 and the crash of the housing, mortgage and financial market. Nevertheless the crash of the various markets made non-linear processes very explicit and hard to ignore. The credit crisis proved to be a major challenge affecting our political and socio-economic systems fundamentally. A lack of critical assessments, feedbacks and mechanisms of corrections of regulatory governmental and economic systems came into the light. The systems that were there failed completely. With it the idea fell apart of humans being in control. No one at that time had a clue what caused the crisis, what route it would follow, and who or what would be affected. It meant a complete blank about how to adjust, structure and regulate the situation after the crash.

Control and regulation are to the planning discipline what certainty and predictability are to disciplines having a traditional, reductionist and neo-positivist orientation. This orientation is also very much influential within the planning discipline, despite the idea of control and regulation being heavily criticized. And it would be wrong to take these traditional approaches to planning and their technical rational as dated or outdated. But instead of being valid for any kind of situation we argue the traditional approaches are relevant under particular conditions: in stable situations where straightforwardness, stability and certainty reign.

Planning has emerged towards a level of understanding through which the world is seen as differentiated, with approaches and strategies which are not just generic but are situation specific too. And therefore there is more to planning than control and regulation. Alternative, interpretative approaches have been around now for two decades. The unexpected crash of the various markets is supportive to even more alternative and competing approaches, fuelling kinds of reasoning which refer to the idea of a world evolving along in a non-linear, spontaneous and autonomous way.

Planners interest in the non-linear connects with a world that is fluid, fuzzy, and in a continuous process of discontinuous change including those processed we could call self-organization. Self-organization as a mechanism is quickly becoming a popular issue. Is it that self-organization is seen as the cure to all the pain society is confronted with? Self-organization being synonymous to problem solvi and self-regulation ? Of course it isn t. Could it that be self-organization is felt to be an expression hope or promise, comparable to notions like self-made and self-supporting ? Again organization is also not to be mistaken for a political agenda, such as neo-liberalism and its emphasis on the individual taking opportunities by its self .

A danger of fastly appearing popular notions is these being easily claimed by a wider community not willing to invest much in understanding its deeper meaning. This wider community is likely to give meaning to these notions making reference to them with a common, traditional or intuïtive understanding. Remember how such a mechanism made sustainability meaningless. Compactness is anoth

notion, stressing the importance of dense and multifunctional space, and in the past being praised as a route to a sustainable urban future, nowadays having lost its meaning with everyone using it to its own desires. And its assumptions remain by and large unproven. While spatial quality goes back to Vitruvius and his quality concept of functionality (utilitas), sustainability (firmitas) and beauty (venustas) being complementary to each other, it is another notion relevant to planning having lost most of its specificities due to the overarching power of common language and the one-sided attention by experts on functionality. How than to consider the notion self-organization ?

### 3. A semantic exploration

Self-organization is obviously a combination of two words each having specific meanings by themselves, independently from the other. When seen jointly, self and organization do not necessarily have intrinsic fit or meaning together, or logically add up to an integrated or synthesized understanding. There is no common denominator giving a clear meaning to self-organization . Self could my own identity (being my-self and knowing my-self), as in self-reflexive, self-assuring and self-made. According to this line of reasoning self-organization would refer to the organization s own identity, for example a self-made organization. This would have been supportive to Rousseau s philosophy (1712-1778), emphasizing the authenticity or uniqueness being a quality of importance for a self , an entity or an organization. This reasoning of an authentic self considers the organization as such, independent from a context. Some do define self-organization in this way: a process through which the organisation of initiatives, including the rules and responsibilities related to them, enfolds without intervention of an authority (Huygen, Van Marissing en Boutellier, 2012). This however is not how self-organization is being understood as a non-linear phenomenon.

Self could represent how it is , in the sense of being . This sense of b requires an object-orientation which can only work with an observer being present. From t point of view the self is subject to experiencing the world around him by himself t thoughts and ideas. The self is in this respect an observer experiencing his env conscious of him self . Some define self-organization accordingly, for example as a kind of social entrepreneurship with specific characteristics: intrinsic motivation, coherence with the surroundings through connectivity and fine tuning, autonomy and creativity (Wmo Kenniscahier 18, http://www.verwey-jonker.nl/participatie/publicaties/zorg/condities_ voor_zelforganisatie). The observer is also conscious of himself in response to his environment, not as a given but through interpretation. This self-awareness in the sense of being relates to how we consider ourselves and as being organized.

Descartes was among the very first to reason what self-organization could stand for, arguing that universal laws of nature represent the ordered production of organization. And how right he was! Consider a reality not responding to the order dictated by the universal laws of nature, a reality not being perfect, orderly or ideal. It could be an argument to interfere, to re-install the order according to the universal laws. Purposeful adjustments are in such cases meant to create a well-functioning environment.

It would mean a proposed route to reaching an orderly, perfect, ultimate, utopian or ideal outcome. This concept in which reality is supposed to reclaim its original state might seem traditional and out-dated, but surprisingly it isn t as it is currently going through a revival. This revival strongly relates to one particular type of resilience, a notion which gets loads of attention these days. While the idea of adjustment is crucial to self-organization, which we will discus below, the emphasis on being is substantially in contrast with self-organization as a non-linear process.

Self-organization as a non-linear process relates most of all to becoming (Prigogine, 1980; De Roo, 2012; Hillier, 2012). Self could refer to a chain of events which does start somewhe triggering various connected entities, situations or systems, resulting in a sequence of moves, activities and changes, sometimes self-replicating, sometimes triggering ad random effects along the chain of events, and all this seemingly unorganized. In a process of becoming self could be considered as effortless , without any attempt , going smoothly or spontaneous .

The notion organization originates from the concept of organs (and the Greek word or Organs , organized and organization do come up easily when considering the meanings of se such self-organization could be seen as a pleonasm. Organs refer first of all to an environ is biological. An organ has a specific function as part of a wider structure, th considered a metaphor for a system which is well structured in a mutually responsive way with all its parts. Kant (1790) has been arguing such processes are both means and ends. Organs are able to behave as if these have a mind of their own. Organs are not just all essential parts to and connected with a wider whole. They do show to some extend the flexibility to expand with and to adjust to the way the wider whole is developing, and are able to absorb negative impacts to a threshold before giving up. Despite all this, organs are structured a-priori, and show no patterns which are the result of self-organization as a non-linear process.

The notions organized and organization are first of all social constructs. The notion organization stresses an environment which is institutionally structured to allow agents, as parts of the organization, to aim collectively for a collective result based on collective actions. Herbert (1963) considers an organization to be a whole of parts in relatedness, of things and events in a r spatial and temporal relationships , being organized on the basis of a certain structure to end (Herbert, 1963, p. 200). Organization relates therefore to institutionally pre-arranged collective intentions. And that is contradicting with what we consider self-organization to be.

The self in self-organization as a non-linear process is not so much referring to m it is or to being . It relates more to by itself and to spontaneous . The or organization is neither pre-arranged nor intentional. Instead it refers to a pattern being the consequence of an unintended collective result. Cilliers defines self-organization as a property of (complex syste which enables them to develop or change internal structure spontaneously and adapt in order to cope with, or manipulate, their environment (Cilliers, 1998, in McDonalds, 2009: p. 460). Therefore organization is not a process aiming a-priori for a particular goal from within as an organizatio do. Self-organization is above all emphasizing a situation without organization a-priori , without organization , without purposeful behaviour or without intent . Consequently se

to a seemingly non-existing collective of disordered parts being triggered to an effort or move through which patterns emerge as a *collective result*. Self-organization stands for a spontaneous result w seemingly looks organized: A pattern that is becoming visible, which is seen by agents as something to respond to, therefore becoming a trigger for further action, out of which consequences emerge.

An organization has a strong goal orientation, which can be represented by a spectrum of options: It could be the organization is meant to maintain or to be supportive to something outside the organization or is meant to reach a new state of affairs. And in all situations the organization is linked to an external environment. The organization is doing its actions purposefully, intentional, with an internal structure being well informed and being ready to comply with its intended function.

And this is precisely what makes an organization different from self-organization. While an organization is a purposeful entity reaching out to its environment, self-organization is to be seen as an autonomous process triggered by and responsive to its environment. Organizations are prepared for intentional actions. Processes of self-organization are able to enfold without intent if the right conditions are met, allowing structural change to happen. Social systems are organizationally and institutionally conditioned, which doesn t make it easy to recognize processes of self-organization in a environment.

Well known examples of self-organization are the spontaneous emergence of pattern in traffic flows (Kerner, 1998), pedestrian movement (Helbing et al. 2001), bird flocking (Hemelrijk & Hildenbrandt, 2012), school of fishes (Camazine, et al., 2003), and a lot more. To what extent all these spontaneous patterns do emerge without pre-informed behaviour is not always easy to say. Traffic flows and pedestrian movement do have in common culturally informed agents. Also self-organization in trail-tracking and wall-building by ant colonies is not entirely without intent and undetermined, as mechanisms of sustained information are responsible for a kind of swarm intelligence (Bonabeau et al., 1999). As a result mechanisms of swarm behaviour become visible which include positive and negative feedback in the multiple interactions among the individuals leading to an increase of behaviour modification. However in all these examples there is no clear strategy or programme which determines a predefined and organized outcome.

Self-organization represents a situation that is in a state of becoming while balancing through a context of discontinuous change. While self-organization suggests a situation to be without organization, this will not mean a social system is impassive to self-organizing processes. On the contrary, aside from social systems to be organized for the sake of the organization and the goals are set, we argue social systems could or should also be organized in such a way to have the system prepared and ready for change to happen spontaneously. In those cases the social system or the organization is willing to bend along with the dynamic changes of the environment it is part of. This is sometimes more forfilling than opposing these contextual changes, which is often done to assure a misplaced idea of being in control. To organize a system to be ready for change means we have to consider the conditions of a system to allow responding to processes of self-organizations.

The process of self-organization is spontaneously evolving, giving rise to new structures, patterns or organizations within a system or a network as a result of interactions between elements, parts, agents or actors which are not externally controlled, coordinated or regulated (Nicolis and Prigogine, 1977; Bonabeau et al., 1997; Bak, 1999; Heylighen, 2008). In that respect self-organization is a process creating spontaneous order. And the abstract knowledge about how this process of self-organization evolves could be seen as a theory of spontaneous order. We know initial and contextual conditions are important in these processes, as well as the presence of fluctuations, and the existence of positive and negative feedback loops. These characteristics have been identified within physical, chemical, biological, ecological and social systems. Scientifically self-organisation relates to natural selection and other evolutionary mechanisms (Kello et al., 2010, p.223).

## 4. What about the invisible hand?

Being organized is subjective to the observer. It is a criterion we lay upon the world we perceive. Observations made to evaluate a situation which is not anthropocentric (for example morphology, cell structures and flocks of birds and fish) bring into the picture parts which are connected with a seemingly well-structured whole. We assume such a structure is a consequence of universal laws, biological programmes or social conventions. The observer would consider these laws, programmes and conventions as intrinsic intent of the system which determines the system s behaviour and th with mechanisms to connect the parts being predefined and laid down in advance. Intent has metaphorical meaning when referring to non-human parts or to agents, with conscious action and purposeful behaviour being absent. These parts have no intent what so ever to step in line or to act according to any law or programme. From their perspective it just happens. Due to an understanding of universa biological programmes or social conventions the observer is nevertheless capable to understand this happening as part of a determined process of change. The understanding of determined change and the Newtonian reasoning supporting this understanding was for several ages so successful it often pushed observations to the side which did not fit well within the Newtonian frame of reference. Not all of these observations were ignored though

Adam Smith proposed already in 1776 the idea of the invisible hand being a self-organizing mechanism within economic systems. Krugman (1996) illustrates the economic consequence of self-organization, which is is something we observe and try to understand, not necessarily something we want (Krugman 1996: p. 5-6). Economics is about what individuals do, and individuals are self-interested. The societal impact of these individuals (the parts) might be disappointing and might even contribute to a crisis, such as the global credit crisis that came up in 2008. In response to an increasing interest in self-organization Krugman reminds us self-organization is not necessarily a process with a positive outcome. This made Hardin to propose his concept of the tragedy of the commons of a higher order to interfere and to set conditions in case individual actions add up to disastrous and destructive consequences for the group (the commons) as a whole.

In modern times the concept of self-organization has been re-introduced through the works of W. Ross Ashby (1947) in cybernetics. Self-organization has been touched upon implicitly in writings on cybernetics by McCulloch and Pitts (Portugali, 2011). Cybernetics has had a strong effect on systems thinking, and system thinking has had a major impact on planning theory. Despite this chain of interests, self-organization did not get much attention in planning theory if at all. Self-organization gained wider attention through the work of Prigogine and Nicolis (1977), introducing dissipative structures and systems.

Dissipative systems are boundary breaking, and adapt and self-organize through their interactions with their environment (Bor, 1990). Dissipative structures (and synonymous to self-organization) within an open system environment and their irreversible mechanisms allow energy, matter and added to these by Eigen (1971) information being exchanged between the system and its environment, triggering the system itself to change. Dissipative systems exist in situations which are out of equilibrium and are therefore not in a stable state. Instead these systems continuously transform, reposition themselves, seeking for best fits, and are gaining, absorbing and passing on energy, matter and information. Systems exist, stay alive and even progress while being out of equilibrium, in a flow (of multiple agents) through which interactions between systems and within systems result in persistent new patterns and transformative effects. Consequently dissipative systems evolve. And Prigogine made us aware of self-organization having a role in the emergence of these transformative patterns (Keller, 2009).

Prigogine s work opened up a wonderful world of non-linear relations, with surprising examples ranging from self-organized Bénard cells (also known as the Rayleigh Bénard convection: Getling, 1998; Koschmieder, 1993) to fractural structured cities (see simulations made by Batty, 2005; Torrens, 2012). Prigogine s work is supported by additional ideas from Hermann Haken (1977) and his theory of synergetics. Humberto Maturana and Fransisco Varela (1974) and their concept of autopoiesis made a susbstantial contribution as well. It contributed to proposals for self-organizing communities (Luhmann, 1984), infrastructure systems and urban networks (Batty and Longley, 1994). All these ideas and concepts are part of the wider notion of complexity and non-linearity, and contribute to or build on the notion of self-organization.

## 5. From the outside and from within

While Prigonine stresses external interactions, Haken s synergetics (a term he considers more or less synonymous to self-organization, Keller, 2009) explains interactions within the system (Haken, 1977). At system level energy, matter and information is being absorbed, used and transformed, and being passed on, resulting in both stable phases and dynamic phase transitions. Through processes of self-organization among subsystems the system will show an increase of pattern-formation, which we perceive as order .

Maturana and Varela explain how subsystems are capable of reproducing and maintaining themselves introducing their model of autopoiesis. According to Jantsch (1980) autopoietic self-organization would then be the self-maintenance and reproduction of systems, or the inward orientation of social systems that is about self-maintenance, identity forming and stabilization, and reproduction . The focus is on subsystems, which are considered to function more or less autonomously while being

structurally coupled with their contextual environment. Through this process of autopoietic s
organization the system is able to stabilize, to attain an existing structure, to differentiate itself from its environment and maintaining its identiyt in self-referentiality (Luhmann, 1995; Flood, 1999).

It is not that hard to imagine these external, internal and bottom up processes influencing each other and through which the system transforms. These transforming mechanisms are structurally coupling more or less autonomously functioning subsystems and their contextual environment. This gives us a conceptual understanding of our reality existing out of very many layers, with each layer interacting with a higher level, exchanging energy, matter and information, which is digested within the system and it subsequential parts.

Obviously changes in the subsystems, affecting the system as a whole, will have an effect on the system s interactions with higher levels of existence. Perhaps systems at the levels beyond the immediate context of the system within which the process of self-organization was initiated will be triggered. And so on. The idea of the various levels of scale interacting gets evidence across disciplines, and relates to scaling laws . These scaling laws are among the factors conditioning processes This means a system and the processes of self-organization by which the system can be affected, is on all scales sensitive to change. And the mechanisms of self-organization allow systems to progress and to seek best fits with their environment (Kello et al., 2010: 223-224).

The result is a highly connected world of systems which interact with various levels of scale. It is an open world in which structure and function, and in which content and process are not to be seen isolated from their environment. Instead content and process are highly dependent and determined by their context. The world as it is , fixed and stable, can no longer be. How to relate self-organization to all of this?

Self-organization (or dissipative structures, or synergetics) is the product of nonlinear dynamics and stable attractors. In other words, it is the production of stable patterns observed in nonequilibrium systems governed by nonlinear dynamics (Keller, 2009: 17). Self-organiztion is part of and contributes to an alternative, non-linear world view, with processes of emergence and co-evolution, and with adaptive behaviour as a response to external influences. Emergence is crucial in complex adaptive systems not only due to the fact that it links different levels, but also because this creates memory , as the st on a higher level will through feedback loops affect the self-organization of the low level components (McDonalds, 2009). While its contribution is limited to spontaneous pattern formation due to symmetry breaks, self-organization is fundamental in creating spontaneous order and discontinuous change (Kauffman, 1993). Self-organization is a spontaneous creation of some sort of order within a complex adaptive system environment (Heylighen, 2001). And discontinuous change is at the core of non-linearity. A non-linear world view results in a relational understanding of space and time, and all it stands for.

The consequence is we have to consider reality not just as generic or universal, but as situational and specific as well. Such a specific situation is allocated at a particular place on a particular moment in time. And if the conditions are met, at such a particular place on a particular moment in time a spontaneous change might occur, due to a process of self-organization. This view is fundamentally different from a

Cartesian, Newtonian, neo-positivist or modernist perspective. Instead of a one true wor an exciting world, full of options, possibility space and windows of opportunity.

## 6. The fundamental steps of self-organization

Self-organization is a process, and a rather special one. Self-organization is not intentional, it is autonomous and spontaneous. While being a representative of a non-linear world that is becoming , self-organization is producing new states of being. And that is why self-organization matters. Agents and actors being parts of a system do respond to these new states of being. These new states of being emerge as spontaneous patterns, which are visible everywhere, around us, as part of everyday life.

Self-organization can be understood if we are willing to consider our world not to be static, but to be in a continuous state of discontinuous change. Instead of linear development such a world will evolve non-linearly, including sudden changes, jumps and transformations. Such a non-linear world might be far more common than we re used to think it is. Such a non-linear world is also far more out of our co than we perhaps would like it to be. Within such a world the various parts, agents or actors behave more autonomously than we might have imagined as we re used to see our world highly func planned, full of rules and driven purposefully and intentionally. This might indeed seem to be the case, nevertheless we argue that if we re willing to see spontaneous developments we wil often, and we ll see it everywhere. We dare to state that the world and our developments depent on it. Each and everyone of us behave partially autonomous and without intent, nevertheless contributing to pattern formation ang by being attracted to patterns. Self-organization is an autonomous process, resulting in patterns we understand, we relate to, we have confidence in and act upon.

Self-organization is a spontaneous process, and therefore beyond our control. Despite these characteristics, it doesn t mean it s a process we cannot understand. To begin with, sel situation specific. Social scientists are very much aware of situation specific processes resulting in rather unique events. While rather familiar to the social sciences, the phenomenon of unique events attracted attention of some physicists as well. This forced them to follow an approach which might be somewhat unusual within physics, nevertheless with interesting result which also supports social scientists again, in their struggle coping with non-linear processes of self-organization. Instead of doing research confirming laws of physics the specificities being essential to make self-organization happen are taken into consideration.

In the following we will dig deep to identify the various conditions under which self-organization will take place. We will identify *a set of rules* which help explaining how processes of self-organization do contribute to change and transformative processes. We will see the process of self-organization can be understood as a process being built up out of four essential steps:

- The *first step* is the creation of a symmetry break, a mismatch in an existing situation.
- While this symmetry break is increasing it builds up energy, which eventually will lead to the *second step*: reaching criticality.

- *Step three* is what happens beyond this critical point. Various parts, agents and actors respond individually to the symmetry break or mismatch, all in an effort to reach i effort state or a best fit with its environment.

- While there is no agreement or a collective intent in responding to the symmetry break having reached its critical point, it results nevertheless in a spontaneous pattern formation. This pattern formation is the *fourth and final step* in the process of self-organization: an unintended but collective result.

And this pattern formation will function as an attractor for more agents and actors to becoming part of it or to respond to it, which makes the pattern formation a stepping stone towards developments to come.

And that is why self-organization matters. And consequently it is important to understand more of this process of self-organization, about how it functions, under which conditions, and to what kind of consequences this process might lead to. And relevant questions from a planner s perspective: a to make use of these spontaneous, self-organization processes? And are we able to influence such a process at all? So here we go

Self-organization as a non-linear process relates first of all to structural change, through which a (spatial) pattern emerges by itself . Some use the word spontaneous , some refer say coincidental , in all cases it is an undefined becoming (Boelens and De Roo, 2014) this change by itself is a change in a response to something undefined which has layers, in the context and/or in the past. While self-organization relates to an undefined becoming its cause is undefined as well. But probably the best way to pinpoint the undefined cause of self-organization is a symmetry break within an existing structure.

*A symmetry break*

Let s imagine first a non-systemic, isomorph environment. Its basic structure would be a collection of parts being positioned in a least effort state. Bak s piles of grain and BØnard s examples, which we will explore more in depth further on in support of our argument. One would expect an isomorphic environment to be in equilibrium. Nevertheless due to an undefined cause parts become dislocated, having been perturbed from their original location, building up tensions around a symmetry break or single-phase interface. This is the beginning of an increasing tension within the existing structure, which comes with high interfacial energy and relatively weak bonding. The break becomes structural, and the preferred spot for the onset of a slide and for the precipitation of a new pattern.

Any kind of self-organization is being initiated somehow, with a symmetry break being pushed beyond its critical point. It might be unclear what the trigger is to this symmetry break: An unknown, undefined, internal or external initiator. While self-organization is considered to be a bottom up approach the initiating factor for a symmetry break to occur (step 1 of self-organization) might very well be contextual. For example a contextual force more or less evenly spread throughout a contextual plain or field triggering not only one particular system but as well its immediate (and perhaps even its wider)

environment, resulting in a planar movement. Such a movement could trigger systems, subsystems and their environment all at once, resulting in a major shift in interdepencies and in shifting balance between structures and their functional meanings.

Vesterby (2008) makes reference of a collision situation : An external movement and initiating internal movement, which triggers the first stages of self-organization. The Bénard cells experiment shows a contextual change which could trigger parts or agents, having an effect throughout the system s or the agent s contextual environment: a plain field of changing cond (1993) calls this weak turbulence) flows through the system, with triggering effects.

Vesterby (2008) qualifies self-organization to be essentially exceptionally simple at it after which it could develop further going through many stages. He made a serious attempt identifying origins of self-organization . Seemingly taking a paradoxal reductionist, mechani approach analysing a situation with spontaneous change, Vesterby s analysis allows us to get a clear understanding of the very beginning of self-organization. At the very beginning the process of self-organization is rather deterministic. In this process it is essential what comes first and what will follow. Crucial in such a process are space, motion and substance, with substance representing not just form (matter, energy) but information as well (Eigen, 1971). In social environments agents respond in particular to information.

Space, motion and substance are essential for seemingly organized structures and patterns to emerge. Space (made explicit by Rayleigh s contextual conditions (Rc)) allows substance to ongoing motion. This substance in motion is constrained by structural criteria depending on the kind of substance. The motion in space contributes to substance s identity as it is anchor and direction. The continuing motion will result in self-referential interactions, which could result in a new status quo. As such it is getting self organized through spatial patterns be certain point on a time-space continuum. In other words: To any observer this self-organized process in space becomes a pattern formation at a particular moment and place, through which this pattern gets identity and congruent structures and functions.

As it might sound all quite abstract, it is nevertheless visible around us. For example tectonic plates moving along each other or pushing one-another up or down, create tensions and frictions which build up energy until the point criticality. This energy being released every so often usually results in hardly noticeable shakes. It can happen the earthquake has a magnitude which is beyond imagination. These shakes are all the result of a symmetry break reaching criticality, sometimes generating destructive powers. A collective of water drops getting beyond a critical point could be the beginning of a flow of water, progressing into a stream, which after some time could become a river which organises itself a route based on physical conditions. The initial stage of Lorenz story of the butt as a process of self-organizing: The butterfly flapping its wings which triggers at a particular moment a chain of air movements varying in pressure, catching up speed and differences in pressure, eventually building up a tremendous force which is being released with a destructive power after a period of time, whipping away anything that s in its way, including houses, villages, towns and mo origin being one bird taking off for whatever reason: The trigger could be internally (an itch) or externally

(the first bird signalling danger, or just being hungry). It does however trigger all others in his vicinity to jump high into the air. And all of them group together while flying away, becoming a flock of birds on the move. Panic for whatever reason starting somewhere within a crowd resulting in a fast move outward, with all individuals being very convinced in what to do without negotiating with or consulting each other.

While these examples are colouring nicely the message of what we understand with a symmetry break, they also represent a world far from Bak s non-systemic, isomorph environment. It means we have to be very conscious about the validity of Bak s findings in a world which is more diverse. examples have in common is the increase of a symmetry break reaching criticality after which a change, a response or an adjustment takes place: The first step in the process of self-organization is a symmetry break.

*Reaching the critical point*

We consider the occurrence of self-organizing events as a consequence of mismatches or symmetry breaks between the parts of a system. These mismatches or breaks do create tensions and struggle within the system: The structural setting of the parts of the system and their functionality through which these parts contribute to the system no longer have a least effort fit. Instead of linear adjustments these brea accumulate tensions or frictions, with a critical point standing in between order (nothing happens) and chaos (turbulence breaks lose). Any small behaviour at or beyond this critical state could trigger parts of the system, eventually affecting the system as a whole.

Bak and colleagues (1987) studied avalanches in grain piles. They wondered about these piles with numerous avalanches suddenly occurring due to grain being provisioned from above. Avalanches happen the moment a critical point (threshold) has been reached. One would guess a small change would lead to a small shift in the grain pile, while a major change would lead to a massive avalanche. Bak and colleagues found something entirely different. The grain on the pile reaching a critical state shows no correlation between cause and effect. The system self-organizes its internal structure independent of external causes (Portugali, 2000). There is no correlation between the change (a perturbation) and the condition which makes this change happen (details of a perturbation). Dropping another grain onto the pile may cause a massive slide, but it may as well be that hardly anything happens. The avalanches represent a self-organized response to change. In other words: The criticality is self-organized. Bak and colleagues were the first to discover a dynamic system displaying self-organized criticality (Bak, Tang and Wiesenfeld, 1987).

While these outcomes seem fundamental, we have to question them again as they have been deducted from Bak s experiments with grain and its non-systemic, isomorph environment. Again we have to think through the validity of Bak s findings the moment we copy the seemingly fundamental outcomes to a world which is diverse. The Grain Pile case Bak uses in his experiments presents a slightly more complicated situation than the three body problem Pioncaré raised in 1887. The three body problem is about three objects influencing each other (either colliding or attracting) of which we know precisely where they are positioned in space, how much they weigh and what their speed and directions are. While

all data is there it is impossible to describe their future path and positions, as the motion of the three bodies does not proceed according to rules which can be generalized in axioms. The moving bodies are the very beginning of a discussion which resulted in chaos theory. Bak s pile of g multiple body problem. A grain will collide with various other grains, all far from being perfectly round, and all uniquely settled within the pile. With Bak s analysis we shift as well from a Newtonian perspective of ideal situations and ideal science, to real situations and science which has an eye for situation specific conditions (which doesn t mean the result cannot be an ideal ty grains therefore all have multiple friction points, which keeps them in place but do also contribute to the frictions and the criticality. At some point this results in an avalanche of which it is unknown a-priori if it will be a minor one or a big one. The human world is more complicated than Bak s pile of grain multiple categories of agents, all floating around, all interacting, with mismatches everywhere, not building up to one clear moment of criticality. Instead there are plenty, resulting in various avalanches in adjusting behaviour of which it will not always be clear to what cause the a respond to. In the human world a clear cut avalanche or straight forward adjusti necessarily the only result to be expected from a symmetry break reaching its criticality.

Nevertheless criticality is essential in a process of self-organization (Bak, 1999). Self-organization takes place in a system having reached a particular threshold (the criticality of tension, struggle or symmetry break between the parts), after which processes of pattern result is a varying degree of change, from abrupt events (grain pile) to periods of varying turbulence (Bénard cells), affected by contextual conditions ($R_c$) and structural criteria.

*Beyond the threshold: adjusting behaviour*

Remarkably, reaching the critical point leads to a period of fundamental uncertainty. It is not possible to identify a-priori outcome of this period of uncertainty. It s a contribution to non-line sublime form. It s the invisible hand all over. It has been in the world of quantum physics that uncertai has been recognized as fundamental. Fundamental uncertainty is also an intrinsic part of self-organization. The context of the system being influenced by self-organization can be influential to the creation of a symmetry break and of reaching the threshold, what follows next in the process of self-organization takes place independently from contextual triggers. Therefore the spontaneous pattern formation (step 4, the end result of self-organization) is not considered to be contextually influenced: the rules s interactions among the system s components are executed using only local information to the global pattern (Camazine et al., 2003: 8).

In other words: With processes of self-organization and their unique and abrupt events we have to accept and to address fundamental uncertainty at the human scale as well. These processes of self-organization have been studied intensely by physicists, resulting in a number of appealing examples. Bak s grain pile is one of them. According to Bak (1999) the out-of-balance critical state will lead to a chain of non-linear, spontaneous events varying in magnitudes. These events are neither regular nor

periodic. These abrupt events could range from small to major adjustments without a linear relationship in the way these events are being triggered.

The study of so-called Bénard cells is another. Bénard (1901) did his famous experiments already in 1900. He investigated a fluid in a dish which he heated from below. The result is surprising. Instead of a vertical upward movement of heat transport also a horizontal layer of convection fluid appears. A rather regular pattern of hexagonal convection cells appears, due to a peculiar mix of buoyance and gravity forces. These cells have become a landmark in the study of nonlinear developments exhibiting self-organization and pattern-formation mechanisms. It is the granddaddy of canonical examples [ ] to study pattern formation and behaviour in spatially extended systems (Newell et al., 1993).

It was Rayleigh (1916) who showed us these convection cells occur only when a critical value $R_c$ has been reached (Ma & Wang, 2007). This $_cR$, or Reynolds number , is a non-dimensional value which relates to contextual conditions (temperature difference, gravity) and structural criteria (viscose of the liquid, thermal diffusivity). It gives expression to fluid motion and heat transfer (Getling, 2008). After $R_c$ has been reached a transforming period of turbulence results in the appearance convection cells. Koschmieder (1993) adds to this the differentiation between weak turbulence and turbulence . By weak turbulence we mean irregular, nonperiodic, time-dependent flow with slow variations with time and slow motions. By turbulent we mean rapidly and randomly varying flow at high Reynolds numbers [$R>R_c$: GdR] with very fast variations with time, relative to the vertical thermal relaxation time (Koschmieder, 1993: 116).

Beyond a critical point self-organization represents the moving of parts, agents or actors seeking balance in new meaningful linkages, adjusting structurally and functionally towards a new state of congruency, consequentially becoming manifest in emerging patterns. Bak (1999) warns us not being biased with a positive attitude towards self-organization (See as well Zhang & De Roo, 2016). All is connected, is the message delivered to us from the complexity sciences. Internal adjusting mechanisms or rearrangements among the parts, agents, or actors of a system could very well be initiated somehow by external interference (sometimes called global information ). However this has no effect o formation as such, which is considered essential to the process of self-organization. Randomly related and seemingly chaotic interactions do bifurcate somehow, presenting us with a pattern. In the complexity theorists: a process of autonomous development and the spontaneous emergence of order out of chaos is called self-organisation (Prigogine and Stengers, 1984).

*Spontaneous pattern formation*

The essence of self-organization is a pattern which results from a spontaneous rearrangement due to a symmetry break. Self-organization means a (structured) change due to undefined responses which trigger adjusting mechanisms: In a non-systemic environment such as a pile of grain or a glass of water its cause is a structure break. In other words, self-organization is considered to be a systemic adjusting effect of structure breaks and structure-function mismatches which comes into effect having reached a threshold.

Self-organization in this respect means a spontaneous adjustment of a structure break, and a better linkage between structure and function, either temporarily or in a more sustained way.

In a systemic environment a mismatch between structure and function might as well be the cause of adjusting mechanisms. In a systemic environment structure and function might find a new balance, different from a past situation, through which both are able to co-evolve. If so, self-organization stands for more than being a self-replicating mechanism, self-similar, self-adjusting, self-repairing or being resilient. The merging of structure and function originates often at a lower, decentralized level through which the system as a whole is being affected. Self-organization represents a responsive situation, linking moving parts and emerging patterns with contextual change, which could result in some sort of new order, at a higher level.

The process of self-organization includes spontaneous pattern formation. The self in self organization refers to spontaneous and to formation, while organization becomes emergence of a pattern. In other words: out of an undefined cause and a non-lineair process a result comes forth which is visible, can be differentiated from placid and chaotic environments, can be given meaning to and gets identity in space and time. In a way spontaneous pattern formation is synonymous to self-organization.

The undefined cause of a symmetry break in a systemic environment could be structure related as well (as in Bak s pile of grain) but could be as well a mismatch between structure mismatch between functions. A systemic environment is in abstraction an environment of nodes being connected with each other through meaningful interactions. These connected nodes are not just structure. These can be seen as functional too. The consequence of this reasoning is quite fundamental: In case of a symmetry break caused by a structure-function or a function-function mismatch, the spontaneous adjustment that might follow could very well be functional without immediate structural consequences. In such a case spontaneous pattern formation will be a secondary outcome.

Systems do well if there is a match between structure and function. This is not a fixed match: For example a family house is a house for a family of a particular size depending on conditions and policy restrictions. A change in culture (due to an increase of migrants for example), in social conditions (children no longer leave their parents house at the age of twe married couple staying in the family home, perhaps due to shortage of houses for starters), and more, a mismatch between structure and function emerges. This mismatch is due to conditions under which structure and function operate, do relate and do have meaning. In other words structure and function, and the system as a whole are conditional, which has consequences for and could trigger self-organizing processes.

Central to self-organization is the (adjusting) response to symmetry breaks and the tensions, frictions and struggles that come with it, resulting into pattern formation. Self-organization could be entirely meaningless, coming and going without any sustainable effect, showing us sudden order a pattern in a chaotic environment. This order can fade away again, but it could as well be the start of a chain of events which affects parts, attracts agents, or matters to the observer, to those affected by it, and

to society as a whole. In that case self-organization will bring sustainable rearrangements among parts, agents or actors under tension. These rearrangements or adjustments would then be an accumulative constructive process, which connects coherently external and internal impulses.

Self-organization is responsible for situation specific, place dependent and unique events taking place. It is therefore a major contribution to uncertainty within social environments. Self-organization as a phenomenon needs in-depth understanding to be able to distinguish it from other processes taking place within the social environment. Identifying the various phases of a process of self-organization contributes to this understanding, and to allow us to identify commonalities and differences with processes of self-organization, not only in a physical environment but as well in a social environment. This brings us back again to spatial planning.

*What about spatial planning?*

It is widely recognised that the development of urban areas, understood in socio-economic and environmental terms, cannot be planned by government action in a linear way, fro action, to outcome as planned. Even where a government agency controls many of the resources for physical development and acts in an integrated and coordinated way, socio-economic and environmental activities make use of the physical fabric of urban areas in all kinds of ways that are often difficult to imagine in advance, let alone predict. What goes on in urban areas is just too dynamic, mazy (Geddes 1915/1968). Understanding mechanisms of self-organization may therefore support the planner in various ways.

This understanding may be about triggering, influencing, avoiding or even preventing processes of self-organization to happen within the daily environment for the good of society. But above all this understanding will make the planner aware it asks for another attitude than the planner is used to. There is the traditional attitude, in which the planner considers the world to be his creation assuming this to be a factual reality - with the planner being in control. And there is the contemporary position of the planner being responsible to reaching consensus among stakeholders and the construct of an agreed reality. In both cases the planner considers the world as it is , factual, agreed and likely appreciate the existence of non-linear processes of self-organization the world will no longer be , but has to be seen as becoming .

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# Urban Resilience in a Post Crisis Context The Regeneration of the Dublin Docklands

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**Keywords**: urban resilience; adaptive capacity; new institutionalism

***Abstract***

*This paper explores the regeneration of the Dublin Docklands, located in inner city Dublin, Ireland. Since the commencement of the regeneration programme in 1987, the area has been the site of complex, changing governance arrangements and has endured rapidly shifting economic conditions from the boom period of the late 1990 s to the most severe economic crisis in 2007.*

*During the boom period, the Docklands transformed from an area of derelicti become the location of Ireland s most important financial services centre. In 1997, the establishmen of a Special Purpose Development Authority (SPDA) to govern the redevelopment of the Docklands marked a radical shift in the philosophy guiding urban planning in Ireland towards more entrepreneurial style engagement with the property development sector (Mc Authority was vested with powers to fast track development in the area, ex powers from the local authority. Under this new scheme, the Docklands developed rapidly until the economic crash in 2007, which created a complex new context for regeneration.*

*This paper examines the role of urban planning in enhancing the resilience of the Docklands depicted here as the areas adaptive capacity in the face of crisis. Particularly, it focuses on the recent, post-crisis governance shift in the area the closure of the SPDA (now known as the Dublin Docklands Development Authority) and the designation of the area, in May 2014, as a Strategic Development Zone (SDZ), a scheme which continues to utilise the fast track pl*

## 1.0 Introduction

> The history of the Dublin Docklands can be read as a microcosm of the h
> *both ancient and modern. The making of the Docklands is a complex tapestry of great engineering achievement, visionary planning, intrigue, economic rise and decline, and human* triumph over adversity. (Dublin Dockland Development Authority 1997:18; in Moore 2008:15)

Over the past two decades, the redevelopment of the Dublin Docklands has radically altered the physical fibre and social structure of a significant part of Dublin s inner commenced with the launch of a significant urban regeneration scheme in 1987; just as Ireland was emerging from a difficult recessionary period. Indeed 1980s Ireland was characterised by rising unemployment (increasing from 10% in 1981 to 17% by 1986) and a surge in emigration (Allen, 2000; Clinch et al., 2002). During this period, Dublin, like many other cities in Northern Europe, experienced the social and physical effects of economic re-structuring, particularly in the areas most dependent on industrial or manual activities (MacLaran, 1984). The abandonment of the urban core by manufacturing industries, a major modernisation of port activities, and a broader suburbanisation movement resulted in significant changes in the employment and social structure of the inner city. However, the general decay and degradation of Dublin s physical and social environment, comb with a growing disillusionment around the Irish planning system (O Leary, 2014), approach to planning and development in the mid 1980s, which drew heavily on the experience of other countries. Importantly, this shift in planning thought also coincided with shifting economic conditions, and the birth of the so called Celtic Tiger (Whelan, 2013).

Following the launch of the major regeneration programme in 1987, the Dublin Docklands transformed from an area of dereliction and decline to become the location of Ireland s r financial services centre. However, it has also been the site of complex, changing governance arrangements and has endured rapidly shifting economic conditions - from the boom period of the late 1990 s to the most severe economic crisis in Ireland s history since 200 argued that Docklands represents the best and worst of Celtic Tiger Ireland microcosm of the history of Ireland, both ancient and modern (Dublin Dockl Authority, 1997; in Moore, 2008:15).

This research employs the concept of resilience to examine the transformation of the Dublin Docklands including the related and parallel evolution of Irish urban planning during the same period. In particular, it aims to utilise the resilience concept as an analytical tool to further explore the local and national responses to the most recent economic crisis and the recovery trajectory of the Dublin Docklands. Ultimately the paper argues that any effort to assess or enhance the resilience of a city involves developing a comprehensive understanding of it s adaptive capacit and transform in the face of crisis. Yet it is not the city that acts but individual or collective actors; and it is their actions that constitute change or lack thereof (Lang, 2011). Therefore, in analysing the evolution of the Dublin Docklands and assessing its resilience, we must also examine patterns of institutional change in urban governance over the same period.

## 2.0 Examining the Evolution of the Dublin Docklands through a Resilience Lens

Resilience, and more specifically urban resilience, is a fuzzy concept (Era gained increasing public, political and academic interest over the past two decades; particularly in the context of the global financial crisis of the late 2000s and continuing forms of perceived social, political, economic and financial crises in a number of European countries. The concept is typically presented as the capacity of cities to bounce back or even bounce forward crisis event. Yet despite the increasing ubiquity of the resilience concept within urban planning literature, its exact meaning and measurement remains contested. Indeed, Davidson (2012, in Gleeson, 2013: 11) asserts that

> *It is far from clear whether the term resilience enjoys a shared understanding within academic disciplines and policy are*as and also between them

Furthermore, the emergence of resilience ideas within academic and policy debates and their relative influence on practice are highly specific to institutional contexts and the perceived security risks faced in particular countries and their urban areas. National policies and associated responsibilities for dealing with disruptive challenges (which in effect build urban resilience), differ between nations and are influenced by historic policy developments and national governance structures (Handmer and Dovers, 2011). Yet these differences, in the manner in which resilience is inter remains an area which has received little academic attention to date.

In Ireland, the concept of urban resilience has not typically been used in urban (explicitly, at least) although the resilience approach is beginning to be used in streams (in attempts to promote more resilient approaches to dealing with flooding, for example). However, explicit reference to the concept of urban resilience is included in th preparatory) papers for the Dublin City Development Plan 2016-2022, where it is defined in the following manner

> Urban resilience *is a relatively new concept, and generally refers to the ability of an urban area to withstand shocks and stresses without reaching an undesired state. Achieving this involves a degree of reorganisation and adaptation, with the development of new structures* and processes (Dublin City Council, 2014: 15).

Despite the ambiguity of this definition, its inclusion indicates movement towards shaping a resilience agenda for Dublin City planning and development. According to this definition, achieving a more resilient city which is capable of withstanding stresses and shocks is linked with the ability of the city to reorganise, and crucially to adapt to such incidents. However, if Dublin is to pursue such an agenda, how can this concept be operationalised and assessed in practice? In order to address this question, this paper utilises the resilience concept to examine the transformation of the Dublin Docklands including the related and parallel evolution of Irish urban planning during the same period. In particular, it aims to utilise the resilience concept to further explore the local and national responses to the most recent economic crisis and the recovery trajectory of the Dublin Docklands. This section briefly charts the development of the resilience concept, and sets out the intended approach for examining the development of the Dublin Docklands through a resilience lens.

C.S Holling, a theoretical ecologist, is typically credited for bringing the prominence in 1970s. In his seminal 1973 paper, Holling utilises the concept to examine the behaviour of ecological systems that are exposed to unexpected external changes and disruptions, defining resilience as

> *A measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables* (Holling, 1973: 14)

Holling draws an important distinction between engineering and ecological resilience defining engineering resilience as the ability of a system to return to an equilibrium or steady-state after a disturbance (Holling, 1973; 1986). Such a perspective understands resilience as a measure of the speed of return to equilibrium (Pimm, 1991). Essentially, the quicker the system bounc more resilient it is. In contrast, Holling (1996: 33) asserts that ecological resilience is concerned with the magnitude of the disturbance that can be absorbed before the system change rather than speed being a defining feature, resilience , in this instance, is understo disturbance a system can undergo while remaining within critical thresholds how it can persist and adapt in the face of disturbance (Adger, 2000). Ecological resilience rejects the existence of a single, stable equilibrium and instead recognises the existence of multiple equilbria, and the possibility of systems to move into alternative stability domains. Yet, despite this core difference in understanding, both perspectives acknowledge the existence of equilibrium in systems, be it a pre-existing one to which a resilient system bounces back (engineering) or a new one to which it bounces forth (ecological) (Davoudi et al, 2012).

Since the 1970 s, resilience has been explored in a variety of different research areas including environmental studies, climate change reduction strategies and disaster prevention. It has also continued to expand as an adapted research concept within social and human geography studies (Kärrholm, Nylund & de la Fuente 2014) and more recently, applied specifically within the urban context where it can be broadly understood as the capacity of a city or urban system to withstand a wide array of shocks and stresses (Agudelo-Vero et al, 2012: 3). However, while the equilibristic view of resilience, as set out by Holling, has become particularly influential in many of these fields, such an understanding may be somewhat problematic when applied to the urban context (Alexander, 2013). Indeed, Dudley (2010; in Eraydin, 2013: 43) emphasises the importance of distinguishing this idea of system equilibrium from concepts of *urban* resilience; A resilient system may experience fluctuations or changes in conditions or structures, and these changes may provide the very basis for an urban systems persistence over time. Such equilibristic views too easily assume that there is some future steady-state (or a return to a past one).

Davoudi (2012), attempts to address the issues associated with applying such an equilibristic view to the urban context. In doing so, she argues for an evolutionary understanding resilience requires continuous adaptation rather than a return to a previous equilibrium. This perspective is also often referred to as socio-ecological resilience (Folke et al, 2010). Here, resilience is not understood as bouncing back to normality, but as the ability of comple systems to change, adapt, and, crucially, transform in response to stresses and strains (Carpenter et al, 2005) a view of resilience is not dissimilar from that put forward by Dublin City Council in their preparatory Development Plan document. Systems, in this view, are conceived as *complex, non-linear, and self-organising, permeated by uncertainty and discontinuities* (Berkes & Folke, 1998: 12). Since cities can be interpreted as complex adaptive systems whose organisation and behaviour are comparable to ecosystems, most scholars agree that the socio-ecological or evolutionary side of the concept is the most appropriate when using the concept in an urban planning / management context.

The need for urban resilience enhancement is often justified through the argument of an increasing level of uncertainty in an increasing complex world (Berkes & Folke, 1998). In line with this, Bosher and Coaffee (2008) propose that urban resilience is best understood as a cap and human induced hazards . If we view resilience in this way the capacity to manag such challenges, which is a feature inherent to the specific place under observation, then we must link this to processes of and (institutional) frameworks for urban decision making instead of only focussing on structural determinants. Indeed, as with cities, urban planning is under constant pressure to adapt. In the midst of ever changing social and spatial challenges, planning must continually re-position itself, proving its social value and long term capacity to function and solve problems (Reimer et al, 2014). Indeed, as Friedmann states (2005: 29; in Reimer at al, 2014: 1).

> within any given setting, planning must continuously reinvent itself as c
> *In contemporary societies, politics, institutions, economies, technologies and social values are all subject to continuous , often radical, change so planners often feel beleaguered, their* profession perpetually on the brink of existential crisis

The need for planning to continuously reinvent itself (and in effect, build resilience) necessitat its institutional setting is capable of innovation. An understanding of how and why institutional change occurs is particularly important in the context of resilience studies, where crisis events are often cited as catalysts for change or for re-thinking existing systems. Yet, how can we assess and examine this in practice? This paper proposes that new institutionalism is potentially useful here, referring to a diverse family of approaches to understanding stability, change and casual processes in social and economic systems (Davies & Trounstine, 2009).

First, it is important to define what is meant by institutions . Institutions as the rules and norms that govern human interaction (Herrfahrdt-Pähle and Pahl- rules, structures and norms that create and enforce cooperative behaviour ar groups (Davies & Trounstine, 2009). While formal institutions are legally bi constitutions, laws and policies in the political system, the economic system, and the enforcement system; informal institutions include cultural norms, such as customs, moral values or traditions (socially shared rules which are enforced outside the formal governance structures). Both formal and informal institutions can enhance or reduce the resilience of a system. Although institutions are not unalterable, as Davies and Trounstine (2009) assert, they are difficult to change and embody power; so understanding an institution necessitates an examination of its origin and how (and whether) it has been altered over time.

While some studies on institutional change focus on rules and structures, others focus on norms. However, four analytical frameworks are often cited as important for the study of urban decision making Rational choice institutionalism; Sociological institutionalism; historical institutionalism and discursive or constructivist intuitionalism. This paper avoids privileging one of these factors over others but uses a three-dimensional framework to understand the process of change or stasis as the interaction of ideas, institutions and interests (similar approaches to studies of institutional change have been followed by Cox, 1995; Hay, 2004; and Murphy, 2014). In employing this organisational framework, one of the central aims of the paper is to explore how ideas, institutions and actors interacted throughout the recent Irish economic crisis and whether they maintained or intensified urban policy continuity or created a path shaping moment.

## 3.0 Phases of Irish Urban Planning

Writing in 2003, Barltey and Treadwell-Shine (in O Leary, 2014) identified three phases in Irish public policy and associated trends in planning since Irish independence in 1922. The first phase, from 1922 to 1960, was pre-industrial with a focus on economic isolationism and self sufficiency with minimal consideration of planning (limited to housing). The second phase, from 1960 to 1986, was one of urbanisation, industrialisation and seeking inward investment with authoritarian, centrally controlled planning. The third phase from 1986 was post industrial with more entrepreneurial and flexible planning. Now, in post Celtic Tiger Ireland, we have entered what is recovery phase, referred to by O Leary (2014) as perhaps the most challe discipline so far as planning seeks to assist economic growth while addressi recent past (O Leary, 2014: 20).

Many of these shifts in public policy and planning thought, particularly post 1960, have been connected or linked with crisis events. Indeed, as Murphy (2014) asserts Previous Irish crises ha proved to be path shaping in policy terms - Responses to the 1950s crisis shaped a new econo regime which reoriented and opened the economy towards international investment. The response to the 1980s crisis shaped the 1987 Programme for National Recovery which laid the foundations of the Celtic Tiger model of light regulation, low taxation and foreign direct investment (Murphy, 2014) and the move towards more entrepreneurial urban planning. It is beyond the scope of thi comprehensively analyse the complex causes of Ireland s recent economic crisis. Rather, this paper will focus on shifts in public policy and related planning trends from the mid to late 1980s, corresponding with the birth of the Celtic Tiger and the establishment of the regeneration programme for the Dublin Docklands through to the present day. Specifically, it aims to examine role of urban planning in mediating and responding to the most recent economic crisis during period .

Since the mid 1980s, urban planning in Ireland has become increasingly infused with an ethos of entrepreneurialism with growing emphasis being placed on the facilitative role of planners rather than on their traditional reactive and essentially passive modes of operation (MacLaren et al, 2007). The transformation of Irish urban planning has not been an isolated event. In fact, the institutional and political contexts for such changes were associated with the growing penetration of political strategies, throughout Europe, by a neoliberal agenda. Such a movement is summarised by Brenner and Theodore (2002: 352) in the statement

> *the linchpin of neoliberal ideology is the belief that open, competitive, and unregulated markets, liberated from all forms of state interference, represent the optimal mechanism for economic development*

As part of this, local authorities / municipalities have tended to move away from the managerial or development control approach that characterised their operation in the 1960s and 1970s towards a more entrepreneurial or innovative approach to city management and marketing. Harvey identifies three strands in this entrepreneurial approach: The first is a reliance on the concept of public-private partnerships (PPP) this is particularly evident in Docklands areas (like inner city Dublin) where many redevelopment projects have been undertaken by specially established development agencies working closely with private sector investors; the second characteristic of this approach is its speculative nature as the role of the public sector in these projects has, in most cases, absorbed much of the risk associated with projects to satisfy the private investors; Thirdly, these new developments tend to be place specific rather than jurisdictional, focussing on particular projects rather than on

redeveloping an entire local authority areas. Indeed, all three of these characteristics could be observed in Dublin throughout the late 1980s to the early 2000s.

## 4.0 A Period of Transition Responding to a Changing Dublin Docklands

One of the defining features of the Dublin Docklands has been the changing character of the area over time, and particularly during the period 1980-2008. From its origins until the later twentieth century, the area has always been a zone in transition (Moore, 2008: 165), particularly vulnerable to global economic changes. While once thriving trade resulted in a bustling port and docklands, the reverse was also true as the vibrancy of the area fluctuated in response to external conditions in the 1980s. Indeed, the history of the Docklands is quite different from the relatively more stable history of the rest of the city centre where districts have undergone less dramatic change over longer periods.

Perhaps one of the most significant periods of change occurred throughout the 1990s and early 2000s, as the area developed under an ambitious new urban regeneration programme, implemented through the use of a Special Purpose Development Authority (SPDA), first established in 1987. Two such agencies operated in the area between 1987 and 2014 first, the Custom House Docks Development Authority (CHDDA) gained responsibility for 11 hectares of the Docklands, and operated until 1997. In 1997 this authority was subsumed by the Dublin Docklands Development Authority (DDDA), an authority which became responsible for more than 500 hectares of the Dublin Docklands until its formal dissolution in 2014.

Modelled on, and drawing upon the experience of Urban Development Corporations (UDCs) in the UK, most notably the London Docklands, these agencies operated entirely outside the jurisdiction of the Dublin City Council (then known as Dublin Corporation) Planning Department and were

> *endowed with planning powers to streamline planning controls and possess the operational and financial powers to undertake infrastructural developments, acquire land, reclaim it and dispose of it at a subsidised cost to private-sector developers* (MacLaran, 2003: 10).

This creation of these agencies was driven, in large part, by a growing dissatisfaction with local authority planning during the late 1980s, which was considered bureaucratic and too inflexible (Bissett, 2008, 16) to tackle the scale of the city s problems. In Ireland, the tradition authority (the City and County Councils) had always focussed on development control. Yet in a context where very little development was taking place, this role became increasingly irrelevant and the role of the local authority began to be questioned (Moore, 2008).

The newly-created agency marked a radical shift in the philosophy guiding urban planning in Ireland towards more overtly facilitative entrepreneurial systems of engagement with the property-development sector. Yet of all the approaches and models introduced for entrepreneurial urban regeneration in, it is only in Dublin Docklands that a fast-track , planning process was est the Irish Government. This fast-track planning process completely bypasses t planning process, including the third-party appeal, as provided in the Planning and Developme legislation. Under this regime, master plans (and planning schemes) were prepared for the Docklands area. The Authority could then issue what was known as a Section 25 certificate in respect of a development, which meant that once a development was consistent with the master plan or scheme it could be exempt from the requirement to obtain planning permission. Within this process, community or public participation in the planning process was limited to the master plan or scheme making phases. Once a plan was complete and approved, the public could not appeal any development seen to be consistent with the plan.

The perceived benefits of this fast track approach were set out in a report DDDA in 2008. These benefits, clearly focussed from the applicant or developer perspective, were stated as follows (Grant Thornton, 2008):

- The planning application process is shorter than the conventional planning route due to t elimination of Third Party Appeals.
- Greater certainty is ensured in planning applications submitted as part of the DDDA planning process as once development complies the respective plans within such schemes, the development will be permitted.
- The cost of the conventional planning process is often significantly higher than costs associated with applications under the DDDA planning process. This is primarily due to the presence of third party appeals, with the involvement of the Board (the Irish appeals board) driving consultants costs and therefore, applicant s costs rise.

As the focus of the regeneration project became far more commercial in orientation, questions arose around the role of Dublin City Council during this period, and around the nature of the planning system itself -

> *The vesting of planning powers in a pro-development body...runs the risk of challenging the legitimacy of the urban planning system itself by exposing it as a tool for legitimating the* unequal distributional outcomes of the development process (MacLaran, *1993*

Particular concern was raised as the 1990s progressed, as the idea of developing an International Financial Services Centre (IFSC) became not just part of the overall plan for the docklands, but the major flagship project. In a short amount of time, the IFSC became a keystone of the entire regeneration project and today ranks as a key symbol of the new docklands. developments in other waterfront locations, and in particular that of Canary Wharf in London, the IFSC project was designed to attract international investment to Dublin with the overall aim of improving tax revenue and jump starting an ailing economy. As such, the focus of the regeneration programme, under the CHDDA, shifted as the 1990s progressed from providing for mixed use development to a far more commercial orientation. This move was also exacerbated by the changing economic climate , as Ireland experienced an unprecedented economic boom with an average growth rate of 9% in GNP between 1995 and 2001 (In contrast, most other European countries experienced annual growth levels of between 4-5%).

Hailed a major economic success by some commentators, the CHDDA prompted phenomenal demand for office space following the establishment and continued promotion of the IFSC. The focus, however, on establishing the IFSC at the site led to a predominance of office activities and a limited amount of residual development. Indeed, a report commissioned by the Department of the Environment (central government) in 1996 to examine the operations and achievements of the CHDDA found that the kinds of mixed use development and heterogeneous social profile that was intended had not emerged. The Government also recognised that planned trickle marginalised communities had also failed to happen in the now largely mono-functional landscape as a growing divide was emerging between the new Docklands area and the surrounding communities (Bartley & Treadwell-Shine, 2003; in McCrory, 2013).

In 1997, the CHDDA was subsumed by the DDDA under legislation to encompass redevelopment and regeneration of a larger area (526 hectares) of Dublin s docklands. The legislative remit of the Authority was wider than that of the CHDDA, and required it to secure three primary goals the social and economic regeneration of the Docklands area on a sustainable basis; improvements in the physical environment of the Docklands area; the continued development of financial services activities

in the Docklands area. Yet, following its establishment much of the population and socio-economic trends continued. Indeed, between 1981 and the mid 2000s, there were significant changes in the employment and social structure of the inner city. The population, declining quite rapidly between 1981 and 1991, began to increase quite substantially between 1991 and 2006 from 20,146 to 27,652 (see table 1, below).

| | 1981 | 1986 | 1991 | 1996 | 2002 | 2006 |
|---|---|---|---|---|---|---|
| **Total DDDA Area** | 23,205 | 21,708 | 20,146 | 21,341 | 24,061 | 27,652 |
| **% Change over previous Census** | -4.10% | -6.90% | -7.80% | 5.60% | 11.30% | 13.00% |

*Table 1: Population Change in the DDDA area between 1981 and 2006 (Source: Adapted from Moore, 2008)*

In addition, between 1991 and 2002, there were two notable changes to the tenure structure of the area: a large increase in the number of households in privately rented accommodation, which more than doubled from 5,611 to 13,272 households; and a 20% reduction in the number of households in social housing (resulting from the sale or privatisation of existing stock and the decline in the number of new social housing units being constructed). Since 2002, the change in tenure has been even more dramatic, with the number of households in privately rented accommodation again more than doubling to 28,286, representing 51% of all households. In 2011, households in owner occupation and privately rented accommodation accounted for 77% of the total, up from 53% in 1991 and 63% in 2002. (MacLaran and Kelly, 2014: 175)

Such developments, according to MacLaren and Kelly (2014: 178) were characteristic of an area undergoing a process of gentrification, which they define as

> *a process of broad socio-spatial change which centres on the transformation of working class neighbourhoods into middle class* residential and / or new commercial spaces .

This was also demonstrated by significant changes to the age structure of the population (there was a 90% increase in the number of adults aged between 25 and 44 years), levels of education achieved and employment rates. While the docklands came to embody all the positive aspects of the Celtic Tiger economy, it also in many ways demonstrated the underbelly of that growth, in particular the emergence of a dual city . While spatial or geographical proximity between a r had increased, the problems of social polarisation became a huge concern in the docklands and elsewhere in the mid 1990s. Although thousands of jobs had been created in the new economic activities based around the financial services sector, they did nothing to address the long term unemployed residents in the area, many of whom were either manual or unskilled workers.

## 5.0 The Dublin Docklands in a Post Crisis Context

From the mid 1990 s until the onset of the global economic crisis in 2007, Irela strongest economies in Europe. During the 1990s the so called Celtic Tiger Iri average annual rate of 7.5%, more than three times the European average at the time (Murphy, 2000).
In the last few years of this boom era however, Ireland s property market entered a high-r phase which eventually burst in 2007, leading Ireland into the greatest ec country s history. Moore-Cherry and Vinci (2012) contend that it is precisely because of the development model, described as predicated on constant growth to function (Kitchin, from 1986-2006 , heavily reliant on borrowed money to fuel an overheated property sector, that the post 2007 crisis has had such a major impact on the social, economic and physical landscape of Dublin.

Unlike as has happened previously in other Europeans countries such as Sweden and Iceland, Ireland s banks were not allowed to collapse under the debt burden created during the boom. In order to introduce liquidity into the Irish banking system the state took a two-pronged approach: (1) direct recapitalisation or nationalisation of the banks; (2) relieving the banks of their toxic assets by purchasing all property loans of 5m or more and placing them in a new state agency to behalf of the taxpayer (Kitchin et al, 2010). This state agency, established in 2009, is the National Asset Management Agency or NAMA. NAMA, having taken control of many of Irelanc unfinished developments and zoned land, became the largest land owner in the state.

Within the Docklands, and other parts of the inner city, a number of key challenges started to emerge relating to a number of large scale partly completed developments; the lack of financing across both the public and private sectors as many of the largest developers became bankrupt; and social issues relating to the impacts of emerging austerity policies. A number of sites in the Docklands which were bought by the DDDA in boom times using compulsory purchase orders were later transferred to NAMA at a fraction of their initial value. Indeed, the DDDA lost an estimated 180 million from seven property deals (Phelan, 2014) over the course of the crisis. In February 2012, in light of its emerging financial difficulties, the Government Auditor General undertook a review of the activities of the DDDA. Three DDDA Executive Board members were also members on the boards of Bank of Ireland and Anglo Irish Bank (one was Chairman of the Board at Anglo Irish Bank), where the DDDA sought funding for a number of sites. The report raises concern of potentia which may occur in these circumstances.

The huge financial losses suffered by the DDDA, combined with the findings of this report, led to the announcement in 2012 that the DDDA was to be disbanded. In 2014, the government published the General Scheme of the Dublin Docklands Development Authority (Dissolution) Bill, a stand-alone piece of legislation which provides for the transfer of certain responsibilities, rights and liabilities for the Docklands area to Dublin City Council.

As Ireland emerges from the worst economic crisis it has faced since independence, questions have been asked about the extent to which the crisis could have been minimised or reduced. The rapid and highly unsustainable development patterns experienced in Dublin over the past two decades were made possible by a combination of political and institutional factors, in particular the relationship between planning, politicians and the property development sector (Moore-Cherry, 2012). The neoliberal approach to development characterised by de-regulated planning in places like the docklands and the willing transfer of power to semi private and private interests by the state, resulted in an environment within which massive speculation was permitted and indeed encouraged. Over the course of the crisis, the legitimacy of the DDDA was called into question and the Irish planning system suffered serious reputational damage. Indeed, Kitchin et al (2010:2) affirm that as well as a catastrophic failure in Ireland s banking and financial regulatory system, there h failure of the planning system at all scales .

Today, Dublin City Council is now responsible for leading the social, economic and physical regeneration of the Dublin Docklands. Yet, the 2014 dissolution bill also refers to a continuation of fast track planning procedures, as part of a new planning mechanism to be Docklands. In May 2014, part of the Docklands (former) DDDA area (66 hectares) was designated a Strategic Development Zone or SDZ by the government. A number of special rules apply to planning and development in an SDZ. These rules make it significantly easier to obtain planning permission for development which is consistent with a Planning Scheme in force for an SDZ and prohibit planning permission for development which is not consistent with it. Similar to the DDDA approach, there is no right of public appeal against a decision of a planning authority on an application

for planning permission in an SDZ. The planning authority may also acquire land in an SDZ, compulsorily if necessary. Fox-Rogers et al. (2011, 650) contends that

> *The power to designate SDZs is an example of the Government's desire to retain the power to intervene in the planning process (Fox-Rogers et al., 2011, 655).*

It is also important to note that NAMA has an interest in 75% of the 22 hectares that are available for development (out of the full 66 ha) in the SDZ area. In light of NAMA s primary objective o obtaining the best achievable financial return on these assets , the potent future planning and development of the inner city should be a critical concern. While achieving the best financial gain may be in the tax payers interest it cannot be considered a core planning objective. NAMA must make important decisions about strategic land holdings and yet there is no overall spatial vision for NAMA assets. The incremental and disjointed disposal of property based assets, it could be argued represents a quick fix property based solution to a property based crisis. Moreov such focus on reviving stalled developments (which in many cases should never have got through the planning process in the first instance) can undermine and inhibit new attempts at innovation and entrepreneurship.

Irish urban planning is at an important crossroad and inevitably, the legacy o period will influence theory and practice for years to come. As Murphy asserts, one might expect both the scale and impact of the recent crisis years to bring about a path shaping moment. Yet Wickham (2013) argues that such shifts have not taken place and that Ireland is survi The overall character of policy and institutions remains constant and this is evident in the Dublin Docklands. While the planning and development of the area is no longer the remit of a private authority, the planning *mechanisms* remain much of the same with the overarching focus, it could be argued, predicated on quick fixes to stimulate markets and reinstate growth.

## 6.0 Conclusion

There is an extensive amount of research on *how* and *why* the global financial crisis has evolved since 2007. However, although there have been studies on *responses* to the crisis, these have typically been conducted at the national or international level. Little or no attention has been given to how municipalities and cities have responded to the crisis. This paper (and the research project from which it stems) works towards closing this gap. This paper proposes that in studying responses to the crisis, and the resilience of cities, it is necessary to understand the adaptive capacity of urban planning systems. In doing so, we must seek to explore preconditions under which spatial and institutional challenges lead to adaptations of planning system characteristics (including legal configurations, tools and spatially relevant discourses).

In Ireland, responses to previous crises (in particular, the 1980s economic crisis) have created path shaping moments for public policy and urban planning. Following the 1980s crisis, Ireland adopted a development model which was predicated on constant growth to function (Kitchi model shaped the direction of urban planning in the years to follow, including the new planning mechanisms implemented in the Dublin Docklands. These mechanisms, utilising fa approaches under the direction of private development authorities, were designed to promote more flexible or adaptive forms of planning in response to a system that was perceived to bureaucratic and too inflexible to tackle the scale of the city s problems period. Yet, the use of tools to promote flexibility cannot be considered a f planning system. Indeed, the use of such approaches within the context of contributed quite substantially to the issues the area faced as the 2000s progressed.

Indeed a number of scholars increasingly highlight a perceived inability of current (market driven) planning systems to adequately enhance the resilience of urban areas due to the sustaining nature of neoliberal ideology (Eraydin, 2013; Fainstein, 2013; Joseph, 2013). Related to this, has been a critique of planning theory in addressing urban vulnerability in a neoliberal age. Urban policy; legislation on urban governance and planning systems; and some institutional changes have emerged, but, according to Eraydin (2013), they have not been supported by a new planning perspective and this has certainly been the case in Ireland, and in the Docklands. It is thus argued that a new paradigm, focussing on the need for greater adaptive and reorganisational capacity in urban systems, is required. Eraydin, (2013) proposes that resilience thinking can form the basis of an alternative planning approach, within a process that will focus on value systems and power relation
Thus, it is argued that a more detailed theoretical understanding of institutional and organisational mechanisms shaping resilience debates and action needs to be developed.

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# COMPLEXITY, PLANNING AND FUZZY RESPONSIBILITIES IN CANBERRA SINCE SELF-GOVERNMENT

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**Abstract.** *On 1 January 2015 the embargo on the 1988/89 cabinet papers held at the National Archives of Australia was lifted. The information that has become accessible sheds new light on a critical transition point in the history of the Australian capital, the imposition of self-government on the Australian Capital Territory. The city had been a kind of national government company town since its inception in the first decade of the 20th century, subject to various forms of departmental control but with no self-government. The systems of planning and governance persisting up to 1989 were based on public ownership of land and, for long periods, high levels of political and financial support from national government – a kind of planners' paradise. These conditions led to the development of a city which has been described as a perfectionist manifestation of ideal concepts in planning (Fischer 2013; Fischer & Weirick 2013).*

*The belated imposition of self-government in 1989 – against the wishes of its citizens – marked the beginning of a period of turbulent reforms. The way in which this was handled, from Cabinet level to administrative sectors of the bureaucracy, led to increasingly complex, fuzzy governance relationships and spatial planning verging on the dysfunctional. In the light of recent policy changes in Canberra and based on the newly released archival material together with interviews conducted since 2000 the paper traces the changing nature of planning and development in Canberra since self-government through the windows (Altrock & Fischer 2014) of planning complexity and fuzzy responsibilities.*

**Keywords.** city visions, urban governance, fuzzy planning

## 1. Introduction and paper structure

The paper first places the Canberra experience in the context of the conference theme *Definite Space – Fuzzy Responsibility* (1.1). In a second step (2), we take heed of the recommendations in track 18 to *"make sure that the audience/readers have a good understanding of the region under consideration, relevant historical and actual development trends, and relevant politico-administrative aspects of national and urban planning systems."* To this end, we briefly outline the history of how planning in Canberra got to the stage of what might be described as exploding fuzziness. The paper then (3) focuses on the phenomena of complexity and fuzzy responsibilities in urban development in the Australian capital and concludes with a structural overview of the Canberra case study (4) based on Martens (2007).

### 1.1. Canberra seen through the window of the conference theme

In the context of the conference theme, the experience of the Australian capital, Canberra presents a particularly clear example of changes in urban development processes since the beginning of the 20th century. In this sense, to quote and paraphrase the conference theme, it can be said that planning in Canberra was indeed "*affected by drift from **strict hierarchic control***" by government – as pertained

from 1900 into the 1980s – to forms of governance with "*public-private partnership projects, where the actual field of public* ***government action is dissolving*** *and shared with business, with many services formerly provided by the public domain outsourced. Who should take responsibility for how cities and regions are being changed?"*

While this question has by no means been solved in a satisfactory way in Canberra, the problems encountered in the transformation process of governance are paradigmatic, and their analysis may help in the search for new solutions.

## 2. Canberra – from strict hierarchic control to dissolving government action

To understand the extent and qualities of the changes in governance, some spotlights on how the core features under consideration in this paper developed over time are required.

Seen from the point of governance, Canberra's outstanding feature during most of its history has been the degree of strict hierarchic control of its planning and development. This long history of Canberra as a kind of government company town – developed in a system approaching that of a planned economy – distinguishes the Australian capital from most other cities. Canberra's planners enjoyed an exceptionally high level of political and financial support over long periods of time. The reason lies in the cultural function the city has had to fulfill since its conception in 1900: Its mission was not simply to be an administrative capital but to become the prestigious symbol of a young federation, in fact "the finest capital city in the world – the pride of time" (King O'Malley, Minister for Home Affairs 1910, quoted in Harrison, 1995, p.6)

Therefore, the elements that shaped Canberra in the long run into the 21st century (discounting sometimes protracted hiccups in the development process) included

a *vision* for the future (which of course changed over time, sometimes even got lost, particularly in phases of stagnation),
an understanding of *history,* albeit selective,
a strong orientation *on international exemplary models of planning* and
overall tight *planning control* on the basis of public ownership of land.

Thus, the underlying principle of public ownership of land and leasehold tenure followed *international models*, but also owed much to Australia's bitter experience with a "squattocracy" of graziers and city based land-speculators through periods of boom and bust in the nineteenth century.

### 2.1 Visions created, lost and found

#### 2.1.1 The vision of the 'Griffin Plan'

The core *vision* for the future of the capital took concrete shape in the 1911 plan designed by Chicago architects Walter Burley Griffin and Marion Mahony G – a plan with amazing *international* linkages, rooted in *history* and anticipating principles in urban design and sustainable planning which planning history generally ascribes to much later phases of the 20th century.

The implementation of the plan – or rather the lack thereof – is a sad affair. This is however, not a consequence of a lack of planning control but rather of changing ideal concepts and power constellations. What happened? In his role as Federal Director of Planning and Development, Griffin did succeed in putting parts of the of City Beautiful skeleton of avenues on the ground. But World War I ended the implementation of the functionally and semantically rich concept (Weirick, 1988, pp.7-10).

#### 2.1.2 Loss of vision in the inter-war years and setting up a system of strict hierarchic control

Following the termination of Griffin's appointment in 1920, the stagnation of the inter-war years and what might be described as a cultural re-orientation of the Australian way of life to suburban norms meant that the medium-density scheme and clearly urban character implied by the Griffin Plan changed to that of a garden town of bungalow suburbs. It would be an exaggeration to call this a *vision*. Canberra entered an adolescent stage – seven oddly configured garden suburbs in search of a city or, as it seemed at the time, 'a good sheep station spoilt' – all, however, within a system of strict departmental *control*.

But then, the experience of World War II changed everything. Political support, financial sourcing and executive clout of planning were upgraded on an unprecedented scale. What caused this change were the disadvantages experienced in the process of conducting the war from Canberra, Sydney and Melbourne. Following changes to the taxation system during World War II, most notably centralising income tax revenue at the Federal level, the various defence departments hitherto headquartered in Sydney and Melbourne were to be brought together in Canberra. But this was to be only the starting shot for concentrating a majority of government departments there. An enormous building program for the transfer of departments, staff, families and services had to be integrated into a process of efficient urban development.

To achieve this, Prime Minister Robert Menzies introduced Federal legislation which in 1957 created a powerful organisation, the National Capital Development Commission (NCDC), whose responsibilities lay in planning and developing the capital. Menzies ensured that the NCDC would have a large, single-line budget and a high degree of planning control based on continuation of the leasehold system. In the event, the NCDC acted as benevolent dictator in a city without self-government – a planners' paradise in a rapidly expanding city with growth rates averaging around 10% per annum.

### 2.1.3 Creating a new vision: The Y Plan

The professional planners oriented their work on the most modern international planning practice – mainly models of British New Town planning combined with US methods of automobile-centred land-use-transportation planning. In a reinterpretation of Howard's 'Centre and Satellite' model and Abercrombie's 1944 County of London Plan, the Canberra of the Griffin Plan became the 'Central City' – today called 'Inner Canberra' – connected to a set of satellite towns in surrounding valleys separated by a continuous green belt.

Reconciling the spatial configuration, size and functional structure of these satellites in terms of population numbers, employment concentrations, retail catchments, traffic flows and infrastructure provision has been a crucial factor in the development process of the city and its long-term sustainability. Under stress since the late 1970s, the 'Centre and Satellite' model appears to have entered a new, highly problematic phase in 2015. At the core of the problem lies the spatial disposition of functions within the topography in the central area:

In the Griffin Plan, the central area functions in terms of commerce, culture and civic administration were to be developed between the two poles of the municipal axis: the Civic Centre in the west and Market Centre in the east. In the 1920s, Griffin's successors had decided to concentrate both functions at the western end. The motorisation of Australian society following World War II put pressure on this decision. Transportation studies commissioned by the NCDC in the early 1960s revealed that a city centre in this location, squeezed between the two ridges of the central hills, would experience considerable traffic congestion if it was developed as a conventional CBD within a car-based overall radial-concentric urban pattern.

The solution was seen in a more linear urban form and in a reduced size of the city centre. In contrast to a conventional CBD, 'Civic' would focus on highly specialized services, while a large share of the office employment and retail functions would be decentralised into the satellite districts. These were termed 'New Towns' to emphasize that a high level of self-containment was intended. The key to

achieving this lay in the government's power of allocating the government departments – which were the city's major employment nodes – to the individual 'New Towns'. Government was also in charge of the construction of the government offices while private enterprise built the shopping centres. Together, these elements provided the core of the town centre structure of each 'New Town'.

The development plan thus envisaged 'New Towns' stretched into the form of a linear city with 'old Canberra' in the middle; connected by peripheral freeways and a central reservation for a public transport spine carrying a rapid transit system planned for implementation when the population reached 500,000. Public transport along this spine was predicted to be more effective by dividing the city at its northern end into two branches in the form of a Y; hence the name 'Y Plan' (fig. 1, NCDC, 1970, p. 226,).

Figure 1. 1970: The Y Plan

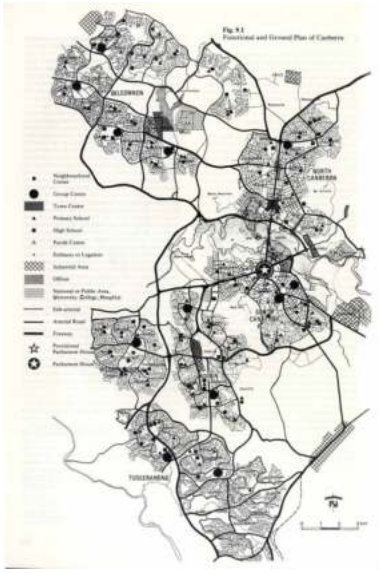

Figure 2. The built reality: Canberra's functional plan 1980

The frame of this network was fleshed out with neighbourhood units, community facilities and roads all graded in perfect hierarchies (fig. 2, Fischer 1984, p.134)

**2.1.4 Implementing the new vision**

The machinery created by the Menzies government ensured that these planning concepts were implemented with amazing precision while accommodating a population increase from 39,000 (1957) to 270,000 (1988) in three decades. This can be demonstrated by comparing the visionary artistic rendering of Canberra drawn in the late 1960s (fig. 3), which depicts the city in the manner of an aerial photograph as it might have looked at the beginning of the 21st century, with an aerial photograph from 2000 (fig. 4). The two images are surprisingly similar.

The city's functional and ground plan looks like a diagram from a planning text book (Fig. 2). But it displays the built reality of a city which can be seen as a perfect manifestation of planners' ideal concepts in the era of high modernism – a city we might call 'the ideal Garden City Metropolis' (Fischer 2013).

Figure 3. Visionary artist's rendering 1970. Source: (Reid, 2001, p.298)

Figure 4. Aerial: The built reality in 2000. Source: (Reid, 2001, p.324)

The basic principles behind this process were described in an impressive publication intended "to solidify [these principles] in a policy sense" (Nielson, 2000) and put them in print for the years to come. In its last chapters on 'Growth and Change' that book, *Tomorrow's Canberra* (1970) also reflected on the need to react flexibly to structural change. It focused on social change and consequences for the design of neighbourhoods. But it did not anticipate significant changes in the structure of governance, nor the way in which office finance and construction or more generally the urban market would change. And this is where the perfect pyramid of planning concepts began to crumble in the 1970s, in fact not long after it had been constructed.

### 3. Complexity and fuzzy responsibilities

#### 3.1 Complexity and fuzzy responsibilities enter the scene in the 1970s

As early as 1972, the leasehold system was emasculated by eliminating land rent and transforming landholdings into what, from an economic viewpoint, was virtual freehold (Stein, Troy and Yeomans, 1995). In May 1970, Prime Minister John Gorton announced that land rents under Canberra's leasehold System would be abolished. This not only destroyed whatever value Canberra might have had as a model of a potentially self-financing town, 'The Gorton Gift' also meant that 27,000 leases of land valued at $230 million had been given away, converted into virtual freehold land. While the high level of planning control based on lease-purpose clauses was not immediately affected, the foundations were laid for a new way of financing the capital based on municipal rates.

A little later, in 1974, a newly appointed Commissioner chartered a new 'Corporate Planning' course for the NCDC designed to augment the role of the private market. Private developers would henceforth not only construct housing, shopping malls and private offices, but also government offices to be 'leased back' by the government. The fact that land values and the potential return on investments were considerably higher in the city centre than in the New Town centres led to immediate pressure from the private sector on the locational strategies of the NCDC, which responded by approving office building in the city centre contrary to its own plan (Gilchrist 1988).

The youngest district commenced under the NCDC, Gungahlin, was even planned without a core of government offices. Instead, the skyline of the city centre was beginning to mushroom with quite non-descript office buildings – in obvious contradiction to the Y Plan. But it was only following self-government that the established urban hierarchy came under significant pressure.

#### 3.2 1989: Self-government

Introducing self-government appeared a step long overdue in a democratic society. But the democratic deficit was the least of the worries of Canberra's citizens. In view of the high level of Commonwealth

subsidies for the capital, a majority had even rejected self-government in a 1978 referendum. Change, nevertheless, was inevitable and in 1988, in a period of fiscal constraint, the Commonwealth forced self-government on the Australian Capital Territory (ACT) (Wettenhall, 2000).

As it turned out, however, the particular arrangements chosen in terms of urban politics, urban economics and urban planning created major problems for the city and its development. New information on the decisions taken at this turning point in Canberra's history have recently become publicly accessible following the lifting of the embargo on the 1988/89 cabinet papers held at the National Archives of Australia.

In 1988, an enquiry into the establishment of an ACT government including a review of the ongoing role of the NCDC was carried out under the chairmanship of an outside expert from the business sector, company director and former merchant banker David Block. The previous year, Prime Minister R.J. Hawke had appointed Block chairman of an Efficiency Scrutiny Unit within the Department of Prime Minister & Cabinet to undertake a review of the Australian Public Service aimed at bringing business methods and cost savings to the public sector. This was on the lines of the Rayner review of the British civil service commissioned in the early 1970's by the T hatcher Government (Schäfer, 1994, pp.84-85). Block's responsibilities also included chairmanship of an Administrative Review Unit – the combination of business efficiency and bureaucratic reform infuses his recommendations to Cabinet on the planning of Canberra, which were distilled into a 1-page (!) Cabinet minute.

On 7 July 1988, the Hawke Government agreed to the abolition of the NCDC and creation of "a small national capital planning authority . . . to prepare and continuously review a National Capital Plan, which would be legally binding; subject to the National Capital Plan, the ACT Administration be responsible for local planning and development; the construction of Commonwealth and national capital works in the ACT be the responsibility of the Department of Administrative Services." Savings of 122 positions and $6.588m per annum were envisaged (Codd 1988; Block 1988).

This decision created a weak national planning authority with nominal control over a powerful local planning authority. Stripped of staff and its role in design and construction, the national planning authority was reduced to an oversight role, with limited capacity to even undertake this role.

Further complications arose over Territory finances. Separating national capital type costs on the one hand from municipal and State costs on the other was a complex affair, with which successive commissions of enquiry had grappled. Self-government now required decisions at the level of fiscal politics, the level of institutional competences and hence too, at the level of spatial planning and design standards. Canberra's planners had always pursued a strategy of thinking of the capital city as a whole, in contrast to most other capitals. This had meant applying the design standards of the capital to the entire city – as opposed to splitting the attention between a carefully designed capital district and an 'ordinary' urban area left to develop as typical Australian suburbia. This was now to be changed.

### 3.2.1 Two organisations, two plans

The NCDC was replaced by a two-level governance structure composed of a local authority (PALM: Planning and Land Management) and a national authority specifically responsible for the areas of national importance in the capital (NCPA: National Capital Planning Authority). Beyond the national area around the lake, these areas included the hills and ridges, the buffer zones between the New Towns, the approach avenues and other landscape features safeguarding the character of the capital. They were inscribed in a **National Capital Plan**. A complementary **Territory Plan** was to ensure, "in a manner not inconsistent with the National Capital Plan, the planning and development of the ACT." At both levels, a significant quality of planning expertise was required.

But the neo-liberal aversion to planning meant that there were too many 'P's in the recipe. Consequently the NCPA was downgraded to the NCA (National Capital Authority). Inside the authority itself, delusions of grandeur facilitated the acceptance of non-explicit planning responsibility. "We wanted the authority to be seen as an organization with a broader base, than just planning – it was too easy to attack it if it was just seen as a planning authority, but if it was seen as a land manager, constructor of things, asset manager, keeper of the state, then that was something that was desirable" (Neilson, 2000).

### 3.2.2 Exploding fuzziness

In fact, the planning role of the NCA was severely curtailed. This has been a continuing process culminating in the current call for its abolition. In an era of reduced power and influence, the NCA's planning competences atrophied – not only through reduction in budget allocations but also reduction in staff, culminating in the abolition of the post of National Capital Plan Director in 2003.

Conceived in Australia's heyday of neo-liberalism (Pusey, 1991), the new **Territory Government** took office at the beginning of a long phase of turbulent reforms and changes. On the political front, election of the ACT Legislative Assembly based on multi-member electorates and proportional representation made it difficult for one political party to achieve a majority, with the result that coalition governments would be the norm. On the economic front, the Territory Government could not afford the low-density, far flung city it had inherited from the Commonwealth on the basis of tax revenues alone. On the planning front, the division of responsibilities between the Commonwealth and Territory governments proved to be dysfunctional. Let us look at these issues in turn.

### 3.2.3 Fragmentation

At the level of municipal or territorial administration, a proceeding loss of focus soon became apparent. Its functions were fragmented into a multitude of Territory departments and branches –in terms responsibilities, physical location and overlapping ministerial control – in a way that has made the co-ordination between often competing branches difficult.

Since the capital was declared to be basically complete, it seemed obvious that it did not require spatial planning on a substantial scale any more. Running a city was seen as a task of **land management**. Planners, architects and engineers could be replaced by economists and managers. Privatisation, small government, staff reduction, de-professionalisation, and radical outsourcing were the key words for the following chapter in Canberra's history.

The ACT planning authority ended up with no transport planners; its urban designers were transferred to ACT Parks & Places; its subdivision planning function to the Land Agency; its major project evaluation role and its ACT/NSW regional planning role were taken over by the Chief Minister's Department.

On the issue of cooperation between the Territory Government and the NCA, it turned out both were unable to strike a compatible balance between Territory and National Capital needs. Relations have been characterized by routine interference and micro-management by ministers and their offices.

### 3.2.3 The economic dilemma

At self-government, municipal rates were not sufficient to meet the annual budget for the running expenditure of the Territory. A substantial portion of municipal revenue, including infrastructure investment (Sansom, 2009), was therefore to be financed from the sale of the Territory's only asset – the land that had been acquired in the first decade of the twentieth century for the foundation of the National Capital.

Under the new arrangements for planning and urban development, this estate was divided into Territory land and National land in terms of ownership, with an overlay of 'designated areas' of national significance on some parts of Territory land subject to Commonwealth planning control. In the debate on the enabling legislation in the Australian Parliament, Labor member and former Minister responsible for Canberra, Tom Uren made the issue clear:

> ". . . it must be understood that the land of the ACT belongs to the people of the nation as a whole, not just to the people of Canberra. Public ownership of and the development rights on it have enabled the Commonwealth to pursue its objectives free from the effects of land speculation and private interest. Public land ownership and integrated planning and development have enabled urban development to be coordinated on a scale far greater than anywhere else in Australia . . . . Under the proposed legislation, there would be a division between national and territorial land for funding certain planning development and for management purposes . . . . Self-government has been designed so the ACT government will have access to the revenues and land and development rights over most of the ACT, and economic necessity is likely to be the basis on which the future declarations of land will be made" (Uren, 1994, pp.424-25).

This came to pass. What had once been conceived as a sustainable method of supplying building land at equitable cost for the homes of average citizens and of channelling land-value increases into the public purse was turned into its opposite. The land policy of the ACT Government now focused on maximising land values, and by 2002 the head of the new Office of Land & Assets Management declared that it could "take pride in its success of raising land prices to Sydney levels" (McKinnon, 2002). By 2004, Canberra was reported to have left Sydney suburban price-levels behind. With the cost of land soaring, affordable housing became a difficult issue, and the low-density, far-flung city the ACT Government could not afford, was further extended by that government for short-term gain in revenue from greenfields development.

### 3.2.4 The dilemma of economics and planning: consequences of small government and outsourcing

The strategies of small government and outsourcing meant hard times for planners, more so than for economists and lawyers. Contradictory trends emerged over time. In order to maximise development opportunities and to reduce capital costs of urban development, suburban projects were packaged and handed over to builders who developed substantial estates in a deregulated environment. In many cases, suburban street patterns and site plans were no longer designed by planners, but by builders and their draftspersons; building control was thinned down in a manner that became instantly visible in a dramatic drop of standards. In other cases, planners and consultants found themselves entangled in growing spiders' webs of red tape; highly contradictory indeed. The development approval process was bureaucratised to a point of absurdity (fig.5)

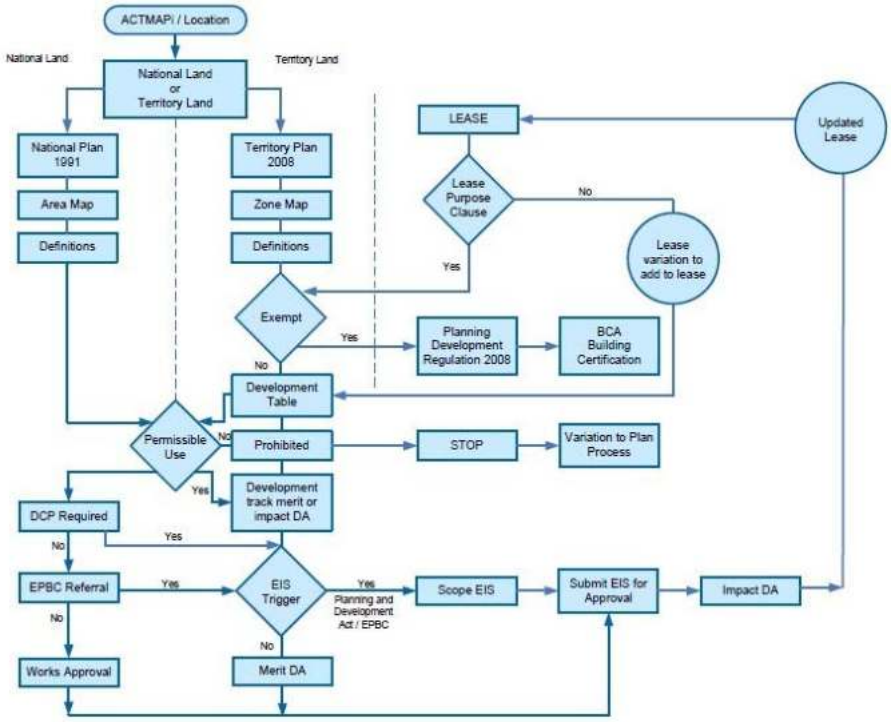


Figure 5. Development Approval process in the ACT. Source: (Sinclair, 2012)

Planning had left the path of the NCDC's (modernist) strategy of planning and development and proceeded more on the principle of 'planning by projects', wherever opportunities for development or redevelopment arose: a sports stadium; a waterfront project; a museum replacing the hospital; and so on. De-skilling and de-professionalization, the loss of corporate memory through staff reduction and the dissipation of libraries meant the loss of in-house competence. Eventually, this resulted in catastrophic, deadly consequences, when in 1997 the task of imploding the Canberra Hospital was arranged as the centrepiece of a public festival and was given to an economically competitive, but inexperienced demolition contractor, leading to loss of life among the spectators. The events of the late 1990s provide classic case study material for the study of urban politics in a neo-liberal phase.

### 3.2.5 Conflicts between the National Capital Plan and the Territory Plan

The ACT (Planning & Land Management) Act 1988 specified that the purpose of the National Capital Plan is to ensure that "Canberra and the Territory are being planned and developed in accordance with their national significance". This has, however, never been achieved. The NCA never had the financial and personal resources to fulfil their task in an adequate way, and the Territory Plan was watered down until it became simply a zoning scheme.

The division of tasks between the National and Territory produced similarly problematic results. Back in the 1970s, the NCDC had created an over-arching conceptual framework for the forested setting of Canberra in the form of an integrated network of public lands termed the 'National Capital Open Space System' (NCOSS). In 1989, responsibility for the NCOSS was divided. The Commonwealth retained control of the visually significant Inner Hills and the parklands of the Central National Area, leaving the ACT Government responsible for the ecologically significant mountain ranges and wilderness areas of the water.

In this way, a city government became responsible for a National Park and a National government became responsible for a city park – a major contributing factor to the Canberra bushfire disaster of 2003 with its loss of life and large scale destruction (Weirick, 2003).

### 3.2.6 Positive and negative dimensions of fuzzy planning in Canberra

**Enter the OECD**
At the nadir of purposeful planning in the National Capital, the neo-liberal agenda produced a positive outcome when the ACT Government turned to the OECD with an invitation to undertake one of its 'city competitiveness and urban renaissance' studies in Canberra – similar to contemporary studies of urban governance and urban innovation which the OECD had carried out in other case study cities including Berlin, Belfast und Glasgow. The study placed the ACT in the broader context of the 'urban renaissance' movement at the beginning of the 21st century (OECD, 2002).

Drawing together a broad range of local actors, stakeholders and community groups, the OECD's approach aimed at the development of locally specific solutions for the sustainable management of structural change. The OECD focused on identifying innovative structures for participation, mobilising social capital networking public and private partners in the context of civil society, integrating locally focused short-term projects into overall metropolitan strategic planning concepts, inventing and implementing new visions – an approach reflecting the state of strategy-oriented development planning as practiced at the turn of the millennium (Fischer 2007).

**New initiatives and plans**
Following an election campaign in which environmental sustainability and planning had been central themes, a change in the ACT government in 2001 to a Labor-Greens coalition led to ambitious programs following the recommendations of the OECD. Their report had criticised the absence of a strategic plan for Canberra. Now, social inclusion, increased sustainability through higher usage of public transport and innovative ways to engage different actors in new patterns of public-private partnership arrangements were incorporated in three integrated plans: a Social plan, an Economic plan, and a Spatial plan, developed in a consultative process between government and the community. They added up to a kind of strategic development plan for orientation and action that had not existed in Canberra since the all-encompassing modernist development plans of the NCDC – not as a simple repetition, however, but as something we might call 'modernism re-loaded' (Fischer 2007). Similar to the historic approach of the NCDC, this catalogue of themes addressed by the ACT government – integrated with public participation exercises– looked as if it had been compiled from a planning text book.

**Rise and fall of the 'Griffin Legacy' study**
Another promising government initiative emerged in the form of a study at the national level which projected a re-discovery and re-naissance of Griffin's City Beautiful concepts with a view to exploiting their potential for the re-urbanisation of Canberra. This combined an historical analysis the Griffin Plan with a kind of New Urbanist vision for the central area. In 2004, a lavishly produced publication with suggestive watercolour renderings presented the ideas of the 'Griffin Legacy' to the public (NCA, 2004). The concept promised to boost the city centre; to re-instate the Griffin vision of a boulevard city of cosmopolitan splendour; and in the process, transform the vast empty lawns north of the lake into prime real estate of immense value.

Certainly at this stage, the beautiful renderings should have been based on thorough analyses of the engineering and transport perspectives, heritage items, property values and other financial implications, consequences for employment, commerce and community facilities and the whole host of studies which form the basis of an urban development strategy including the phasing and timing of land release and infrastructure provision. But this did not happen. One reason can be seen in the deplorable state of the ACT and Commonwealth administration described above.

Instead, amendments to the National Capital Plan were approved in 2006, which bestowed upon the study the qualities of "a blueprint …directing public and private investment in core areas of the capital" (NCA, 2006, p.1). The assumption was obviously that this would lead to immediate investment without lengthy ground work and public involvement. A combination of factors including

the NCA's lack of control over the lands in question, lack of funding for the necessary infrastructure, and approval of a $600 million headquarters for the Australian Security Intelligence Organisation (ASIO) contrary to the plan, combined with community resistance to the fast tracking of development projects and the loss of heritage values, led to a collapse in the legitimacy of the so-called 'Griffin Legacy' project.

**Private sector initiatives**

In parallel with the public planning exercise of the Griffin Legacy, the Property Council submitted "Recommendations for an Outstanding Canberra Spatial Plan" (Property Council, 2004); and the developers of the privatised airport were employing the services of a former NCDC commissioner to develop a city centre redevelopment plan (Powell, 2005). Already in 1991, one of the major developers in Canberra's housing market had spent 1 million dollars on a study for the introduction of light rail (Winnel, 1991). These actors had played significant roles in the over-concentration of commercial offices in Central Canberra under the NCDC. But the new impulses created since the 1990s gave them a new understanding of their role.

**Privatisation and spatial strategies: The Airport and the abandonment of the Y Plan**

Further to this new role of the private sector, the public/private balance shifted significantly around the turn of the millennium in one major field. Canberra airport was privatised by the Federal Government in 1998 as a 'free enterprise zone' subject to neither the National Capital Plan nor the Territory Plan. In short order, the owners built a hitherto unplanned 'Edge City' with offices and factory outlets around the airport east of the Central City.

This led to a dramatic retreat from the principles of the Y Plan, ignoring the lessons of the transportation studies of the 1960s. With the airport 'Edge City' a *fait accompli*, the Territory planning institutions abandoned commitment to the linear disposition of New Towns and proposed a new urban growth structure based on a centralised radial pattern, similar to the one the NCDC had tested and rejected in the 1960s. The overriding interest of developing greenfield sites in order to support the Territory budget through land sales led to the establishment of a new residential satellite on greenbelt lands immediately to the west of the city. While the new satellite to the west and the privatised airport to the east embraced selective principles of sustainable design, the consequences for transportation were highly problematic. Rejecting the principle of strong functional decentralisation, the city centre was now to be built up as a conventional CBD. Forgotten were the warnings of the 1961 transport study which had predicted an overload of traffic in the city centre. Already existing traffic problems were ignored.

What thus emerged was a radial-concentric element similar to that of the first post-war development plan. Among the consequences is a traffic tsunami breaking its way along the lake shore from the new residential district in the west, past the CBD and the Russell defence offices to the 'airport city' with its competing interests of passengers, office workers and factory outlet visitors. Trying to make a virtue out of this, transportation planners proclaimed that the Y plan had now changed into an H plan, with the east-west motorway cutting through the symbolic heart of Canberra forming the bar of the H. The problems were exacerbated by the construction of a huge building block for the Australian Security Intelligence Organisation on this route. The sheer bulk of this complex sits in the urban fabric of the Griffin network like an embolism; far too big in terms of block size and outright deadly for urban life in terms of its security requirements. All of this is continuing to tear the Griffin concept, as a manifestation of good urban form, to pieces.

How could this have happened? Were the planners, and was the NCA in particular, not able to act as custodians of Canberra's urban legacy? As our interviews conducted between 2000 and 2015 have shown, they were not. Some of the reasons have been explained above, such as the NCA's scarcity of personal and financial resources and the Territory's overriding interest in maximising real estate values. Another reason lies in the fact that the NCA had lost the control over the lands even in the Parliamentary triangle. Commonwealth land had become a disposable good negotiated in the non-transparent power games between ministries. And the practice of 'leasing back' governmental office

space from the private sector anywhere in the city meant that government departments could locate wherever the market made the most attractive offer. In recent years this has had problematic consequences, with departments leaving their town centre locations to relocate in the city centre and in the airport office park.

A study carried out in 2007 had demonstrated that the jobs in the new towns were predominantly taken by residents of the new town or adjoining districts. It also identified that proximity to work was an important consideration in where people decide to live. In spite of the relatively high levels of self-containment in the ACT New Towns, the study concluded that "unless there is a commitment by all levels of governments to support the strategy, the potential benefits of employment dispersal to designated centres will not be fully realized" (Quirk 2007).

Recent developments and surveys, however, reveal that this commitment has been dwindling, and truly dramatic consequences are imminent. Following a growth of office floorspace at the airport from 4,000$m^2$ in 2001 to over 200,000$m^2$ in 2015, the level of floorspace is now higher than found at any of the town centres (EPD, 2015). The main problem with this is that the airport is difficult to serve efficiently by public transport and that the new pattern results in a higher level of travel in the city than if the development had been located in more accessible locations.

Several large departments in the New Towns have already relocated to central locations. But the most dramatic imminent shift appeared on the horizon early in 2015. The Conservative government had responded to the problems associated with illegal migration by merging the Australian Customs & Border Protection Service and the Department of Immigration into one 'super agency'. The Minister of this newly created 'Australian Border Force' announced that the combined staff of the old ministries would be centralised in one building, and that consequently, 5,500 jobs would be removed from the centre of the New Town of Belconnen to be relocated in the central area or the airport office park, now termed 'Aerotropolis'. The consequences for the commercial viability of Belconnen town centre, for the jobs in the associated service establishments, not to mention the patterns of the journey to work would be grave indeed. Recent announcements have again moved towards considering 'local impacts' when deciding where to base the Immigration Department's headquarters while emphasising that the Finance Department "will have a final call on where Immigration's 5500 ACT staff will be consolidated" (Canberra Times 11.05.2015).

### 3.3 Canberra at the centennial, 2012-2013

The cultural life of Canberra at its centennial more than demonstrated the energy and creativity of an active community but the physical form of the city remained problematic. Updated planning studies at metropolitan scale, an extensive consultation process, a new plan for the city centre, a proposal to extend the city centre to the lake and planning for a light rail line were inspired by critical reflection on the history of the city, in particular the Griffin Plan.

None of these exercises, however, did anything to change the return to the radial-concentric urban form and to the H-Plan with its problematic traffic implications. Canberra is moving towards higher densities in the centre, but at the same time adding new suburbs on the periphery. These processes are underway while the larger issue of divided planning responsibility is still being determined in the aftermath of Parliamentary enquiries and Ministerial reviews. For all the positive aspects of the centennial years, 'exploding fuzziness' remains the distinguishing characteristic of Canberra's governance and planning.

## 4. Concluding Remarks

Writing of Canberra in the 1970's, American city planner Edmund Bacon observed, "Here flourished, and continues to flourish, one of the greatest urban designs ever produced, conceived, nurtured and grown in circumstances fiercely democratic" (Bacon, 1974, p.309). Bacon was correct as far as the long-standing national debate on the National Capital was concerned but at the municipal level there

was no democracy in Canberra at that time. The introduction of self-government fifteen years later belatedly brought a measure of democratic governance to the citizens of the city. But with new actors and new institutions, the scene was set for the emergence of 'fuzzy' planning practices in terms defined by Martens (2007, p.50), "practices perceived as *fuzzy* in the sense that they are not based on a clear-cut framework about the roles and responsibilities of various actors."

Listing the main actors involved in government processes as "political institutions, governmental agencies, private business interests, issue-oriented interest-groups, locality-based citizen groups, and 'ordinary' citizens," Martens (2007, pp.44-49) usefully outlines three 'ideal models' of governance:

> the coordinative model, based on control and command – "the governing body is positioned above the governed and has the task to steer society for the good of the governed, it . . . collects information, sets goals and priorities, and selects and implements policies";
>
> the competitive model, based on the metaphor and reality of market forces – "governance is primarily seen as a competition between actors with diverse interests. Actors set goals and formulate policies independent of each other and try to achieve them through power struggles with competitors";
>
> the argumentative model, based on public participation and communicative action – "differences between governmental bodies, private sector agencies, interest groups and 'ordinary' citizens become obsolete. Every actor is respected as an equal participant . . . . The focus is on the knowledge, assumptions, arguments and solutions these actors bring to the table rather than formal responsibilities, power resources and interests of the actors."

The three models, represented in diagrammatic form as the 'governance triangle' make manifest the nature of fuzzy practices that "combine one or more models of governance" (Martens, 2007, p.50) (fig.6).

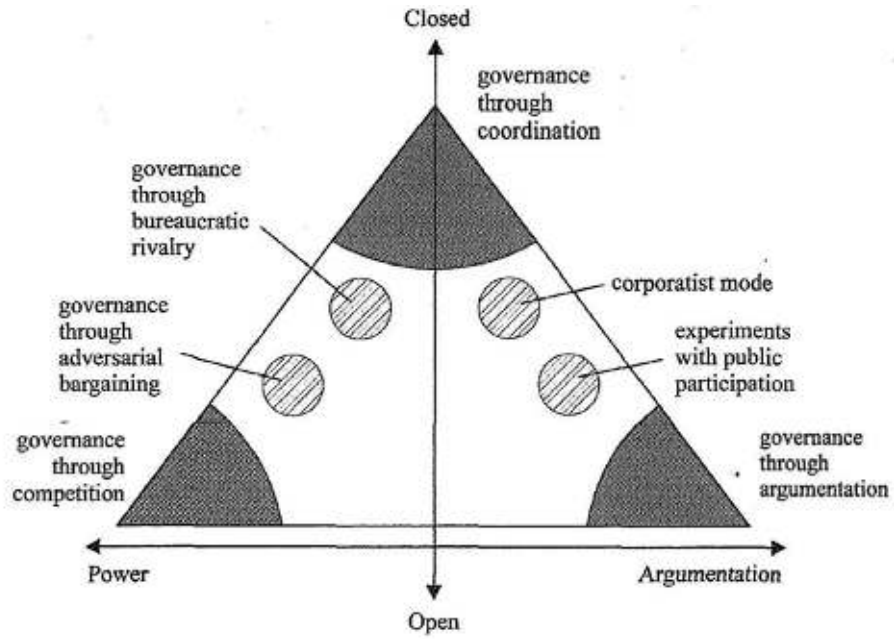


Figure 6. Fuzzy practices within the 'governance triangle'. Source: (Martens, 2007, figs 3.1 & 3.2)

This diagram from the work of Martens (2007) helps us see the emergence of fuzzy planning in Canberra in structural terms. The long history of central government 'control and command' of the development process, culminating in the work of the NCDC from the 1950's to the 1970's, is a classic case of the coordinative model in the field of spatial planning.

The first deviation from this model into the realms of fuzzy planning occurs in the 1970's when the NCDC adopts a corporatist mode, shifting marginally from a closed structure towards a more dynamic role of civic leadership together with an embrace of the private sector, in the process losing legitimacy and generating community opposition. This stimulates the move towards self-government but when this is imposed from above – the closed 'command and control' realm of the central government – its basis in the Block Report, driven by private sector perceptions of administrative efficiency, is detached from the planning traditions of the city, unleashing decades of bureaucratic rivalry and institutionalising the opposite of its intentions, administrative inefficiency. Meanwhile the private sector, advancing from the competitive model, begins to win monopoly rights over suburban development, commercial leasing and the privatised airport through adversarial bargaining. An informed public reacts to the erosion of environmental amenity and civic identity through the creation of citizen groups, which briefly aligned with OECD experts and Labor-Greens political representatives in the ACT Legislative Assembly leads to an idealistic period of participatory planning in the initial stages of producing The Canberra Plan, 2008. Private sector power and bureaucratic rivalry nevertheless quench this movement, and threats to the National Capital role and metropolitan structure of the ACT become the norm.

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# THE ARCHITECTURE OF DYNAMIC PLANNING REGULATIONS

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Abstract: This paper stems from our work on the new Master Plan for Bucharest.
efforts to construct a three-tiered planning regulation system aimed at gove
occurring within the city. Essentially, the three levels of regulations exhibit t

Firm regulations are destined for consolidated or representative areas w
imply fixed samples of amenities and flexible urban and qualitative indica
specific values are allocated to different ranges, which are later used
purposes;

Flexible or adaptable regulations apply to urban areas containing mixed
work with classes of amenities that receive different weights, as well a
minimum value. Within this type of regulations, urban indicators are flex

Strategic guidelines apply to deeply disorganised areas, which under
development. They work with pre-set amenities, determined by the speci
each area. In contrast to the previous types of regulations, strategic
global indicators.

The architecture of the entire planning regulation system becomes operational t
and alternative development scenarios, which are, in turn, governed by an overar
Thus, this paper describes the architecture of the planning regulation system,
employed, as well as the proposed municipal co-operation mechanism.

The theoretical framework underpinning this exercise rests on three different
metropolitan functions; the incipient theory of demand oriented urban life cycl
as insights related to network approaches in tackling matters related to urban c

Keywords: Planning Culture, Dynamic Master Plan, Planning Regulation System.

## 1. Introduction

This paper stems from our work on the new Master Plan for Bucharest. It chron
construct a three-tiered planning regulation system aimed at governing developme
the city. We have written it with the explicit intention of submitting it to th
AESOP Conference in Prague. Therefore, it is more of a conceptual paper than a
work progresses, we intend to expand it into detailed account, charting the ev

For the time being however, we restrict ourselves to revealing the intended arch
regulations, which will govern the new Master Plan.

Almost two years ago, we have started devising the Master Plan for what can be
complex city in Romania. For the purpose of this paper, two main dimensions
complexity are of interest to us, namely its morphological complexity and its i
Both take centre stage within the architecture of our proposed model.

## 1.1 The Morphological Perspective

First, let us summarise the major development phases that shaped the current mo
of Bucharest (Filipeanu et al., 1997, pp. 35f.):

> During its medieval times, Bucharest lacked any sort of defensive walls
> could expand into its direct hinterland, by incorporating existing vil
> settlements that clustered around the roads connecting it to the rest
> principality. Hence, the city developed policentrically from an early
> expansion implied that there were never any clear limits between diffe
> areas, thus keeping the city in a constant state of flux;
>
> When examining the architectural fabric of the city during medieval times, we
> host of fragile building materials, prone to destruction by fires, ear
> deterioration over time. Against this background, the city became a ferti
> recycling. The only building types that were spared by this process
> monasteries and the princely palace;
>
> The last important factor that impacted heavily on the urban form was p
> Over a period of about a century and a half, Bucharest experienced
> population numbers:
>
> > The first period was confined to the end of the 19th century, when the Kingdom of
> > Romania was slowly opening towards European, viz. mostly French
> > influences. This period of rapid population growth was accompanied b
> > interventions, as Bucharest gained in importance as the new capita
> > formed Kingdom of Romania (cf. Lascu, 2011, pp. 73ff.; P noiu, 20
> > They required a supporting set of urban regulations, which had to be
> > 1997);
> >
> > The second period, which spanned the interwar period, correspond
> > overhaul of the Romanian economy, which, in turn, triggered a n
> > immigration. From a morphological perspective, this period correspon
> > rise in density and building heights. Functionally, most new ho
> > displayed a high degree of differentiation, which was geared towards
> > a wider array of social classes. This newly gained interest in hig
> > functional specialisation was supported by a scientific turn in urban p
> > was later formally embodied in the Urban (Systematisation) Plan of 1
> > 2013);
> >
> > The third period started immediately after the Second World War. A
> > industrialisation produced a sustained population influx, both f
> > hinterland of the city and from other cities in the country. Conco
> > properties were nationalised. Both processes paved the way for the t
> > regulatory planning system to a decisional planning system (Filipeanu e
> > pp. 35f.). It is during these times that all the major housing pro

> gained momentum. As the production of new housing units increased,
> gradual shift form the quantitative to a more qualitative perspectiv
> prescriptions (Derer, 1985, pp. 137ff.). Thus, as private propert
> abolished, the new architecture aligned itself fully to modernis
> However, this period of Europeanization did not last later than
> Afterwards, as socialist aesthetics gained prominence, this traditi
> somewhat old-fashioned, and probably too Western European in taste.
> repeated densifications ensued, as the built-up perimeter was frozen
> As a result, the end of the socialist regime witnessed exaggerated
> and undersized public amenities.

Hence, the urban structure of Bucharest exhibits the results of a wide var
operations. As time has passed, most of them have become the hallmark of the cit
lack a comprehensive comparative perspective, in order to grasp the full impact
a wider Central European perspective (cf. Lenger, 2014).

## 1.2 The Institutional Perspective

The above chronology is sketchy at best. However, it is nearly impossible to
synthesis in institutional terms. The research upon this topic is currently
material has become more available, but a comprehensive synthesis is nowhere in
time being.

Thus, we can only make three general observations:

> First, that the pre-war period experienced a slow accumulation of or
> stemming from a wide array of different laws and codes. This proce
> relation to the growing complexity of Bucharest (cf. Lascu, 1997);
>
> Second, that planners working during the interwar period were the
> building and zoning ordinances from a scientific perspective, al
> working in a regulatory planning system centred upon private proper
> 2014);
>
> And third, that planners working under the socialist regime had to
> political pressure (cf. Olteanu, 2013). They responded by drafting d
> methodologies, while at the same time dispensing with much of th
> interests that blossomed during the interwar period.

This fragmentary evolution brings us to the present day, which is characterised
crisis in the field of urban and spatial planning, as well as by a an increased
interests, across which municipalities find it increasingly hard to manoeuvre
institutional insufficiency is further complicated by a fragmented, and sometim
of planning laws.

## 1.3 Conceptual and Theoretical Framework

Our conceptual framework is shown in Figure 1. Thus, the new Master Plan lies at
four fields: the field of urban planning, containing regulations and managem
structural field, encompassing the link between planning and its associated
functional field, which connects actors to opportunities by permanent ass
municipality, and, finally the GIS interface, which is merely a tool in suppor
and the municipality.

It is plain to see that such a complicated figure is difficult to frame in theo
the perusal of the dedicated literature, we have settled upon three theoretica
metropolitan functions, as developed by Blotevogel (Blotevogel and Schulze, 201
(Bege, 2010); the incipient theory of demand oriented urban life cycle manage
2010), as well as some insights stemming from the science of networks (Thompson,
al., 2006; Newman, 2010). The theory of metropolitan functions links the urban
scale, while the theory of demand oriented urban life cycle management links th
level. However, both theories lack a clear operational character. Hence, the
provided by the science of networks.

Nonetheless, reframing the conceptual framework in theoretical terms proved a
for two main reasons: first, because all three theories are in their infancy, a
one hand, we still lack data[1], and on the other, because available datasets display insuffi

Take for example the theory of metropolitan functions: Bege (2010) uses two s
measure the three metropolitan functions, i.e. the decision and control functi
competitiveness function and the gateway function. The difference between the t
a question of size: while reduced set uses 90 indicators, the extended set use
option surpasses the information we currently have. Hence, we shall have to
insights gained from each theory as we continue constructing the architecture of

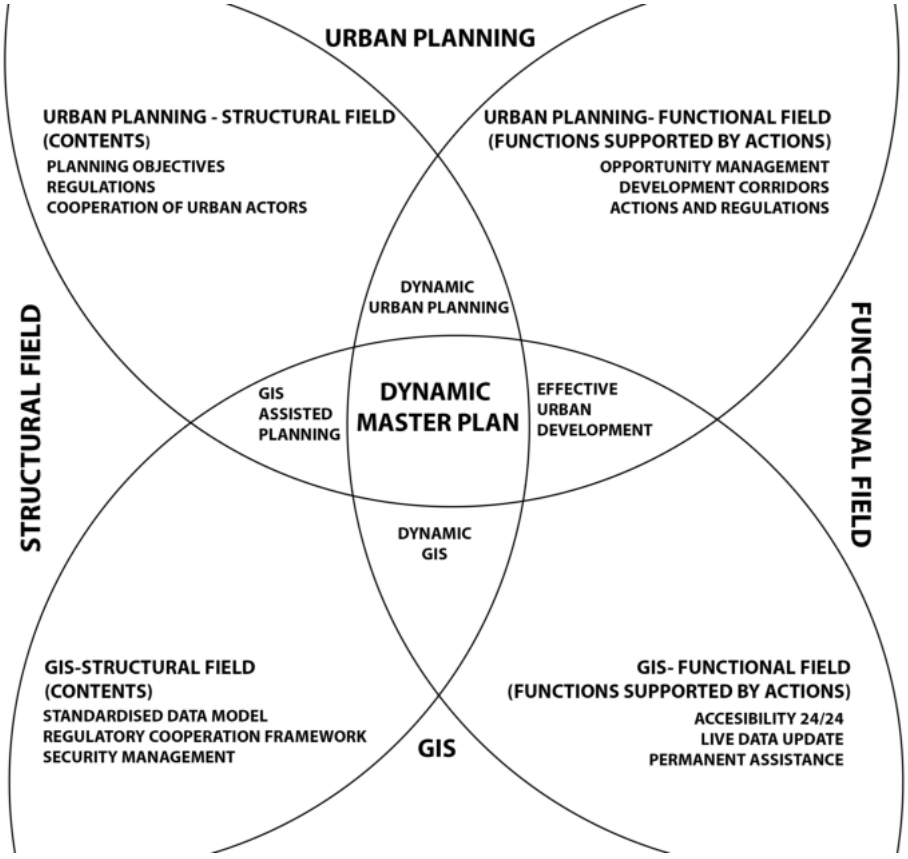


Figure 1. The Concept of the New Dynamic Master Plan
Source: The Authors.

[1] Cf. section 2.2.

## 2. Methodology

As this is still work in progress, this section contains a set of ideas, which w
in support of our model. As the research matures, a full account of our progres
contain an extensive methodological section.

### 2.1 Research Strategy

Compliant with current planning legislation, the new Master Plan has to evolve
stages: first, there is a background study phase, aimed at rendering the current
as well as its future prospects. This is then followed by a second stage, in
regulations is constructed, in order to provide a consistent and coherent coverag
future situations. In its third stage, the Master Plan undergoes administrative
ministries concerned with spatial development and environmental matters.

We now find ourselves in the midst of the first phase, in which a series of b
produced. However, the deadline for this first phase is well beyond the schedule
Against this background, the research supporting the architecture of the new p
necessarily limited, both in scope and in depth.

Nonetheless, we have managed to construct a system of problems that will require spec
within the model (cf. Lehnerer, 2009/2013):

1. The problem of clearly delineating public and private interests. In
problem translates into the difficulty of creating building and zoning
widespread acceptance. This issue is fundamental to any urban interventio
the right to property is a fundamental right, stipulated by the Romanian
other hand, there is currently no Urban Planning Code to moderate this ri

2. The problem of mediation, which stems directly from the problem stated
pragmatic terms, the model should allow for constructing a negotiation
public and private interests. This is a stringent requirement, as the Buc
subject to increasing pressure from private interest groups. Hence, in
model presented in this paper, we have started work on an additional
operation mechanism to aid future mediation efforts;

3. The problem of over-regulation and arbitrariness. We have tried to guar
risks within the model, by focusing on indicators that tolerate mediation
and the private interest[2], but we feel that there is still much work ahead in this

4. The problem of relevant thresholds. This problem is mainly economic in
usually a very fine line between efficiently enforcing public interest a
interests. Hence, the three tiered-structure of our planning regulation s

All four problems are of a great operational interest. If we manage to succeed
into an effective system of control indicators, then we would be a step closer
haphazard development path, which has characterised the city of Bucharest over
century, towards a more resilient trajectory (cf. Birkmann, 2004; Dro , 2004).

[2] Cf. section 3.

## 2.2 Data Quality and Collection

At present, the process of collecting data is incomplete, as about 70% of the r
missing. More specifically, we have received a few dozen datasets, over a perioc
half, and we are currently waiting for the rest. However, the real problem lies with da
is distinctly uneven.

First, there is the problem of an insufficient level of detail. To illustrate th
the National Institute of Statistics (NIS) generally works with datasets pert
Nonetheless, except for coarse-grained analyses, the census tract level is almos

Then there is the problem of accurately delineating private and public property
has been made under the INSPIRE Directive (EP and C, 2007), there is still
improvement in this field. Nonetheless, as the project progresses, we believe
bound to improve.

And finally, there are some important areas in which data is not even collecte
foremost example in this sense is commuting information. In such instances, we s
other studies, which were supported by fieldwork.

In spite of all these issues, even the data we have received thus far requires e
now, most background studies have managed to produce some workable images of the
Bucharest. However, they do not have the accuracy needed to test the feasibility
currently working on this issue.

## 3. Results

The model we have constructed for monitoring and controlling planning regulat
Figure 2. Upon closer inspection, the image reveals that the model works with
namely the city, the district, the zone and the plot. Each scale has a distinct
seek to operationalise with the help of indicators.

Thus, at the city level, we work with four related concepts: mobility, inhabitan
four concepts are related to the concept of zoning, in the sense that the
specialisation and the structure of the built environment. Practically, they
existing and possible concentrations, which need to be taken into account.

The ensuing level is the district level. Some of its characteristics overlap t
level, i.e. characteristic densities, inhabitants and jobs. However, some addi
such as the functional character of each district and its capacity for sustain
expressed in the coverage and quality of the existing infrastructure of public utiliti

One level lower, the regulation zone is the working unit for the model, in the
sort of density and distribution regulator (cf. Lehnerer, 2009/2013, p. 12)
authorised and unauthorised functions, as well as general morphological indica
characteristics[3], its building capacity[4], and the building's position[5]. Most of these
indicators have minimum and maximum acceptable values, thereby touching upon
problem mentioned earlier.

[3] Relevant indicators for this category include Lot Surface (LS), in relation to property lines, a
Depth (LD), and Curb Cut Spacing (CCS).
[4] For this second category, the relevant indicators include Lot Coverage (LC), Floor Area Ratio
(FYD), Rear Yard Depth (RYD), Side Yard Width (SYW), Building Distance (BD), and Driveway Width (D
[5] Examples are Building Height (BH) and Street Wall Length (SWL).

The lowest operational level consists of the plot itself. It inherits most of
regulation zone, and subsequently adds a few more to them, like the required
spaces per lot and the amount of area that needs planting.

Essentially, the model has the following workings: from a top-down perspective,
interplay of districts, thereby acting as a typological framework. The distri
regarded as classes within this typology, thus setting the general characteri
zones. At this level, however, another, bottom-up perspective steps in, which c
the regulation zone with the characteristics of the individual lot.

According to each zone s specific attributes, it then enters into one of the th
namely, firm regulations, flexible regulations or strategic guidelines. Howeve
each type of regulation is still a matter of debate within the team, as it has
legislation, without sacrificing the innovative character of the entire system.

## 4. Conclusions and Open Questions

Conceptually, the model described above has the capability of providing partial
problems mentioned in the methodological section. Specifically, the first two
defining and mediating between the public and the private interest have two bas
first, there is the option of direct public investment in properties[6] belonging
second, there is the option of negotiation, which is supported by allowing fo
within each regulation type. Thus, if the plot structure allows it, an increase
traded off against the provision of targeted public amenities within the bound
zone.

The latter two problems are more technical in nature, and we do not have an exa
least for the moment, because of the following two reasons: First, because the
has not finished yet, and second, because not all the relevant background stud
Thus, for the time being, we still lack the morphological study, as well as th
mobility and economic development.

However, we do have a list of open questions, to which we shall return as our re

- First, there is the question of whether we can connect our model
metropolitan functions, incipient as it may be. A successful connecti
enhance the efficiency of metropolitan planning, which is currently
institutional frictions;

- Second, we are still uncertain whether the model is clear enough f
good use by the municipality (cf. Selle, 2005);

- And third, we have not fully grasped the impact this approach will
planning legislation. We do hope, however, that it will trigger a mu
in Romanian planning culture and planning practices.

[6] Nonetheless, until we do not have a clear situation of the exact properties available to the mu
and location, we cannot form a clear picture of the scale of such public investments. Furthermor
about a land acquisition programme run by the municipality to date.

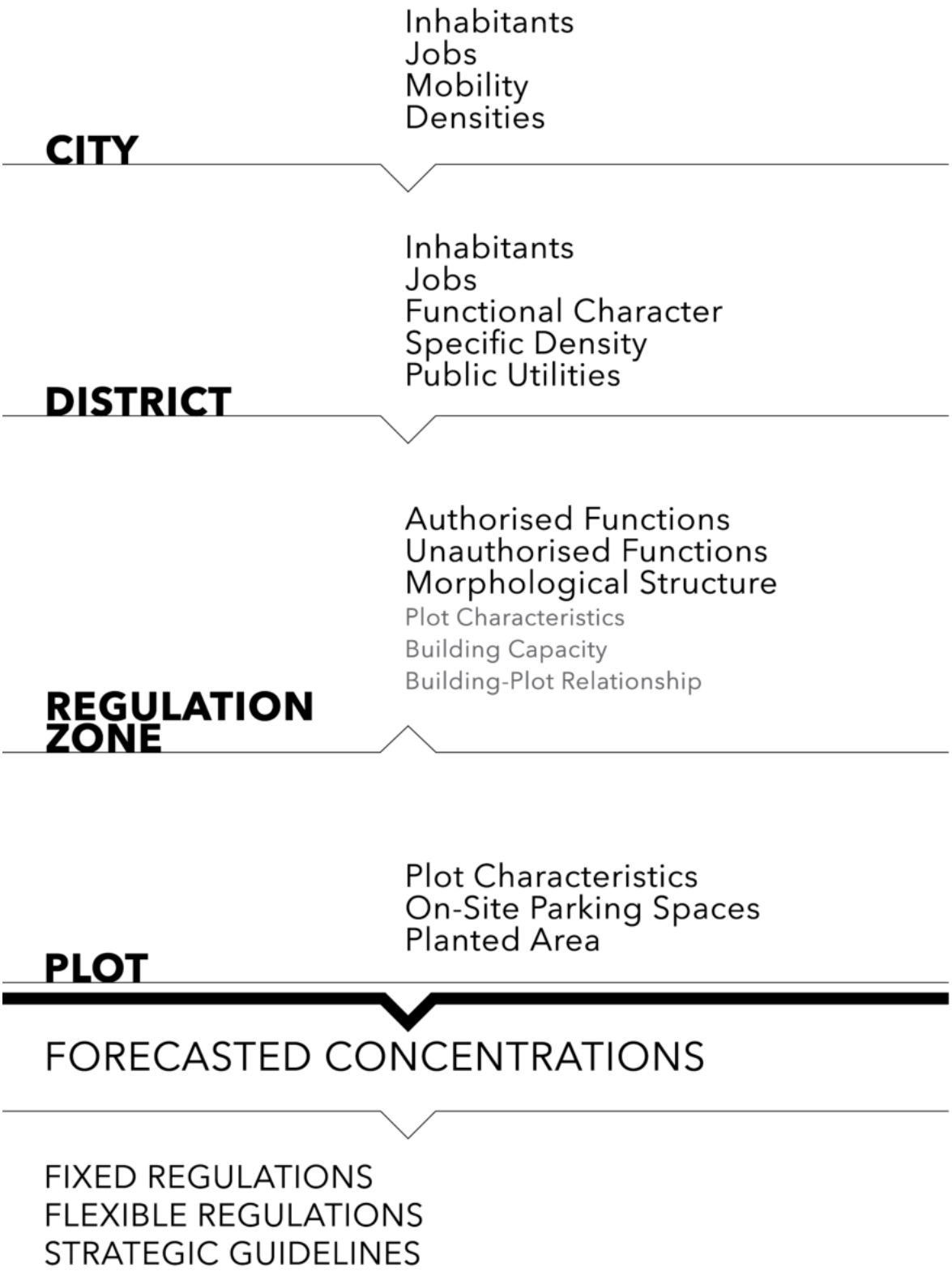


Figure 2. The Architecture of the New Planning Regulations
Source: The Authors.

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# ADDRESSING FUZZY RESPONSIBILITIES WITH INFORMAL, FLEXIBLE INSTRUMENTS: LANDSCAPE PARKS AND REGIONAL PLANNING

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Keywords: Landscape Park, Regional Planning, Land Management

## Abstract

*Green belts, smart growth or minimum residential densities have been some of the planning policies and instruments employed to reduce low-density, fragmented urbanisation that is generally deemed unsustainable. However, success of such tools in metropolitan, geopolitically fragmented areas involving many different municipalities is often hampered by a combination of lack of political will and diffuse* (or fuzzy) *responsibilities in multi-actor settings. Indeed many traditional planning instruments are inadequate at regional scales. This paper reviews the emerging concept of regional landscape parks in various European countries as a mostly informal instrument that nevertheless can shape settlement patterns at regional scale in multi-actor governance settings. While drawing on several examples* throughout Europe the Stuttgart Region s Landscape Park is used as m *study. The development of the landscape park is not a legally required activity within the planning system, yet there is evidence that the voluntary leadership of the regional planning association in developing the Regional Landscape Park complements traditional landscape management and nature preservation instruments. The policy language actively broadens the discourse around landscape conservation and urban development to supersede the traditional distinctions of urban and natural areas. This allows for the inclusion of economic, social, environmental and cultural arguments in decision making regarding landscape, land use and nature protection. The analysis suggests that by drawing flexibly on ideas and concepts from different disciplines a wide range of actors and agencies can proclaim benefit and in turn assume responsibility to help build a productive, healthy, and ecologically valuable urban regional landscape.*

## 1. Introduction

For decades, planners in many densely populated industrialised nations have been searching for appropriate ways to manage urban growth and sprawling settlement pattern. Green belts, smart growth and minimum residential densities have been some of the planning policies and instruments employed to reduce low-density, fragmented urbanisation that is generally deemed unsustainable in more than one way. For one, low-density development undermines the feasibility of public transport and is positively correlated with private car ownership and use. Second, land is an essential, multifunctional but increasingly limited and contested resource required not only for urban development but for the production of food, construction material and renewable energy generation (biofuels, wind- and solar farms). The conversion of forests, open spaces and agricultural land into more or less dense (sub)urban areas has well documented environmental detriments (e.g., Johnson, 2001; Thomas, 2011), which ultimately will degrade human health and quality of life (TEEB, 2010). It is thus important to protect open land for valuable ecosystems service provisions now and in future. Despite sound scientific evidence in respect to unwanted effects, land conversion from agricultural, forests and pasture to urban and infrastructure uses remains considerable. At the end of the first decade of the 21st century, in Germany, for example, an average of more than 100 ha of land were converted into urbanised use (housing, commercial/industrial or infrastructure) on a daily basis (Bundesregierung, 2008; Thomas 2011).

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However, the problem is not merely a quantitative one. Simply keeping land from urban development is neither a sustainable nor desirable solution. Agricultural rural landscapes although associated culturally with healthy lifestyles and nature may not feature high levels of biodiversity and ecosystems services. In fact, in some instances urban environments display higher levels of ecological quality and biodiversity (e.g., Lachmund, 2013). As the importance of protecting and maintaining not only open space *per se* but also ecological qualities such as biodiversity and ecosystems functions gains increasing currency there is a need to reconceptualise the human-society nature relationship in respect to land use management on one hand, and on the other, operationalise and implement such an alternative relationship by making it visible in the built environment.

The need to find new images and imaginations for our cities is not a new one. There is no lack of astute observations as to the changing morphologies of urban settlements over the last few centuries from compact, clearly delineated cities into modern polycentric metropolitan agglomerations, edge cities (Garreau, 1991), or metaphorically scrambled eggs (Price, 1982). The thinning of urban structures has been likened to a Fordist dispersal of production patterns regionally, nationally and globally (Schumacher and Rogner, 2001). Traditional planning instruments and even modern adaptations have had little success to halt or slow these trends which could only be reversed through considerable increases in energy costs, and decreases in income (e.g., Sieverts, 2001). Instead, it may be more fruitful to develop alternative conceptions of settlement patterns. Landscape urbanism (e.g., Waldheim, 2006) and regional landscape parks (e.g., Otto, 2006) could be starting points for the development of a new type of urban vision.

This contribution looks at the emergence of an emerging planning and land use management instrument that is increasingly employed at strategic level in metropolitan regions in Europe: regional landscape parks or regional parks. These regional parks have become a means by which actors re-imagine city-regions and metropolitan agglomerations as urban landscapes where natural open spaces are holistically integrated, made accessible and often are protected throughout. While the definition of the landscape park concept is still developing and its detailed aims and goals vary from case to case there are some general characteristics. The role of land use categories is diminished with many plans abandoning artificial divisions between urban and non-urban areas with the aim to enhance the ecological and recreational quality of *all* open spaces small and large. In many cases, this entails changing users aesthetic conceptions and understanding of natural processes, ar rather than fighting it. The approach offers interesting opportunities and challenges for future plan development at regional scale that could provide win-win strategies for high quality regional development which will need to be shaped by a pattern of multifunctional spaces that intelligently organise biophysical constraints and characteristics.

Using different examples of landscape parks in Europe and Germany in particular, the paper will derive common characteristics, policies and goals by those who are promoting, establishing and implementing this concept. Using then, the case study of the Stuttgart Region Landscape Park, we will explore implementation and operationalization successes.

## 2. Changing Conceptions of Human-Nature Relationship

Fundamentally, and theoretically, we can distinguish two opposing conception of nature. On one hand there is a holistic view of nature which includes humans. Humans are here understood not as separate but an integral element of nature, part of the ecosystem and food chains. This implies respecting nature and a valuing nature as equal. On the other there is a rationalist, reductionist perspective which perceives nature and object and conceives humans as separate and superior to nature. Nature is a

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economically measurable resource and might even be worthy of protection as part of its contribution to ecosystems services.

Practically, human s and society s relation to nature and the environment is complex and At a personal level our views of open, rural land and nature tends to depend on the geographic locatedness and economic circumstances we live in. Values and conceptions are culturally constructed. For example, the urbanite frequently perceives open/rural land as an area for recreation and leisure providing respite from the concrete hard spaces of the inner city. This land and its natural elements therefore are worthy of protection. Yet, for a farmer, the land is a productive resource and livelihood. As the value of open space or agriculture land tends to be lower in financial terms compared to sites available for development (Thomas, 2011) there is considerable economic pressure to convert open spaces into higher valued commercial land uses. Moreover, over time, the human-nature relationship conceptions have seen considerable mutations and change. These have been documented elsewhere in detail and full coverage would be beyond the scope of this paper. Instead the only a few select re-conceptualisations with relevance to land use management will be addressed briefly.

One notable shift is an increasing realisation that economies must preserve and sustain natural capital as with and overexploitation of (non-renewable as well as renewable) natural resources economic success itself will be jeopardised. This has led to the recent attempt to value and in fact monetize the nature in respect to ecosystems assets or the services nature provides to human life and wellbeing. As such, open spaces and nature are conceived as essential due to their ability to providing a multitude of life sustaining eco-system services. They clean the air and water, and provi material etc. (TEEB, 2011) and so forth.

Another transformation is the view that the divide between nature and culture is an unproductive one particularly in respect to landscape. Rather Tress, et al. (2001) argued that all landscapes are multifunctional and multidimensional encompassing both a natural and cultural component. Phillips (2003) suggested in fact that new paradigms for protected areas have been emerging since 1990s around participatory natural resource managements, a strong alignment with needs of rural inhabitants, and alliances with grass-roots. Such protected areas are often governed and managed by multiple partners and pursue both social, economic and leisure objectives in parallel to conservation, nature rehabilitation and protection.

## 3. Regional Landscape Park an emerging definition

The concept of a regional landscape park is a relatively new one; hence it is not surprising that a common understanding and definition is only slowly emerging. More precisely, landscape parks are understood differently in different national contexts. Some countries use the term landscape park regional landscape park to acknowledge a territorial designation of an area w of nature (fauna/flora) protection within the parks boundaries. The nature protection is typically at a significantly lower level than that applicable within for example a national park. In other countries the label landscape park is applied as a soft, informal instrument to facilitate land use planning and management goals. While in the first instance, the regional landscape park designation aims to demarcate and safeguard open spaces in planning terms in the second instance the main aim is to provide and enhance leisure opportunities that make the (natural) landscape accessible to the public while maintaining and improving ecological and aesthetic qualities. It is important that the landscape parks in many cases are including urbanised areas and cities. Landscape parks build on holistic design concepts that connect the demands of recreation, nature conservation and agriculture in cities and their surrounding rurban fringe and hinterland. The landscape park represents a vision and idea that

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initiates the development of an identity and plans which capture these ideas visually. The process of plan development creates consensus, buy-in and value.

In this sense the landscape park is not a traditional mechanism of nature conservation or preservation but rather a manifestation or instrumentalising of the concept of landscape 2006) an idea developed in the late 20th century. According to Corner (2003) and Weller (2008) landscape urbanism is seeks to reclaim structural influence over urban development plans and projects. It aims to conceptualize and then directly engage the city and its natural, chaotic ecology and to interpret landscape systems so that they in turn can influence urban form in open ended design strategies (Weller, 2008, p. 256).

3.1 Landscape parks in Germany

In Germany a host of regional landscape parks have been established in the last 10-20 years. They vary in size and governance and their goals

Table 1. Comparison of German Landscape parks: Size, Goal and Governance

| | State/ size and date established | Goals/ Aims, features | Governance |
|---|---|---|---|
| Emscher Landschaftspark | North Rhine West-phalia, 320 sqkm, ca. 1990; intent to enlarge area by 116 sqkm | Culture, nature and leisure park; network of linked green open spaces, sustainable | KVR and municipalities together with IBA office (1989-1999); from 2004 under new Project Ruhr Gmbh lead. |
| Regionalpark Rhein Main | Hessia, 1988/89 | Form network of green areas (green wedges, srips), regional identity creation, leisure access | Planning association of agglomeration Rhein-Main (no finances, weak); require to obtain support from local municipalities |
| Regionalparks Brandenburg | Brandenburg Multiple chain of parks surrounding Berlin | Retain urban edge, leisure | |
| Landschaftspark Region Stuttgart | Baden-Württemberg, ca 3650 sqkm | Identity creation, leisure, attractive environment, economic and ecological | Regional planning Association |

## 4. The Stuttgart City-Region Landscape Park

The Stuttgart region is one of 12 areas designated for the purpose of regional planning in the state of Baden-Württemberg. The region has a polycentric urban character and is home to 2.7 mio inhabitants and 1.03 mio jobs. It consists of 179 municipalities which include the state capital of Stuttgart with 590 000 residents alongside many smaller cities and villages such as the village of Drackenstein with merely 450 residents. It covers a land area of 3654 skm which makes it equivalent the size of the largest national park in the UK (Cairngorms National Park). These 179 municipalities are grouped into 5 counties. The region has a relative high population density of 732 persons/skm. Just over 20% of the land area represents urbanised land and road infrastructure, 30.5% is forested and 46% is in use for

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agriculture. The region is economically vital with a vibrant SME sector and a high level of manufacturing and production of 40% linked to the motor industry, electronics and engineering (Frank and Morgan, 2012).

The landscape park is in its boundaries congruent with the regions boundaries. The idea to create a region-wide landscape park emerged shortly after the regional planning authority was formally established in 1994. Its underlying concept was guided by the view that landscapes with typical regional character represent soft factors that support the development of identity and increase attractiveness of the core city and the hinterland (Otto, 2006, 18). The regional landscape park as a purposeful designed and created landscape is to move beyond the simplistic division of land areas into nature preserve on one hand and productively used land resource ( Nutzland ) implication of this traditional division is that land (and the associated resources of flora/fauna) in protected areas are economically relatively unproductive whereas outside such protected areas land can be economically exploited. In practice of course the distinction has never been quite so simple and dichotomous. The emergence of eco-systems services has started to change the value attributed to seemingly un-used landscape. Another way to change the perception of nature is by increasing the appreciation of landscape design interventions and through re-designation as a park (Schmelzer and Bezzenberger, 1994; Otto, 2006).

Regional landscape parks thus are functional landscapes which mediate between different use and stakeholder conflicts while also safeguard open space for recreational use and habitat protection. The regional park development represents an informal planning instrument which integrates economic uses in respect to agriculture and forestry with sustainability. A new generation of Parks Paradigm change

## 5. Discussion

A key characteristic of the Stuttgart region as well as other land scape parks in Germany is the deliberate ignorance of traditional distinctions between urban, suburban and rural zones or existing administrative boundaries. Multiple actor systems not entirely informal act together to guarantee a minimum level of longevity and continuity in terms of communication and support structure (New CityLandscapes, 2001).

## 6. Conclusions

New concepts and methods for planning the urban realm are necessary. It is suggested that public open space (grey, green and blue) are an essential element in design urban landscapes. The integration of urban development and open space which renders the historical strict division between urbanised and rural obsolete is an emerging new concept that could overcome the antagonistic relationship between nature conservation and economic development that is increasingly criticised by science. The landscape park is one such new concept that combines ecological, social and economic benefits rather than asking for trade-offs in the traditional sense.

Opportunities to use the park metaphor to guide the development and restructuring of city-regions into new types of city landscapes with distinct identities as well as enhanced quality of life with open spaces that offer recreational opportunities as well as ecosystems services. Enhancing potentials of open spaces in cities

The dichotomous perspective of urban versus rural, open space is not helpful as it is bound to create more rather than less conflict in future. Rather than strict preservation, creation and wise management

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of natural resources may be a more useful way forward that allows the reconciliation of human needs and environmental values and ecological processes.

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# EVALUATION FRAMEWORK FOR BOTTOM-UP INITIATIVES IN FLOOD MANAGEMENT

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Flood risk management, community-led initiatives, multi-use

Preferred track
# 04: Participation and New Governance: Ethics, Responsibilities and Commitments

Abstract
TRANS-ADAPT project focuses on bottom-up initiatives to flood risk management different from the mainstream flood risk management measures. Our hypothesis i pursued by local stakeholders, with the aim to address local problems or to se multi-functional use of land.TRANS-ADAPT explores what and who is behind these i out the motives and key aspects of multi-functional outcomes that are relevant f The final objectives are to explore the possibilities for up-scaling and replic countries and outlining the institutional change required to facilitate local i the barriers and limitations of the current flood governance, the project aims framework. This framework will adapt the classical governance and design criteri flood risk management, providing operational indicators. The aim of the propo TRANS-ADAPT research questions, literature review and the conceptual framework can give insights to the participation issues suggested by Track04. We will pre from one French case study during the communication.

## 1. Introduction

### 1.1 Increased flood risks: how to improve policies?

In a context of climate change, recent extreme hydrological events experience focused the attention of policymakers on flood hazards. It leads to an increasi beyond vulnerability and flood risk (Fuchs et al. 2013), such as climate change exposed societies (Keiler and Fuchs 2010; Birkmann et al. 2013). As they co economic resources, transportation, interdepent networks, social and informati and urban areas are especially vulnerable.

In parallel, the context of changing role of the state in responsibility responsibilities for risk management and precaution (Adger et al. 2013; Mees et the question of other emerging flood risk strategies. Especially, the impleme

Directive in Europe places the lead responsibility on local organisations to de
to manage local risks which demands societal transformation (Driessen et al. 2
reduction (Fuchs 2009; Fuchs et al. 2011).

We propose to focus on how local governance elaborates new flood management str
multiple functionality land use is included, alternatively to classical flood ri
imposed by top-down State governance which are dominated by one type of use (flo

### 1.2 Research objectives: evaluation framework for bottom-up initiatives

In JPI-Climate research, the project TRANS-ADAPT contributes to answering the is
transformations of society in the face of climate change. TRANS-ADAPT is the a
« Societal transformation and adaptation necessary to manage dynamics in flooc
mitigation ».TRANS-ADAPT evaluates and analyses bottom-up initiatives in flood
Europe. The aim is to refresh policy analysis on new types of local initiatives
and the outcome, TRANS-ADAPT mixes different disciplines: geography, economy,
governance scholars.

To face the challenges of climate change and flood prevention, TRANS-ADAPT foc
transformation in bottom-up initiatives driving to multiuse alleviations in floc
of this paper is to frame the problem definition and to build an evaluation fra
matrix will help us to test the success of the non-traditional flood risk man
therefore propose to use a multidisciplinary set of criteria commonly applied in
analysis (Tompkins & Adger, 2004). The governance criteria selected in TRANS-AD
at evaluating the governance processes, but also the spatial outcomes. The case
four European countries (Austria, The Netherlands, Ireland, France).

We refer to classical criteria in governance policies, and we aim to ground t
bottom-up initiatives in flood management. The evaluation helps to qualify the l
way stakeholders came to organise and create the local initiatives: how do c
create multi-use (process) and make it live today (outcome) and is it socially
the time scale, the non-traditional flood risk management strategies of multiu
observed mostly from the Second World War onwards, even if in some situations need a l
back in the late 1900s to understand spatial and social transformations.

## 2. Research background

### 2.1. Adaptation to Climate Change

Climate change fostered by human activities is triggering more and more extre
events, including violent floods. Europe does not escape them, although its
temperate. Europe is also facing 'global weirding'. Heavy rainfall, violent stor
catchment scale make rivers step out of their beds and submerse areas vulne
European cities, towns and villages are part of these vulnerable areas, because
coasts. The risk of flooding is high in these densely populated areas. Artifici
drainage networks and embankments of river beds are making living areas more
occurrence of floods.

In this context, societies are engaging at different levels into adaptation p
(2005) define adaptation to climate change as an adjustment in ecological,
systems in response to observed or expected changes in climatic stimuli and thei
in order to alleviate adverse impacts of change or take advantage of new oppor
adaptation is a continuous stream of activities, actions, decisions and attitude

about all aspects of life, and that reflects existing social norms and proces
definitions, adaptation challenges the prevention of risks in the context of ext
in adjustments of responses, and integration of prevention against extrem
development. Societies face the challenge to continue development and at the
acceptable infrastructure and make adaptation choices based on supposed-to-happe

Whereas incremental adaptation is the fact of going further in what is alread
as Kates et al. define it (2012), transformational adaptation is bringing ne
changing context. Kates et al. (2012) define Incremental adaptations to ch
extensions of actions and behaviours that already reduce the losses or enhance t
variations in climate and extreme events. In other words, they state it means
what is already being done to deal with natural variation in climate and with ex
the challenges of climate change, urban societies are required to transform them
and their organisation. More than an incremental adaptation, societal transform
essential component of the strategies (Kates and al. 2012 ; Smith and al. 2011
Navarrete, 2011). Those transformations require to pay attention to the cons
cultures and identities, of people and places (Marshall and al. 2012). If e
shocking events, a brutal transformation can also have a devastating impact on
most of the environmental policies are top-down decision processes, especially
natural risks.

### 2.2. Flood risk management: traditional top-down policy

TRANS-ADAPT defines risk as the probability of a hazard to occur combined wit
to damage the society. It deals with two types of hydrological hazards: river fl
The combination of hazard, vulnerability and exposure seems relevant in seeing
approach. TRANS-ADAPT will analyse both hazard and flood risk, in order to
reduction. The definition of the characteristics of the hazard is useful to ev
feasibility, but also to understand the expert-based rhetoric in flood manage
experiences of flood in the different places. The aim of TRANS-ADAPT is to s
capacity to react, to face, to manage with flood risks in the context of very ce
flood management.

In flood management, after WWII and until the 1970s, 'hard engineering' solution
were at the top of the pyramid. They were essentially suggested to resist to fl
farming profitability, industrial interest and growing urban assets. There was l
social representation and local solutions, especially non-structural approaches.
« that if mitigative strategies are to be successfully implemented, then the
process must incorporate public participation at the local decision-making l
management can be no more a top-down process: actors are so numerous, diverse an
powerful than the State. The technical decision coming from the State, from a t
viewpoint, is challenged, not only in terms of protest, of political claims for
also because local stakeholders can do better, with less resources or more quic
State decision-making process. In a context of financial crisis, flood managem
purpose of the current appraisal, prioritisation in decision-making processes.

In this context, how do bottom-up initiatives lead (or not) to multi-functional
rural contexts, in the field of flood risk management?

### 2.3. Bottom-up initiatives in flood risk management: a step towards social tra

The idea of bottom-up initiatives is an organisational method to take decision a from and with the local users, not only with the elite solution makers. In management, it is an alternative to the traditional State expert-based decisio way for more innovative measures. Johnson and Priest (2008) analysed the shift a responsibility between the State and its citizens, and then, a new balance betwe structural risk management options, towards more tailor-made choices, depe social, economic or cultural characteristics of the nature of the place and the r

In its empirical research, TRANS-ADAPT wants to understand how bottom-up init innovative spatial flood risk measures and what they teach us about flood manag cases where a significant amount of responsibility is given to local authoriti suggest to define bottom-up initiatives as the decision-making process and poli which local stakeholders in a local area address problems of local interest, as share flood management between the State and the local stakeholders, and, se creative and innovative solutions to face climate changes in terms of extreme ev

TRANS-ADAPT will pay a special attention to the role of community in the emergen initiatives. Besides the others stakeholders involved in the flood policy, we d that allow to speak about community :i) a system of interrelations around a co improve their own representation of spatial quality of life ; iii) which i spatialisation in the community. Using several sources of definitions for comm Hoggett 1997; Jentoft, 2000; Orr, 2007) TRANS-ADAPT will study groups of people on land that bear specific features geographically defined, with a definite f groups include those residing in close proximity to rivers, flooded districts re political authorities, fisheries interest groups, environmental associations, et the objective of protecting their environment, their quality of life and their f for creation of recreational areas or in finding other qualitative ways to reduc

### 2.4. Integrating multiple uses of land in flood risk management

Multifunctional land use can be defined as the combination of different socio- the same area (Vreeker et al., 2004). The main goal of multifunctional land save scarce space by intensifying its use. Vreeker et al. (2004) argue that th of multifunctional land use (as a planning concept) is its emphasis on the return to supposed to create synergy effects by combining a diversity of land use fu location .

With the objective of giving rivers more space (EU Floods Directive 2007), flood consider the maintenance and/or restoration of floodplains where possible. The d could be: multifunctional use of land, in the scope of flood risk prevention, several functions or activities through space (on different plots of the same l on a same location, associating at least one use of land that serves the inter which ever the type of flood risk management it may be.

## 3. Hypotheses

### 3.1. Objectives of the research

TRANS-ADAPT aims to contribute to the analysis and evaluation of the role of lo are complementing conventional flood policies in the field of Climate Chang ultimately, to provide guidance for the design of bottom-up initiatives for floo TRANS-ADAPT focuses on community-based bottom-up initiatives for flood risk ma are clearly different or niche relative to mainstream solutions of flood risk ma

interest given the involvement of diverse actors is multi-functional use of th
functions (park, leisure, festival, shops, sport, gardening, farming, fishing...

These initiatives are pursued by local stakeholders, with the aim of protecting
preserving a certain quality of life and space. When those three components a
study them as community and trying to see how the specificities of being comm
support multi-use flood strategies. How community-led initiatives are creating
ways of managing flood prevention infrastructures with multi-use strategies? Ou
that the bottom-up process of local actors is more innovative than traditional i
We argue that the main reasons for this shift from centralised to decentralised
scale is more efficient in dealing with those tasks relating to risk management.

Our second hypothesis is that the community process led to a more successful o
vulnerability and resilience, in which multi-uses is the example we observe.
functions of a land (leisure, sport, commercial activities, fishing spots)
vulnerability of those activities, we are studying if multi-functions increas
defined as the capacity to respond to a disturbance by resisting and rebuildi
Classical flood risk management measures, which are dominated by one type of use
cannot respond to the new circumstances. We argue that such approaches hol
unexploited, potential for realising unexpected solutions for dealing with floo
2007).

### 3.2. Goals of the evaluation framework

One of the aims of TRANS-ADAPT is to identify wider lessons for other European
working on the implementation of climate change adaptation strategies arising fr
& Pidgeon 2011; Hanger et al. 2013). To be able to learn from the existing pr
account explicitly the effect of scale, but at the same time to be able to prov
and actions, the evaluation framework offers many opportunities.

The evaluation framework is composed of 8 criteria that will be used to evalu
initiatives and multi-use alleviations, processes and outcomes. We have c
multidisciplinary set of criteria commonly applied in policy analysis. The fr
evaluation criteria that assess the success of the community-based multi-functio
adaptation strategies, in terms of: 1) economic efficiency; 2) effectivene
achievement; 3) legitimacy including legality; 4) accountability; 5) social just
vulnerability reduction, in terms of physical, social, institutional and econ
finally 8) technical feasibility. Criteria have been divided into two parts. Fi
criteria (efficiency; effectiveness; legitimacy; accountability; social justice
will especially be used to evaluate the process and the outcome of the bottom-up
multi-use flood management. Then, there are two design-oriented criteria
feasibility) that will be used in order to replicate initiatives in other contex
to mainstream policies.

## 4. Methods: the development of an evaluation framework for legiti accountability

This paper focuses on two governance criteria dealing with participation in gove
legitimacy and accountability. Each criterion has been studied in a conceptual w
review from geography, social, governance and risk management scholars. Then
grounded into TRANS-ADAPT research, to adapt their understanding to our resear
order to make the criteria operational in the empirical research, indicators hav

of the criteria. Moreover, a scoring is applied to each indicator, to give a example if the participation evaluated in the process can be seen as low, me scorings help the comparison between countries and case studies.

### 4.1 Evaluating legitimacy

Legitimacy has to do with the acceptance of authority by the people. It is a recognised (Dogan, 1992).Within the evaluation part of Trans-Adapt, legitimacy criteria to normatively judge and compare the performance of the TRANS-ADAPT political systems. From a political science perspective, legitimacy is essent process of the creation of acceptance of authority or justification of politica Glasbergen, 2011; Peter, 2010; Dingwerth, 2007). So it means that political sc legitimacy as a benchmark of acceptability or justification of authority or 2010). According to Bernstein (2005, 142) political legitimacy is the acceptanc shared rule by a community . In line with the above scholars it is suggested definition of legitimacy for Trans-Adapt: legitimacy is the acceptance of author political power (Bernstein, 2005; Dingwerth, 2007; Biermann and Gupta, 2011).

The study of legitimacy is tricky: how to measure legitimacy (Dogan, 1992, W One way to deal with this issue is by breaking the concept down into sub-ty legitimacy. For instance, Beetham (1991) has differentiated between i) views o system attains legitimacy in a way that is in accordance with people s views a customs), ii) views of justification (a political system is legitimate when it i shared principles, ideas and values), and iii) acts of consent (a political sy people consent with its authority through positive actions that express a cit acceptance of the authority). A very common way to subdivide legitimacy by poli governance scholars is to differentiate between input, throughput and outpu Papadopoulos, 2011; Scharpf, 1997), a differentiation that will be used for Tra be further elaborated upon in the next paragraphs. It is recommended for Tra combines conditions that refer to procedural features, i.e. to the decision- conditions about the quality of the outcomes of the decision-making process. I legitimacy refer to the first (procedural features), while output legitimacy ref the outcomes).

Input legitimacy is about what goes into the decision-making process (the input legitimacy is about the quality of representation. The idea is that input leg interests are represented (inclusive representation), and if those interests are representation). All voices should be heard. The more equal and inclusive the higher the input legitimacy is. To sum up it is about inclusive interest rep representation of all interests at stake and through the equality of represen 2006; Renn, 2006; Dingwerth, 2007; Bekkers and Edwards, 2007; Paavola, 2008 democracies this inclusive and equal representation is often reflected in repre which elected officials represent the voice of the people, and in which politica held accountable by the means of elections. This is a form of indirect represe modern democracies are sometimes also steered in interactive modes of gove networks) where the different interests are directly represented.

Throughput legitimacy is about what goes through the decision-making process. It of the procedural features. It is about the quality of participation, and relate and procedures to reach decisions, and the fairness of the process (Bekkers Dingwerth, 2007). This is in line with what Paavola (2008) refers to as procedu

adaptation. The idea is that throughput legitimacy is created when the different
the decision-making and can also influence the decision-making.
In interactive governance modes such as policy networks and public-private part
legitimacy is gained through meaningful participation (e.g. Smith, 2003; Pa
2006;Paavola, 2008) and due deliberation (e.g. Dryzek, 2000; Adger et al.,
Elander, 2010). Meaningful participation is about being able to truly influence
all voices should count. This is in contrast to the phenomenon that public deci
use participatory processes as window dressing to legitimize predetermined ou
2007), a phenomenon famously coined by Arnstein (1969, p. 218) as tokenism . D
about collective decision making being done on the basis of integrating mea
deliberation and debate (Bekkers& Edwards, 2007, p. 44; Dryzek, 2000; Smith, 20
that all stakeholders critically engage in unconstrained dialogue so that they
increase their knowledge base, widen their own perceptions, reflect and loo
preferences (Renn, 2006). Thus an enlarged mentality can be created based on m
(Smith, 2003, p.63). The process of deliberation should be conducive to making
choices, even if consensus cannot be reached. Legitimacy thus rests on all stake
and accepting the rationale behind the outcomes, although disagreement may perta

Output legitimacy is about what comes out of the decision-making process and ref
the outcomes of the decision-making. In case of output legitimacy, acceptance o
by the extent to which that authority is effective in achieving goals (Scharpf,
19) states that a democracy would be an empty ritual if the democratic proce
produce effective outcomes, by achieving the goals that citizens collective
Tatenhove (2011) argues that a system is legitimate if it has the capacity to
Both interpretations of Scharpf and Van Tatenhove are very much related to effe
to Biermann and Gupta (2011, 1858), it is about the perceived effectiveness
rather than effectiveness as in the actual solving of the issue. Perceived e
acceptance of the outcomes of the governance process (Bekkers and Edwards, 2007)
It is advised to use the interpretation of perceived effectiveness for the evalu
for TRANS-ADAPT, since effectiveness is already included as one of the other
assessing the performance of the community initiatives.

### 4.2 Accountability as the essence of answerability

In its most core meaning accountability refers to actors, organisations, leader
account to some authority for their actions according to some set standard (Mas
2000). Generally speaking accountability is about stakeholders and society being
the actions of policy-makers. It has become a term for all kinds of mechanisms t
institutions responsive to their publics.

All in all, most definitions of accountability concern the obligation of indiv
provide information about, and/or justification for, their action to other act
imposition of sanctions for failure to comply and/or to engage in appropriate ac
2004, p. 372). Mark Bovens has particularly studied the concept of accountabili
be used in (comparative) empirical studies. Therefore his following definition (
adopted:

> Accountability is a relationship between an actor and a forum, in which
> actor has an obligation to explain and justify his or her conduct, the for
> pose questions and pass judgement, and the actor may face consequences .

By adopting this definition, various questions are raised relating to who is th
forum, what is the obligation, and how the obligation can be enforced in such
may indeed face consequences. Those questions may be answered differently depe
instance, the scale and context in which accountability is evaluated (local, na

global governance, environmental governance, corporate governance, network gov
This can also change depending on the entity to which it is applied (officials,
corporations, networks, etc.) (e.g. Mason, 2008; Bovens, 2007; Mulgan, 2000;
Therefore, any empirical study on accountability should start with answerinc
questions (Bovens, 2007; Papadopoulos, 2007; Brinkerhoff, 2004; Romzek, 2000):

Who is held accountable? Who is/are the accountable actor(s)?

To whom, i.e. who holds to account? Who is/are the overseeing actor(s)?

For what, i.e. about what is the account to be rendered? This can be subst
results) and this can be procedural such as the decision-making process

How can the accountable actor be made accountable for their action
(procedures, mechanisms to correct deviant behavior through sanctions .)

## 5. Results

### 5.1 Evaluating legitimacy of bottom-up initiatives to flood risk management

Facing several definitions from social scientific disciplines, TRANS-ADAPT has p
normative political/policy science perspective, since we are dealing with the a
design of bottom-up community initiatives as a form of a political system.

We focus here on interactive governance modes such as networks, given its sig
(global) governance, and given the fact that the Trans-Adapt case studies can a
examples of network arrangements in which the local public authorities collab
private stakeholders for the planning and implementation of flood risk manageme
the legitimacy of network arrangements the procedural characteristics of the
processes are very important (e.g. Słrensen and Torfing, 2005). Acceptance
promoted through the direct participation of stakeholders (Paavola, 2008; Adger
through an open deliberative process which leaves room for reasoned debate (e.g
B ckstrand et al., 2010). Furthermore, participation and deliberation may increa
and facilitate implementation (e.g. Lemos and Agrawal, 2006; Juhola and Westerho

For the operationalisation of the legitimacy criterion into indicators it is use
the key challenges related to legitimacy in the context of interactive governa
networks. Key challenges to the legitimacy of networks include (e.g. Papadopoul
and Agrawal, 2006; Few et al., 2007):

Skewed interest representation

Limited quality of participation

Limited quality of deliberation.

Legitimacy for whom?

Here the questions arise with respect to:

the legitimacy of whom or what are we evaluating?, and

in the eyes of whom?

It is proposed here to use the community initiative including the public-privat
and stakeholders in the different case studies as the unit of analysis for t
legitimacy criterion in terms of the of whom/what question. This network of
regarded as legitimate, i.e. have authority, in the eyes of the participants o
legitimacy) as well as in the eyes of outsiders/the community in general (exter
to whom question).

The indicators that are proposed in the table below are based on the typology o
and output legitimacy.

Indicator 1: Inclusive and equal interest representation (input legitimacy)
This indicator deals with the question of who participates. Skewed interest repr
challenge to be addressed here. Networks are not sufficiently pluralist (
representative of society at large (Papadopoulos, 2007). The representation refl
relations, such that certain elites obtain a dominant voice through their p
governance network, leading to procedural and distributive inequities (e.g.
Bogason and Musso, 2006; Lemos and Agrawal, 2006). Moreover, short-term economi
(housing, tourism) may overshadow long-term non-economic interests (flood
hypothesis is that the more all interests, including weaker long-term inte
represented, the higher the legitimacy of the network.

Indicator 2: Quality of participation (throughput legitimacy)
This indicator deals with the question of how stakeholders participate. Quality
determined by the possibility to influence the decision-making by the stakeholde
regarding participation lies in the true nature of stakeholders influence on de
decision-makers might use participatory processes as window dressing to legitimi
outcomes (Few et al., 2007). The hypothesis is that the more the participants i
real influence on the decision-making process, the higher the legitimacy of the

Indicator 3: Quality of deliberation (throughput legitimacy)
This indicator also deals with the participation process. Deliberation is ab
decision-making is realised on the basis of integrating mechanisms such as delib
rather than through traditional democratic representation (Bekkers& Edwards, 200
Smith, 2003). All stakeholders need to critically engage in unconstrained dialog
share arguments, increase their knowledge base, widen their own perceptions,
beyond personal preferences (Renn, 2006). Legitimacy rests on all stakeholders u
accepting the rationale behind the outcomes, although disagreement may pertain
key issue lies in the stakeholders ability to understand complex informatic
rationales behind decision-making, in particular with lay people such as residen
and Semenza, 2008). The hypothesis is that the higher the quality of deliberat
legitimacy of the network.

Indicator 4: Acceptance of outcomes (output legitimacy)
This indicator related to output legitimacy is very straightforward and concern
the outcomes of the Trans-Adapt case study. It might still be necessary to
outcome(s) are referred to in the case studies, and whether this outcome can be
each case study, for instance the flood risk measure that is implemented. We c
leave it open, and ask the interviewees which outcome for them is most important
is that the more the outcomes of the network are accepted by the participa
community in general, the higher the legitimacy of the network.

The indicators used to evaluate legitimacy are gathered in this table (Table 1)
levels of scoring.

| | Score 1 : low | Score 2 : medium | Score 3 : high |
|---|---|---|---|
| Quality of interest representati | Some interests are under-represented; particular the weak | All interests are r but representation is direct representation | All interests are repre there is an equal representatio those interests |

| | | | |
|---|---|---|---|
| (process) | of flood protection. | interests over others | |
| Quality of participatio (process) | No real influenc decision-making in policy process b participants of the | Limited access to/inf the policy process, e in terms of the stag policy process, or in certain specific part certain issues | High access to and influence o major stages of the policy proc by all participants |
| Quality of deliberatio (process) | There is hardly deliberation, and i symbolic than according to partic the network | There is deliberati discussions are not sc constructive in the participants | There is ample deliberation; op exchange of argumentation and discussion is encouraged |
| Quality of t outcome as measured by t acceptance o that outcome (outcome) | The majority of par in the network do accept the key outco chosen flood risk me | The outcome is accepte participants of the (internal legitimacy) | The outcome is accepted by the participants and by the communit in general (external legitimacy) |

Table 1 : Legitimacy Indicators & Scoring for TRANS-ADAPT project (adapted from Mees et al., 2014)

5.2 Evaluating accountability of bottom-up initiatives to flood risk manageme

The TRANS-ADAPT project analyses community-based initiatives, in which the l authorities (municipalities) collaborate with local private stakeholders. Those classified as network arrangements. For the operationalisation of the accountab indicators to evaluate the accountability of the TRANS-ADAPT cases it will there take account of the challenges related to accountability in the context of netwo

Key risks for the accountability of public-private networks include (Papadopoulo
1. Opaque/informal decision-making procedures
2. Diluted, shared responsibilities among a large number of actors
3. Networks often operate in isolation from democratic institutions
4. Networks are not sufficiently pluralist (re interests) and representative

Indicator 1: Clear allocation of responsibilities

This indicator addresses the who question, which can be linked to the challe shared responsibilities. It is difficult to hold the network accountable, if re and diluted. Who should be held accountable for what? If the actors in the netw to basic criteria of accountability and transparency, the network itself cannot 2004, p. 200). In order to hold the individual participants in the network acc know who is responsible for which task in the network. The hypothesis is tha responsibilities are allocated among the participants of the network, the higher the a the network.

Indicator 2: Influence of elected representatives

This indicator addresses the to whom question, which can be linked to the cha from democratic institutions. Besides peer accountability (mutual accountabili within the network) which is difficult to monitor and control, it could be impo elected representatives of the community (members of council, Aldermen), for ex decisions regarding the project (so this is political accountability). It is

the interests of the actors in the network from the interests of the wider comm
by elected officials. It may well be that an important interest of the wider
represented in the actor network, and therefore political accountability will h
This political accountability enables a functional separation of power bet
formulation in the network, and the constituent power dedicated to institutions
and accountable to citizens (Papadopoulos, 2007, 485). This is a phenomenon, a
the democratic anchorage of networks (Sørensen and Torfing, 2005).

This echoes back to the 'quality of participation' in the throughput legitimacy
that the participants of the network have real influence in the decision-makin
present indicator, we look at the contrary. Both situations exist: direct re
relevant stakeholders AND decisions being accountable to the elected representa
that they should reflect the interests of society as a whole. In other words: th
the wider community that are not covered in the network. Therefore the networ
represent society as a whole. So they are complementary even if it sounds like
hypothesis is the more elected representatives can influence the major deci
accountability of the network.

Indicator 3: Transparency
This indicator addresses the for what question, and is linked to the challenge
making procedures. Networks cannot be held accountable if the procedures, vo
decision-making processes are not open to scrutiny (Benner et al., 2004). The hy
more open and transparent the decision-making processes are, the higher the acc
network.

Indicator 4: Sanctioning mechanisms
This indicator addresses the how question. It is not directly linked to any pa
is very relevant in light of the fact that the principal-agent relation in net
and therefore there is no principal to punish the agent to correct the agent
network formulated its own sanctioning mechanisms, are they dependent on externa
naming and shaming the main or even only whistle blowing mechanism? The hypothes
more sanctioning mechanisms are in place within the network, the higher the acc
network.

The 4 indicators are gathered in a table in order to evaluate the TRANS-ADAPT c
developed with 3 levels of scoring.

| | Score 1 : low | Score 2 : medium | Score 3 : high |
|---|---|---|---|
| Allocation of responsibilit | Responsibilities a clearly defined f participant and f different task | Responsibilities are defined, and clear ar participants of the ne | Responsibilities are defined per participant/task, are completely transparent to other participants of the netw and outside the network |
| Influence of elected representativ | There is no influ elected representa the major decision network | Council members/Alde were involved in decisions, but there formal ratification ( power | Council members and/or Aldermen have been able to influence the major decisions a a there was a formal ratificatio the major decisions by those council members/Aldermen |

| | | | |
|---|---|---|---|
| Transparency | There is no trans regarding the de making rules, proc etc. of the networ | There is transparency w network, but not for o | There is full transparency of decision-making process, also f outsiders. The procedures hav been written down on paper and openly pubished |
| Sanctioning mechanisms | There are no sp sanctioning mecha in place | There is a sanct mechanism in place, b widely used or not effective | One or more sanctioning mechanisms are clearly discusse and applied within the network |

Table 2 : Accountability Indicators & Scoring for TRANS-ADAPT project

## 6. Analysis and discussions

The challenge of the evaluation framework on how bottom-up and community-led in management is to build relationships between the two participation criter Accountability) and the other Governance criteria: Efficiency, Effectiveness, Sc Capacity.

Concerning efficiency, we first need to ask ourselves the question of the eff What should be efficient? TRANS-ADAPT makes a basic distinction between bottom-u multi-use flood strategy as a process (stressing the decision-making community-l an outcome. First, the criterion of efficiency seems to better fit the outco process dimension of TRANS-ADAPT. The outcome dimension corresponds to the outp of the input output ratio, the effect dimension of the cost effect ratio, and th cost benefit ratio. TRANS-ADAPT is about whether the chosen multi-use flood allev the most efficient.

Then, concerning the criteria of effectiveness, we evaluate it in terms of an inn process, or we can evaluate in terms of the outcome(s) of that process, i.e alleviations. The most logical choice seems to be to evaluate effectiveness in t the TRANS-ADAPT case studies. The evaluation will be carried on the outcomes of the on the process itself. Even the process effectiveness is based on an outcome, other policies or normative ideals. So, ideally, we should be able to provide argumentation that the community initiative has created such outcomes, and that the outcomes alleviation) were not the result of something else.

Third, the notion of who wins and who loses and how those decisions are mad contention within and between societies.The issue of social justice with respect been extensively researched. Recognising these increasing risks, a number of sch to understand the justice issues that societies face through the lens of fl management. The lack of fairness in flood risk management decision-making i vulnerability and inequality and called for nationally consistent practices structural strategies. Such an approach, coupled with greater autonomy over decisions at a local level, may alleviate the vulnerability and injustice that t In contrast, decision-making is best made at a national level with respect to f sustainability and the wider concerns of society are to be taken into considerat Priest (2008) call for a greater understanding in determining the feasibil partnerships with respect to flood risk management focusing on a combination and top-down approaches. Furthermore, they stipulate the need for more radical engage local stakeholders and their resources in the decision-making process analysis continues to act as the primary decision mechanism for flood protection

Finally, the question raises whether those most densely populated cities will be challenges of developing social capacities at individual, community and organi may prove particularly problematic for enhancing social capacity at a local recognised that structural measures alone will be insufficient to deal with economic and human losses from extreme flooding in the future. As non-structur measures gain prominence, increased public engagement and participation, and a process between stakeholders is needed to manage the risks posed by flooc management will require further co-operation between multiple actors from acros including, but not limited to, civic society and public and private sectors if losses from flooding are to be curtailed or reversed. Furthermore, adopting an i alone to social capacity building does not necessarily produce desired outcomes is argued, is too paternalistic and does not recognise the mutual learnings that builders and those with a capacity deficit. A move towards a system where i participatory capacity building measures are recognised as inter-dependent is flood risk management is to be addressed effectively. Social capacity is an ite process and needs to take account of multi-actor interactions, unexpected outc previous actions and feedback loops.

To address the challenge of linking those criteria, we will test the framework located in Le Mans, on the Sarthe river. The  Ile aux planches  is a leisure p flood control system in the city. Le Mans Agglomeration accounts about 200 000 the 1990s, the city of Le Mans has been strongly hit by floods. The  Ile aux Pla close to the city centre. It was created in 2008 on a brownfield site. It playgrounds for children, green areas dedicated to festivals and cultural events left for biodiversity.  The flood issue has been tackled within this project wit has been designed so that it can be flooded (10-year and 50-year floods) with (specific plantations, public benches secured to the ground). From the start, th by two local NGOs. After the city had been hit by major floods, some of the i supporting association. Another association of the district residents was create sustainable use of the brownfield site. At that time, it belonged to a national France, EDF), willing to sell it to building promoters.
The local NGOs fought against this project and proposed to Le Mans Agglomeration for the site as a leisure park adapted to floods and contributing to risk r Agglomeration took the responsibility for implementing it. After implementat association kept organising cultural and social events on the site. Today, it i and regularly used for public events. Its function as a spillway and retention a be successful.

## 7. Conclusions

TRANS-ADAPT will use this evaluation framework, including participation evaluat success of the initiatives and of the outcomes. The participation concern is hi case studies and the evaluation will give insights about the level of succes processes. TRANS-ADAPT also explores and analyses what and who is behind the in economic and socio-ecological pressures) and will tease out the motives often aspects of multi-functional initiatives that are relevant for their success an will be employed to present best practices and develop recommendations/guide application of such approaches in other institutional and organisational set challenges of climate change for society. Further, we will research the ext

functional approaches to risk reduction are promising in solving local problems
lessons from such initiatives.

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# EVALUATING THE STRATEGIC CAPACITY OF COLLABORATIVE SPATIAL PLANNING INITIATIVES BY THE PERFORMANCE OF ITS PROCESS, OUTPUT AND OUTCOMES: THE CASE OF THE SOUTHERN RANDSTAD HOLLAND

PAPER TO BE PRESENTED AT AESOP CONGRESS 2015, 13-16 JULY, PRAGUE

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**Abstract**
*Spatial planning practices are constantly evolving to be more effective in a dynamic context. In the face of the latest developments, the practice of collaborative spatial planning through the formation of regional collaborations has emerged as the contemporary solution. The practice of working with a multitude of public actors that cooperate to formulate spatial strategies for issues that transcend their own planning capacity is relatively new and the ideal structure, organization and scope are yet unclear. The ability to of a region to successfully develop joint strategies is referred to as a region's strategic capacity.*

*As a means for comprehensive assessment of the effectiveness of such collaboration projects an evaluation framework is proposed to assess a region's strategic capacity. To this end, the paper further elaborates the concept of strategic capacity. And furthermore it develops an evaluation framework specifically designed for the evaluation of regional collaborations and the strategic capacity generated. It is shown that this framework has a high potential for meaningful evaluation of regional planning collaboration projects.*

Keywords: planning evaluation, collaborative spatial planning, strategic capacity

## 1 Introduction

In the face of geographic, social and economic dynamics, Dutch spatial planning has gone through significant change from a comprehensive planning approach to a more open-ended and decentralised collaborative spatial planning style in which there is a key role for networks of like-minded governments. The collaborative spatial planning effort is one of common ambitions, goals and resources across different tiers of government, integrating policy fields and territories (Healey, 2006; Albrechts, 2010; Mastop & Faludi, 1997; Sehested, 2009). Such regional collaborations seek to align their efforts to effectively steer regional development to their joint benefit.

In the last few years, regional collaborations between different tiers of government and even market parties have emerged as the contemporary spatial planning practice (Salet & Woltjer, 2009). The changes in spatial planning practice have made old roles of government obsolete and responsibilities have shifted. Numerous regional collaborations in one form or another have popped up across the

Netherlands. Since the collaborative practice is relatively new, the numerous regional collaborations individually attempt to find the right organization, size and scope. However, best practices have not yet been identified (Hajer, 2009), and may in fact not exist due to specific contextual circumstances requiring situational solutions and approaches. Yet, whatever the exact outcome, evaluation of the effectiveness of regional collaborations may be helpful in developing a frame of reference for developing effective institutional arrangements within regional collaborations. However, an appropriate and complete evaluation framework is not yet available. This paper offers a first attempt to develop a framework for the evaluation of regional collaborations and as such forms a first step towards the development of such a frame of reference for best practices.

The paper starts with brief overview of trends in Dutch spatial planning practice. This is followed by the introduction of the methodology used to develop the evaluation framework to assess the effectiveness of a regional collaboration. The key theoretical concept along which this evaluation framework is developed is strategic capacity, a concept originally introduced by Haran (2010). This capacity, which captures a range of single indicators and regional network characteristics, refers to a region's ability to come to joint strategies and decision making. After elaborating the developed framework, the application of the framework on the regional collaboration between the national government and the so-called Zuidvleugel partners in the southern Randstad Holland is discussed. More specifically one of the concrete outputs of this collaboration is discussed: the Adaptive Agenda Southern Randstad (AASR). The paper concludes with a short evaluation of the use of the framework and recommendations for its further development.

## 2 Spatial planning in the Netherlands: overcoming the institutional void

Before the 90's, the spatial planning decisions at the national and regional level mostly involved restrictive regulation (Salet & Woltjer, 2009). According to Ark (2005), the Dutch planning system could, until the second half of the 00's, be characterized by a strict delineation between government departments, a strong territorial orientation, formal relations between different tiers of government and plans that focus on a single aspect of space. However, over time, economic and social dynamics put pressure on these protective regulations and strict delineation gradually lost ground (Raad van State, 2012).

In society, the citizen-actor is on the rise. Active involvement at select moments in the design process are used to increase citizen approval rates and legitimization of projects and investments (Hajer, 2003; Witteveen+Bos, 2012). Regions are becoming more important in current spatial policy making. Many policy issues are simply better solved at a regional level with optimal use of resources (Hajer & Zonneveld, 2000). The globalization and the EU lead to more permeable borders and due to the development of networks, territories are becoming more interconnected (Raad van State, 2012; Balz & Zonneveld, 2012). The economic crisis has further increased the urgency of collaboration between parties due to lacking financial resources (Boelens, 2010; Herrschel & Tallberg, 2011).

The changing context brings with it new demands in terms of governability and the mobilisation of stakeholders. One interpretation of governance is the self-regulation of actors in a network to *"coordinate their interdependencies in order to realise public policies and deliver public services"* (Klijn & Koppenjan, 2012, pp. 594). With regard to governance, several trends affecting spatial planning are identified by Anders Lidström (2007; 2011). These trends show that (national) governments are gradually changing their role from regulator to facilitator, thereby strengthening lower levels of government and decentralizing parts of their responsibilities. Reflecting the changing society a new Spatial Planning Act (2008) has done away with the formal hierarchy between governmental layers, introduces decentralisation and provincial autonomy, and by handing land use plan competencies to all governmental levels opened the way for more entrepreneurial and bottom up planning approaches (Buitelaar et al., 2011; Roodbol-Mekkes & Van der Valk, 2012).

The current development in spatial planning is the formation of regional collaborations in which a multitude of (public) interdependent actors (Healey, 2006; Albrechts, 2010) cooperate for purposes of

regional development. This is called collaborative spatial planning or strategic spatial planning (Healey, 2006; Albrechts, 2010; Mastop & Faludi, 1997; Sehested, 2009). In this paper, the practice of spatial planning for the purpose of spatial-economic development within an informal regional collaboration of actors by aligning their goals, ambitions and resources (Zuidvleugelbureau, 2013; SNN, 2014), is referred to as collaborative spatial planning (CSP). Parties can steer the practice of working in CSP networks, otherwise known as meta-governance (Sehested, 2009).

In the traditional top down spatial planning system, the institutional arrangements are clearly established. The roles and responsibilities of each government have been the same for decades. When governments start to participate in regional collaborations to achieve their policy goals, they move into an as of yet unknown planning arena in which the role and responsibility division is undecided. This 'in between' arena in which most CSP initiatives function is dubbed soft space by Allmendinger and Haughton (2009).

The institutional arrangements within these soft spaces with often having fuzzy boundaries are far from established and many different arrangements are set loose on CSP initiatives. Hajer (2009) refers to this as the institutional void – i.e. it is not that there are no institutions at the regional level, yet in the 'void' there are so many institutions and stakeholders that it has become unclear how they best relate to each other. New initiatives are formed and old initiatives evolve in the ongoing search for the right form of collaboration (Edelenbos, 2005). Over the course of years, widespread variations of often thematically overlapping regional collaborations have been established in the same geographic regions (in the southern Randstad: Public Partnership Zuidvleugel, Metropolitan Region Rotterdam The Hague and city regions).

Due to the multitude of initiatives, structures and forms, the optimal organization of CSP initiatives remains unclear. The question of how effective the efforts of regional collaborations are is therefore highly relevant in order to come to best practices for the optimal organization of such CSP initiatives. Addressing this question is currently not possible, as there is no adequate evaluation framework to assess regional collaborations as sketched above on. In this paper, such a framework is presented.

## 3 Research method

This paper focuses on the strategic capacity of the regional collaboration between the national government and the Zuidvleugel partners in the southern Randstad. Because there is little experience with assessing regional collaborative spatial planning practices, the main aim of this paper concerns the development of an appropriate evaluation framework for the assessment of the regional collaboration through the performance of its results.

Although the concept of strategic capacity of Haran (2010) as we will find out below, is very relevant for regional collaborations, the original framework by Haran is found to have several deficiencies. On the basis of a literature review (Haran, 2010; Mastop & Faludi, 1997; Faludi, 2000; De Bruijn et al., 2010) and an exploration into the nature of the regional collaboration and its product under investigation (Harteveld, 2014), these deficiencies were identified. The inclusion of the work of other spatial planning evaluation theorists (Mandarano, 2008; Margerum, 2002; Innes & Booher, 2003; Healey, 1998; Briassoulis, 2004) was done to ensure an enriched framework that results in a comprehensive overview of the most important (according to these theorists) indicators for effective spatial planning.

The actual case study was carried by means of participatory research way with the principle author having the opportunity to participate in the process for half a year from within the leading stakeholder's organisation, in this case the urban development department of the city of Rotterdam. The case study was carried out partly during the development of the enriched framework and after. Information on the nature of the collaboration and the results themselves was gathered and processed through a review of the available information sources. These sources include but are not limited to websites, law descriptions, the product itself and written reports about meetings, but also semi-

structured interviews with the process managers and a select group of participants in the process as well as, finally, observation.

The interviewees have all been involved in the collaborative planning process, either at the administrative, directive or workgroup level or as a process manager. Criteria for selection included level of personal involvement, position in the process and scope of knowledge on the goings on in the process and 'in house'.

Two interview schemes have been developed. The first was prepared for the process managers who designed and managed the process. The second aimed at the experiences and opinions of the participants with regard to the process and results. The interviews with the process managers were semi-structured leaning more towards the structured side. The reason for this is that with regard to the process design, there were several indicators which would help determine how the process was designed, what the reasoning behind it was and how it played out. The interviews with the participants of the process were semi-structured leaning more towards the un-structured side. The focus was on the experiences and assessments of the process, the output and the outcome. Since experiences are variable, an open structure was sometimes deemed more appropriate for this set of interviews.

Finally, theory and empirical findings were processed and interpreted, after which general conclusions on the strategic capacity per component could be drawn. The use of the framework was also evaluated based on the experiences during the case study. From these experiences, weaknesses and strengths were identified, resulting in recommendations for further development of the enriched framework. These strengths, weaknesses and recommendations form the conclusion of this paper.

## 4 Development of the evaluation framework: the concept of Strategic Capacity

Strategic capacity forms the overarching concept of the evaluation framework. The concept gives direction and context to the evaluation of the effectiveness of the CSP initiative in the southern Randstad. Haran (2010, pp. 37) defines strategic capacity as: *"[the] capacity to involve a wide number of stakeholders while producing well-defined strategies with high selectivity and internal coherency, and bringing those to implementation while maintaining the support and commitment of collaborating members."* Strategic capacity thus focusses on the effectiveness of a regional collaboration.

Haran has conducted an evaluation in of the Metropolitan Region Amsterdam, Brabant City and the City Region Arnhem Nijmegen using his framework for strategic capacity evaluation. This framework is presented in Table 1. These collaborations are comparable to the collaboration selected for this paper: they are informal, contain interdependent parties and aim to strengthen the socio-economic situation in their territories through the formulation of ambitions in spatial strategies.

Table 1 Evaluation framework of Haran (2010)

| Components | Haran's indicators |
|---|---|
| 1 Reception | Actor diversity<br>Intensity of involvement<br>Diversity/multiplicity sectors<br>Incorporation of knowledge |
| 2 Consolidation | Well-defined/ integrated strategies<br>Collective lobbying<br>Collective internal investments |
| 3 Realization | Official commitments of external parties<br>Official commitments of internal parties |

The definition and selection of evaluation subjects reflect, at first glance, the purpose of the regional collaboration in the Southern Randstad. Strategic capacity is an interesting approach for the evaluation of the effectiveness of regional collaborations. Its greatest merit is the premise that a wider group of

committed stakeholders is able to implement strategies. Incidentally, the components and indicators of strategic capacity are broad enough to further specify their definitions to create a framework that is more comprehensive and useable.

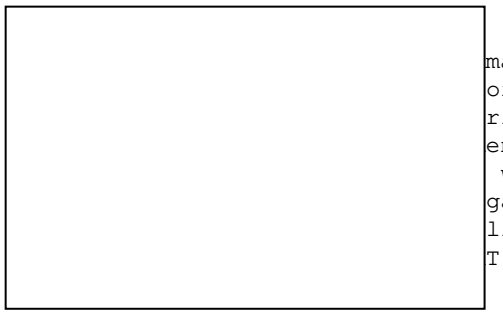
## 4.1 Reassessing Strategic Capacity

One of the main problems of Haran's (2010) framework for analyzing the Southern Randstad case is that it does not foresee in the cooperation between regional and national stakeholders. This section will explain a number of further deficiencies to create a better understanding of the type of enrichment that is needed to operationalize the framework for the evaluation of this paper's regional collaboration case.

A first problem is that the framework does not do justice to the regional collaboration process. The attention paid to the process design and management is, at best, limited. This can be concluded from the indicators under the component *reception* as seen in Table 1. A high quality process is more likely to result in high quality outputs and outcomes (De Bruijn, Ten Heuvelhof, & In 't Veld, 2010; Margerum, 2002).

Secondly, the framework provides little handholds for evaluating regional collaborations. Regional collaborations are continuously evolving, making delineation of the evaluation difficult. Additionally, the indicators offered by Haran (2010) are abstract. This makes that the framework is difficult to apply as a means to assess and compare the effectiveness of collaborations. Further operationalization of the framework will give better guidance and allows for stricter delineation of the evaluation.

Thirdly, empirical research into the case of the regional collaboration between the national government and the Zuidvleugel partners has shown that there are in fact important differences between this case and the cases of Haran. The Southern Randstad collaboration is directed by the MIRT program of the national government. It is a means of meta-governance as practiced by the Ministry of Infrastructure and Environment (Zonneveld & Spaans 2014). The regional collaborations evaluated by Haran are collaborations between governments of the region and without the national government practicing meta-governance. Another difference is that the collaboration aims to formulate a spatial strategy, rather than concrete plans. The focus of this case is on strategic issues, more in particular on the Adaptive Agenda Southern Randstad (AASR, see: Rijk & Zuidvleugelpartners 2013).



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Fourthly, there is a gap between policy making and implementation, in a sense that implementation is not always straightforward. The collaboration will have to be effective in creating commitment to the produced strategies. The reason for this is that within a regional collaboration, responsibilities, tasks and resources are not predefined. Agreements will have to be carried out by the individual participants.

These deficiencies are not unsolvable and with the help of contemporary planning evaluation theory, they can be managed.

## 4.2 Enriching the framework: performance theory

Traditionally, planning effectiveness was studied from the viewpoint of conformance (Faludi, 2000), referring to the level in which the original intentions were carried through to the final result (Knudsen, 1988 in: Korthals Altes, 2008, pp. 13). Lately, other methods for evaluation of spatial planning approaches have emerged. The focus shifted to performance, which is more abstract in nature (Faludi, 2000; Innes & Booher, 2003). This shift in evaluation methods is in line with the

shift in planning practice itself. From hierarchical prescriptive planning by a single government towards collaborative spatial planning by a network of governments. With regard to the AASR and spatial strategies like it, depending on follow-up decision making over a long period of time, conformance evaluation is not an option.

The performance of spatial strategies can be understood as the influence the results of the strategy development have on subsequent decision situations (Mastop & Faludi, 1997). Performance defines two forms of effectiveness for the results: 1) being relevant in subsequent decision situations and 2) being accepted in subsequent decision situations (Mastop & Faludi (1997) and Faludi (2000)). Thus, deviation from the spatial strategy does not necessarily mean the strategy is ineffective as long as it remains relevant in subsequent decision situations (Faludi, 2000).

It is understood that Mastop and Faludi and particularly Faludi (2000) also include the process that led to the formulation of the spatial strategy under evaluation. They see planning as a soft process of learning and "*seemingly endless multifarious negotiations*" (Faludi, 2000, pp. 299) before results emerge.

Thus, it can be concluded that performance as understood by Mastop and Faludi refers to the results of the collaboration process and the process itself. There is a relation between process and result. A high quality process is more likely to result in effective results and effective results will create more commitment to the process (Margerum, 2002). Please refer to Figure 1.

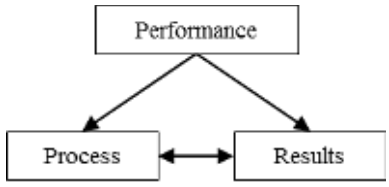


Figure 1 The relation between performance, process and results

The first factor influencing the performance of the spatial strategy is the process leading to the final strategy. The formulation of a spatial strategy is a complex process: a multitude of actors and perceptions are involved, no optimal solution is possible, the context is dynamic in time and multiple issues need to be addressed (De Bruijn, Ten Heuvelhof, & In 't Veld, 2010). It makes it all the more important to evaluate the process and determining how and where procedures can be improved: "*Process-like arrangements have consistently proven to be crucial for success*" (De Bruijn, Ten Heuvelhof, & In 't Veld, 2010, pp. 11).

The second factor of influencing the performance is the quality of the results of the process. The process serves as the breeding ground for not only spatial strategies such as the Adaptive Agenda Southern Randstad (AASR), but also for social effects such as improved relations between participants and commitment of external and internal parties to the agreed upon strategies (Innes & Booher, 1999; Mandarano, 2008). These results should, as discussed earlier, either be relevant for subsequent decision situations or reflect the potential for the realization of the ambitions defined by the regional collaboration.

By using performance evaluation for the enrichment of Haran's evaluation framework, two of the deficiencies previously discussed can be solved. First, it includes process considerations in the evaluation and recognizes its influence on the quality of the results of a collaboration process. Secondly, it allows for stricter delineation of the evaluation as performance evaluation revolves around the specific result of a process. Spatial strategies, such as the AASR, can function as the result that delineates the evaluation. Other deficiencies can be solved with the help of slight adaptions to Haran's original definitions.

## 4.3 Relating strategic capacity to performance

The concept of performance is appropriate for the enrichment of Haran's strategic capacity evaluation framework. The difference between the concept of strategic capacity and performance is their object. The objects are, respectively, a regional collaboration and a spatial strategy.

Strategic capacity can be evaluated through several means. As regional collaborations develop spatial strategies, planning effectiveness – or performance – can be regarded part of the means to evaluate the overall effectiveness – or strategic capacity – of regional collaborations.

Nevertheless, 'merely' evaluating the performance of the process and results can say a lot about the effectiveness of the collaboration. The reason for this is that within a regional collaboration, and responsibilities, tasks resources are not predefined. As discussed in Paragraph 4.1, there is a gap between policy making and implementation, making that implementation is not straightforward. The collaboration will have to be effective in creating commitment to the produced strategies. Agreements will have to be carried by the individual participants. Thus, the performance of the process and results can give a meaningful insight in the effectiveness of the collaboration. The relation is showed in Figure 2.

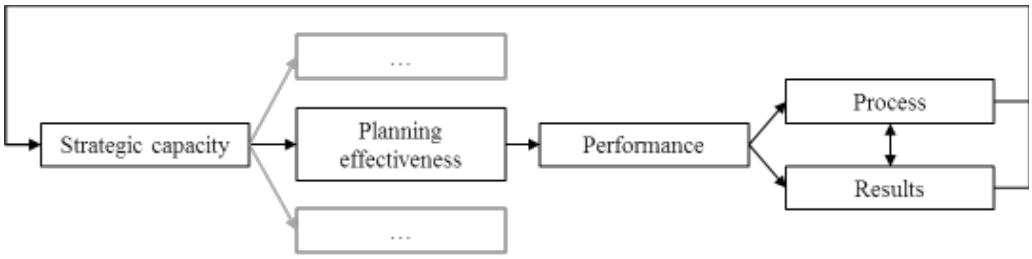


Figure 2 The concepts of effectiveness, performance, capacity and strategy

## 4.4 Operationalizing strategic capacity evaluation

Now that the relation between the two concepts is shown, the relation has to be operationalized in order to function in a comprehensive evaluation framework. With the help of the work of other researchers in the field of collaborative spatial planning evaluation, the relation is operationalized. Furthermore, the adaption of the definitions solves the remaining identified deficiencies.

Firstly, it has been shown that there are some differences between the evaluation subject of this paper and the subjects of Haran (2010). The strategic capacity definition of Haran has been slightly adapted to better reflect the intention of the regional collaboration and the developed AASR, namely to steer decision making in the MIRT by aligning and coordinating the ambitions and the efforts of the region and the national government for the long term. The policy statements in the AASR do not require direct implementation but rather continuous consideration of how paths of action fit into the strategies set forth in the AASR. Furthermore, it has been discussed that a spatial strategy is not the only result of the process. For the purposes of this research, strategic capacity is understood as:

*the ability to [involve a wide number of stakeholders] [while producing well-defined strategies with high selectivity and internal coherency] and [effectively acting upon the ambitions set forth in the strategies while maintaining the support and commitment of collaborating members].*

The trichotomy in this definition has resulted in three components of strategic capacity. These components are reception, consolidation and realization (Haran, 2010). These definitions are also slightly adapted in order to align them with the authors' definition of strategic capacity. Please refer to table 2.

Table 2 Definition of strategic capacity split into three components.

| | |
|---|---|
| **Reception** | continuous incorporation of (new) knowledge by a wider group of stakeholders through self organization and facilitation. |
| Consolidation | collectively filtering and selecting from different ideas, thoughts a action and prioritize between potential paths of action. |
| **Realization** | development of and commitment to future collaboration for the purpose of implementation of the produced strategy. |

With the help of the concept of Collaborative Planning Evaluation (CPE) of Innes and Booher (1999) and the follow-up of CPE by Mandarano (2008), the relation between strategic capacity as defined by the author and performance can be operationalized. CPE combines the collaborative character of strategic capacity with the evaluation of a spatial strategy through its use of components. CSP divides the evaluation into the components process, output and outcome (Mandarano, 2008).

Process as understood by Innes and Booher (1999) and Mandarano (2008) includes engaging a wide group of participants with relevant and different interests through common incentives, incorporating (new) knowledge while following good process design. These elements fall under the definition of reception: *continuous incorporation of (new) knowledge by a wider group of stakeholders through self organization and facilitation.*

Output and outcome are the two types of results of the collaboration process (Mandarano, 2008). The line of reasoning behind the distinction between output and outcome is that the results of a collaborative process are very different in nature. There are physical results in the form of a plan or strategy and there are more abstract results in the form of social effects.

Performance divides the results into two types of effectiveness. The first type is the relevance of results in subsequent decision situations. Innes and Booher (1999) and Mandarano (2008) justly include high quality and innovation as important considerations for the output of regional collaborations. High quality and innovative output reflect the ability to collectively select and prioritize ideas with the highest relevance (Mastop & Faludi, 1997). For high quality and innovative output, the participants of the regional collaboration should jointly filter and select appropriate paths of action based on their collective goals and ambitions as well as sound knowledge (Margerum, 2002). Consolidation is defined as *collectively filtering and selecting from different ideas, thoughts and action and prioritizing between potential paths of action*, showing that consolidation can indeed be found in the output of collaborative processes.

The second type of effectiveness in performance theory is the acceptance of a spatial strategy as part of the decision making situation (Mastop and Faludi, 1997). In the case of spatial strategies like the AASR, acceptance should be reflected by the potential of subsequent decisions being in broad agreement with the spatial strategy. Due to the abstract nature of the AASR, no concrete agreements for realization based purely on what is in the AASR can be made. Therefore, only the potential for realization through social outcomes like commitment and social capital among the involved parties is considered (Innes & Booher, 1999; Mandarano, 2008). The social effects as meant by outcome show the acceptance or commitment of the involved parties to continue participating in the collaborative process. The component realization, *development of and commitment to future collaboration for the purpose of implementation of the produced strategy*, reflects this ambition level with regard to implementation. The result of the operationalization effort is table 3.

Table 3 Operationalization of the link between strategic capacity and performance through CPE

| | **Components** | | |
|---|---|---|---|
| **Strategic capacity** | Reception | Consolidation | Realization |
| **Operationalization through CPE** | Process | Output | Outcome |
| **Performance** | Process | Relevance of results | Acceptance of results |

## 5 Introducing the enriched evaluation framework

In this section the enriched framework based on the work of Haran (2010) for the evaluation of a regional collaboration as reflected by the performance of its results is presented. The indicators are mainly qualitative. The framework provides a method to assess the strategic capacity of the AASR collaboration at the moment of execution of the research. This research is therefore a snapshot of the ongoing process of working together, formulating strategies and building social capital and commitment within the regional collaboration.

Table 4 Operationalization of strategic capacity

| | Components | Sources | Indicators |
|---|---|---|---|
| *Reception - how was the process that led to the output organized?* | | | |
| Process | Process design | (Briassoulis, 2004) (Mastop & Faludi, 1997) (Mandarano, 2008) (Margerum, 2002) (De Bruijn et al., 2010) | Self-organization; participants decide rules, groups and topics<br>Support and facilitation of the process<br>Consistent procedures for decision making |
| | Participation and involvement | (Briassoulis, 2004) (Haran, 2010) (Healey, 1998) (Mastop & Faludi, 1997) (Mandarano, 2008) (Margerum, 2002) (De Bruijn et al., 2010) | Engagement of stakeholders through common goals/objectives/issues<br>Intensity of involvement |
| | Incorporation of knowledge | (Briassoulis, 2004) (Haran, 2010) (Healey, 1998) (Mastop & Faludi, 1997) (Margerum, 2002) (De Bruijn et al., 2010) | Shared research sources and consistent information bases<br>Common assessment, integration and evaluation tools<br>Encourages creative thinking and challenges beliefs |
| | Diversity and multiplicity | (Briassoulis, 2004) (Haran, 2010) (Mastop & Faludi, 1997) (Healey, 1998) (Mandarano, 2008) (Margerum, 2002) (De Bruijn et al., 2010) | Representatives of all relevant and different interests across territories and policy fields (spatial planning, housing, transport, economy)<br>Interaction between private, public and non-gov. parties |
| *Consolidation – to what extend do the outputs have an effect on subsequent decision making?* | | | |
| Output | Well-defined and agreed strategies | (Briassoulis, 2004) (Haran, 2010) (Mastop & Faludi, 1997) (Mandarano, 2008) (Margerum, 2002) | Includes long term development strategies<br>Joining up of different policy fields and their actors<br>Joining up of policy fields between territories<br>Agreement shows innovation and creativity |
| *Realization – does the AASR have the potential to be in broad agreement with subsequent policy documents?* | | | |
| Outcome | Commitment | (Briassoulis, 2004) (Haran, 2010) (Innes & Booher, 1999) (Mandarano, 2008) | Collective action based on agreements in the spatial strategy<br>Impact in organizations |
| | Social capital | (Briassoulis, 2004) (Mastop & Faludi, 1997) (Mandarano, 2008) | Informal interaction between formal actors<br>Trust among actors |

The indicators remain quite broad. It should be noted that this framework thus does not provide a list of characteristics to be ticked off, but rather a collection of broadly interpretable aspects of regional collaborations that can cover a wide range of findings. It should be noted that it is not necessary that the indicators reflect what has happened during or after the process for the collaboration to be considered effective (Mandarano, 2008). As always with frameworks, it is the responsibility of the researcher to interpret the findings in a logical manner. While the framework thus provides a structured guide for evaluation, researchers should come to a meaningful conclusion on their own merit.

## 5.1 Discussion of the framework

The components and indicators from Table 4 have been carefully selected and assembled, based on empirical findings and the work of other spatial planning evaluation theorists. The reasoning behind the selection of the components and indicators is elaborated upon in this section.

Figure 3 Process characteristics of De Bruij et al. (2010)

De Bruijn, Ten Heuvelhof and In ‘t Veld (2010) provide important points of consideration when making process arrangements (see Figure 3). These process arrangements are essential for making a collaboration effective and will, among other notions, be used to substantiate the selection of

indicators.

### 5.1.1 Process design

The indicators *self-organization, support and facilitation* and *consistent procedures for decision making* are included as part of the process design component because they reflect the qualities of openness, progress and protection of core values of De Bruijn et al. (2010). When there is room for self-organization, parties can decide their own joint process rules, topics and work forms. This makes the process open and democratic, which is important for voluntary collaborations.

De Bruijn et al. (2010) have discussed the importance of progress in a process. If there is no progress, participants feel their efforts are not leading to results and decide to quit it altogether. (Independent) process support and facilitation can help the process further through adequate preparation of meetings and use of techniques to involve parties, even in times of conflict.

The inclusion of consistent procedure for decision making is motivated by the process considerations openness and protection of core values by De Bruijn et al. (2010). Consistent procedures lead to openness and protection of core values as all participants understand the procedure and know what criteria each decision has to pass to be accepted.

### 5.1.2 Diversity and multiplicity

De Bruijn et al. (2010) considerations of openness, substance and progress make that the indicator *interaction between private, public and non-profit parties* is appropriate. The interaction between different types of parties ensures that a variety of interests and concerns can be heard (Briassoulis, 2004).

Openness to different interests lead to substance and progress as parties will feel less need to delay. The process consideration substance is partly taken care of if *representatives from different territories*, *policy sectors* are included. It ensures that the majority of interests and requirements are covered. Varied interests and territories forces participants to think differently and search for common goals and ambitions (De Bruijn et al., 2010; Briassoulis, 2004; Healey, 1998; Innes & Booher, 1999).

### 5.1.3 Participation and involvement

The inclusion of the indicator *engagement of stakeholders through common goals and objectives* is suitable to find out whether the parties have a common incentive to participate. A common incentive, like a sense of urgency is a necessary to drive the process. When there is no drive or commitment, the process will lack progress or participants (Mandarano, 2008; Margerum, 2002; Briassoulis, 2004; De Bruijn et al., 2010).

The *intensity or level of involvement* is a relevant indicator to determine the level of commitment of parties to the process and its results (Healey, 1998; Innes & Booher, 1999; Mandarano, 2008). If a party is committed to the process, it delegates a representative who has commitment power, meaning they can work relatively independent from their superiors. The commitment power of these representatives influences the progress of the process (De Bruijn et al., 2010).

### 5.1.4 Incorporation of knowledge

The indicator *shared resources and consistent information bases* is based on the notion of Briassoulis (2004) and Margerum (2002) that common information and negotiated knowledge can help parties to achieve consensus, thereby enhancing progress (De Bruijn et al., 2010).

The data considered with the indicator *common assessment, integration and evaluation tools* also represents the process considerations progress and substance by the Bruijn et al. (2010). Common

tools can help parties to build negotiated knowledge and tools for equal understanding of knowledge and propositions, limiting the number of conflicts (Briassoulis, 2004; Margerum, 2002).

*Creative thinking and challenging of beliefs* form a twofold indicator that reflects the substance of the process. New insights and approaches make the formulation of a new document relevant and logical. If not, parties are difficult to engage in the process (De Bruijn et al., 2010; Innes & Booher, 1999; Healey, 1998).

### 5.1.5 Well-defined and integrated strategies

The indicator *innovation and creativity* is included on the basis that good collaboration and consideration of different interests is shown by the innovation and creativity of the content. It suggests that considerations have been made and prioritized (Innes & Booher, 1999; Mandarano, 2008). Furthermore, innovation and creativity in the document reveal the effort participants have made with regard to substance (De Bruijn et al., 2010).

The *inclusion of long term strategies* is an important indicator to consider. If long term strategies are the main focus of a spatial strategy, it suggests that parties are willing to commit in the long term to what they have agreed. Furthermore, it shows that there has been a consideration of the future relevance and coherence of the actions that have to be taken (Margerum, 2002; Briassoulis, 2004).

The third and fourth indicator are included, because *the integration of policy sectors, parties and territories* shows that a variety of considerations have been made and prioritized (Healey, 1998; Margerum, 2002; Briassoulis, 2004). The integration of territories, sectors and parties shows an understanding of where opportunities and threats are located and how they can be used to strengthen the region in its entirety.

### 5.1.6 Commitment

*Collective action based on agreements* in the spatial strategy shows commitment of effort and resources to bring the ambitions of the AASR about (Haran, 2010; Briassoulis, 2004; Innes & Booher, 1999; Mandarano, 2008). It is a vital indicator that reflects the potential for realization of the ambitions.

The second indicator reflecting *commitment* is the *impact in organizations of government*. However obvious it may be, the AASR should be known within the governments and organizations for it to be used and realized (Mastop & Faludi, 1997).

### 5.1.7 Social capital

The first indicator of the component *social capital* is included for two reasons. Firstly, informal relations reflect the stance of a participant towards the collaboration itself. Secondly, personal informal contact generates expectations about each other (Innes & Booher, 1999; Mandarano, 2008; Briassoulis, 2004).

Trust is necessary to engage in a process with conviction and represent each other's interests successfully (Innes & Booher, 1999; De Bruijn et al., 2010; Process Management, 2010; Mandarano, 2008). *Trust among involved parties* can be divided into two aspects, namely trust in each other on the one side and trust in the produced spatial strategy on the other side.

## 6 Case study: strategic capacity in the southern Randstad

A case study has been conducted in which the enriched framework has been used. The case is the regional collaboration between the national government and the Zuidvleugel partners in the southern

Randstad. This (test) case is briefly discussed, as it provides experiences about the use of the framework, forming the base of the evaluation of the framework itself. This evaluation is presented in section 6.2.

### 6.1 The regional collaboration in the southern Randstad and the Adaptive Agenda

The regional collaboration between the Zuidvleugel partners and the national government seeks to align their ambitions, strategies and resources for the purpose of coordinating regional development. The Zuidvleugel partners stem from the Public Partnership Zuidvleugel, which is an informal regional collaboration which seeks to develop the southern Randstad spatial-economically. Globally, the southern Randstad stretches from Leiden to Dordrecht, including a very diverse selection of economic sectors and spatial characteristics.

The collaboration stretches across all tiers of government, even including the water boards. It aims to formulate policy statements at a strategic level, rather than offering concrete paths of action. Moreover, the collaboration is structured by policy of the Ministry of Infrastructure & Environment, making it formal in that sense. At the same time it is informal in the sense that it cannot make decisions by itself or implement its own decisions. The regional collaboration is thus dependent on the social and political commitment of the participants for the implementation of the results of the process. Strategic capacity is thus a relevant concept for this type of collaboration.

For the purpose of strengthening the spatial-economic situation in the southern Randstad, several territorial agendas have been developed over the last years together with the national government (Zonneveld & Spaans 2014). The latest, the Adaptive Agenda Southern Randstad 2040 (AASR), is the object of this evaluation. In the AASR, the common ambitions and complementing strategies for the spatial-economic situation for the southern Randstad by 2040 are sketched.

The development of the AASR took place within the context of a national government investment programme called MIRT. The national government used the MIRT to give the Zuidvleugel partners an incentive to collaborate and formulate spatial strategies. Within the MIRT framework, parties could organize the process themselves, determining the level of involvement, how information was treated and how choices were made. Within the MIRT, decisions are made for investments in regional projects or the commissioning of research – MIRT explorations - so robust MIRT decisions can be made in the future.

While the content of the AASR is not new (most can be found in earlier Agendas), the approach that is taken is. The AASR advocates the adaptive approach, meaning that 1) governments and policy statements should be flexible enough to cope with all possible scenarios in the future and still be relevant and 2) governments should work with and facilitate external parties and their initiatives, allowing for adequate reactions to opportunities from the market.

## 6.2 Findings

A picture of the strategic capacity has emerged that is both positive and critical. The process has had a diverse selection of governments participating continuously and was appropriately and enthusiastically managed by the process managers, but the essence of the process – its position in the MIRT, its objectives and form – have not had the attention it required. Moreover, the lack of external parties in the process lowers the strategic capacity of the collaboration, as is experienced during the initiation phase of the MIRT explorations.

The result is a spatial strategy that is both strategic and concrete; and strong social outcomes. Some initiatives have emerged which reflect the ambitions in the AASR, showing the commitment of parties to their common ambitions. Participants are found to value the AASR, trust each other and appreciate the developed adaptive approach, but both output and outcome require nourishment and follow-through to keep them at the high appreciation levels they are now. Especially the adaptive approach

will require continuous effort to settle in the regular practices of governments at all levels and to connect with market parties and knowledge institutes. The AASR has proven to be an exemplary strategic outcome of close collaboration between regional parties (the Zuidvleugel partners) and the national government (Harteveld, 2014). Other regions refer to the AASR when trying to decide their approach to national /subnational collaborative spatial planning.

The strategic capacity of the regional collaboration between national government and Zuidvleugel partners is thus ambiguous. The regional collaboration before the finalization of the AASR seems to have had more strategic capacity than it has after the finalization of the AASR. The efforts during the development process have resulted in several initiatives such as the MIRT explorations and collaborations on issues, albeit these initiatives have not yet resulted in concrete interventions, physical or policy-wise, in the spatial-economic situation of the southern Randstad. The groundwork for interventions has been laid in the form of new research and regional sub-collaborations, showing that the regional collaboration indeed has strategic capacity by bringing this about. However, there are several elements that have emerged after the finalization of the AASR, such as the adaptive approach, which limit the strategic capacity at this moment. It seems that due to the indistinctness – or more specifically, the lack of a clear goal and purpose – the effort and commitment to the current AASR process is lowering. Focus and effort is shifting to the MIRT explorations and the regional (sub-)collaborations on specific issues.

## 7 Evaluation of the use of the evaluation framework

For the purposes of this thesis research, the conceptual framework of Haran (2010) has been enriched into a full scoped evaluation framework for the strategic capacity of a regional collaboration as reflected by the performance of one of its products. It has been developed for and tested on the case of the regional collaboration between national government and Zuidvleugel partners.

The resulting overview of process, output and outcomes forms the basis to answer the question of strategic capacity, and has shown to be useful. While strategic capacity is also dependent on other issues – like the dynamic context in which regional collaborations operate, or its legitimacy and presumably more – the performance of the process and results do give a strong indication of the level at which a regional collaboration is able to cooperate to achieve joint policy goals by producing and implementing effective spatial strategies and thus of the strategic capacity. A process evaluation illustrates the manner in which the regional collaboration cooperated, which results in social outcomes that should ideally benefit the realization of the ambitions in the output of the process; the spatial strategy. Indeed, the purpose of having strategic capacity is to effectively intervene in the current spatial-economic situation to realize one's ambitions. Thus, the evaluation framework provides the building blocks needed to answer the question of strategic capacity. This answer is relevant even though the aforementioned other issues are not actively studied.

## 8 Concluding remarks & recommendations for further research

Since collaborative spatial planning initiatives are continuously evolving in the face of the institutional void, a framework has been developed based on existing frameworks. This framework is used to evaluate the strategic capacity, or the ability of a group of actors to cooperate to achieve joint policy goals by producing and implementing effective spatial strategies.

The crucial adaption to the framework is the link between the strategic capacity of the collaboration and the performance of its product. This allows for stricter delineation of the evaluation and for an evaluation of the strategic capacity development of a regional collaboration over time based on the performance of two or more spatial strategies.

### 8.1 Recommendations for further research

The expanded evaluation framework applied on the regional collaboration in the southern Randstad. However, no comparison has been possible to other regional collaborations. It is therefore recommended that additional research is done on the strategic capacity of other regional collaborations in order to develop a frame of reference.

The evaluation framework for strategic capacity has been found to be lacking with regard to legitimacy and the context the regional collaboration under investigation operates in. This means that the collaboration in itself can be found to have high strategic capacity, but limited accountability and responsibility; and due to external developments in the context, the strategic capacity six months from now could be dramatically different. The developments of the Metropolitan region Rotterdam The Hague parallel to the Public Partnership Zuidvleugel (in which the Zuidvleugel partners come together) can and will have an impact on the operations of the PPZ and the Zuidvleugel partners.

For this reason, an adaption or addition to the evaluation is necessary. For example, the evaluation framework could be expanded to include and extra elements besides the original three that refer to the dynamics in the context of the regional collaboration and legitimacy. These elements could include indicators like the level of feedback received from administrators with regard to the practices and the commitment of administrators to different collaborations in the southern Randstad. Another direction for involving the context could be a more elaborate external actor analysis of the similar CSP initiatives in the wider region, including their stance towards the different collaborations.

## 8.2 Final remarks

This having been said, the evaluation framework has considerable potential for meaningful evaluation of regional collaborations. Even though the context of collaborative spatial planning is continuously evolving, regional collaboration which formulated the AASR has shown that strategic capacity evaluation of the collaboration itself can provide interesting insights in its performance. Regional collaborations are likely to stay and the framework allows for critical analysis and can help identify best practices. The question of how collaborative spatial planning should be practiced in the future depends largely on the effort participants and process managers will put into nourishing and improving current processes. Paired with the developments outside the collaboration, only the future will tell how collaborative spatial planning practice will evolve. The findings of strategic capacity evaluation can provide guidance towards the best practices.

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# Dealing with a complex urban object: planning the covers o transport infrastructures in urban areas.

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Keywords: covers of transport infrastructures; coordination between transport an decision making-process.

Our paper focuses on the complexity, in urban planning practices, to coordinate and urban development. This is the case for transport systems organized aroun infrastructures. Contrary to what we could imagine in a first approach, there causality between the construction of such infrastructures and urban devel territories. We mainly observe an intertwining of causal links, and an interpen evolution.

This observation has implications for public policy, whether to create new tr organize urban development. Interactions are still structured at one time or an fields of public intervention strongly related. Problems should therefore be joi planning and urban planning actions differ as much in their challenges as implementation. This generates problems of coordination between stakholders backgrounds, sharing neither the same interests nor the same objectives of action. possible in this context?

To highlight the difficulties of coordination, we focused our research on a interface between these two fields: urban development projects organized around infrastructures covers. There are many reasons to cover a transport infrastr nuisances, to create new available land, or to improve the transport system. W these projects are always at the junction between construction of the structural engineering object); operation of the transport infrastructure (production a transportation system); and planning of urban development project (creation of settlements, etc.).

In a first theoretical part, we will explore the complex links between transport development, and its consequences on public policies. We will then focus on th we ll see how they constitute spaces of confrontation and interaction between planning. We will explain how coordination of collective action between th nevertheless organized in the decision-making process and in the operational completed within the framework of an interdisciplinary research program ANR CANOPE on an organizational analysis of five cover projects in France, Belgium and Ge 2015): coverage of existing railway lines coming out of the Gare d'Austerlitz Gauche (France) ; enlargement of part of the railway network around Brussels ( portions ; coverage of urban expressway and the construction of a tram line (Germany), burying the A55 highway in Marseille in EuromØditerranØe project an new urban areas (France); the coverage of an expressway section in Gennevilliers

# 1 – The infrastructure, product or motor of territorial transfo

## 1.1. The chicken or the egg? Infrastructure or territory?

There are many urban researches that theorize the articulation between transpo urban development. By creating a very schematic map of the main of them, and i that divide the natural sciences (in the study of human-environment report), we possible theoretical models to consider the links between infrastructure and ter

The first two take the form of causality in one direction or the other. We can called "deterministic" (Leheis 2011), in which the object determines its environ meaning it's the infrastructure that determines the territory. It is the oldes works that are mainly interested in the effects of infrastructure on territo example the first works of economic geography that explain the structuration transport system and travel opportunities, and thus infrastructure {like the mod Isard, Moses) on market areas (L sch, Hotelling) or land-use (Von Th nen) (see this model, transport infrastructures have a decisive effect on the territo relationship: they constitute one of the main vectors of urbanization and urban

This model finds its translation in the operational practices of the actors, and transport infrastructure. It is used in particular to support all analyzes based benefit (or model CBA Cost Benefit Analysis), which seek to justify the investm by calculating direct and indirect effects, monetized or not, of infrastructure o urban phenomena, however, are difficult to understand in this single prism. The controversies around the creation or modification of large infrastructures, whe territories crossed by the infrastructure are strongly opposed to the projects some cases it is even the inhabitants of urbanized areas with the creation of then are opposed to its expansion.

We have identified a second approach which is described as "evolutionary" (Lehe represented in urban research. In this approach, the environment determines the meaning that the territory transforms the transport infrastructure or netwo functional balance of the urban system (the same way that the principle of struc selection would according to some an optimal balance of the medium). This mo common. We find an application in the article by Luca Bertolini, about the ur conducted in Amsterdam since the post-war (L. Bertolini, 2007). He shows how policies evolved based on changes in the socio-demographic, economical, or land to him, we are facing a complex evolutionary system in the sense that: firstly periods of incremental change and radical change; on the other hand, the syste and finally, it is possible to identify transitions. The case study highligh economic and social transformations, and their effects on the urban transport sy changes have no effect, other times they produce side effects (the principle of produce a radical change, which involves the reorganization of the transport sys the urban transport system must be able to endure despite changes, socioeconomic a performance criterion). The system must also provide to adapt to changes. It i in a simple causal relationship: the characteristics and developments of trans determined by urbanization of territories crossed.

This model also finds some translations in the operational practices of the acto the engineers who make the transport infrastructure seek to size according to

areas crossed to adapt supply to demand. But the logic of this type lead to le
spillover effects on urbanization: the creation or improvement of transpor
generates new needs due to improved transport times. We can even make the h
continuous improvement of a heavy infrastructure system could in some cases lead
saturation.

## 1.2. The infrastructure as a technical object: crossed interactions betwe urban planning

It is possible to identify a third approach, which can be described as "interac
which the object and its environment (or the transport infrastructure and urban
the most recent examples include the work of (Graham and Marvin, 2001) whose m
highlighting the link between network evolution and social and physical fragment
these authors, the liberalization of infrastructures and development of new te
possible new infrastructural landscapes more segmented, leading to differentiat
infrastructures. In other words, the network transformation is part of a global
technical object and of the social, economic, political, or geographical dynamic
the idea that the infrastructure can not be understood without taking into
relations with the territory in which it is part (analyzing these relations unde
angle the network).

We find the foundations of this interactionist model in the theory of scienc
literature called STS (Science and Technology Studies or Science Technology an
relates the evolution of the society with technical developments. At the origin
the work of history and sociology of science and technics from Thomas Kuhn or
(Bijker, Hughes & Pinch, 1987). These works highlight the multiplicity of dia
(from symbiosis to break) between techniques and societies that produce them. Th
transformation process, they highlight the tensions and resistance forms bet
evolution.

The STS approach is dominated by three major trends, highlighted by (Bijker, Hug
In the "social constructivist" approach based on the sociology of scientific kno
to consider that the technical objects can be analyzed as social objects, t
sociology may therefore apply to it. The Tomas P. Hughes approach then conside
system, that is to say a combination of material elements but also representa
Finally, the approach of Michel Callon, Bruno Latour and John Law, at the Ecole
which technical and social-between is defined by combination or interconnectio
humans (of where the use of the network concept), is better known under the t
network. Without repeating the details of these different approaches, simply ret
lead out of a vision in which technical objects are considered a given. At the
the technical object is defined as a "socio-technical compromise." These app
relationships "environment" within which the technical object evolve. They were
first time in the work of Gilbert Simondon (Simondon, 1958) with key concepts
"associated environment", which allow him to describe an interactive process
transformation and evolution of technical object (Akrich, 1993).

The STS literature is particularly suited to analyzing the relationship between
and urban development, transport infrastructure is seen as a socio-technical ob
transformations can not be understood without taking into account its interac
system, but also with urban territories in which it is inserted. This third

emphasizes crossed causal links between transport infrastructure and urban area
considered as a social construct contributing to change their environment and in

This theoretical approach has consequences for public policy thinking around tr
It is not possible to simply describe the process of transport infrastructure p
only as responses to urban transport demand, or only through their expected effe
crossed. The action takes place in fact in an environment where the infrastruc
territories crossed evolve jointly. Any new production or infrastructure change
the interaction between transport and urban development, and therefore in t
dissociated logics of action. This situation forced collective action and
coordination problems between the protagonists acting at the intersection of
representations, or the calendars of both public intervention fields.

This is particularly true in the case of infrastructure coverage projects. A co
fact at the interface between transport and urban development. It is part of th
the transport infrastructure, particularly in urban areas where it limits the b
road or railway. At the same time, the cover is also an urban object, which tak
urban renewal operations for example, by bringing a new urban ground. Covera
interface between urban planning and transport. It crystallizes, more than o
interaction between territory and infrastructure.

## 2 - The transport infrastructure covers: urban objects at t between development and transportation

### 2.1. Interactions with the transportation field

Covers projects are a key issue in urban transport infrastructure planning. The
structured between the construction of the cover on the one hand, and management or mod
the covered rail or road infrastructure. They take different forms.

a/ The coverage project may itself result from global modifications of the trans
cover is then one of the elements necessary for a larger project related to
covered. This is the case for the Brussels RER, where the few railways cover
firstly to facilitate technically network extension (putting four-way lines), a
acceptance of the works in some cities that might oppose it, by offering sensibl
noise and improve crossing the tracks. This is the case of Kombilosung in K
burying of KriegStrasse helps to report one part of the trafic from the tram
surface and reduce the congestion. This is also the case for Paris Rive Gauche though a
the coverage of railroads is mainly induced by the urban development project,
realization of a new RER station and metro line 14. In these examples, the fi
infrastructure is integrated within the transport project: it would not have bee

b/ Even in cases where coverage is not the primary objective in a transportat
object can nevertheless interact with the challenges of transport when its reali
potential or actual - on projects transport current or future related to the
EuromØditerranØe and Gennevilliers, the covers of motorway lanes create tunn
extremely strong regulatory constraints in terms of security, and thus in c
infrastructure. In Paris Rive Gauche, coverage of railroads necessary to
neighborhood area involves a reduction in the number of tracks, which has impl
the Gare d'Austerlitz operation as it exists today, but also on future opportuni
therefore, on potential changes in the rail network.

These interactions also take the form of strong contraints generated by the realization of coverage. A major constraint is that the infrastructure remains coverage works, as is the case in Paris Rive Gauche or Brussels for the rail Karlsruhe and for Gennevilliers motorway routes. The complexity that it generat in terms of costs and therefore feasibility and programming surface projects. generates constraints on the possible structural supports of the cover, as in Pa detailed plan of structural supports was imposed by the infrastructure manager project.

c/ The cover opens possibilities to reorganize the surface mobility. The covers surface rail or road links. In Paris Rive Gauche, this will physically connect th existing city. For EuromØditØrannØe, coverage of coastal highway creates new p the new districts, and more largely the city of Marseille, to the sea. In KriegStrasse, an highway road that currently separates the station area fron significantly improve urban connections between these two parts of the city coverage RN315 is the opportunity to get a tram to the surface.

In the same way, covering operations offer opportunities to organize connection and infrastructure. These connections are typically associated with changes in conditions, for example in the case of railways creating new stations or modify reorganize traffic. We have already mentioned the case of the new RER station in district of Paris Rive Gauche, which is essential in its service by public trans conditions to implement the new stop and create new exits for travelers, etc. Th are organized mostly around a redevelopment of railway stations. Additional gr cover is used in particular to organize intermodality with buses and cars.

## 2.2. Interactions with the urban planning field

Similarly, covers projects are at the heart of urban development issues in the Therefore, interactions between projects are structured to surrounding developm and the construction of the cover on the other hand. They take also different fo

a/ The covering project can be part of larger projects development of an urban one of the elements necessary for the overall development project. This is th Gauche where coverage of railways in the Gare d'Austerlitz, as we have seen, district to the rest of the district, which is well connected to banks the Seine new facilities in Marseille EuromØditerranØe district has its immediate access is made possible by the covering of the coastal highway: the project leader reconquest of the waterfront. The case of Kriegstrasse coverage in Karlsruhe is of the project of "Kombil sung" (combined solution) by the people in a refer indeed that it is both a transport project and a project urban development: co central element in the redevelopment of downtown and in the development of attractiveness. In all these projects, the main stakeholders involved in the pr as an essential element to achieve the urban development objectives. Consequ coverage based mainly on the overall development project.

b/ Even if the cover objective is to improve transport infrastructure, urban de are still often added. Under the Brussels RER, although the covers are designed four-way lines extension, urban development issues were quickly raised, espec municipalities and local authorities. The cover of the RN315 in Gennevilliers

reducing pollution generated by the infrastructure, but the surface was then spaces.

c/ The cover opens up possibilities for urban development on the surface above t covers are creating developable land. In Paris Rive Gauche, volumes of slabs a who construct housing or offices buildings. The proceeds helps to fund the cove creates public facilities and public spaces on the slab. In Marseille, it is realized on the cover, above the coastal highway. In Brussels, the land created stations, a garden, shops, a sports field, parking, etc. And the new surface constraints on the cover. A major constraint is due to leveling of the above, organizing traffic and roadway surface and thus determines the thickness of th Gauche, leveling the Avenue de France, main avenue crossing the new district ar the maximum height of all other adjacent covers. This setting led by unusual pl solutions in order to cover: the developer carries out hedging office buildings to carry out intermediate cover slab. Another constraint is expressed in terms the cover, which must be sufficient to support arrangements from the surface, mo to buildings like the Left Bank in Paris or some covers of RER Brussels.

The cover also allows to open new development opportunities for the land on infrastructure, by reducing pollution - actual or potential - related to infr example. Burial of the coastal highway in Marseille facilitates spatial Eurom open the new area to the sea. In Paris Left Bank, the creation of the new RER t 14 on the cover railways ensures an essential public transit service to urban district.

## 2.3. Coverage in the heart of the interdependencies between transpor planning

An infrastructure coverage is, as we see, an urban object interacts with both infrastructure and the development of the surrounding urban areas. It plays an technical object between transport and urban planning at the interface between these two fields of public intervention between which it organizes interd interdependencies are structured in several dimensions.

a/ The first physical interdependencies are: formal and functional characterist linked to those of the transport infrastructure as well as those of surfa surroundings. Its leveling, width, length or location of support points, are c and functional characteristics of the existing infrastructure and urban develop the characteristics of future projects. For example, the locations of the suppo Paris Rive Gauche are determined by the locations of the existing track and structures capable of supporting buildings. But the covers of support points wi possible developments of the infrastructure (they limit the number of tracks it and developments in surface (the supports are designed for specific building difficult to change once the realized coverage). Note transitivity of these leveling of the infrastructure will constrain including the height of the cover, the leveling of the surface. Leveling the Avenue de France in Paris Rive Gauche is dete height of the covererage that is determined by the leveling of tracks. But now t completed, its leveling determines those of all future covers added or related.

b/ Interdependencies are structured between the actors involved in collective a those who realize the coverage, those managing the infrastructure and those wh

development in surface. Given the physical interdependencies between what they r
each of them has consequences for those of others. It is also common that some m
others to achieve their own projects. The developer who wants to build in Paris
do that if the developer has covered the tracks beforehand to create a new
Conversely, the developer needs sponsors because the coverage is at least parti
of land to build, and construction above the railway also constitutes one of the
project.

These interdependencies between actors can be analyzed in terms of resources.
first. For the Brussels RER, many covers are funded under the overall envelope
project. None of them could have been funded otherwise. The actors that take a
facilities – mainly municipalities – are therefore dependent in this respect th
RER project. In general, infrastructure covers rarely find their financial balan
transportation or development. The resources of the actors in Paris Rive Gauche,
is the railway operators that hold most of the developable land, either on the
The developer has to deal with the logic specific to these key players, logi
functioning of the infrastructure to cover land valuation. Resources can then b
Railway operators that carry the RER project should thus deal with the tow
infrastructure in the three Belgian regions: municipalities have indeed the abil
four way up the planning permit operations this is likely to cause substantia
railways is with this in mind a key argument promoting local acceptance of the p
the approval of permits.

c/ Finally, interdependencies exist between transport, urban and coverage p
intrinsically linked from a temporal point of view. The achievement of urban d
intervene only once the constructed coverage. Some items can be blocking. For t
RER in Brussels, as the upgrade to four tracks has not been carried across the a
be operated. Now the works to four tracks of the railway infrastructure require
works covering in a few specific areas of the network because these works are essen
tax base on rails in particularly constrained contexts. Other elements may inst
schedule. At the start of Paris Rive Gauche project, the first commercial offi
were determinant to trigger the realization of the Avenue de France which was ne
service of these offices. The Avenue de France from above the tracks, it was nec
first Infrastructure covers. This example also shows that interdependencies int
project process, from design and implementation phases of the various elements.
France realized, his leveling was then a major constraint to the other covers a
surface facilities. Moreover, the first covers railway lead the actors to que
possible to condemn to build the supports of the future covers. This led them t
manager" directing the futur of the entire rail network output from the Gare d
account of future rail projects.

## 3 – Coordinating collective action in circumstances o interdependences between transports and urban development

As we can see, the cover projects are intrinsically linked to the field of tr
planning, two interrelated fields of action but whose logics and action fram
different. This situation raises questions from the perspective of collective a
driving these projects can coordinate and manage these interdependencies? How

action at the interface between the two fields? We have identified four types characterize how the action is organized.

### 3.1. The unthought or unmastered coordination

One might think that collective action goes with the coordination between part shows many situations where collective action is not or poorly organized, and between the different elements of the system is little or no thought. The ste transport and those related to urban development are disjointed: the actors without seeking to establish a dialogue. The question of coordination between arise, at least not a priori. Although there are interdependencies between obj disconnected. The lack of coordination is particularly strong in cases where co one of the two fields, either transports (eg expanding the infrastructure or causes) or urban planning. The action is then little linked with the other fi Gennevilliers, where infrastructure is primarily intended to cover the accepta project supported by the State towards local authorities. Urban development does objective for anyone, and are postsponed.

The lack of coordination in the decision process is most of time unfavourable to su developments, which generally come last, once the infrastructure and coverage case of the creation of the Littoral Boulevard in EuromØditØrannØe project in responsible for public spaces only starts once the cover slab (made by the man infrastructure) is achieved. The cover has structurally « always one step ahead development, which restricts the possibilities for coordination of the action, This is also the case with the RER in Brussels, where most of the covers nee infrastructure to four tracks are sized and sometimes flufilled well before the precise idea of their expectations about surface urban developments.

In this configuration, everything related to the other field of action is po posteriori, being the adjustment variable. For EuromediterranØe where burying affects the whole urban project with the creation of the Boulevard du Littoral, project results in many surface growths that become constraints to manage and i the surface facilities. The actors of urban development, who are coming in las "make do."

### 3.2. The organizational devices for coordination

In order to manage projects, stakeholders are building organizational device structuring coordination between transport and urban planning.

We first find contractual devices: partnership agreements, memoranda of under disposals, etc. The regulation of collective action between transport infrastru development goes on here by a formal clarification of the roles, skills and res of Paris Rive Gauche thus precise the division of responsibilities between the operators, which are also owners of the land above and around the tracks. In oth specifies a priori what refers to urban development and what refers to tra opportunities for actors of the two fields: rail operators take on selling la accept in exchange to follow the requirements of rail operators to enable th business. Such theoretical division of roles is to define each responsibilities it actually often leaves a place to blur, interpretations of rules and games wi example of the question of the division of land properties, mostly treated afte

and not specified in the contracts. At Gennevilliers, property lines had to be after the project: the use and management of lands do not necessarily go to pla realization.

Coordination tools can also be hierarchical, and refer to the construction intermediary to the various elements of the system. Their action covers ei infrastructure, its coverage and surface facilities. The same formal organizatio action. It manage and pilote several elements of the overall project: both th cover (MPM for EuromediterranØe, DIRIF in Gennevilliers, KASIG Karlsruhe); both and surface facilities (SEMAPA in Paris Rive Gauche); or even infrastructure, surface facilities at the same time (TUC Rail Brussels RER). In this situation internally to the structure, between staff of the different services. Some structures can be created for the occasion (SEMAPA in Paris Rive Gauche, EPA E the KASIG in Karlsruhe). All of them are explicitly entrusted with a mission to project issues between those related to transport infrastructures and thos development. This mission for instance involves piloting preliminary studies tha the overall project and built the beginnings of the division of roles. The int also have a role to boost the project or to push its progress. In Karlsruhe, t the tramway project in the planned time frames. According to the project mar calendar at best despite the difficulties is one of the main prerogatives of t the intermediate structure can finally consist in solving all the technical di discussions (including the antagonisms between transport and planning) arising stakeholders.

However, coordination difficulties in collective action between issues of tr development are relatively similar whether there is or not an intermediate stru project shows that the responsibility of a stakeholder in coordinating matters give him the possibility to force the action of others. Each project owner k interests, its terms of action and its own temporalities. Thus, far from defining a st between the protagonists, these devices work more as common frameworks in whi play, and that they contribute simultaneously to change.

### 3.3. Coordination throught the technical design

When the temporalities of project processes overlap between infrastructure, th development project, coordination can go through the design work of these tech interact one with eachother. The actors discuss and negotiate the characteristi In other words, the coordination of action suppose to agree and to modify the c so that they are compatible. The cover slab is at the intersection of transport development: its characteristics (the fact to cover or not, the length of th leveling, its lift, etc.) are often taken as adjustment variables between above the debates and are the subject of socio-technical compromises. In all our case the slab have at one time or another been discussed at a political level, eithe the elected representatives of partner institutions to stabilize funding of the controversies on whether or not to cover (Karlsruhe and Brussels), on the length (Karlsruhe, Paris Rive Gauche, Brussels), on its positioning, etc. We can see political renegotiation of cover characteristics punctuate projects, and can c project process.

The length of coverage is one of the main adjustment variables between the infrastructure and those related to surface development. Discussions can also

interfaces between the slab, the surface and the infrastructure. Connections b
(end of the tunnels created, infrastructure emergences to the surface, etc.) a
Their positioning in space, and their technical and architectural treatment,
coordination between the logics to the transport infrastructure and those
development.

The difficulty of reconciling the challenges and expectations can push the acto
the technical or in the organizational innovation. Coordination then comes fro
solutions, new objects, new features, which allow to take all requirements
especially the case when heavy technical constraints prevent collective action.
can find solutions by modifying the design of the cover slab. The games with
tunnels, extremely demanding in terms of safety features, are particularly indic
the case of the second phase of EuromØditerrannØe, the proposed solution largely
posed by the tunnel laws (most binding as soon as the tunnel is long and compl
new form of partial coverage open hillside. Technical innovation can also
innovations in the organization of the steering action. This is the case in
"bridge building" that doesn t need any slab cover : the building itself is co
and so there is a single project owner for all.

### 3.4. Coordination through constraints

The last mode of coordination is what can be called coordination through constra
the very strong interdependency situations put the stakeholders in project d
constrained by transportation infrastructure and urban development issues. It
the constraints. These systems of very strong rules, which apply to everyone,
only at the margin. In defining what is feasible drastically or not, they frame
reduce uncertainty and stabilize the game. They thus contribute to the coordinat
to constraints then constitutes a large part of the project activity of the
structures theirlogics of action: actors that drive the cover projects very
identifying ant adaptating to constraints.

Some of these constraints, as we have seen, are related to the contractual and
which collective action is organized. Others refer to technical rationality, jus
negotiable. For example, security constraints for the sites over the railways a
various constraints tend to cumulate on the same situation of action. This is t
Gauche project : constraints on the construction of the slab come both from the
of the slab, than from the infrastructure (the release of rail volumes) and from
(the requirements of the city and elected representatives). These situations
construction at the heart of discussions on the management of projects, as
constraints may challenge them. Technical discussions on the implementatio
particularly strong in the negociations between stakeholders and in the develop
The difficulty is to enable the execution of works despite all the difficulties
Gauche, the accumulation of constraints led to the proposal of complex, costly
work methodologies, which commit the project feasibility. These questions
(technical, phasing, workflow, ) often tend to invest the political sphere and deb
space.

However, the constraints are not completely fixed. The stakeholders have leew
constraints fields that organize collective action, and that seem to impose on
phasing, by playing on programs or on steering structures, they manage to cha
them. To do so, players first can change the content of the projects, and so t

interdependencies. In Karlsruhe, the fact of linking the rail project and the
within a single project enabled to build a coalition for the action, which
transportation and urban development issues. This evolution allowed the both to

Whatever the configuration might be, the stakeholders who design a part of the
or a part of the urban development regularly have to choose between fixing cons
the following (including them), or instead let up options open for those who co
is then to find when it becomes appropriate to define constraints that will free
In dooing too much ahead, there is a risk to confront the following to pro
anticipated, and which one must then manage the consequences. Conversely, t
anticipate problems before freezing constraints is limited by the uncertainty in
place. Contexts can evolve even more that the action takes place over very long

## Conclusion

We highlighted how the dynamics of interactions between transportation infrastr
development do materialize on any public action at the interface between these
we have analyzed transportation infrastructure covers as objects at the junctio
have shown that they were in the heart of interdependencies between the infras
covered, and the development of the surface. By questioning the modalities of
stakeholders from below and from above, we could then highlight the existence of
organized forms of cooperation, and test their limits.

It follows from this analysis a reflection track to question the practices
coordinate, and with which tools, to design coherent projects which combine se
particular transportation and urban planning? With the particular case of infra
see that highly structured forms of cooperation, organized from regulatory and
show their limits in the implementation and in the way stakeholders seize them.
collective action is structured in large part at a technical level: coordination
urban development requires a particular capacity of operational stakeholders (e
and in transportation) to test the limits of their practices, and to reconc
technical constraints.

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# COPING WITH THE COMPLEX IMPLEMENTATION OF LARGE-SCALE DEVELOPMENT PROJECTS: CRITICAL QUESTIONS ON THE INTEGRATED PROJECT DELIVERY METHOD

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Keywords: Integrated Project Delivery (IPD), implementation, large-scale development projects

## Abstract

*Our cities and societies are getting larger and complex more than ever before. As a result, urban professionals are seeking new tools and methods to cope with the contemporary urban issues from planning to the implementation process. The challenges are becoming more intense when discussion goes into large-scale development projects. These are often measured with high risks of implementation, extreme cost of construction and a large number of actors involvement. Nowadays, the use of the Integrated Project Delivery (IPD) method in large-scale projects has been deployed internationally as an efficient model among architecture, engineering and construction firms. This model is not only esteemed to enhance collaboration, sharing the project s risks and rew its stakeholders, but to serve as a successful tool for decision making and planning process. Drawing on research of this method, the paper examines the use of IPD in implementation process, not specifically pointing out on the efficiency of this model in technical terms, but instead questioning the effectiveness of IPD within different urban contexts. The paper considers the longstanding planning literature regarding implementation research and strategic spatial planning countering the typical collaborative project such as IPD practice. Furthermore, the case of the city of Abu Dhabi vision 2030 and Masdar City as an extreme case of using IPD method is examined. At the end the paper suggests that the use of IPD in various contexts has to give special attention to the actual development of place and involve the knowledge of local actors.*

## 1. Introduction

Recently, the involvement of multi- actors in planning and implementation of projects is increasing due to the rapid growth of cities and likewise in the complexity of societies. Moreover, need to consider the environmental, social, political and economic concerns are becoming increasingly influential in policy and decision makers agendas. In favor of boosting the economic crisis or exposing the political-economic power among cold-war global politics, cities governments and relevant entities have initiated in participation to urban global competitions. Year by year, cities around the world, regardless of their government system, try to be the winner of this worldwide large development war by using these large scale projects as an urban growth machine. According to Molotch (1976), most city governments can be seen as growth machines. This puts localities in competition with each other in ways that affect the vast majority of their citizens and environments. Certainly his point of view is more applicable in the social science realm, but the idea of using the term *growth machine* in built environment and urban land-use is significant in urban planning discourse. Hence, this paper applies the term of urban growth machine also with reference to large-scale development projects as the main generator of cities transformation. It is important to that this study does not intend to argue the necessity of large-scale projects in contemporary cities, neither to discuss the opportunities or risks of the role of mega projects in the development. Instead,

the main concern of this paper is on the complexity of the implementation in urban projects by oversimplifying the urban issues by using a fixed project delivery method, namely IPD. This method is being applied world-wide by urban professionals to manage complexities of projects implementation, especially in large infrastructure projects. The birthplace of IPD is the U.S., a federal republic government system where the decision making power is divided between the federal government and the government of the individual states. Its practice has been done by an elite group of international architecture, engineering and planning firms based in North America and Europe sometimes referred to as the global intelligence corps (GIC). Given that hypothetically this method might work well in the American cities context, a quick research and sample studies verify other aspects[1].

The main argument of this paper will be supported by the planning literature on implementation research mostly discussed by Wildavsky (1973), using the partisan mutual adjustment concept of Lindblom (1959), and also having a quick review of Patsy Healey s analysis on the transnational of planning ideas and practices (Healey, 2013). Considering this theoretical background, the discussion is focused concisely on the spatial strategic planning of Abu Dhabi and the future vision provided by the city government. The author believes that having the knowledge of the original stories of the strategic planning of the city, how it travels and is translated from the exogenous planning, in the way Healey (2013) describes, is one of the fundamental features of implementation studies, especially for large urban development projects. This study also highlights the importance of the government system of the city since it is one of the main key deciding factors for plan implementation. The final part of the paper discusses briefly the strategic planning of Abu Dhabi Vision 2030 as a federal monarchy and the extensive use of IPD through many GIC firms for their large development projects.

## 2. Urban Strategic Planning: Convention to Invention

In recent years, creating a strategic plan has become the mainstream among cities in order to increase their visibility in national and global milieus. Specifically developing a long-term vision with a strategic approach and introducing innovative technologies are becoming the key feat considerations. According to Albrechts (2004) only some of these strategies are strategic and it is impossible to do everything that needs to be done. Moreover he emphasizes that being strategic requires prioritizing decisions and actions as well as having a selective focus. However, the judgment process and being selective among the wicked problems as discussed by Rittel and Weber (1973) seems a crucial task in which to frame the strategic plan.

As discussed by Healy (2006) and Balducci et al (2011) the literature on strategic planning is expanding and different strategic spatial planning methods have been introduced depending on the political system, economic development, and social context of the nations. However, the question that Alberchts and Balducci (2013) address in their recent article on practicing strategic planning is still pending: *to what extent are the strategic plans different from traditional planning?* This question is becoming more noticeable as new technologies and innovative approaches such as IPD are introduced to the implementation phase of a plan, and the plan becomes the flagship and model to follow, whether it is strategic or not. In both strategic planning and project management literatures, the outline of IPD as a decision making method is delineated in a linear model. In project management, specifically in project development, linear thinking is a predictive approach as IPD. This project delivery method is

[1] The case of Caltrans District 7 HQ in Los Angeles designed by architect Pavel Getov used IPD reveals the limitation of this method in the U.S. in terms of lack of the involvement of non-experts, final users, and citizens in the planning and implementation process (Archdaily, 2011).

an approach to facilitate and optimize this predictability in the most efficient way. Besides linear thinking, IPD is also recognized as a traditional-waterfall-method. In other words, it is a sequential design and implementation process that flows steadily downward like a waterfall (figure 1).

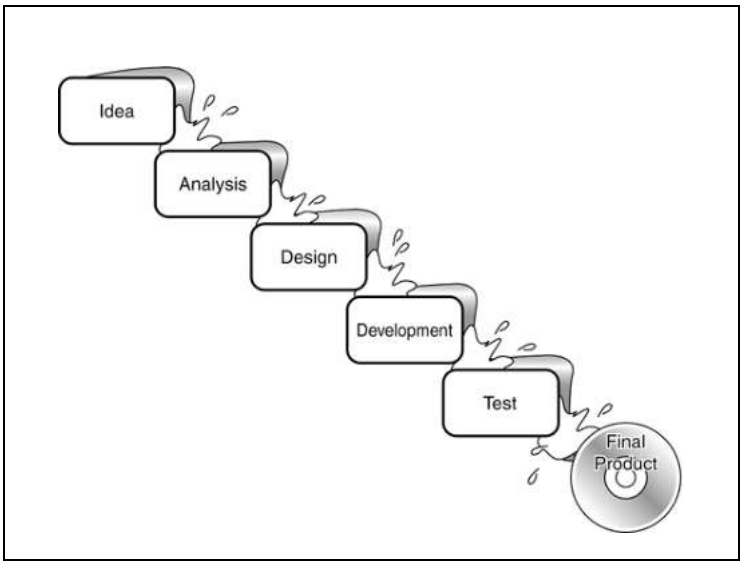


Figure1- Traditional waterfall method (Inqbation, 2013)

While this study moves forward into the use of IPD, it recognizes that this method has common features of rational linear models in planning literature: the process of realizing an issue to making logical decisions in an orderly path in a predictable and stable situation. However as Schon (1971) has argued, based on the rapid change of our society, traditional planning instruments seem to be ineffective as they are designed for situation of stability, not for cities constantly in processes of transformation. The other criticism on IPD is related to the famous discourse of uncertainty in planning issues as discussed by Christensen (1985) three decades ago. Thus, how does this new method (IPD), within its defined instruction and its inherent traditional planning structure, navigate the unpredictable urban issues? And to what extent can cities develop new innovative strategic plans since the new emerging development method is still far from being a strategic one?

In the process of analyzing a phenomenon, system or even a tool, it is crucial to clarify the point of view of the observer. The discourse mentioned above regarding the framework of IPD and its position in planning model, can be seen with another perspective, one primarily cherished by engineers, architects and project managers. Their analysis of IPD is referring to the internal framework in a way to be actually measured as a successful communicative interactive model. In project management literature, IPD would be considered as an adaptive project system[2], which helps perfectly to achieve an efficient result in terms of time and cost of projects with the minimum risks. In this manner IPD holds a strategic attitude managing the project and system, rapidly respond to changes by adopting its initial stable configurations. It is true that with this point of view, IPD is very flexible, responsible, innovative and adaptable but all of them fit within the framework of traditional planning models already proved to be ineffective as discussed in urban planning literature by the scholars mentioned above.

[2] Adaptive project system also known as adaptive resource management (ARM), is a structured, iterative process of robust decision making in the face of uncertainty, with an aim to reducing uncertainty over time via system monitoring (Holling, 1978).

According to Healey (2013), historically, the concept of the creation of strategic planning and the idea of transnational flow of planning was examined in three fields: actor-network theory, institutional versions of policy, and circulation of knowledge. This paper is using the concept of circulate the Knowledge in terms of traveling a new technology and method (IPD) into different destinations and its translation into different urban contexts. Later she mentions the best example of current urban policy modification that can found in cities like Barcelona, Freiburg and Vancouver (Healey 2010, 2013). Such concepts of circulation, especially in large-scale urban projects, raise critical questions of the adaption of the plan considering the new urban context.

## 3. Plan to Implementation: Long Adventure

As mentioned earlier, our cities are becoming more complex and the process of making a meaningful place is neither to build the single artefact nor to use strategic spatial planning, which merely makes it possible to follow if it is not under conditions of complete information as Lindblom (1959) emphasizes on it. Moreover, having a really well written and great plan doesn t guarante chance of success of the plan on the ground (Pressman & Wildavsky, 1973). Indeed, the process of implementing is the significant stage of a project and certainly lots of external actors are involved in the process of the built environment (Werner, 2004). Pressman and Wildavsky (1973) express that even if each step in the implementation of a policy seems like a fixed-task of series, certain to succeed, it can be almost certain to fail as well. According to Albert Hirschman s essay (1975), The Principle o the Hiding hand, the ignorance of future obstacles pushed society to innovate and overcome the obstacles. Through his study based on number of development projects financed by World Bank, he describes how the hiding hand would lead us to unforeseen opportunities. Once setting problems and creating plans, we engage in problem solving by creating the issues that haven t happened yet and we try to solve them through some expectations. Eventually we provide some actors to help navigate and move forward to implement the project. Even so, Hirschman emphasizes that in the process of implementation, unexpected difficulties can rise up and all the targeted calculations and expectations can fail. This stage is considered as a critical moment in Hirshman s discourse and in this stage he believes that success clearly requires creativity (Hirshman, 1975).

In the discourse of planning policy, Presmann and Wildavsky s point on policy implementation describes how the best of intentions, and even great methods and plans, fall apart when it is time to implement them on the ground (Presmann & Wildavsky, 1973). Implementation of the planning policy has always been a critical concern for scholars as well as practitioners. Of course the process of implementation is varied and dependent on the strategic planning of the city and the actors involved in the creation of plan. This process of finalizing the plan on the ground is becoming more complex when our attention shifts to large-scale development projects with the involvement of multi-actors. This complexity of implementation could turn into disasters once we simplify the projects (Hall, 1982), particularly by applying some tools and methods such as IPD. These sort of fixed - technical approaches ignore the hiding hands principles of Hirshman as well as the intell and the partisan mutual adjustment concept of Lindblom (1965). And of course the result will be those examples that Peter Hall in 1982 mentions on to uncertainty, an unavoidable feature of urban planning. In addition, often the time it happens in planning policy, the implementation part moves into more symbolic and conceptual phase rather than practicable and feasible, especially in large development projects as according to Flyvbjerg discussing in his recent overview of megaprojects (Flyvbjerg, 2014). Based on this Danish economic geographer, Flyvbjerg, most of the time the misinformation and mis-providing of data about large development project is on purpose and city governments use this technique to promote their visibility world-widely to become the winner of an urban global war of branding and commerciality (Flyvbjerg et al, 2009). How far IPD as a mainstream approach can help cities to be seen as modern and global city is a question in need of investigation.

## 4. Integrated Project Delivery: The Mainstream Approach

The Integrated Project Delivery (IPD) is one of the most recent popular project delivery methods among architects, contractors, and engineers as well as many international masterplanners (GIC). In this method, the client, the architect and the main construction contractor all sign one contract. This contract ensures that all parties share the risks and awards of the project. In comparison to other project delivery methods such as the design-bid-build, design-build, or construction management at risk, IPD is considered the best model to maximize the collaboration between the primary parties: owner, designer, and builder ensure of delivered the project to the client on time, within cost (Ashcraft, 2014). The IPD term is common in the U.S. since it was developed in the 90 s and trademarked in 2000 by the American Institute of Architects (AIA) (AIA, 2014). Recently, other countries around the world extensively use this type of collaborative project arrangements under other terms such as project partnering in the UK and project alliancing in Australia (Lahdenperä, 2012).

To understand the main aim of this research, a clear definition of such collaborative project delivery and the relevant tools must be given. It is important to mention that the main intention of this research is not to question the technical aspects and efficiency of IPD; instead the research goes one step further and explores the idea of traveling and implementing this method in different urban context. IPD as a conceptual framework for project delivery is distinguished via its standard tool known as BIM (Building Information Modeling). BIM by itself is a process of creating and using digital models for design, construction and the implementation of projects principally under the umbrella of IPD (Hill, 2009). In this paper, to avoid exerting the technical term of BIM and misleading the analysis, the author uses the key word of IPD for the rest of the project with the knowledge that in some projects BIM can be defined slightly different from IPD; however the concept of both used in this paper is slightly the same. According to the current IPD literature, this method seems very efficient in terms of providing highest collaboration between its parties, transparency during the process and sharing the risk and award of final output. As mentioned earlier, IPD is promoted and commercialized as one of the suitable method for large-scale urban projects. Significantly the use of this method is increasing among GIC as well as multinational architectural firms who are moving from designing buildings to designing decisions (Pou, 2012).

We are entering a world which problems are visualized... visualizing virtual model such BIM (IPD) enables improved decision-making and being more aware of the scope of a problem (Pou, 163). This quote is from architect Eduard Pou who believes that designing strategy is a priority step for architecture activity. In his quote, he emphasizes and applauds the ease of using BIM (IPD) and the efficiency of this model that eventually ends up developing a powerful marketing strategy and improves the brand of the architect in selling his services for the highest price. Pou is not the only one who describes IPD as the best solution for coping with complexity in large projects. A general observation shows that in different disciplines, from the business management to construction engineering, BIM is one the successful process in delivering a project. Currently in the urban planning realm, mainly architects, construction engineers and real estate developers use this method as a way to facilitate the development process and get the maximum financial benefit of their projects. Therefore it is important to know the answer of how far IPD considers the final urban context? One might answer that the practice of IPD is not meant to consider the urban scale.

### 4.1 Operationalization and implementation of IPD

IPD looks at the planning process is an operationalized way with its own operational definition[3]. This means that since the process of defining a fuzzy concept is not directly measurable it is therefore through other indicators that IPD can define the existence of problems and move forward to solve them. In some theories this concept might works well, for example in the engineering discipline where the process of defining the complexity usually is a procedure agreed upon for translation of a concept into measurement (Deming, 2000). However, in urban planning processes and large development projects, as discussed earlier, nothing is 100% secure, particularly in the implementation process which is commonly a latent procedure. By using the IPD method for the phenomenon of large-scale project, we transfer the process of implementation to an operationalized system. The system requires some familiar indicators to outline the issue. This point can be the inflection point of the IPD process; the way it continues and operates. If we assume that these familiar indicators are related directly to the final urban context and include the local knowledge in the calculation, the next step of IPD might work well and the final result is acceptable for larger systems (the city). But it seems IPD operates in the contrary way; from the stage of defining the indicators to delivery of the project, the indicators are not very relevant to the final develop place, because those indicators are already set and fixed from the first phase of the plan, which may have been developed somewhere else. In the case of Masdar city, this issue is more recognizable in the sense of implementation of the project with insufficient primary local knowledge.

The importance of this study for IPD in the planning discipline is tangible practically after the recent announcement of several nations such as the UK, UAE and Singapore making IPD (BIM) method compulsory for all government projects (Arabianindustry, 2014.). Among these nations, some go even further and mention the advantage of BIM in their strategic plan such as the UK Government Construction Strategy in 2011, which announced the government s intention to require collaborative 3D BIM on its projects by 2016. The key object for this movement is reducing capital cost and capital burden from the construction and operation of the built environment by 20% (BIM Task Group, 2015). It can be true that BIM may be a successful approach in business and management sectors, but we should also consider that by simplifying the complexity of large development projects, they can turn into disasters from a planning perspective as Peter Hall argues in *Great planning disasters* (Hall, 1982).

## 5. Large-scale Development Projects: Urban Growth Machine

Large-scale development projects can be defined in various ways depending on their scales, costs, and functions and so on. But there is a common slogan for most of them as Flyvbjerg (2003) emphasizes: over time, over budget, over and over again . A political-economic explanation of this sl according to Flyvbjerg.et al (2009) is the strategic misrepresentation, basically lying and deception in implementation from the starting point of the development of plan. This misconduct can be applied to the use (or misuse) of new tools and technologies such as IPD. In this paper the concept of growth machine from Molotch (1976) applies to describe the importance of large development projects in city. The main discussion on Molotch s urban growth machine is situated on the the commodification of place, where the place is understood to be socially and economically valued land (Rodgers, 2009).According to Molotch, in order to grow the urban machine, collaboration of actors and organizations at the local scale is crucial. However, in large-scale projects the roles of local actors are usually limited. This little involvement is more noticeable when IPD as a new project delivery

[3] Operational definition is the process of defining a fuzzy concept or measurement of a phenomenon that is not directly measurable (Bridgman, 1927).

model with defined stakeholders enters into the equation. Paradoxically, it means the engine of the city growth machine by using IPD method in the large projects doesn t work well from the starting point. Furthermore, Logan and Moloch (1987) look at the place as a concept, which becomes a commodity in future development where the emphasis on place is not just a basis for carrying on life but an object to derive wealth from. This raises the question: are large-scale urban projects considered meaningful places or just a tool to attract visitors to enter an exhibition rather than to live in a real place?

It is true that the level of megaprojects is completely different from conventional and smaller projects due to their level of aspirations, complexity and stakeholder involvements. Hirschman (1995) calls them trait making, meaning that ambitiously they have the power to change the structure of society. Besides their complexities and admirations, megaprojects or large infrastructure projects are highly costly area of business and government. Of course the downturn from 2008 has helped the megaproject business grow further (Flyvbjerg et al, 2009). According to the economist magazine in 2008, infrastructure spending for large development project was the largest it has ever been as a share of world GDP (Economist, 2008) and still after seven years it is considered as the biggest investment boom in history. Typically the cost is declared in the proposal plan and increases dramatically through the implementation process and most performance promises are modified in the process of project delivery. Flyvjerg believes that the majority of projects are started by the misinformation about costs and risks and often the final cost of the projects become at least doubled.

Cost overrun is also very common in large infrastructure projects. For example, according to Flyvjerg s study of 20 countries, nine out of ten projects had cost overruns. He emphasizes that to solve the appropriate slogan of large development project over budget, over tim again we need to minimize the gap between expectations and performance for project such a large share of the private and especially public purse (Flyvjerg et al, 2009). As discussed earlier in architecture and project monument literature, IPD is consider as a method with maximum efficiency during the process and transparency between actors, and in some cases extends to solve cost overruns and over time. In the sense of narrowing the gap between planning expectations and implementing the projects, IPD still has a long path to achieve this aim. The case of Masdar City in Abu Dhabi is a good example for this dispute.

## 6. The case of Abu Dhabi: Vision 2030 and Masdar city

Abu Dhabi is the federal capital of the United Arab Emirates (UAE) as well as the capital of Abu Dhabi emirate, the largest emirate among the other seven which form the UAE. The city is the house of federal government offices, president of the UAE who is the ruler of Abu Dhabi and member of the Abu Dhabi Emiri family (Ponzini, 2011). Abu Dhabi is also the home of important financial center such as central bank of UAE, corporate headquarters of many companies including numerous multinational corporations. Due to its discovery of oil in 1960, the city has experienced significant urban transformation from a small fishing and pearling village to a city (Elsheshtawy, 2008).Recently Abu Dhabi tries to create a diversified, globally-integrated and knowledge-based economy. In 2008, the new generation of ruler, Sheik Khalifa who has strong tendency towards western approaches decreed to create a long-term vison plan for the city of Abu Dhabi for economic progress through the establishment a common framework. With this ambition the city of Abu Dhabi developed the vision 2030 including two different documents provided by two separate government organizations with one person as the leader, Crown Price of Abu Dhabi. The first organization is the Abu Dhabi Council for Economic Development (ADCED) formulated the economic vision 2030 and one year later in 2007, the second organization; Abu Dhabi Urban Planning Council (UPC) provided the plan vison 2030. The main framework of these two visions was based on a sustainable economy (ADCED, 2008).

Due to the monocracy government system of Abu Dhabi, the prince crown of Abu Dhabi, Sheik Mohamed, served as the chairman of both organizations. In this context it might also not be a big deal to see that all urban development projects in Emirates need to be approved by the government and Executive Council over the direct mandate of Sheikh Mohamead. This means that basically any proposed master plans require the approval of its creator (Figure 2). One important observation of the Abu Dhabi plan vision 2030 is the conceptual characteristic and abstract framework of the plans, which can be modified and re-defined at any time. Reading the maps legends provided in the plan clarifies this concept of abstractions and ambiguity.

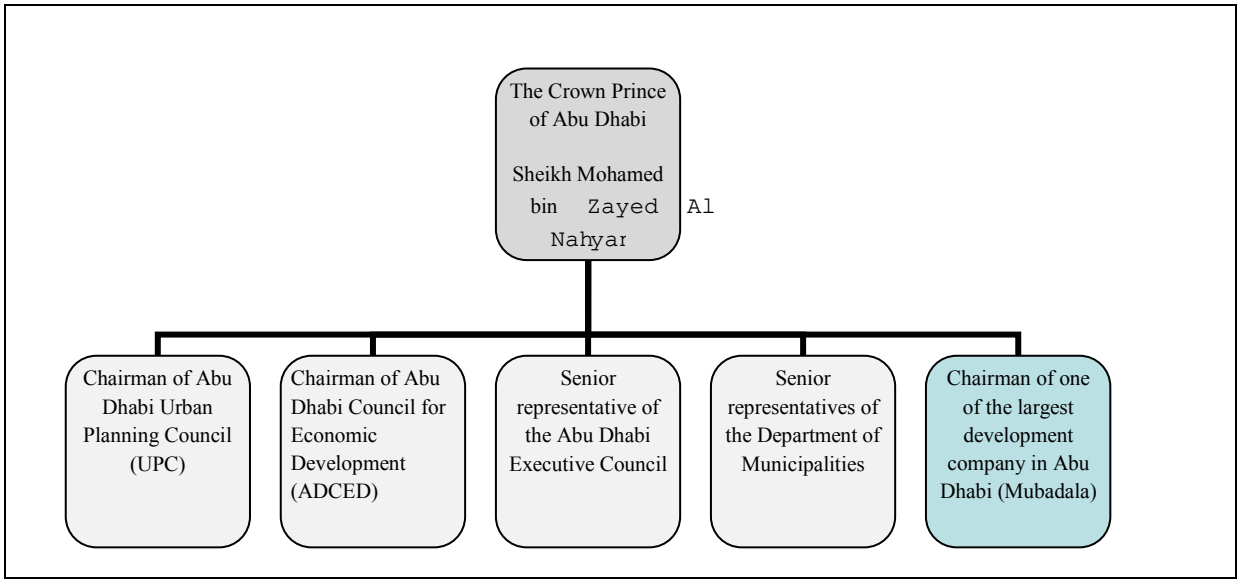


Figure 2: The table shows the power in planning system of Abu Dhabi is in the hand of one person, the Crown Prince of Abu Dhabi. All urban development projects in Abu Dhabi need to be approved by government over the direct mandate of Sheik Mohamed, the Crown Prince of Abu Dhabi.

It might also be notable to mention that the chairman of one the most dominated development company in Abu Dhabi, Mubadala, that works on many large urban infrastructure projects, is the same chairman as ADCED, UPC and Executive Council (Mubadala, 2015). As a result, the actors in decision-making process are limited and the distance of relevant actors from plan to implementation is very short. In environmental policy, Walker (1988) and Barry (1999) might look at this authoritarian manner as a more efficient one to tackle environmental problem rather than an obstacle. Also the 40 year history of monocratic regime in Abu Dhabi shields this oligarchic system within its top-down approach in planning. However, the result of planning shows that the idea of circulating knowledge, translating and modifying the policy based on the urban context do not apply in non-democratic societies such as the UAE. Moreover, the use of the new innovative project delivery model, which originally promoted transparency and sharing of knowledge among its stakeholder (even the fixed actors), is no longer applicable due to the small circle of decision makers.

The main issue arises when a project in this system introduces itself as the number one approach in the world and other cities start following its structure for future urban development. The case of Masdar City, master-planned by the British architecture firm Foster and Partners (Economist, 2012) and subsidiary of Mubadala, is a proper example of this argument. The case of Masdar City is selected primary because of its self-description as a model for what can be achieved in other cou (Nader, 2009), and secondly because of dealing extremely with IPD (BIM) in their ongoing constructions. In both economic and planning terms, the 2030 vision Masdar City is introduced as the

world s first zero-carbon, zero-waste and car-free city with the slogan One day all cities will be built like this (ADEFC, 2010). On the other side, the Abu Dhabi economic vison 2030 introduces the Mubadala Development Company as the main source to provide sustainable financial return (Mubadala, 2015). This company was established in 2002 by the government of Abu Dhabi as a public joint stock company. According to the Mubadala website the company s main mission is to stre Abu Dhabi s economic growth by investing in sustainable profit over the long term plan and act as a catalyst in diversification of the economy. In order to achieve this vision, Mubadala invests enormously in large infrastructure developments including urban projects in cooperation with world-class architectural and construction international firms. One of the active sectors of Mubadala is Masdar, also known as the Abu Dhabi Future Energy Company (ADFEC). Masdar (ADEFC) was established in 2006 as a way to develop and commercialize renewable energy solutions and clean technology in Abu Dhabi and around the world. ADEFC initiated Masdar City as one the worldwide sustainable projects that will host the headquarters of the International Renewable Energy Agency (IRENA). Looking at the plan 2030 vision discloses that the use of IPD (BIM) to visualize the masterplan of Masdar City was very successful in terms of branding and promoting the city globally. Regardless of all these promotions and advertising of the city, Masdar City is carrying out several issues relate to the implementation of projects.

Masdar City project was initiated in 2006, with a US $18-22 billion estimated cost and the city was planned to be constructed over seven phases and to be completed by 2016. This initial plan was calculated by an integrated project delivery method and applied BIM for the final 3D visualization. Over two years of starting the project only six buildings of the city were completed and occupied in 2010. The plan is already very behind on its schedule due to several unexpected and unplanned issues. The first phase supposed to be done in 2009, due to the global financial crises, was postponed until 2015 with final completion scheduled to occur between 2020 and 2035 (Khaleej times, 2010). From the initial master plan, the project has been altered in several ways, which is not very surprising from a planning perspective and literature. However, these changes massively affect the projects from the time of completion to the cost. Due to the environmental miscalculation and miss-conception, the construction of solar panels will be less effective than anticipated because of ignoring the impact of local dust storms (Crot, 2013). As a result, the main slogan of Masdar City is changed from zero carbon to low carbon and the promise of becoming the number one project in energy saving and production is no longer secure. The estimated cost also has declined due to the changing plan of not implementing solar panels on the site. Additionally, the initial design was to reach 100% sustainability and to become an eco-city by banning automobiles, but this initiative has been modified due to the overall cost and also neglecting the culture and social background in the sense of driving personal car. The issues mentioned above are just a couple of visible planning problems affected by using a complete planning method for creating cities. As discussed in implementation policy literature, there is no plan that can be implemented with 100% unpredictability and uncertainty in the process.

## 7. Conclusion

Success in large-scale urban development is typically defined as projects that are delivered within budget, on time, and with the promised benefits. To reach this level of success, the IPD method is considered the proper choice among architects, engineers, and project managers. However success can be defined in different ways and it totally depends on the actors and scale of projects. We should accept that by increasing the megaprojects the need of model delivery projects that consider managing time, cost, and benefit are increased. IPD may be a useful approach for overcoming the shortages of large projects, yet it needs to go one step further beyond efficiency and become more flexible for dealing with uncertainties. This research tried to open a new way of looking at the IPD method, from the perspective of implementation policy rather than just a technical and managerial vision. Primarily the well-defined actors and structure delivery method of the plan is oversimplified to be operational in

different contexts. This simplification of operational system doesn t share any space for local knowledge and eventually this causes the future issues in urban projects.

Until now, the idea and technology behind IPD (BIM) was able to travel from the U.S. to all around the world, but the question of its translation into different physical, social, economic and political context is yet to be answered. A city like Abu Dhabi with an absolute monocracy government system with a desert ecology needs to apply IPD in a different approach from that of California or London. Of course the decision-making process varies based on the nation and on the strategic planning of the cities; however, the planning issues occur when this project delivery method is considered as the one that is the best method to build the environment (AIA, 2014) and becomes one of the main players of the transformation of contemporary cities through large-scale development projects. According to Rapoport (2014), Masdar City project in Abu Dhabi may attract significant attention and inviting visitors, but it also may not be considered as a replicable project. The result of this project will obviously be a product of a particular set of conditions such as a large source of oil and continued economic growth. Such project as Masdar City risk becoming model towns, exhibits rather than real places (Rapopor, 2014; Keeton, 2011)

Finally, collaborative project delivery such as IPD raises radical questions of democracy in the transformation of contemporary cities through large-scale development projects and the responsibility of planners risks being limited to the mere technical aspects taken care of by architects or engineers. The domination of GIC, as the big clients of this method, also needs to be considered due to their large influence on shaping cities globally. Furthermore, in the use of IPD, not only is having knowledge of the government system of the city crucial, it is essential for there to also be a thorough assessment of the local urban, economic and political context. The extreme case of strategic planning and implementation of IPD in Masdar city in Abu Dhabi reveals this deficiency of IPD. In conclusion, the author wants to finish this paper by proposing a final question: while governments start to mandate the use of BIM (IPD) as a common standardized method for large scale projects, how do the final projects include local variables related to the urban, political, economic and social context as well as the knowledge of non-involved actors? This question requires further research in both urban planning and urban science disciplines to fill the gap between longstanding literatures from urban theory to urban practice.

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**NEW WATER CULTURE UNDER FUZZINESS: using complexity to reframe water policy debates**

Ing. Martina Lazarova[1], Ing. arch. Daniela Gazova[2], PhD.

The paper focuses on the idea that the language of current urban water management is full of fussiness what address different forms of uncertainty within the city territory. Therefore the importance of water governance and its cultural adaptation has become a major issue of discussion. At the same time, concerns have been raised that traditional water culture is wrongly adapted to challenges associated with climate change, population growth, ecological and social imbalances. Integrated water management represents fully complex approach to governance in functionally specified field of ecosystem planning policy. The aim of the paper is to examine calling for new water ethics and its new culture of managing. In addition, the paper contributes to the debates about co-designing with nature and reviving success of old traditions. Indeed, management in the sense of new water culture requires knowledge of the system in its full complexity. While time lasts there will always be a struggle around water, but as Jerome Delli Priscoli (1998) states water is far more humanity's learning ground for building communities. In fact, the social learning and collective knowledge of the system are recognized as crucial step for water management. Therefore, partnerships through water sharing plans can be seen as a way to increase water resilience to such events as droughts and floods. The paper·s findings are supported by theoretical arguments and practical experiences from the project: Redevelopment of residential neighborhood ilina-HÆjik, which potential is in the way how to sha specific area of urban fringe.

Keywords: water resilience, cultural diversity, social learning

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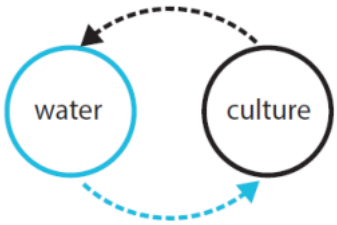
## 1. INTRODUCTION




Picture 1 Water shapes culture and culture shapes water
Resource: Author

Historically nobody has doubt about the importance of water as essential lifeblood for every civilization. Most settlements were founded to take advantage of and to be in harmony with the water element. Some of these were even built on water, whether in the river, lake or in the sea. Water has become crucial for the flourishing of cultures, and vice- versa (Figure 1). On the one hand, water has always had cultural significance. The first societies were irrigation-based cultures with ingenious water management structures as for example China, India, Mesopotamia or ancient Rome. It is therefore not surprising that water carries humanity s collective memory of management practice. A key challe for water resilience is therefore to reclaim the proven solutions of the past, though another context, to present day. And according to Cabreba et. al (2010) this is not an easy task. On the other hand, through-out history, a cultural stewardship relation towards water was crucial for the sustainability of the water resources. Especially in the urban context this becomes even more obvious, as the higher urbanization puts higher pressure on local water resources. (Nilsson, 2006) Within this view culture shapes both conflict and consensus in understanding, valuing, using, and managing water. In summary, it is our values, faiths, and ethic that ultimately drive our management solutions (Priscsoti, 2012).

The research focuses on the idea that the language of current urban water management is full of fussiness what address different forms of uncertainties within the city territory ( Pahl-Wostl, 2002, Pearson et at., 2010, Brown et al., 2001). Therefore the importance of water resilience and its cultural adaptation has become a major issue of discussion. Until just a few decades ago, the changes of water culture have caused a number of problems. Nowadays, concerns have been raised that traditional water management is wrongly adapted to challenges associated with climate change, population growth, ecological and social imbalances. Much of the call to action has been, understandably, dominated by fear and pessimism: for example, fear of destroying the ecology or fear of social conflicts. (Priscoli, 1999, Pahl-Wostl, 2002, Pearson et at., 2010, Brown et al., 2011) The core concepts utilized in this paper draw upon the traditional knowledge, stewardship and time-tested management solutions, which can help to meet the complex needs of a changing environment. The aspiration for change has been tagged in variety of way, but in this paper is referred to the concept of water resilience . The motivated by the core research question: **How can cultural diversity and social learning contribute to future urban water resilience?**

Although extensive academic research has explored the shifting from posting simple system to using more complex frameworks to understand the diversity of water resilience·s puz Falkenmark, M. Allan, M., Folke, C. Gordon, L. J gerskog, A. Kummu, M., 2014 (Folke S.R. Walker, B. Scheffer, M. Chapin, T. Rockstr m, J., 2010), a little attention has been attribute of cultural diversity and social learning in the concept of water resilience (Cabrera, 2010).

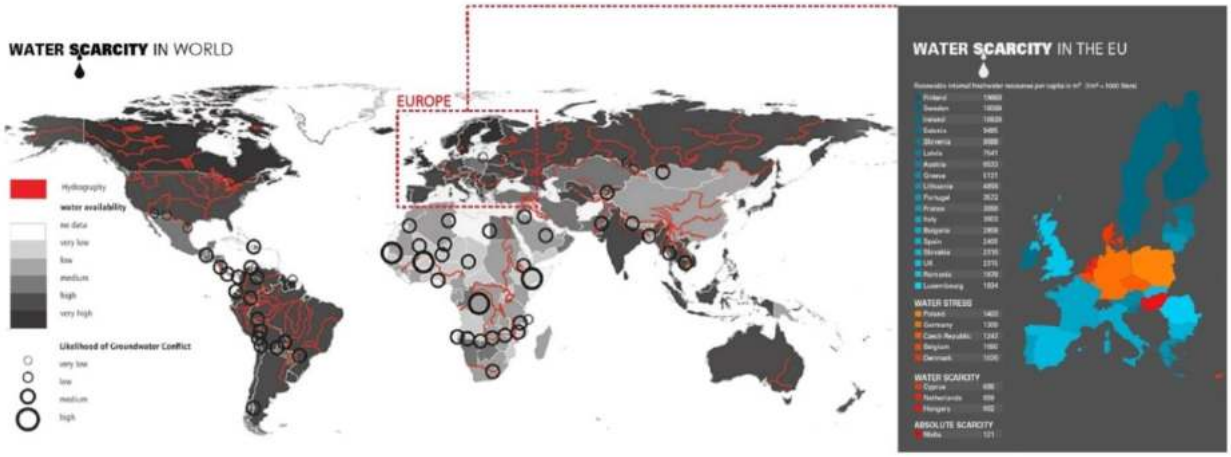



Figure 2 World water availability and water scarcity in the E , Likelihood of water

A) Global water availability map (2011) estimates based on current projections for future water sustainability problems. Actual emissions and climate variations could alter projected drought patterns.
B) The global-level maps and graphs provide the reader with a detailed impression of where our water and sustainability problems are located.
C) Renewable internal freshwater resources map (2011) provides a detailed impression of where water scarcity problems are located in E

Resource: A) University Corporation for Atmospheric Research. 2014
B) The institute of Internal and European Affairs, 2011

## 2. LITERATURE REVIEW: WATER RESILIENCE

According to United Nations predictions, by 2025, 1.8 billion people will be living in countries or regions with absolute water scarcity, and two-thirds of the world's population could be living under water stressed conditions (Arup, 2011). It is because, in many cities all over the world, current water is poorly managed and water policies are simple unsustainable. Great historian Edward Gibon, while walking around Rome·s ruins, wondered how such an impressive culture had fallen can be found in his statement that what does not evolve, is decadent. For this reason the challenge that the present-day society has to face is to match up to its ancestors: to give the adequate response to the moment in which that society is living (Cabrera, 2010).

Despite the recent hype in the literature around resilience, agreement on key aspects of the concept of water resilience is still missing. Resilience in general has been variously defined and its conceptualization in recent years has been called fuzzy and contested . It shares similarities with sustainable development in that it is frequently used as an umbrella concept to describe a broad array of in terrelated issues (Dovers, Handmer, 1996). The concept of general resilience has occurred in modern times primarily through the work of Canadian ecologist C.S. Holling in1973, who defined resilience as persistence of a system through change. Since then, the term started to run through almost all the disciplines and languages concerning individuals and institutions, as well as cities and territories. Its multidisciplinary and its adaptability within dynamic systems and complexity theories make the concept more and more attractive (Garschagen, 2011). Now, over 40 years later, the CMAs (Catchment Management Authorities, 2012) sustains that resilience consists of two related aspects;

- **general resilience** - the resilience of the system as a whole to any and all kinds of disturbances.
- **specified resilience** - the resilience of what, to what , which calls for ide particular limits in the system, beyond which it begins to function in a different kind of way, impacting on the quality of ecosystem services (Catchment Management Authorities, 2012)

**water resilience** - sets an ambitious goal by tackling the world s ke in the spotlight of global change

school of water landscape

school of water engineering

According to CMA, we distinguish between general and specific resilience in relation to water management, because this provides an important conceptual differences in our understanding. The general resilience is defined as resilience of an entire system to all kind of shocks. On the other hand, specific resilience is described as the ability of a particular part of the system related to specific control variable, to cope with disturbances. Specific resilience is possible to quantify and analytical explore, while general resilience is more complex and often impossible to measure analytically. Following Rockstr m et. al (2014), water play a fundamental role in supporting both specific and general resilience. Therefore, in order to usefully define resilience of water sector it is necessary to look at its origins and the current academic uses of the term **water resilience .** The foundation for this research was to compare the perspective of water landscape with perspective of water engineering, and to find out general definition for their possible interrelationships in the context of spatial planning.

## 2.1 A BRIEF HISTORICAL PERSPECTIVE OF WATER RESILIENCE

In the recent years, researchers have developed the concept of water resilience; however, it is not fully new. For the purpose of this paper we have reviewed some of the past literature, in order to determine the evolution of water resilience-based concept and simultaneously to outline new perspective of the concept based on cultural diversity (Figure 3). The historical roots of the concept reached the early 1990s. Before this period the management focus were on blue water as fully fragmented and sectorial approach to water resources that has led to poor services and unsustainable resource use (Bartone et al., 1994, GWP, 2010). After that, in response to the deepening understanding of water s fundamental roles in the life-support systems of our planet, water resource thinking has broadened from blue water only to integrated blue-green approach (also known as green water concept) (Fiorino, 2001). Put another way, as Scheffer et al., (2001) stated in his definition, the ecosystem processes modify the hydrological cycle and the hydrological cycle affect ecosystem processes. These mutual interactions affect the ability to buffer stress and shocks. Both traditional concepts were followed by a more systems-oriented approach of integrated land and water resources management in the early 2000s. During that time the attention was focused on the new situation, in which abrupt, large-scale changes in the hydrological cycles can no longer be overlooked (Rockstrom et al. 2014). However, over the last 15 years, the definition of water resilience appeared and evolved. The core of mainstream thinking has become the idea that water resilience refers to the ability to deal with change while continuing to develop (Folke et al., 2010).

Synthesizing the evolution of the water resilience-based concept, the need for a new focus on water management has recently been recognized by science community (Montanari, 2013; Cabrera, 2010). This implies a deeper insight into fundamental role played by culture in water management practice. Drawing on the huge uncertainties concerning the water hazard, it is needed to build on local knowledge,

historical experience and cultural diversity. Therefore, this study brings together a set of unsettled water-culture related challenges.

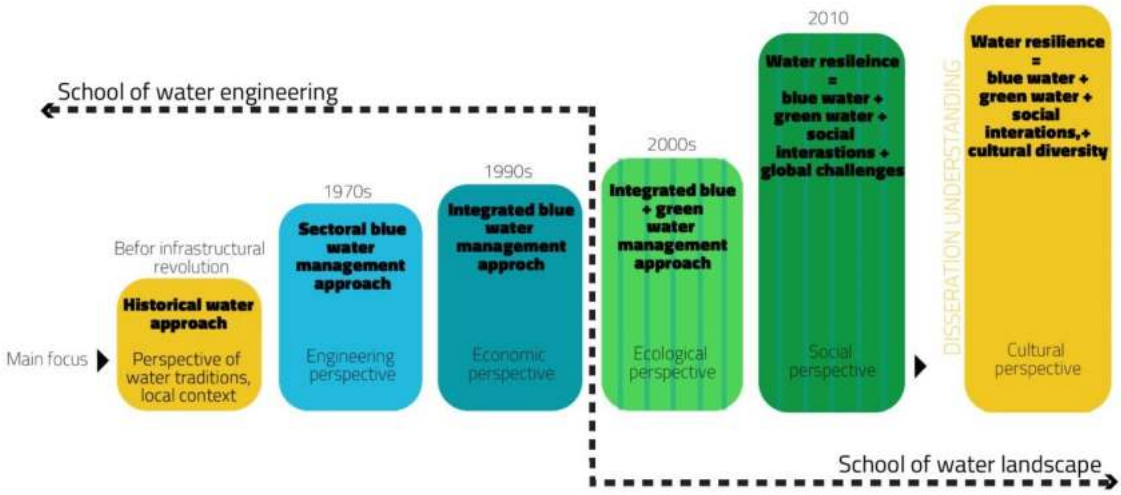



Figure 3: The evolution of the water resilience-based concept and new perspective of the concept based on cultural diversity
Resource: Author according to (Rockstr m et al, 2014)

## 2.2 THE MEANING OF WATER RESILIENCE

Although the idea of water resilience is a bit messy in and by itself, in this paper two conflicting schools offer explanations of water resilience. Even Canadian theoretical ecologist, C.S. Holling (1973), who firstly developed the general concept of resilience, made a distinction between engineering and ecological resilience. On the one hand, **water engineering school** defines resilience as the ability to return to an equilibrium or steady-state after disturbances. The effectiveness of a resilient infrastructure then depends upon its ability to predict, absorb, adapt to, and rapidly recover from a potentially disruptive event such as droughts and floods (Holling, 1986, Wallace et al. 2010). In light of this definition, water resilience is mostly about delivering services regardless of disruptive events that may occur the ability to take a licking and keep on ticking (to quote the old Time resilience is mostly defined according to how long it takes for the system to recover after a shock. The emphasis is on return time, efficiency, constancy and predictability , all o qualities for a fail-safe engineering design (Holling, 1996, p. 31). Despite, this understanding is rooted in most of current water management practices.

At the other hand, the second **school of water landscape** considers water system as more than the sum of their engineered parts. They can be described as socio-ecological systems, as they require complex interactions between human, technological and environmental components. In this perspective, ecological resilience is more complex and has very broad implications (Folke et al. 2010). School of water landscape defined water resilience as the magnitude of the disturbance that can be absorbed before the system changes its structure (Holling, 1996). Therefore, it is focused on the ability to persist and the ability to adapt within critical thresholds (Adger, 2003, p. 1). The main difference between these two schools is that ecological resilience rejects the existence of a stable equilibrium and requires a mind shift in water thinking (Rockstrom et al., 2014).

To sum up, the literature review indicates that the water resilience is another intuitively appealing buzzword. However, it is worth questioning whether water resilience has simpl of intuitively appealing yet unclear concepts (such as resilience and sustainability). It s certainly no easy to define, or specify what a resilient water system might look like. Following Folke et al. (2010) and Rockstrom et al. (2014) for the purpose of this research water resilience is defined as, the complex, multi-dimensional system that is not at equilibrium. It periodically or constantly changes and adjusts. The key is to shift away from yesterday s focus on how to reduce environmenta activities, towards reconnecting economic, ecological, social as well as cultural attributes. Simply put, the research is motivated by question: Are two different approaches of water landscape and water engineering mutually exclusive? The paper considers them to be complementary and both useful at different territories and different scales.

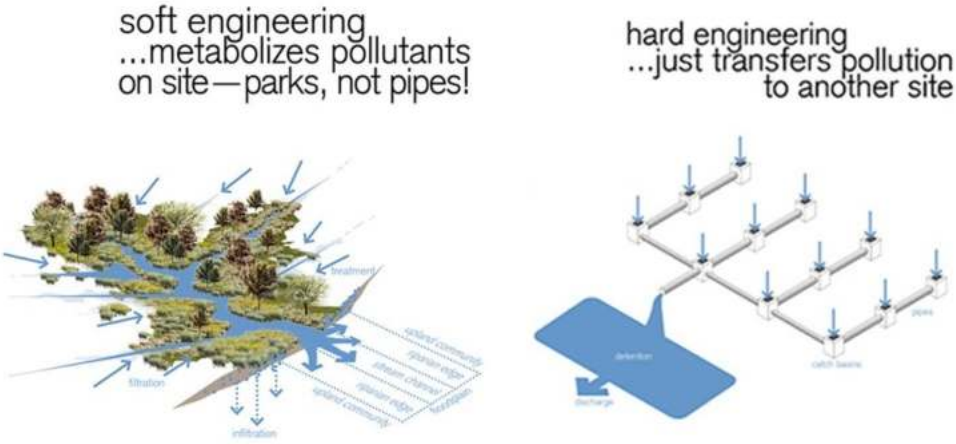



Figure 4A: An example of water landscape perspective:
Figure 4B: An example of water engineering perspective
Resource: University of Arcansas, Community Design Centre, 2011

## 3. CORE CONSTRUCT: LINKING WATER RESILIENCE WITH CULTURAL DIVERSITY

In keeping with the intent to promote both, cultural diversity and water management, this paper offers an array of ideas to understand mainly the cultural implications for growing water resilience. Therefore, the foundation for the research was the extant (Jonson, 2012, Donahue, Johnston. 1998) literature on the relationship between water and culture. Therefore the paper points out, that water resilience is shaped by the cultural perspective and historically embedded urban water values, expressed through institutional arrangements, regulatory frameworks, and physically represented through water systems infrastructure. The focus is made on the question: How to transform cities through reviving time tested solutions in urban water management, urban design, and governance.

A classical overview of **theories of culture** was provided by Keesing (1974). He distinguishes between culture as an ideational system and culture as an integrated adaptive socio-cultural system (most classical anthropological theories and schools). In the first case, culture is ultimately in the head of a collective mind and it only refers to perceptions, beliefs, norms and values. Culture in this sense can be used to explain social practices. Culture as an integrated system integrates the social practices in the concept. It emphasizes the interrelation between ideas and practices. Cultural diversity, as recognized by UNESCO (2009) is crucial to environmental sustainability; it generates the multiple human

possibilities necessary for generating sustainable adaptations in a changing world . It is with understanding in mind that human history and the evolution of culturally diverse understandings of life reflect in many ways our interactions with, need for, and use of water. Because culture is learned, lived, and expressed in broader social relationships, it is a significant dimension that shapes water resilience. This paper involves not only managing flows to sustain ecological processes, but also ensuring that the water flows are sufficient to recognize and sustain cultural ways of life.

Some of water management solutions have only been developed recently, whilst others have a considerable history behind them. While there is no one model, or concept that will be universally applicable and effective in every circumstance, there are certain universal conclusions that can be recognized (Johnson,2012, Gleick, 2006). Here, these are briefly outlined:

1) The increasing vulnerability of water resources calls for **holistic strategies** and **diverse approaches** to water management to be recognized and supported.
2) **Indigenous and local communities** are invaluable partners in this regard, representing a vast array of adaptive knowledge and practices which have not only sustained engagements with water for millennia, but also offer much potential for creativity and innovation.
3) Local water practices **do not exist in a vacuum**. A key challenge for water resilience is therefore to reclaim the proven solutions of the past, though another context, to present day.
4) Water issues must be tackled at **various levels**. Water governance therefore requires a dance between levels . When water resources are brought under centralized, bureaucratic control, the resilience of local forms of governance is often diminished. Therefore, soft path complements the twentieth-century s large-scale, centralized infrastructure with lower cost systems, decentralized and open decision-making
5) **Social learning** and **collective knowledge** of the system are recognized as crucial step for resilient water management. Collaborative practices aim at developing a shared construction of reality through the understanding of local contexts.

To conclude, trough time, societies have developed different technologies, practices, and institutions for managing water, what brought enormous benefits to humankind. But they have also failed to solve some of our most water problems, and in key ways they are unsuited to our new challenges. This paper brings to the fore the increasing scientific evidence for a rapidly changing global water agenda, shifting from a general focus on water management under assumptions of stability and predictability, to a focus on water resilience in a world of instability and surprise (Rockstr m et al., 2014). The core cor utilized in this paper draws upon water resilience and importance of cultural values and traditional management solutions in it. The next section of the paper discusses in more detail also the role of social learning.

## 3.2 LINKING WATER RESILIENCE WITH SOCIAL LEARNING

In recent years the engineering paradigm dominated by technical end-of-pipe solutions, has been replaced by a paradigm based on the notion of living with water (school of water landscape) approach the limits of control and the importance of uncertainties are clearly acknowledged. Acceptable risks and decisions are negotiated. This cultural framing supports integrated solutions and the implementation of multi-functional landscape with an increased adaptive capacity of the system. New paradigm argues for an integrated approach however, most international regimes are focused on single issues such as flood protection. The clearly perceived need to adapt to climate change requires a whole range of measures to be implemented. The processes by which adaptations to be judged at different scales will involve new and challenging institutional processes (e.g. Adger et al., 2005). Moreover, water transboundary cooperation demands improving processes of **social learning** to integrate distinct cultural frameworks that agents at different locations use to deal with their issues at stake. As Pahl- Wost (2007) states, within governance perspective, social learning is an essential element of policy development and implementation. It refers to both the learning process and to its outcome. The e moving from the need to simply know more and placing even more information to policy and ex circles to developing adaptive cross-sectoral strategies and new types of knowledge to respond adequately the changing dynamics of current world. The problem that we face when we deal with resilience lies not so much in our lack of understanding of the functioning of ecological systems, but in our lack of understanding of the governance and cultural systems and how they are structured and managed and interact with ecological systems, and how we produce science and knowledge for policy. Following Mostert ·s (2005), new institutional arrangements are needed to structure the more sustainable framework for collaborative water governance in transboundary water management (Figure 5). Therefore, the problem lies in developing new identities, as well as institutions and individual capacities, that are more socially and ecologically robust with the common goal of water resilience.

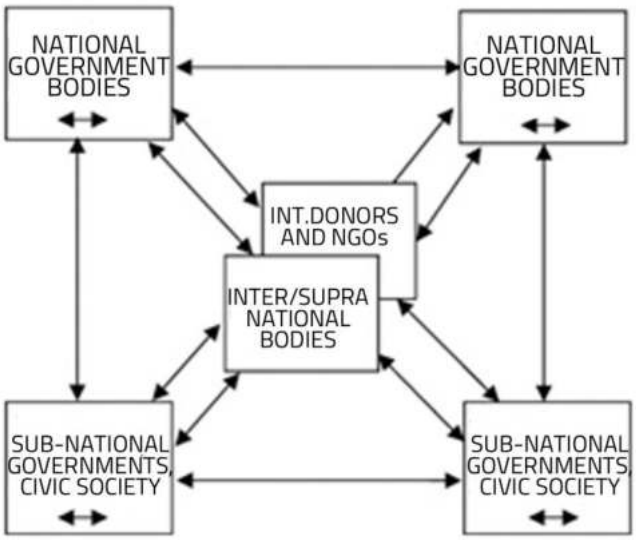



Figure 5: Organizational famework for collaborative water governance in transboundary water management.
Resource: Mostert, 2005

Mostert·s model outline the organizational framework within which social learning unfolds. It needs to take place between formal governmental authorities and stakeholder groups organized formally or

informally at different scales. Integrated water management typically requires cooperation across these sectorial boundaries:

- **National cultures** determine the nature of transboundary cooperation. They shape legislation and negotiation strategies and influence the nature of the participatory processes (Patel and Stel, 2004).
- **An individual** holds different social roles and belongs to more than one social and thus cultural group. Hence, it is possible that different cultural frames occur within individual persons and may be activated in different social contexts. They act as representatives of an interest group and represent the cultural values of these groups
- **Professional cultures** (e.g. farmers' beliefs and practices) may be more important than national cultures for some stakeholder groups and establish an identity across national scales. The influence of national cultures seems to be stronger than the influence of the technology/expert culture characterizing the community of water resource practitioners across national boundaries (Langaas and Timmerman, 2003).

## 4. SHYNTEHSIS: BUILDING WATER RESILIENCE

Based on the aforementioned theoretical discussion in literature review, the paper defines the concept of water resilience and its interrelationship with culture and social learning. The focus of the paper is to study the adaptability of water systems and to meet the new challenges in navigating ecosystem dynamics without compromising long-term sustainability. Through this chapter, we argue that:

- **H1**: Water resilience is combination of water landscape perspective and water engineering perspective
- **H2**: Water resilience is built on local knowledge and cultural diversity.
- **H3**: Social learning is a tool how to address water resilience.

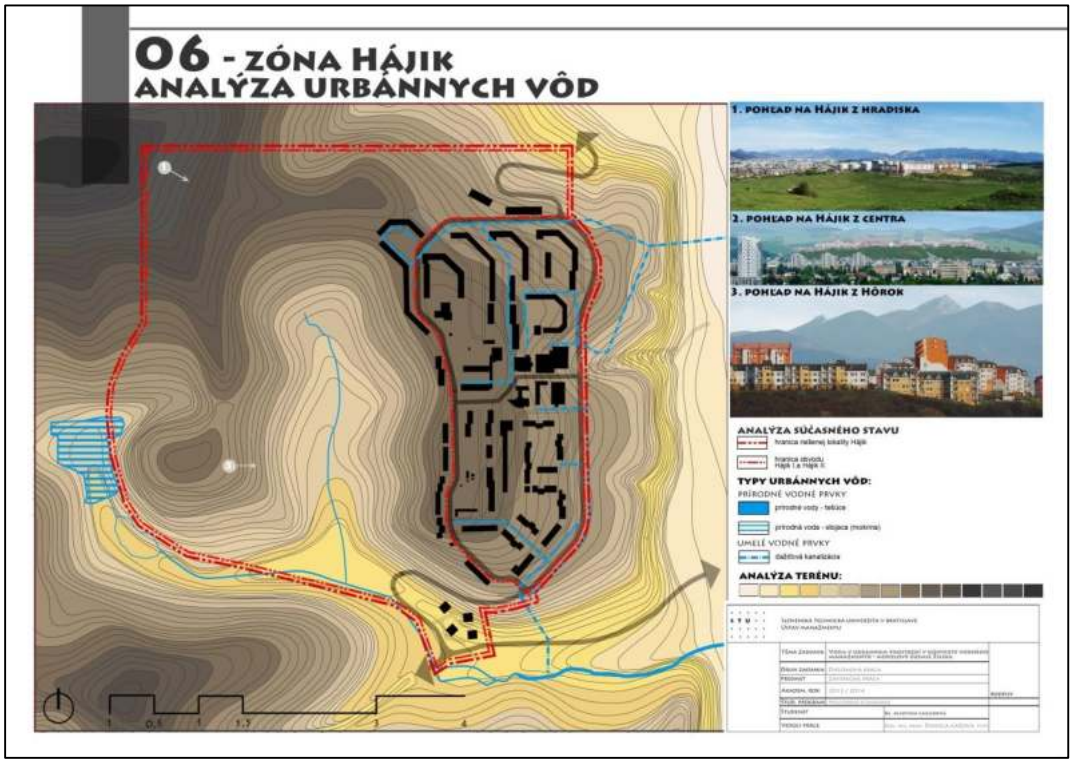
Here, we outline combined nature/engineering perspective, with emphasis on cultural diversity and local knowledge. The challenge is to anticipate change and shape it for resilience in a manner that does not lead to loss of future options. It involves enhancing the capacity of social learning. In this chapter we explore the above hypotheses and present some provisional conclusions on resilient water cycles. Currently, we are living in period of constant changes. Such periods caused by disturbances or crisis are the most neglected and the least understood in conventional water management practice. This implies a shift in water management towards those institutions and organizations that can deal with nature·s dynamics in a fashion that build not only ecological or social but also cultural resilience of water resources. Otherwise, the development and well-being of human societies will become increasingly vulnerable to environmental changes.

## 5. CASE STUDY

After the literature review this section implements outlined assumptions in the model territory of southern Slovak city ilina and its residential neighborhood HÆjik. Going deeper in research on water resilience should result an understanding of the strength and limitation of resilient water system with regard to the scale in which the process take place. The model territory of HÆjik is characterized as interplay of wild natural landscape with panel housing estate. The area is widely acknowledged as holding a wealth of water resources, but on the other hand the neighborhood hides several controversies. For example the rich local diversity is continuously shift to dense urban structure

of housing estate, or hilly terrain is alternated by several lowlands. Then, local waters from underground aquifers rushes past the hills and lowlands, are infused with symbolic and cultural meanings, and after they flows into the metal pipes of modern urban infrastructure. Moreover, HÆjik is a social melting pot of native populations, mixed with other communities.

Map 1 of HÆjik, shows the location of the neighborhood within the city and the traditional drai water system, while the Map 2 introduces proposal for resilient management solution based on the combination of the water engineering mechanisms with the tools of water landscape approach. The aim of the project was to linked different type of water with leisure time activities, and most other cultural manifestations. This case demonstrates how can be designed a small-scale urban water system sustainably and how can we revive small water cycles in theory of urban fringe. To sum up, long-term ecological and economic resilience requires a multiscale institutional mechanism that acknowledges not only the biological, but also cultural diversity of the region. Effective decision-making processes that integrate local knowledge and ideas about traditional water management must be included in any development plans. Cultural difference particularly historical experience has become crucial in managing the watershed for this key shipping lane. In the best case, the new water plan will be used for social learning process of the local community.




Map 1: Location of the residential neighborhood HÆjik, ilina Resource: LazarovÆ, 2014

Map 2: Proposal of water resilient urban design in the specific area
Resource: LazarovÆ, 2014

## 6. CONCLUSION

Water is one of the most pressing development challenges of our time. Water management model built on the paradigm of engineering expertise has been dominating the water management community for decades. Such perspective requires system behavior as highly predictable. The failure to implement water resilient systems may be due less cultural-based expertise. A better understanding of cultural values and water management traditions is essential to catalyze change for integrated and adaptive water management regimes. This new approach requires knowledge of the system in its full complexity and calls for a shift to strategies that can deal with high uncertainty. The new water dynamics facing the world will require changes in governance in order to sustain and develop human wellbeing within scientifically defined resilience criteria. Water is at the heart of such a transition to global resilience as it constitutes the bloodstream of the biosphere. Therefore a planning process based on deeply uncertain predictions provides only a crude approximation of the future and is a weak basis for robust decision-making. As history has shown, this can result in problematic decisions, such as high operational costs and lock-in effects. Therefore, collaborative practices develop a shared construction of reality through the understanding of local contexts from the perspective of the involved parties in order to derive knowledge informed by context and suitable solutions. However, doing so is not easy. Paper·s contributions emphasize the role that local knowledge and underlines the physical manifestations of the water/culture relationship in the concept of water resilience. Local leadership will be vital in addressing the challenges in the decades to come. The project Redevelopment of residential neighborhood ilina-HÆjik, represents the hope for the future of urban water, which has been for ages the lifeblood for the region.

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# Localization as an act of planning:
## Contextual conditions for planners' acting space

### Introduction

Localization, in the literature, has not a single, unambiguous meaning. Quite often, the act of localization is mixed with "the location" (where something is localized, the result of localization) or localization in the meaning of "making local". Moreover, these two meanings of localization (the act to localize something and the act of making local) are interrelated, especially in the discourse on sustainable development. "To make local" is quite often seen as a cure of the evils of globalization (Douthwaite 2012). This meaning of localization may also be of relevance discussing allocation of public resources in European cities, through localization as an intervention, to achieve desired changes related to socially and ecologically sustainable solutions. Davoudi & Madanipour further remind us of that "making local" is not only a different process to carry through in every new situation, but also have different and hardly foreseeable effects, depending on pre-conditions as well as the accomplishments and outcomes of the process (Davoudi & Madanipour 2015:3). Even without the responsibility of "making local", any localization is a complex affair, often with very precise aims, but quite as often with qualitatively and quantitatively different results.

Localization of public service institutions are decided on in different organizational levels; by municipal, regional, national or sometimes international authorities as well by public-private partnerships. These decisions are, together with already present location qualities, decisive for urban land use; on a macro scale shaping the map of real estate prices, thereby the distribution of the population; on a micro scale conducting urban mobility, the everyday streams of cars, public transport, bikes and pedestrians.

Public localization decisions are certainly not the only ones affecting the urban landscape; the localizations within the private sector have a great (if not major) influence on development projects, urban mobility, use of public space, social integration as well as landscape ecological issues.

The concept of localization is not 'scale proof'. We see 'location' as well as 'localization' in a wide range of discussions; in choosing the aesthetically, functionally or socially most effective location of a new cultural institution (local planning level), in pointing out cities most suitable for economic growth (regional planning level) or in companies' decisions on where to outsource manufacturing of goods (global economy level).

In critical space practice, the use and interpretations of concepts and the search for distinctions plays a crucial role. Jane Rendell distinguishes between space, place, site and location:

> "…*space* in connection to social relations, *place* as a single articulation of the spatial and *site* as a performed place. I reserve use of the term *location* to define the physical position of an art or architectural work." (Rendell 2010:20, emphasis added)

Drawing from Rendell's distinctions, 'localization' would be the act of deciding of a location; not only locations of art and architecture, but also of activities, services, businesses etc. When adding to the list of phenomena being localized it becomes endless. While it is easy to point out the grand, important, costly localizations (such as new city districts, centers for public service, sports arenas), it is hard to detect the finite demarcation lines between public and private, between corporative and personal choice, between localizations with outreaching, long lasting influence (e. g. a railway station) and small temporary localizations (e. g. parking your car on the street).

Why localization, then? Is there anything to say except for complexity, unpredictability, power play and effectual dynamism? What I am trying to do here is to scrutinize and interpret the specific gap between the *intentional concept* of localization as it is used in planning regulation documents and the *act* of localization as implementation of these regulations.

This text derives from paying respect to the intentions of steering documents for planning; with the use of the Swedish Plan- and Building act as an example; the conditions and possibilities for their implementation and fulfilment. In this particular law it is pointed at, as the foremost goal for planning, "a purposive structure and an aesthetically appealing formation of developments, green areas and routes for communication" (PBL 2010 3:2). The National Council for Planning, Building and Housing interprets this as follows:

> "The physical structure, i. e. how residential areas, working places, public services, roads, railroads and green areas *are localized, in relation to each other*, is decisive for the possibilities to accomplish a sustainable development and a good living environment for the urban inhabitants."
> (Boverket 2015, emphasis added)

It is concluded, as a point of departure, that the activity of 'localization' is worthy of scrutinizing further. It is well known that 'location' is the one criteria outstanding all others for real estate agents. But as we also know, what is a hot location today can be bad business tomorrow. The value of locations differs, which makes it the more difficult to understand 'localization'. On the one hand, it is certainly a matter of finding the right location. On the other hand, it is hard to know if this is a good location tomorrow and also in 20 years. This indicates that localization is not just to find a good location for something right now, but is also about understanding the dynamics influencing the location and its surroundings? And not less important: what effect does the location itself have, upon the surroundings?[1] Real estate agents are in favor of a single tool – the price. They do not have to be experts on any of the single factors summing up to the ideal location; the market does the job and the estate with the best price has the best location.

Planners have to reach a few steps further in understanding not only how to find good locations for all assets a municipality is supposed to afford its citizens; schools, hospitals, car parking etc.; but also,

[1] This way of reason is borrowed from Andrea Kahn (Burns & Kahn 2005) concerning 'sites'; a three-dimensional understanding of site as "the area of control", "the area of influence" and "the area of effect"; relevant since every site is becoming a location, if it is not the other way around – that the site becomes a site due to location.

according to the law, how to synthesize the *relationally* good locations into a good *assemblage* of residential areas, working places, public services, roads, railroads and green areas. This is, it is said, "decisive" in order to fulfil expectations of good living environments as well as a sustainable urban development. These are not issues to be handled at level of development plans or building permits, but in the long term strategic land use discussions (in Sweden this is usually connected to the comprehensive planning). In theory the strategic decisions are implemented in a comprehensive plan, which is in turn implemented in development plans, to assure that these are not being scattered "stamp plans", but work in accordance with a comprehensive strategy politically agreed on. Practice is more complicated, for reasons so taken for granted that they are seldom talked about. On the other hand, not taking these reasons into consideration is to admit that the plan- and building act is impossible to follow. One answer to this could be that the said plan - and building act is a "frame law"; it is expressing the values the planning and building activities are expected to follow, but on the other hand, in terms so vague that it is hard to determine whenever you have failed or succeeded. But then again – isn't it a good thing to have a law telling you to do your best as a planner, to achieve a purposive structure? Is the law a bad one because it is difficult to follow? No, not necessarily, but to have an impact, its content and values must be kept alive, by discussions, analyses and questioning. This paper is an effort in such a direction.

Another reason for scrutinizing the possibilities for planning to live up to the law's expectation, is a widely spread notion of the increasing complexity characterizing the realm of planning and building[2]. Planning theorists put light on various aspects of this complexity; analyzing e. g. effects of the increased faith in risk management (Gunn & Hiller 2014) and impressively affording increased understanding of the shifts, tensions and opportunities in planning (At the same time, our ways of experience our surroundings (through sensual sensations together with more or less conscious ways of reflections and conclusions) are the same, with the contradictory aspect of increasing mobility and an increasing disclosing from the immediate surroundings, spending more and more time "within" "virtual realities".

On the international academic scene, many planning scholars have identified, analyzed and discussed "gaps", basically referring to a wanting communication between urban development on a "planning-policy level" (by municipal authorities) and urban landscape change on a "real-life level" (the lived environment, experienced by its inhabitants). There is a vast literature dealing with a range of closely related problems; the gap between planning and practice, the gap between a socially and environmentally idealistic rhetoric and an economically pragmatic practice, the gap between optimistic participatory projects and a deficit of participatory impact, etc. (Freeman 2004, Bond& Morrison-Saunders 2011, Davoudi S 2012, Kaika & Swyngedouw 2012, Monno V & Khakee A 2012, Olowoporoku D et al 2012, Westin 2012, Bradley & Hedrén 2014, Cele S & van der Burgt D 2015).

There are difficulties with aspiring to analyze the gap(-s), trying to come to terms with possible linkages and bridges, the major ones most probable of political nature; there are more often votes to be gained through persuasive, promising messages than by messy and ambiguous descriptions of actual situations and reachable changes. Thus, there will always be present interests in keeping these gaps, as space for tactical moves of stakeholders (or authorities) without having to be questioned in the open.

[2] This statement is not further elaborated here, but derives mainly from 1) the turn from government to governance, implying stakeholder cooperation as well as citizens' participation and 2) increasing political pressure on risk management, climate mitigation, environmental safety etc. The one direction evolving with openness and flexibility, the other rather calls for a controlled development. Both point at a transition phase for urban planning; trapped between organization, regulations and routines from a social democratic paternalistic era on the one hand and on the other hand neo-liberal hegemonic politics, guiding implementations.

As citizens (or researchers) we have very rare (if any) opportunities to see, discuss or understand the silent layers of negotiations, deliberations, agreements and decisions, preceding the processes opened for democratic discussions. This could certainly be understood as contradicting both "the liberal ethos" (individual freedom) and "the invisible hand" of the market (ideally balancing between demand and supply).

Adding to these complexities, we could include in the discussions the international, national, regional and local effects of climate change. On the one hand acting rhetorically unifying ("we are all in the same boat", financial institutes using environmentalists' phrasings) the threats of unconditional economical, ecological and social change are not only encouraging risk management, but also a less co-operative general behavior, in spite of and contradictory to the general insight of the necessity of collaborations in the manifestos, policies and research literature connected to a resilient society and a sustainable urban development.

Planning regulations certainly intend to have a general appliance and significance. Insisting of investigating localization as an act of planning, could be seen as a way of starting anywhere[3], following 'planning behavior' from regulation to implementation by discussing an example; how the Swedish plan- and building law as implemented on the local level. The discussion continues in an aspiration to connect (or contrast) the language use in the text of the law with questioning (or even desiderate) descriptions of how an actual urban landscape evolves. Is the law text relevant? Does it target important actions? Is it significant?

## Planning as practice of localization – purpose and performance

According to the Swedish Plan- and Building Act (PBL 2010), it is the purpose of all plans (regional plan, comprehensive plan, development plan and 'spatial regulations'), "with respect to natural and cultural values, environmental and climatic aspects, as well as inter-municipal and regional conditions", to promote:

1) "a purposive structure and an aesthetically appealing formation of developments, green areas and routes for communication,
2) a from a social aspect good living environment, accessible and usable for all classes of population,
3) a long term good economization of land, water, energy and natural resources, and as for the rest good environmental conditions
4) good economic growth and an effective competition, and
5) building of residencies and development of the housing stock." (Swedish Parliament 2010)

This paragraph, which is the unifying steering document for urban planning in Sweden, is perfectly in tune with what is generally conceived upon as a sustainable development. It is interesting to notice the order, in which the three pillars are stated; "for social, environmental and economic concerns". Since this is the law, approved of and decided upon on highest democratic level; the Swedish Parliament; it does pinpoint what has been frequently described as 'the gap' between the rhetoric and the practice levels of sustainable urban development. Social – environmental – economic; this is the order in which planners should think, according to the law, but there are in practice few, if any, examples of anything else than the opposite order; economic – environmental – social.

When the Swedish National Council for Building and Planning (Boverket) explains the law, on their website, it says:

[3] This is to follow the example of Jean Hillier, inspired by Deleuze & Guattari, "starting in the middle" (Hillier 2007)

> ”The physical structure, i. e. how residential areas, working places, public services, roads, railroads and green areas *are localized, in relation to each other*, is decisive for the possibilities to accomplish a sustainable development and a good living environment for the urban inhabitants. If walking or biking to work, to school or for shopping is inviting, safe and within reasonable distance; this promotes both health and environment. An effective public transport can be facilitated by conscious localization of new housing development. Parks, recreational areas and meeting places are important for wellbeing and health. One of the most important tasks for the comprehensive planning is therefore to foster “a purposive structure and an aesthetically appealing formation of developments, green areas and routes for communication”. ” (National Board of Housing, Building and Planning, 2015, emphasis added)

Localization seems to be a decisive act, within urban planning processes. Through history, we have also seen a lot of examples of utopias, model cities, wherein everything is purposively localized and aesthetically appealing (fig 1-2). We also do know that very few of these model cities exist in real life, even if we can experience fragments of the grand visions in many places, reminiscent of the utopias. Yet, there is a gap to be observed already in the distinction between ‘the full masterplan’ and ‘fragments of a masterplan’. A masterplan can express – at its best – a deliberation between all different interests from all stakeholders and the public opinion. Remaining fragments are not. A masterplan can be – at its best – a result of several meetings, collaborations and negotiations, as well as qualified use of necessary knowledge and skills, to achieve “a purposive structure and an aesthetically appealing formation of developments, green areas and routes for communication”. Remaining fragments might be, but in this case more due to coincidence or intuition than to arguments, agreements and communicative rationality.

A question arises: Is the law written for the fulfillment of a purposively structured and aesthetically appealing *representation* of a desired environment, or is it written for to afford to the actual inhabitants and visitors the *experiences* of a well-functioning and appealing environment? Certainly, there has not to be a conflict between these aims, but a truth is that architects and planners learn their history, culture and skills more through representations than by observations of actual urban landscapes. In collision with this representational practice, another truth is that the personal notions of your surroundings; the house, the backyard, the street, the encounters with the urban landscape in your everyday movements; are not represented but first hand bodily experienced. “How residential areas, working places, public services, roads, railroads and green areas are *localized*, in relation to each other” is a task solved by expertise by means of, and resulting in, representations. How residential areas, working places, public services, roads, railroads and green areas *really work*, in relation to each other, is understood by bodily sensations. Localization is dealt with, professionally, in the masterplan, but the experienced result is dealt with, personally, in everyday urban life. There are, in fact, very few learning loops between these two realms.

Localization of developments, green areas and infrastructure, in a purposive way, is prescribed in law. The question is if this demand is possible to obey. The law does not prescribe that the purposive structure should be fulfilled in the plan (on paper or digitalized). The law prescribes that a purposive structure is going to be built, for people to live in (and spend their money on). A crucial distinction is that mistakes done in making this structure have to be corrected during the planning process; otherwise it will be too late for making any corrections other than just superficial, i.e. not concerning the purposive structure, founded in purposive localizations. One logical conclusion from these premises must be that the representations (of a new development) would have to be made not just in order to sell a vision and a project, neither for the purpose of coming to a consensus between land owners, builders, public authorities and other interests, but in order to make it possible to understand (for everyone possibly affected by this development) how the urban landscape is going to be transformed.

Figure 1. The Ideal City, unknown artist, 15th century

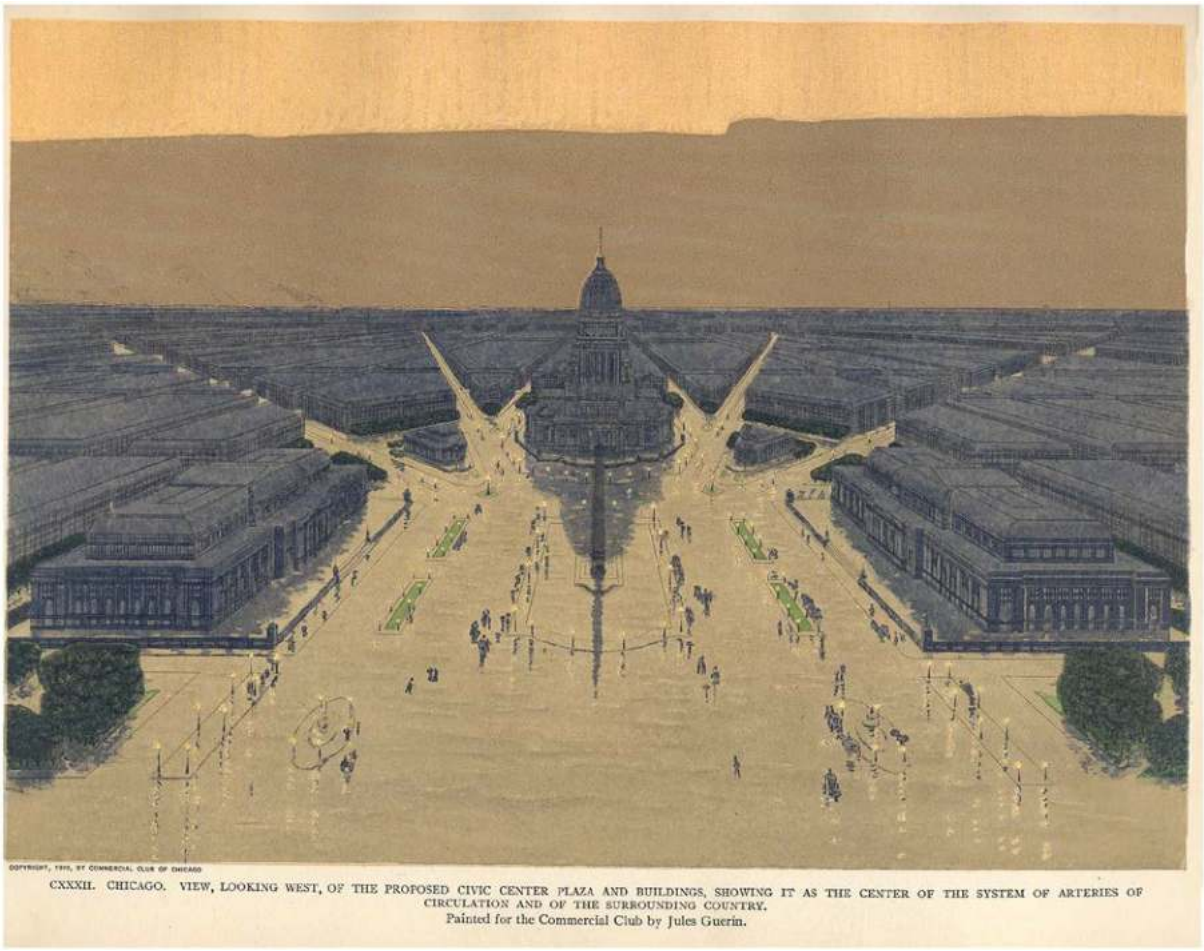


Figure 2. The Burnham Plan for Chicago 1909[4], illustrated by Jules Guerin.

[4] The Civic Centre, the impressive buildings around which the rest of the city of Chicago was thought to circle in the Burnham plan, was never realized in the visualized configuration. Other parts of the plan, such as the huge park envisioned in the front corners of the picture, actually were materialized nearly a hundred years after the plan was made. This exemplifies the unpredictability with which a vision is affecting urban landscape change.

For hundreds of years, urban planning projects have been discussed on the basis of visual urban landscape representations (figure 1 & 2). These pictures help planners, politicians and investors alike to understand, discuss, alter and decide on what choices, agreements and decisions of localization are needed to make the vision come true. If the non-transparency and opacity of these negotiations could be added to these pictures (as visual representations of the probabilities of their fulfilment), the visions would soon become obscure. If the visions where changed according to new deliberations, new pre-conditions and new possibilities; as a method of making a planning process literate; this might foster new kinds of trust and collaborative spirit.

As paradoxical it may seem; in order to diminish the gap between 'the representations of urban landscape in urban planning' and 'the effects of urban planning in the urban landscape', new kinds of representations would have to be tried out. If the representations of the urban landscape used in urban planning do not make understandable how the new development is going to function and be experienced; it will not be possible to achieve sustainable development in any sense conceived of so far.

> "people know *what* they do; they frequently know *why* they do what they do; but what they don't know is what what they do *does*"
>
> (M Foucault, quoted in Dreyfus & Rabinow, 1983:187, emphasis added)

The quotation from Foucault describes on the one hand the inevitability in the existing gap between an intention and a vision on the one hand and the effectuation and result on the other hand. At the same time, it does in itself open for both rhetoric and experimental bridge-building, in order to affect what is going to be the pre-conditions for future planning acts.

Today, everyone has access to satellite pictures of the bigger part of the world. GIS archives are accumulating data, more or less publicly accessible. Why are these informational resources not used to 1) create understanding for the continuous changes of the urban landscape and 2) create alternative scenarios for future development, iteratively testing and up-dating visions? In spite of real-time statistics and financial updates, animated advertisements and self-generating computer games; there is seemingly no interest of up-leveling information about our own surroundings. The difference between urban landscape representations used in planning processes 2015 compared to 50 years ago is negligible. Building project visualizations are nowadays made in Photoshop instead of being drawn by hand, but this is just a superficial dissimilarity which does not make any difference. To provide continuous representations of urban landscape change, including on-going projects, and offer also alternative visions for the future; would make role of planners and municipalities more influential and increase the opportunities for rational decisions and localizations.

## Localization by public actors – allocations of common resources for public good

Seen from another angle, "the purposive structure" could be achieved, not by erasing something existing, fulfilling the perfect scheme from a 'tabula rasa', but through additions. Many re-constructions of plans and fill-in projects; many new spatial additions to the urban landscape, such as green structures or biking road systems have over the years accomplished a updated (upgraded?) purposive distribution and relationship between buildings, green areas and infrastructure. Such examples serve as indications of the necessity of planning as public service, taking on the responsibility of "purposive structure".

In spite of its prominent position in the frame law, localization is seldom mentioned in planning regulations, and when it is, it serves very specific aims. Thus, there is a "localization principle" in the

environmental act; activities possibly annoying people should be localized as distant as possible from urban areas. There also exist instrumental techniques to destine a localization through measuring the factors affecting the effectiveness of it from a rational point of view. To localize a fire engine station a formula for the driving distance of fire engines combined the time of driving with acceleration capacity and the distance for reaching ground speed, has been widely used to decide the locations of fire stations.

$$T(D) = \begin{cases} 2(D/a)^{1/2} & \text{om} \quad D \le 2d_c \\ v_c/a + D/v_c & \text{om} \quad D > 2d_c \end{cases}$$

Figure 3. Formula for calculating the optimal localization of a fire engine station. (Kolesar, 1975)

Localization of public services such as day care centers and primary schools has since long been a task for achieving added values, managed by public authorities. During Sweden's international fame for successful residential areas (1940-1960) the aim of social integration was built in by purposeful localization of schools so that the uptake of pupils (with reasonable distance from the school area) would contain children from different social groups.

There is a difference in how this kind of basic public service affordances are managed (or have been managed), i. e. the results of a deliberation not only between interests of urban land, but also as an effect of an interpretation of scenarios and empathy with the complexities affecting new spatial orders; and the way more instrumental services are handled.

To conclude, public localization (given the decision resource) seems to combine instrumental effectiveness with heuristic interpretation of complexities. It is also obvious, from the example of the school, that localization is not only guided by functional effectiveness, but is also one of the more effective political tools to be used in planning. Localization is a mode to allocate resources to fulfill democratic and integrative aims, with is effective and long lasting.

**Localization by commercial actors – allocations of resources for profit maximization**

Localization by commercial actors is not a way to accomplish "the just city" (Fainstein 2010). In the commercial sector, profit maximization is a principle and a prioritized aim. Retail localization applies certain rules related to the spatial pattern and urban mobility in city centers (A-, B- and C-locations).[5] Offices in need of advertising area often want locations near to transport infrastructure. Factory premises also favor the nearness to transport infrastructure in localization decisions, not so much for the exposure as for the cheap land. These dynamics seem to be the same regardless of political majority. The profound change, experienced only a few decades, happens when public authorities sell out what was earlier public service; not least in terms of localization.

When Europe's a social democratic hegemony (1945-1975) changed for a neoliberal hegemony (around 1980), leading to unquestioned market forces, 'public service' changed meaning from something decided on by local politicians, and afforded by the managers of common resources and their civil servants to be a commodity among others, to be demanded and consumed (see e. g. Bauman 2010). What happened was that health care centers, schools etc. became run by private companies,

[5] Different combinations of price on land, rent level, nearness to customers and urban mobility, proximity to others in the same branch (clustering) are calculated. To identify these combinations as A-, B- and C-locations is a common way for e. g. city commerce cooperation to support local entrepreneurs and businesses.

using tax money (the common resource) as a guarantee, but with commercial actors' principles. This has been very much debated from a point of view of justice, but hardly at all from the spatial planning point of view: The privatization of public services has bereft the public authorities the possibility to use localizations of the services as opportunities for achieving added values (in former times often called equality, in present times more often "social sustainability"). This means that localization of schools and day care centers often follow the same criteria as applied by retail companies; a striking example of how the effects of privatization go further than to management and profitability is how the localization of schools put less attention to outdoor environment (Nordström 2007, Hjelkerud Nilsen 2014).

This kind of critique of localization, viewing the planning activity as "torn between dialogic ideals and a neo-liberal reality" (Sager 2009); questioning the profit maximization as principle for public service; needs to be widened and deepened, in order to understand and preclude the long term spatial impact of this 'tyranny of small steps'. One pre-condition for this, I would argue, is to understand and respect each act of localization, not as the first step in a chain of actions, ending up after a planning and building process, in materialized buildings or infra structures, changing the urban landscape for unlimited time. Instead, it seems important to appreciate a situation of urban growth, not only as a free market where property companies are shopping land and building permits, but also – just as the law actually states – an opportunity to govern the work with preliminary localizations, relative to each other, with the aim to localize primary building projects as well as public service needed as well as public space and green structure.

## Changing perspective: Localizations as drivers of urban landscape change

The claim for a purposive structure and localizations in the Swedish Plan- and Building Law seems to be more in tune with a former social democratic society than with the present neo-liberal politics. In order to frame new possibilities within a new political landscape is here suggested an increased research for a future-oriented urban landscape management. Seen at large, on a regional or national level, cities have extremely different conditions for planning. While a few municipalities have immense hardship to produce enough plans for new residencies, many municipalities are facing problems with empty houses, increased outwards commuting and a descending population trend.

With "urban landscape management" is here meant how to handle existing resources and values, for the whole cluster of management of urban land; from the comprehensive planning strategies to the considerations of a single real estate owner. It is suggested here, that "localizations", as deliberations out from an entire urban landscape perspective, could be used as means to prevent a "tyranny of small steps" and on the contrary be a driving force to instigate "the blessings of steps". This implies to change urban planning from a present defensive state of moderating between strong stakeholders, (claiming nothing else than existing stop signs, mostly from the environmental regulations) into a capacity for accumulating, presenting, communicating knowledge, and a position to produce frameworks for planning and building (fulfilling the aims of the law).

*Here I have identified a section (10-20 lines) which was not yet publishable – I will work further with this one until the conference.*

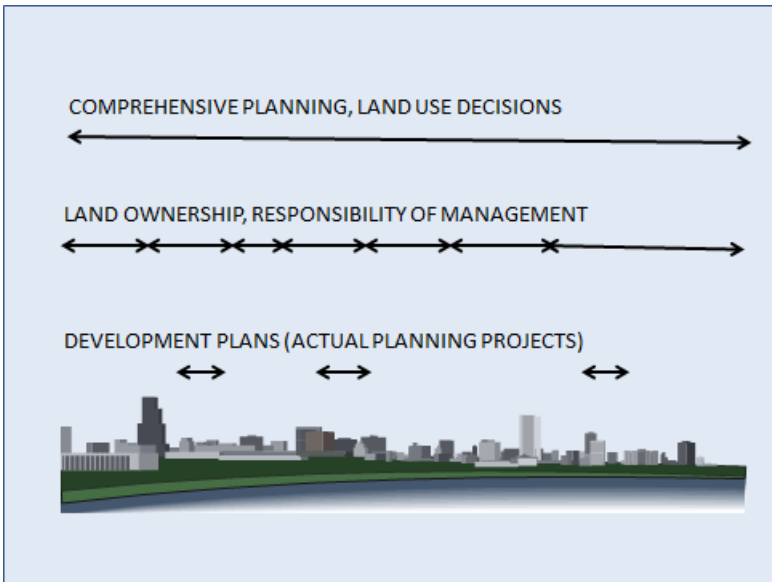


Figure 4. Spaces of action and responsibility are different for comprehensive planning, land ownership and development planning. A purposive structure demands both common landscape representations and arenas for development of common urban landscape strategies.

## Discussion: urban landscape representations for alternative future purposes

The example above; localization of schools governed by different politics; is used to show the difficulties met when privatizing services which by tradition have been provided by public authorities. One reason is a lack of both responsibility and means for to overview the whole urban landscape and the opportunities at hand for localization (see figure 4).

To conclude, the concept of localization gets added characterization when trying to merge public and private interests and when trying to discuss a 'typology of locations'. The reason to analyze the different aspects of localization as part of planning activity, was found in the increasing difficulty to make distinctions and arguments for one of the founding objects of planning; the public interests. While the law (the Swedish plan- and building law was used as example) prescribes "a purposive structure and an aesthetically appealing formation of developments, green areas and routes for communication" the practice of localization in planning today displays something more in tune with the reductive location-hunting practiced by real estate agents and guided only by price tags.

There is certainly not a total lack of ideas, alternatives and urban landscape representations. In the planning departments themselves there are, at least in the bigger, growing cities, constantly ongoing alternative ways to tackle the balancing between providing plans in time for awaiting building projects and the political pressures to answer for the needs of public services and public space needed both for the new projects and as renovating and upgrading of older city districts. Also workshops and communicative innovations in relation to new planning projects, in different formats, are common; architecture competitions, student invitations, internships and municipal PhD-projects, contribute to new ways of understanding urban landscapes and city development.

There is however, lingering routines and organizational peculiarities hindering new methods to emerge (Hillier 2014), including implementation of new policies even decided on. It is also understandable that for a public organization fighting with diminishing resources, innovative methods for more sustainable long term strategies, are not first priority. Planning research could here play a more active role; investigating and testing, on an experimental level, new ways of working with alternative futures.

A common way to reason in such terms are alternative developments based on scenarios. As important however, is to learn ways of understanding the imbued driving forces for urban landscape change, whether planned or not. Localizations will continue a lead part, whether we want to see it or not.

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# AREA VASTA 2.0
# A NEW FORM OF LOCALISM IN ITALY: CHALLENGES, RISKS AND OPPORTUNITIES FOR SPATIAL PLANNING ACROSS LOCAL BOUNDARIES[1]

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Keywords: joint planning, strategic planning, duty to cooperate

***Abstract***
*The papers aims to understand the forms and outcomes of cooperative spatial planning practices at a supra-local level in Italy. Assuming co-operation as one of the key challenges for planning strategically across local boundaries, the research will deal with the rescaling of formal planning activities carried out by joint local authorities, under a cooperative attitude that, in a Localism era, is supposed to replace sub-regional planning strategies.*
*The research focuses on the changes occurring in the Italian planning system after the Laws n. 135/2012 and 56/2014 that, in the name of the spending review, obligate the 10 main regional cities to form joint metropolitan city governments by abolishing the provincial level, and municipalities with certain population requirements to come together into "Unions of competences", including spatial planning.*
*Of course, the need of co-operation on strategic issues is not new in Italy. Some institutions have an old history of working together to address planning issues of common concern. Nevertheless, the emergence of cooperation as a duty certainly poses some questions concerning the redefinition of planning spaces and responsibilities, the role of the planner, the access to the cooperative arena, the need for regional design practices.*
*Through the analysis of some medium cities socio-economic and spatial planning contexts, the paper discusses the forms of governance in place, the different boundaries they assume and the responsibilities they encounter. The aim is to contribute to a better understanding of the way strategic spatial planning can works in Italy, in order to define the issues to tackle and further directions for research.*

## 1. The context: the arising of localism in Europe and Italy

In many European countries, important changes are arising both in the institutional system and in that of planning, for repositioning objectives, forms, tools and methods of planning in a context of increasing globalization, Europeanization and, at the same time, of growing of the importance of subsidiarity and of the local.

[1] This paper refers to the research project "AREA VASTA 2.0. A new form of localism in Italy: challenges, risks and opportunities for spatial planning across local boundaries", that has just been founded (june 2015) with 0,5 million euros by the Ministry of Education, Universities and Research within the framework of the prestigious SIR Programme (Scientific Independence of young Researchers) aimed to support young researchers at the start of their independent research activity.
The Programme is designed for the funding of research projects with high scientific quality, developed by independent research teams, under the scientific coordination of a Principal Investigator (PI), either of Italian or non-Italian nationality, resident in or moving to Italy, who has been awarded their PHD (or medical specialty training) up to 6 years prior to the publication of the call for proposals (http://sir.miur.it/). The SIR programme is the Italian correspondent of the ERC Starting Grants, designed to support excellent Principal Investigators at the career stage at which they are starting their own independent research team or programme.

This paper is concerned with the forms and outcomes of strategic spatial planning practices at a supra-local level, dealing with the rescaling of formal planning activities carried out by joint local authorities, under a cooperative attitude that, in a Localism era, is supposed to replace regional and sub-regional strategies.

This issue is grounded on a debate involving the Western Europe in respect to the emergence of a widespread neo-liberalism (Waterhout et al., 2013), that has conveyed to processes of State space rescaling (Brenner, 2004) and a strong affirmation of localism. Although there are clear differences in its amount and real effects in planning across Europe, there seems to be a clear direction toward the rescaling of planning systems, that could be associated with reducing government. Indeed, every level between the national and the local is now up for discussion, and, in some case, even abolished, as happened to the English Regions in 2011. In other cases (and particularly in Italy) competences are nominally shifted between governance levels, making sub-regional/provincial spatial planning weaker.

To the rescaling of formal competences corresponds the increasing development of spatial visioning for non-statutory areas. In France, Germany, and the Netherlands, we observe an increase of spatial visions for all kinds of 'new' sub-regions or soft spaces (Haughton et al., 2010 for the UK), both at metropolitan level and at rural one. Cooperative planning practices engaged by neighbouring municipalities convey to different and quite fuzzy geographical regions, aiming at developing regional identities and mobilizing public, private, and civic stakeholders for achieving major competitiveness developing economic and territorial potentials, as proved by the French national policies for motivating such relatively voluntary planning processes, focusing on competitiveness and spatial development (Dikeç, 2006).

To this rescaling of formal competences corresponds the increasing development of Strategic Spatial Planning approaches based on strategic visions moving beyond administrative limits, so that they convey to the definition of soft planning spaces with fuzzy boundaries (Allmendinger & Haughton, 2010).
The emphasis on strategic planning as a socio-spatial process (Healey, 1007, 2007; Albrechts, 2004) in the spatial strategy making process advocates the importance of collaborative and inclusive governance for developing regional identities and mobilizing public, private, and civic stakeholders.

Nowadays, the emergence of cooperation as a new obligation for Local Authorities certainly poses some questions concerned with the redefinition of planning spaces, the role of planners, the access to cooperative arenas. If these are typical problems of strategic spatial planning practices, the government expectation for plan-making authorities to undertake joint work on supra-local concerns affects issues of governance rescaling and accountability for planning.

In Italy these questions arise in a framework in which, in spite of several attempts of innovation of the national planning system (Lingua & Servillo, 2014) and diverse regional reforms (Campos Venuti & Oliva, DeLuca) – even after the failure of the "comprensori" season in the '80s and the proved weakness of provincial planning (Gerundo & Lingua, 2011) – the outcomes of already-in-place voluntary inter-municipal practices and the relationships between strategic and statutory planning have yet to be focused (Fedeli, 2013). Moreover, an interdisciplinary reflexion on the relationship between localism and the re-organisation of institutional levels could lead to a better understanding of their effects on inter-municipal and metropolitan planning practices and outcomes (Oliva, 2012; Sbetti, Feralino et al., 2012).

The paper analyzes the changes that are occurring in the Italian planning system and practices following the revision of the institutional system, as well as their impact on the system of governance

in planning at local and sub-regional levels, in order to define the issues to tackle, the challenges to face and the connected risks and opportunities for spatial planning across local boundaries.

## 2. The challenges of the Italian institutional reform to the planning context

The Italian planning system is still based on the original National Spatial Planning Law n. 1150 dated 1942, that organizes the competences of the land-use planning system into different levels in quite a hierarchical way, the plan corresponding to the level of the institution in charge.

After the reform of the Constitution in 2001, the State is responsible for guidance and coordination, while the subject of planning is constitutionally attributed to the regional institution, that is required to make indicative laws within the limits of the principles laid down by the laws of the State, nowadays changed in a more enhanced federal perspective. Being absent a territorial framework at the national scale, three tiers characterise the Italian planning system at the subnational level:
1) the regional plan;
2) the provincial plan (Piano Territoriale di Coordinamento Provinciale - PTCP) at county level[2];
3) the municipal plan (Piano Regolatore Generale - PRG) at local level, that in some region is divided into two acts: a structural plan and an operational one (land-use regulatory).

Despite a reform of the national spatial planning law has no longer been on the agenda of the national government, new and most innovative spatial planning laws have been adopted by some regions, whose conception is in line with the substantial autonomy that Regions have gained with the reform of the Constitution in 2001.

In this framework, the municipal level, through different experimental forms of land use plans, remain the fundamental actor in managing the urban growth and the territorial changes[3]. All the reforms and the growing complexity of the planning system (including the use of different paradigms and the introduction of diverse tools according to each region) slightly affect the primacy of municipalities as main planning actors and the land use plan as main technical devise (Lingua & Servillo, 2014a).

However, the presence of 8,092 municipalities and 110 provinces, with different planning tools and different speeds of implementation, creating overlaps and conflicts between the different levels (Gerundo & Lingua, 2011), together with the global socio-economic crisis, in the last five years led to an important reflection on the cost of politics and the difficulties of territorial government.

[2] At the provincial level, the Territorial Plan of Provincial Co-ordination - (PTCP - Piano territoriale di coordinamento provinciale) contains prescriptions and indications on landscape and environmental constraints, which local authorities must conform to in the exercise of their respective competences. It determines guidelines for the different zoning according to the predominant use. It defines also the sites for major infrastructure and lines of communication, the areas for erosion prevention and water flow control, and the areas of nature reserves or parks. The plan may cover all the provincial territory. It has no time limits. Lower authorities (Municipalities), in preparation of their own planning instruments, may respect plan contents as a guidance and a regulation.

[3] In the 1990s, the cultural debate led by the Istituto nazionale di urbanistica (INU - National Town Planning Institute) about the necessity to innovate the planning system found a fertile political context for proposing a a new Planning Law (1995) in which the local planning level should be divided in two different acts: the "structural plan", containing the future scenarios as the strategic vision of the territory, with spatial development strategies based on structural characteristics of the territory as peculiar invariants; and an the "operational plan", containing the land use indications that pursue the contents of strategic plan. Despite no longer being on the reform agenda of the national government, the INU's proposal became an important reference for some of the new and most innovative spatial planning laws adopted by some regions from 1995 to 2000 (e.g. Tuscany, Liguria and Emilia Romagna), and then in the new millennium spatial planning laws (of Lazio, Veneto, Lombardy etc.), whose conception is in line with the substantial autonomy that Regions have gained with the reform of the Constitution in 2001.

In this context, the key words of the (Law 214/2011), promoted by Prime Minister prof. Monti, were those of cost reduction and simplification, even concerning the levels of government by the suppression of the provinces and the unification of small municipalities. On this trail, the actual prime minister Matteo Renzi conveyed to the approval of Law 7 April 2014, n. 56 (the so called "Delrio Law" from the name of the Minister in charge) that formally transforms the "provincia" in a second institutional level, in prevision of a change in the art. 117 of the Constitution to revoke it.
Actually, this series of laws and connected decrees provide the "reorganization" of local entities through a process of "rationalization" that includes:

1. the transformation of all provinces in second level institution, with non-elected assemblies and with a reduction of their competencies;
2. the suppression of provinces who insist on 10 major regional capital cities (Roma, Torino, Milano, Venezia, Genova, Bologna, Firenze, Bari, Napoli e Reggio Calabria) and their replacement with "Metropolitan cities", sub regional organizations which are attributed to the fundamental functions of the provinces and, in particular, of spatial planning.
3. the unification of municipalities with a population of up to 5,000 inhabitants, which have an obligation to associate the exercise of their competences (including spatial and land use planning), through the conclusion of agreements or the establishment of a "union of municipalities" [4]. In any case, the optimal size cannot be less than 10,000 inhabitants (or 3,000 in mountain areas).

De facto, the questioning on the role of provinces and this climate of constant change necessarily involve a deep reflection on the adaptation of planning tools and processes (Camagni, 2012). Indeed, different types of cooperation are emerging, more or less coercive, at different scales: the regulatory measures include an obligation to cooperation at sub-regional and local level, for municipalities submitted to defined roles for regrouping. The same obligation involves the municipalities of the metropolitan areas which have not yet ever undertaken processes of metropolitan planning[5].

The municipalities that meet the demographic requirements, instead, remain excluded from the obligation. In these cases, outside the modalities of cooperation imposed by law, the weakening of the role of provinces, however, seems to prefigure the need for a greater use of inter-municipal or joint planning for strategic matters and issues of sub-regional interest.

Of course, this need has already gained good practices, but it has speed, times and methods differentiated according to the region. Forms of voluntary cooperation are already in place in some regions that provide and promote inter-municipal cooperation in planning (i.e. Emilia Romagna, Veneto), in addition to sporadic episodes in other regions, due to the need to jointly address strategic issues et sub-regional level, defining informal spaces of planning.

The *fil rouge* that links these practices is definitely that of cooperative governance, understood as the ability to work-with to achieve objectives of development and planning going beyond the mere administrative boundary (De Luca & Lingua, 2012).

[4] This form is midway between inter-municipal cooperation and inter-municipal consolidation; member municipalities keep their legal identity but all functions are managed by the Union which is a sort of consortium.
[5] Some metropolitan areas have already activated forms of cooperation for strategic planning (Turin, Genoa, Milan), but these have never led to forms of metropolitan spatial planning.

## 3. Strategic spatial planning in the era of localism: assumptions and principles

The context of change that has affected several European countries in the last decade has generated a considerable debate on the issues of regional and sub-regional planning. Firstly, it was focused on the potential of *strategic spatial planning* as a way of comprehensive planning, capable to get through previous regulatory land-use planning approaches, by improving engagement with stakeholders and the public in order to define long-term strategic visions (Albrechts 2010), improve integration across sectoral plans and activities (Tewdwr-Jones & al., 2010) and approach sustainable development in a wider perspective (ODPM, 2005; Raco, 2005). Criticism of this approach (Newman, 2008; Allmendinger& Haughton, 2010; Haughton et al., 2014; Kunzmann, 2011) addressed the incapacity to deal with these assumptions and goals with a win-win-win approach, and on the difficulties encountered by its planning tools (in particular at the Regional level) to address strategic issues in a relevant way and with authority, being approved by non-Elected assemblies.

In Italy, the debate has concerned the so-called "pianificazione di area vasta" (inter-municipal or "wide-area"/sub-regional planning), both in its formal aspects (the coordination plan drawn up by the provinces) and in the emerged spaces of soft planning (strategic planning and planning agreements on different topics, from urban renewal to territorial development). In particular, the Territorial Coordination Plan (PTC), which starting 1990 became the responsibility of the provinces, is intended as a new space of interaction which can embrace broader horizons than local plans, and lead to convergence sector plans including, especially, landscape planning.

Two decades of planning practices allow, on the one hand, to point out some deficiencies in the provincial planning (Lingua, 2011; Gerundo & Lingua, 2011), such as excessive "rigidity" of the plans, very long timing procedures, different speeds of planning between Northern (now in the second generation of provincial plans) and Southern Italy (where many provinces do not yet have a PTC). On the other hand, some planning practices at the intermediate/subregional level (inter-municipal planning, co-ordinate planning, planning agreements) are multiplying, carrying to significant rescaling in the spaces of cooperative governance (Zanon, 2013; De Luca & Lingua, 2012). In both cases, the considerable effort to open to multi-scalar planning, to sectoral coordination and integration (Swain et al., 2012; De Luca & Lingua, 2010), is not lost, but has led to a redefinition of the planning levels through the introduction of new paradigms and new modes of action.

Of course, the need of co-operation on strategic issues is not new. Institutions have an old history of working together and with other bodies to address planning issues of common concern. Nevertheless, the emergence of cooperation as a duty, i.e. as a new obligation for Local Authorities in all fields (not only in spatial planning), in both countries certainly poses some new questions, which are:

- the extension of cooperation, which is based on parameters (previous provincial boundaries in metropolitan areas, population in little municipalities) that are often divorced from socio-economic dynamics, territorial specificities and cooperative practices already in place;
- the presence of overlapping spaces of cooperation, between joint local development plans (coming from formal or informal spaces of planning) and development planning documents;
- the effectiveness of cooperation: the duty to cooperate implies that all relevant government over local issues, if affected by the plan, ought be involved. This results in a rescaling of cooperative governance in spatial planning, which takes varying boundaries. At the same time, the duty to cooperate cannot become a duty to agree (Geoghegan, 2012)**,** so what does it happens in case of disagreement, conflict or refusal to cooperate?
- the role of the planner, not only to demonstrate the link between plan and rules, but in activating practices of effective strategic planning across local boundaries;

- finally, the effectiveness of cooperative planning results, in terms of shared supra-local strategies, formalized in specific agreements or in a joint plan and implemented in local planning practices, that conveys to a need for activating regional design practices.

The redefinition of planning spaces, the role of the planner, the access to the cooperative arena are typical problems of strategic planning as a forms of collective action (Healey 2007, Albrechts 2004). But a voluntary practice in itself is now transposed in a context of obligation, where local planning authorities are obliged to cooperate on specific issues. An already focused concept is now putted into tension and has yet to be analysed in its full potentials for supra-local planning and its local implementation. The Italian planning system, being established on Provincial Plans abolition, now rely on informal arrangements for strategic planning: the governments expect plan-making authorities to undertake joint work on supra-local planning issues. This expectation affects issues of governance rescaling and accountability for planning.

## 4. Medium metropolitan cities in the face of localism: the issues to tackle

The literature review has led to define the state of the debate, for identifying the specificity and the common aspects of the process of localism that affects the Italian institutional system and that challenge the planning system in different ways and with different speeds. As a matter of facts, the metropolitan cities government are now in place, while the duty to union for little municipalities is delayed to the end of 2015.

Because of the obligation to revoke provinces governments prior to the 31$^{st}$ of December 2014, the metropolitan councils (composed by the mayors of all municipalities composing the metropolitan area and by the capital city major acting as the "metropolitan major") are now in place and have already approved their metropolitan statutes. Nowadays, they are starting to deal with inter-municipal management of the urban region and the connected challenges for the governance system.

In such a dynamic framework, this paper refers to the analysis of the forms of governance in place, as well as of the different boundaries they assume into supra-municipal planning practices, in three Italian medium cities where the debate on joint planning is arising because of the non-correspondence between institutional boundaries and socio-economics, housing and population dynamics. The profiles of the practices are presented in Table 1.

The analysis of the Italian case studies has allowed to focus on the main issues in the debate and on their translation into practice. In particular, we identified four major themes concerning strategic spatial planning in the context of the institutional reform:

1. the **re-scaling of the statutory planning system**, that convey to a shift in scale and focus of planning practices and responsibilities
2. the **extension of cooperation** and the presence of **overlapping spaces of cooperation**, between joint local development plans and sectoral and economic development programs
3. the need, for planning officers and practitioners, to achieve **new negotiation and participation skills** in activating practices of effective joint planning across local boundaries
4. the **effectiveness of cooperative planning results**, in terms of shared supra-local strategies, formalized in specific agreements or in a joint plan and implemented in local planning practices.

Table 1. Italian Case studies profile

| **Case** | **Current Planning Instruments** | **Co-operation practices in place** | **Involved Authorities** | **Motivation for co-operation** | **N. of Involved authorities by Law 54/14 (Provincial boundary)** |
|---|---|---|---|---|---|
| *A. Turin* | Regional territorial Plan<br>Regional Landscape Plan<br>Provincial Territorial Coordination Plan<br>Local PRG (Land use plans) | **Strategic plan (3rd generation) "Torino metropoli 2025)** | 18 municipalities | Socio-economic development | 315 municipalities |
| *B. Florence* | Regional territorial and Landscape Plan<br>Provincial Territorial Coordination Plan<br>Local Structural Plans | **- Structural development framework ('90s)**<br>**- Strategic regional projects (Piana area)** | 18 municipalities in Florence province +<br>n. municipalities in Prato province +<br>n. municipalities in Pistoia province | Socio-economic development, further addresses for cooperation by the Regional spatial plan | 42 municipalities in Florence province |
| *C. Naples* | Regional Landscape Plan<br>Provincial Territorial Coordination Plan<br>Local PRG (Land use plans) | - | [gravitational area composed by 173 municipalities:<br>92 municipalities (the whole province of Naples) +<br>36 municipalities in Caserta province +<br>35 municipalities in Salerno province +<br>6 municipalities in Avellino province (SVIMEZ, 1999)] | | 92 municipalities in Naples province |

*1. The re-scaling of the statutory planning system*

The institutional reform conveys to a move of direct control over and ownership of the strategic-planning function at the local level (Gallent et al., 2013, Zanon, 2013). Nowadays, to manage this great shift, Italian local authorities could refer to three main frameworks:

The strategic framework provided from previous provincial Territorial Coordination Plans
Existing and new soft planning spaces
The big picture of current municipal structural plans.

The first reference is the weaker one: planning activities of the Provinces started in 1990, in the framework of law n. 142, and in Northern Italy they are now at the second generation of provincial

plans, with some best practices whereas Bologna Territorial Coordination Plan is the most cited one. However, provincial plans were usually concerned with landscape and sectoral issues (as water and mobility management) and their strategic frameworks were usually affected by a lack of involvement of municipalities. That means that the vision of the provincial area they conveyed were not a shared one, and municipalities conceived it as imposed.

Existing and new soft planning spaces can be a possible way to achieve shared visions, whereas some of the ones created during previous strategic planning practices can be now formalised, and others may be opened (Haughton et al., 2013). However, the formalization of soft planning spaces seems to be a constraint in their development as pertinent planning arenas: can a Memorandum of Understanding or a Strategic Statement resist to administrative changes?

Finally, the big picture of current municipal structural plans has to be explored: being the metropolitan council just putted in place, a coordination in planning offices has still to be conceived. Joint political board, supported by Joint technical board are envisaged (see point 3) for systematising all the local strategies in order to identify common and conflicting visions and shaping a shared image of the future of the urban region (point 4).

*2. The extension of cooperation*

The defining and redefining of sub-regional boundaries convey to new planning spaces dealing with diverse functional areas. The extension of cooperation and the overlapping of functional areas and new planning spaces emerge as huge constraints.

The re-organisation of institutional boundaries is based on two parameters (existing provinces & population) that are often totally **unrelated** to territorial specificities and cooperative practices already in place.

Given that the obligation to union and to form metropolitan governments is not a duty to agree, after the revocation of the provinces a vast gap between functional areas and political convenience has emerged. Many difficulties in involving neighbouring authorities in a real cooperative governance process are due to different visions of the future development and to the balance of powers: political convenience or the perceived hierarchy or dominance can be a concern, as well as the perception that the partnership, being led by the mayor of the regional capital city, is not balanced in powers and financial allocations.

Finally, the reform doesn't take into account the presence of overlapping spaces of cooperation, between joint local development plans (coming from formal or informal spaces of planning) and sectoral and economic development programs. This is the case of the city of Florence, whereas the socio-economic gravitational area is extended to the neighboring provinces of Prato and Pistoia on the Pisa-Florence development system, as well as of the city of Turin, that is now conceiving the second strategic plan as an inter-municipal development plan among the municipalities of the first and second belt, while the metropolitan area is extended until Susa Valley, in the Cozie Alps.

*3. The need for rebuilding governance structures and for new skills for planning practitioners*

The dismantling of the provinces in metropolitan areas has led to voids in formal officer and Member governance structures at the cross-boundary, functional area or sub-regional level. These are now to be re-built to face strategic planning issues, in the context of the metropolitan government.

Concerning little municipalities obliged to convey into unions, in the shift from a provincial obligation for co-ordinating planning activities in sub-regional areas to a completely free discretion for local Authorities in choosing pertinent neighbouring authorities to cooperate with, these new "governance structures" have to face with diverse concerns: different visions of the future development as well as diverse expectations in the balance of powers and diverse views on housing provision.

If Localism represent a big challenge for planning officers culture (Sturzaker 2011), in the framework of the process of strategic spatial planning, negotiation and mediation becomes one of the main concerns. The discussion about the formalisation of soft planning spaces and the previous informal arrangements is the backdrop to some reflections on the role of planning officers and practitioners, as well as members.

The planning officers in the Localism Era are asked to act as collaborating planner (Clifford & Twedwr-Jones, 2013) in order to face the new challenge of metropolitan spatial planning. But even for tackling the issues of strategic planning there is a need for a more proactive attitude in setting-up and resourcing joint working arrangements, that was not required in a province-led framework.

The same skills become fundamental for members, mostly wherever the union with other municipalities remains contentious and is unwanted by local communities. A local authority councillor is asked to be able to meet the needs of his communities and fulfil his leadership role better through understanding the process and what his role can be in the context of the union or the urban regiona.

This concerns on the function of councillors seem to be lacking at the beyond-local level, conveying the State government to prospects a key role for the Regions, either acting as the co-ordinating body in setting-up the co-operative arena. Given the real difficulty for local members to deal with controversial issues connected with the processes of joining with other municipalities, a support from the regional government could be useful.

In any case, a joint political board seems to be the best solution to face strategic planning issues and to convey to the adoption of joint or aligned core strategies, because it avoid a process of continuous mediation between politician involved in the process and their councils and the resolution by committee on joint planning issues decreases decision times. Finally, the Joint political and technical boards guarantee transparency and political continuity in the planning process and delivery.

*4. The strategic spatial planning effectiveness and the need for Regional Design practices*

Being the metropolitan cities just born as formal government institutions, and the union of municipalities having to be shaped before the end of the year, the definition of **shared** supra-local strategies, **formalized** in specific agreements or in a joint plan and **implemented** in local planning practices is still a far away perspective.

Local authorities are still working to implement – whenever not to impose – their vision for defining the urban region and the priorities for its development. A great need for Regional Design practices is emerging (Lingua 2014, Lingua & De Luca 2015) for shaping the boundaries of the urban region and conceiving a shared vision of its spatial development.

Regional design is intended as an institutional process of common visioning, capable to shape the physical form of regions and to «portray a vital vision of what a region can look like, and how to achieve it» (Neuman, 2000:118). In this sense, representations of the urban region are generally

intended to indicate physical changes and to encourage debate on spatial planning coordination and responsibilities at supra-local/sub-regional and local levels.

Balz and Zonneveld (2014) relate regional design to a discursive dimension of planning concepts. They assume that spatial representations are used in processes of frame reflection by integrating and explicating analytical knowledge and allocating meaning in politics and policy-making.

In this perspective, Italian metropolitan areas are starting to engage in regional design processes that – through its discursive function –, are conceived as a pertinent ways for envisioning the spatial futures of urban regions, in order to enhance inter-municipal strategic spatial planning.

A Design-Led Approach to spatial planning is envisaged for systematizing all the current visions provided by the statutory planning system in place: municipal structural plans already provide a vision of the socio-economic and spatial development priorities of the Local Authority, without avoiding to collocate it into the dynamics of the whole urban region. The same does the Provincial Territorial Coordination Plan. Regional design approaches can convey to overcome limitations that the statutory planning system – strongly based on the local level – poses to inter-municipal planning.

This is happening in the Metropolitan city of Florence, whereas the *Regional design Lab* of the University of Florence has carried out the attempt to join local strategies for defining a common vision of the urban region, within the framework of the "Report on Metropolitan Cities" national research project carried out by the National Town Planning Institute (Istituto Nazionale di Urbanistica – INU). This vision is intended as the framework within defining the spatial representation of the urban area.

Employing spatial representations of urban regions in argumentations about political priorities, territorial change and spatial transformation can be the way to engage collaborative processes among councilors of the new born "Metropolitan Council", as well as planning officers, experts and the whole metropolitan community, in the formulation of metropolitan development strategies and projects.

## 5. Conclusion and directions for further research

The paper focuses on the changes occurring in the Italian planning system after the Law 135/2012 that, in the name of the spending review, aims to abolish the provincial level, obligating municipalities with certain population and territorial surface requirements to come together into "Unions of competences", including planning, and obligating the 10 main regional cities to form joint metropolitan city governments.

The case studies of Italian medium cities governance dynamics in the phase of shaping the urban region and defining priorities for spatial planning and development has evidenced four main issues to be tackled. *The re-scaling of the statutory planning system* has to take into account three main frameworks provided respectively from previous provincial Territorial Coordination Plans, from existing and new soft planning spaces and from the big picture of current municipal structural plans.

The *extension of cooperation* is the main issue: based on two parameters (existing provinces & population) that are totally unrelated to territorial specificities and cooperative practices already in place, it doesn't take into account the presence of overlapping spaces of cooperation, between joint local development plans (coming from formal or informal spaces of planning) and sectoral and economic development programs.

For defining the pertinent extension of urban regions and putting in place the governance structures to manage them, planning officers and practitioners need to deal with the lack of coordination and communication, as well as situations of disagreement or conflict, given that the duty to union is not a duty to agree. So, planning officers and practitioners are asked to achieve *new negotiation and participation skills* in activating practices of effective joint planning across local boundaries

Joint political board, supported by Joint technical board are envisaged for systematising all the local strategies in order to identify common and conflicting visions and shaping a shared image of the future of the urban region. In this perspective, Italian metropolitan areas are engageing in regional design processes for envisioning the spatial futures of urban regions, in order to enhance inter-municipal strategic spatial planning.

The analysis carried out so far allows to trace some perspectives for further research, in an ongoing cross-disciplinary and comparative project finalized to understand the forms and outcomes of processes of cooperative planning practices at a supra-local level in Italy, within the framework of a widespread process of diffusion of Localism in Europe[6].

Notwithstanding the obvious differences in the institutional systems and planning cultures, the research aim to provide a comparative perspective with other West European countries where this obligation is active since several time (i.e. the "agglomerations" system in France, introduced in 1999) or has just been putted in place (i.e. the obligation for municipalities to face strategic issues under a "duty to cooperate" in England, under the Localism Act 2011) or in other countries where the national or regional governments incentive cooperation (i.e. the "Regionale" in Germany or ongoing sub-regional planning practices in The Netherland as the process of "Regiona design" in place). Despite the strong differences between countries, Italy could take advantage from looking to these experiences, that have conveyed to questions and answers very close to the demands for change in place.

Of course, the need of co-operation on strategic issues is not new. Institutions have an old history of working together and with other bodies to address planning issues of common concern. Nevertheless, the emergence of cooperation as a duty, i.e. as a new obligation for Local Authorities in all fields (including spatial planning), certainly poses some questions concerning the redefinition of planning spaces, the role of the planner, the access to the cooperative arena. If these are typical problems of collaborative planning, the government expectation for plan-making authorities to undertake joint work on supra-local concerns affects issues of governance rescaling and accountability for planning.

The research aims to systematize the lessons learned from the solutions given to strategic issues in previous Italian and European sub-regional/ supra-local co-operative practices, in terms of shared strategies, in order to define:
-the pertinent extension of cooperation, in relation to the concerned issues and typologies of agreements
-a model for evaluating the effectiveness of cooperation
-a virtual platform for managing supra-local planning.

The research project approaches inter-municipal spatial planning as a complex system of interaction, influenced by several variables, that will be systematised through the concept of "platform", conceived

[6] In the framework of the project "AREA VASTA 2.0. A new form of localism in Italy: challenges, risks and opportunities for spatial planning across local boundaries" founded by the Ministry of Education, Universities and Research within the prestigious SIR Programme (Scientific Independence of young Researchers, see note 1).

as a support both for implementing cooperative planning processes and for evaluating their effectiveness.

An evaluative framework will be thus outlined to assess the emerging co-operative planning efforts under the duty to cooperate, in terms of how they are changing local planning agencies capacity to manage their territorial systems. In order to explore how these developments may be really changing the concept of planning strategically across local boundaries, in contemporary times affected by localism tendencies, a systematic appraisal will begin by disaggregating such conceptual frameworks into different elements that can enlighten and implement the platform: rescaling of cooperative governance, definition of new planning spaces with varying boundaries, management of disagreement, conflict or refuse to cooperate. Assessing the efficacy of cooperative practices across local boundaries is conceived for informing and explaining what planners 'really' do and can do, not only to demonstrate that they comply with a procedure, but in activating practices of effective strategic planning across local boundaries.

Finally, the definition of an innovative technical tool is intended to overcome the limitations inherent the traditional processes of cooperation (lack of comparable data, need to compare simultaneously diverse proposed project). Planning, as a discipline, demands the dual engagement with academic discourse and professional practice and crucially requires research that moves from theoretical analysis and understanding to pro-active visioning and implementation via multi-disciplinary pursuits. The project, by involving advanced software developers, aims to develop a virtual geo-referenced interactive platform, specifically targeted to spatial planning and intended not only as a virtual platform for data sharing, but as a working space for joint planning.

The expected results are concerned with the definition of policy recommendations for join supra-local planning, addressed to Local Planning Authorities and practitioners. The challenge is the redrawing of inter-institutional relations and spaces of planning on cooperative basis, for defining relevant planning visions across local boundaries within the framework of Regional Design processes.

The project is based on an innovative methodological approach to explore new paths for planning at a supra-local level. Planning criteria for inter-municipal and supra-local planning practices are defined and systematized through the concept of "platform", intended both as a methodological grid for the co-ordination of the diverse issues affecting territorial and urban inter-municipal planning and as a virtual platform to be used by the involved authorities in managing supra-local planning processes.

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**Meta Synthesis in Exploration Urban Planning Responsibilities Regarding to Vulnerable Groups**

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*abstract*
*At present, vulnerable groups are easily found in all walks of life, especially in cities with population concentration. Due to neglect of vulnerable groups, however, imperfect urban planning systems pose problems destabilizing the society. If not well dealt with for a long period, the problems can grow worse.*

*In the paper meta synthesis in computing is applied to urban planning. Specifically, with urban planning expertise, data & information system and computer in proper combination, a highly inclusive, man-machine integrated smart planning system is created to safeguard vulnerable groups using computer data support instead of limited human brain thinking, smart objective approaches instead of subjective planning.*

*Based on meta synthesis from qualitative to quantitative (hereafter referred to as meta synthesis), the theorization of the paper is outlined as follows:*

*1. Suggestion of a experiential hypothesis ( judgement or conjecture) after refining of scientific theories, experiential knowledge, expert judgment;*

*2. Statistics collecting and analysis of elements relating to vulnerable groups with the help of computer technology;*

*3. Proposal of a preliminary draft after model construction for numerous parameters;*

*4. Experiments on different types of beneficiaries regionally and communication & survey with the beneficiary.*

*5. Repetition of (3)(4) to get feedbacks and recommendations for the best urban planning.*

*Research summary:*
*1.Reduce potential difference among vulnerable groups from top-down combining scientific*

*theories and experiential knowledge;*

*2. Establish a discontent-defusing mechanism from bottom -up according to hierarchical structure of complex giant system*

The research takes urban areas with typical vulnerable groups iss
guide urban planning system through *meta synthesis* and enhance inclusi
groups, therefore reducing and defusing conflicts. In addition, i
vulnerable groups.

Keywords: meta synthesis, vulnerable groups, smart approaches, social responsibilities

1.General situation of the urban planning structure of vulnerable groups

Under the background of rapid development in contemporary China, the research of city social space transformation is gradually unfolded. With the differentiation of social structure and the influence of globalization coming, it highlights two level position in the labor market, income, housing between city Multi-National Corporation staff and migrant workers. As a result, began to appear in what was known as the so-called high level community, villa district , Zhejiang village, Anhui village, and other resettlement village. The new urban areas appear, differentiation of social space has become today's urban residents daily experience of urban impression. At the same time, the phenomenon of residential differentiation also began to be the concern of the planner, as early as in 2004, the fourth edition of "urban planning" has three articles respectively explore the residential space differentiation in Shanghai, Xi 'an and Hefei.

In the recent 30 years, the western cities is undergoing tremendous changes. The economic development based on faradism and the welfare policy under the influence of Keynesian were also happening profound transformation. Time-space compression, under the background of economic globalization, internationalization, the development of information technology, contributed to the current global production of diversification restructuring. The research of Sassen shows the globalization on big cities, especially the so-called "global city" in New York, London, Tokyo. With the gathering of global Multi-National Corporation headquarters and the international elite talents in these cities, urban industrial structure's biggest growth actually comes from the underlying services. At the same time, the structural tightening in the manufacturing and the increasing international migration, provide the necessary labor for the service industry development which just need low technical requirements and low level of wages. City structure adjustment caused the polarization of social structure, then both ends expanded and the middle reduced. Meanwhile, city space has become more "differentiation" and "fragmentation": On the one hand, the elite gathered in the luxury community, and their living space is generally not for outsiders in recent years (especially in California, USA ), that formed the so-called gated community. On the other hand, low income people and minorities, living in the poor community. Especially in the black community USA, due to its marginal status even constitute the so-called "underclass". Therefore, the contemporary western city is known as the "two cities", "broken city", "multicolour city", etc. Marcus and Van Cape discussed the city spatial polarization under globalization indicates whether a new city space full arrival, although their basic conclusion is no , this new phenomenon of city development should not be ignored, which drawbacks also require a long

time, downy, comprehensive improvement.

2. Objective problems and psychological demands of vulnerable groups

A fair and just social structure, is a hot topic in today's society. However, in a fair and just society, safeguard the interests of the disadvantaged groups is the basic premise.

Vulnerable groups, refers to the "crowd with low social survival ability caused by its own factors", such as the disabled, the elderly, minors (especially orphans). In China, it also include the Laid-off unemployed which as the main body of the poor in city, as well as poor farmers, the city migrant workers, etc. All of them have been ignored, discouraged, forgotten, ignored and marginalized. The basic rights of these groups have been greatly damaged, than they have to be at a disadvantage in the distribution of social resources, and unable to carry out normal social competition with other groups, finally, had to withdraw from the mainstream society.

The characteristics of vulnerable groups is generally composed of their physiological, experience, family background, social environment and cultural factors. Can have a correct understanding of the essential characteristics of vulnerable groups in contemporary Chinese social, is the key to effectively solve the problem of social protection and support for vulnerable groups.

2.2 Objective problem of vulnerable groups

2.2.1Life pauperized, living in poverty, lacking of material possessions. Mainly in low-income group, such as that who faces failure in the competitive market, laid-off, disability, or retirement. In their consumption structure, most or all of the income used to buy food, daily life use cheap goods, wear old clothes, no culture and entertainment consumption, and drop out of school or other bad consequences. Living in poverty is the typical characteristics of the vulnerable groups.

2.2.2Politically marginalized, this is mainly manifested in the pursuit of their own interests and abilities. The powerful group has an important influence in the process of making public policy, in contrast, it is difficult to truly implement down their wishes for the vulnerable groups. Now, although there is some improvement, some people in vulnerable groups have dared to stand up and express their opinions, their own voices, but the question is how many people can listen to, and how much can hear.

2.2.3Social exclusion, mainly manifested in a lack of participation in some universal social activity for some individuals or groups, which is a systemic process of marginalized and isolated. Their living environment is often neglected. Indeed, they live in the institutional exclusion, moreover to be posted disparaging and insulting label. Such as Shenzhen Airlines forced two disabled persons signed the "life and death "before allowing them on the plane, and so on. Because of this conflict involving living, so the conflict itself will with a more violent character.

2.2.4Mentality marginalized and extra malization, vulnerable groups is at the bottom of the social stratification system. Due to the lack of basic social resources and conditions, they lost the basic right of discourse in social development. And then it lead to the fault between social groups. If the vulnerable groups lose the hope of climbing, they will produce a feeling of despair, also their psychological pressure will continue to increase. When they feel they did not cause the attention of the society, even be

abandoned by the society, sometimes will have the idea of revenge to the society, and may show extreme behavior.

2.3 Rationality of system and impartiality of welfare

A fair and impartial social welfare is not only an important condition for the comprehensive development of individuals and the happiness of life, is also an important content of social civilization. Meanwhile, impartial social welfare is dependent on the rational social protection system. Excellent system and fair welfare policy plays an important role in guiding the national happiness to improve. As any group of non-governmental organization shall actively cooperate with related government for the study of improving the lives of vulnerable groups, provide the rational and wisdom theoretical basis by each subject's point of view, thus as the fundamental guarantee of rational system.

4.2.2Intelligent survey of vulnerable group: breaking the bottleneck of the lack of information

The status of intelligent survey, breaking the bottleneck of the lack of information: traditional urban planning survey, simply by manual work of planning staffs to collect and process information.

That involves all aspects of urban and rural status information, data quantity is huge, limited brain power is difficult to remember all the spatial information for the planning staffs, not to mention to space the profound social, economic and other transactional information into physical space. Lack of informa hard to collect has became an excuse of the planning is lack of science and ope

In recent years, Shenzhen introduced professional companies with GIS technicians to achieve the separation of planning and survey in battle of statutory plan . They have gained some underlines the effectiveness of intelligent survey to the status of vulnerable groups. But this separation of investigation and planning of intelligent survey also have some shortcomings:(1)Lack of the effective interface between the planning government and other departments which have already established an effective information.(2)Fail to meet demand-oriented in planning work, and did not achieve restructuring , consolidation of information and establish an effective urban status database, insufficient information utilization efficiency. (3)Not really refined to individual planning from area planning, and listen to voices.

The basic information of intelligent status survey includes two categories, spatial information and non-spatial information. The vulnerable groups most concerned about non-spatial information. Spatial information's are not only from the urban planning, underground pipeline information and outcomes of urban planning information, but also from the information of land use survey, mineral resource survey, geological hazard survey conducted by land, forestry, transportation and other department base on GIS platform. Non-spatial information includes the operation and construction information of education, health and other department; Land prices, property prices, rentals and other economic information, disaster prevention ,environmental protection, heritage conservation; As well as industry development planning, social undertaking development, and other related planning

In the GIS platform, the gathering of spatial information and the specialization of non-spatial information will urge various factors that describe the city to show as data information, urban planning gradually became a decision-making progress which depend on quantitative urban information

4.2.3Reorganization planning information: avoid data rich but information poor

The spatial and non-spatial information of intelligent survey conducted by each departments are diverse and complex. With the widely used of information technology in all sectors of modern city, urban information data will continually aggregated, resulting in useless data rich, usab

In the intelligent survey, planning demand oriented information restructuring is to systematically organize obtained information, unified scientific classification, enable the distributed information become systematize, change exclusive information to shared information, change mess data to standardization, make single-factor information to comprehensive information, thereby significantly improving utilization rate of basic data.

Planning demand oriented information restructuring is using the method of data fusion which is to complete the decision-making, evaluate tasks and comprehensively process obtained data of stats survey under certain rules. Data fusion can be divided into data level fusion, feature level fusion and decision level fusion.

In the reorganization of planning information, data level fusion refers to integration of spatial coordinates. Such as there are differences in analytical data for vulnerable groups because of diverse foundation from place to place. However in the planning data reorganization we should concentrate around each city's analysis data , use the bottom line data as basic guarantee.

Feature level fusion which belongs to the intermediate level of fusion, it first selects features from raw data, then associates features information with each other, then combine these information according to decision task oriented. In the reorganization of information, the features level fusion is overlay analysis for similar information. For example, in order to get the distributed information of female vulnerable groups, we should not only extract partial information from census authorities, but also from employment sector, the medical sector, the education sector etc, then overlap these information to get detailed distributed information of female vulnerable groups.

Decision level fusion is the highest level of integration, it first use feature selection technology which make judgment, identification and classification for complex information based on judging criteria. We finally get integrated decision-making results according to the credibility of each decision and some certain guidelines. For example, to obtain the population information of all kinds of urban land, we can overlap cadastral maps, topographic maps and satellite image to extricate residential construction information; We can interpret layer number and units number from satellite image, then we can calculate the resident population in each region, thus providing the foundation of the accurate population distribution information.

In the age of urban basic information explosion. Reorganization planning information based on data fusion technology can meet the maximum characteristic information requirement of decision making analysis. It can greatly refined complex data, so as to avoid the situation of data-rich but information poor.

4.2.4 Planning information mining: discovery the knowledge of urban laws

In the modern information technology, we emphasize the use of Knowledge to di
things. Knowledge consists of facts and rules. Truth is defined as an event, such as there is a traffic

accident at the east street and second ring road intersection, the height of Eiffel Tower is 300m or Beijing is the capital of China.

Rules can be understood as the methods ,standards, principles, processes, rules and etc, in general, it is expressed as IFTHEN in the information world. In facts the rules are the result such as the fact that Beijing is the capital of China is the result of information connection between China and capital. The rules that bring an umbrella if it rains is the result of information connection between rain and umbrella.

The data mining of smart city planning is spatial data mining, which extract implied knowledge, spatial relationships and other meaningful patterns from urban spatial basic database, then reveals the law of vulnerable groups development in the urban development. The main types of knowledge can be found include:1,Spatial distribution pattern ,analyzing the spatial distribution pattern of target.2,the law of spatial characteristics, describe the geometry and attributes of a set of spatial targets.3,spatial association rules, such as adjacent, connected, contain and etc.4,space classification rules which similar features are classified into same cluster.5,spatial distinction rules that differentiate between different types of space target.6,spatial evaluation rule which shows the variation laws of spatial target with time.7,spatial variation knowledge, that is the description of the difference between each spatial objects and extreme.8,object-oriented knowledge, that is the subclass structure and common features of complex object.

For example in the research of a city's neighborhood service facilities, we can extract the information of road function , width, section form and the disabled population, barrier-free facilities, barrier blind spot, barrier-free information service in each parcel. We can use qualitative and quantitative met synthesis to mine the information of the spatial distribution rules and spatial association rules, to find the distribution laws of handicapped population density, obstacle-free routes, the area with limited service, laying the foundation of planning adjustment.

4.2.5 Planning information update: based on work-flow principle

With the development of city, the related information of urban planning keep changing. If it lacks updating mechanism the intelligent planning will be a pool of stagnant water, we cannot check the results of planning, and correct unreasonable and non real time results, and lose the sustainable development livelihood.
Intelligent urban planning not only provide the manager a blueprint for future planning, more importantly, the achievement of planning work is the control and guidance for dynamic process, and provide the manager a dynamic process control and implementation mechanism.

Planning information will be updated not only based on the remote sensing monitoring and other modern technology, and more importantly we can construct perfect stats information database, planning deliverables information database and planning permission information database, and complete the association rules construction between each information database, providing a update platform for information. In the basis of this platform, we can use the work flow principle to establish information flow to track and monitor the process of system platform. In the daily business process of planning management and cooperative work, we can realize the dynamic update of planning information, through the information sharing between approval department and other competent departments. In this way, we

can keep related planning information up-to-date and conduct data mining in the work flow to modify unreasonable planning results and the component which lack of up-to-date.

Currently, many Chinese cities have established a picture planning management i update the approval information more maturely, but due to inadequate information sharing between relevant departments and lack of data mining in the work-flow, so we still not achieve dynamic update of comprehensive planning information which truly cover the vulnerable groups

5conclusion

We can use quantitative analysis to support the policy influence, which is the mainstream of urban planning studies in many developed countries. But for the city, the open complex giant system, it is hard to find the results just rely on computer logic, it must be complemented by human imagination and creative thinking, which means the use of human-machine interaction, using qualitative and quantitative methods to search the problem solution for complex system.

Integrated intelligent urban planning is not the universal tool to solve all the problems about urban fairness , but it will adopt an open attitude . With the development of human cognition to the world, we can integrate more sophisticated theories and methods to solve various issues ,make the development closer to origin.

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# Simplicity and Complexity in Cities and Their Planning

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# Simplicity and Complexity in Cities and Their Planning

Abstract

What are the contemporary conditions of complexity and simplicity, and their contestation the context of urban sustainability? The primary objective of this paper is to critically ex range of contemporary efforts that creatively engage these issues as we c transform the urban experience in the 21st century. A fundamental hypothesis theoretically, based on a preliminary synthesis of the laws of thermodynamics dynamics, and socio-econo-political theory. The hypothesis is that the more si the less complex a system, the more sustainable it is. This hypothesis accelerating degrees of complexity of societies in a global era is a key drive is coupled with and indeed underlies and makes possible two other factors tha often cited as the key drivers of sustainability: the increasing population an and human activities such as production, consumption, and their impacts; alon accelerating rates of change of human phenomena, so that together in combinat lead away from sustainability due to the fundamental principles of various including and especially thermodynamics and ecology.

Furthermore and more fundamentally, the degree of complexity of a system, esp dynamic human social systems of varying forms as well as ways of va scalar and temporal dimensions, underlies and gives rise to the possibility scales of magnitude of social systems such as cities, organisations, insti infrastructure networks, for example, and simultaneously gives rise to the acce of change of human processes that flow through those systems, such as the information and knowledge flows attendant to routine economic transactions o Giving rise to the possibility , in this context, means to provide the infras and administrative armatures that enable all human transactions, most often en institutions. Heidegger referred to this collective of enabling m technology (Heidegger 1977). In a global society these refer to but certainl to big data, the cloud and the numerous apps, softwares and hardwares that con ever-expanding, ever more interactive, and ever more complex constellation networks.

To the extent that this premise is true, this means that the measurable degree of human society and its social constructs and processes is fundamental to thei in an essential and ontological way. In an important way, complexity thus condi prospect of social institutions and processes being governable and sustainable,

degree. Moreover, following this logic, it is hypothesised that the degree c
inversely correlated with the degree of governability and the degree of sus
institutions and other social collectivities and their activities.

The complexity of a dynamic and living social system is based upon its abili
energy and information in order to support its growth and evolution. The more
information that is directed towards its development, the greater its degree
(Schneider and Sagan 2005). However, if this energy is not produced and ut
sustainable way, as much energy is nowadays, then it leads the system that uses
away from sustainability. Much the same can be indicated for information, whic
to both the development of the system – norms, rules, data, knowledge –
management and control. However, information gathering and processing consu
great deal of energy, and in increasing amounts. In this manner, complexity
and underlies the increases in scale and rates of change of a system; rath
alongside the latter two as co-equals. Furthermore, according to this view, c
not mere increases in scale and rates of change, is more fundamentally respon
current state of human affairs and their increasingly unsustainable and ungover
Increases complexity are demonstrably less and less capable of being mana
controlled by existing mechanisms and institutions as currently constituted, a
key driver away from sustainability today.

The paper continues below with an exposition of this argument and then ends with c
analytical remarks that suggest several new lines of research regarding the i
complex and simple components and aspects of eco-socio-technical systems are pr
for the development of planning practice and its theory. These lines are yet to
at the time of this writing.

Background and Literature Review: Social science perspectives on complexity,
increasing, are still limited in scope and quantity, relative to natural scienc
management, where there are more (May 1973, Batty 2007, Berkes, et al. 2003, U
Porter 2012, de Roo et al. 2012). There is even less scholarship on the notion
(Elgin 1993, Miller 1993, Etzioni 2004, Maeda 2006). Scholarship on their inte
virtually non-existent (Gell-Mann 1993). In the realm of the city, these inter
almost unexplored in urban planning and social science (Portugali 2011, de Roo e
These gaps have critical consequences. The most critical of these gaps is
increasing complexity of urban society and our inability to manage it and its c
largely and silently responsible for our current predicament.

However, in contrast, complexity is acknowledged as not only the overarching contemporary times, but it is even celebrated, sought, and planned. Ever larg complex socio-technical systems are evident in corporate and government institu and infrastructural mega-projects, big data and telecomm networks, and the the necessary for deep explorations of space, oceans, and particulate matter, or ex most apparent manifestation may be the city itself. In the realm of human se size of urban agglomerations is exploding, leading to an increasing variety of label mega agglomerations, such as the megalopolis and the mega-city region (Ne Hull 2011). The overall urban population of the planet is also increasing, b and relative / proportional terms. The overlapping and interlacing multiple ne economies, infrastructures and the other characteristics of urban life inters expanding complexity that increasingly spins out of control. In so doing, w that the largely negative (on aggregate) indicators of social, health, environm and political well-being abounding mark its mark our collective desc complexity to chaos. This is due to the fact that we have not been able complexity we have unleashed, but rather merely marvel at its portent.

Complexity, it appears, is difficult to manage because it is emergent, evolvin contemporary society without precedents in type, form, scale, and its rate of c metropolitan areas, and city regions are recognized as increasingly difficult t fully ungovernable (citation). This is because increases in complexity require and sophisticated data, management, and resources, not the least of which are technology. This unintended consequence of complexity, the need for more infor energy to attempt to control it, is itself extraordinarily energy intensi International 2012). This leads to increasing consumption of energy and other support management and governance infrastructures, and the people that are en those activities. Is urban planning and governance up to the challenges?

In policy arenas, including its scholarship, the role of complexity is inex whereas neoliberalism, globalisation, climate change, terrorism, etc. are pinp usual suspects in the court of responsibility for our current predicament as networked world. [insert a section here regarding the inter-relationship betw and these global predicaments] Underlying these conditions which I hav predicaments is the premise that at least part of the reason for which they traced to a complexity that extends not only beyond our capacity to cope and t the organizational, urban and societal scales; but it extends more crucial personal or individual abilities to understand and thus to navigate in order to and give meaning to our lives, and how to go about making them more meaning

sustainable in the future. In this context we begin to see that while simplic complexity lauded, these stances mask fundamental insights that have im consequences for society and fundamental relevance for the future.

Exposition of the Argument: An underlying premise of the paper is that what li complexity and simplicity with sustainability are their differences. Simple s have fewer parts. They tend to be smaller, have fewer interactions, follow phys be more predictable and more reliable. Complex systems tend to have more parts. systems tend to be larger, have more interactions, follow natural as well as ph dissipative, emergent, and thus less predictable and reliable. When the com system exceeds a set of limits that cannot be pre-determined, and cannot be ma the system itself (that is, the system cannot be self-organised), then it will its self-governance capacity as well as surpass the capacity of its environs. instability, and over the longer run, crisis. Here crisis means the inabilit change sufficiently to respond to altering conditions and perturbations in orde itself sustainably. When a system loses its ability to reproduce itself, it go outcome of a true crisis is the demise of the system, or its radical transforma type of system.

The rates at which these phenomena occur highlight the importance of understan as processes (Neuman and Churchill, 2011). Natural ecosystems, for example, are and their complexity evolves in dynamic equilibrium over the long run via ad other natural mechanisms the inescapable laws of nature. One key fact distinguishes natural ecosystems from human ones (cities, societies) is the ra of these mechanisms and processes. These rates of change are gradual, they naturally in a trial and error sequence of adaptation to surroundings and circ biologists call evolution. Moreover, these rates of change in the natural worl at least, are sustainable ones. As such, these rates of change and processes (adaptation, evolution) should inform current debates about urban progress, eco politics.

However, complex social systems including institutions, cities, societies, nati and so on; are subject to fluxes in conditions that are not necessarily only ev are also punctuated events and phenomena that lead to catastrophe such as respond to catastrophe, such as famine or draught. While learning and progres these circumstances, more often than not these catastrophic events reveal that conditions of human society are not sustainable, equitable, and respectful o other beings basic rights. [transition section here from the importance of th

to the nature of management and governance being linear, rational and thus hamst
capacity to respond to complexity, chaos, and catastrophes.]

Another key factor that distinguishes complexity from simplicity and complex s
simple systems is that the degree of complexity in nature is managed via evolut
to exceed its capacity, while in urban society complexity has been managed la
rational, linear tools that cope poorly with interdependencies among a multipli
and with their dynamic uncertainties. The latter factors that complicate matt
magnified by the accelerating rates of change and scales of impacts. The i
among all these factors give rise to degrees of complexity that lie beyond
capacities to understand, much less manage, these processes and their outcon
impacts.

Yet we rush headlong into more complexity due to the thrills, the convenience
productivity increases it affords. Think of the cloud, digital games, films,
media creations, and an endless list of other gadgets and capabilities. The
conveniences that occur throughout the city are enabled and put into place
complexity: international trade, globalisation, and elaborate governance and a
apparatus attendant to the global political economy. At what costs, to
communities, societies, other species and planet does Are we rush ourselves
blindly into this rush, with deficient decision mechanisms (Kahneman 2011)?

Compounding this complexity is parallel and increasingly intertwined dual worl
virtual, with prospects unknown and unknowable. The outcomes spinning from real
virtual reality and their interactions defy nature as they draw us in deep
humanity from the grounding of nature. Within urban society we are increasingl
computer-generated algorithms we do not control, or think we control, while the
spins consequences and implications we can scarcely imagine, much less control.

In this context, people increasingly opt out , move away from the big city, a
of means in order to simplify, cope, and survive. They adopt and adapt a mu
strategies in order to navigate the complex urban realm (de Certeau 1984).

The remainder of the full paper will address the intersection between sim
complexity by addressing two aspects. First is a brief critical history, explo
which themes of complexity and simplicity have been mobilized both as concep
political economy agendas in cities. Second is a preliminary mapping of co

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responses Key questions in the analysis of the intersection between simpli complexity include: Are societies destined to collapse due to their unstoppabl towards ever-increasing complexity (Tainter 1988)? Is simplicity the only pa sustainable survival? (Alexander and McLeod 2014) Are there intermediate ways?

Conclusion in abstract form: expl This atory research seeks to make new sense of th continuing and seemingly intractable conundrum of the consumer urban society policies that enable it in the urban context. It will also target the key i existing political economy arrangements guiding urban planning and governance advantage of the opportunities in the twenty-first century, or are new norm necessary? In sum, the paper will have engaged the intertwined issues of sim complexity, as well as their implications, in order to draw conclusions that are especially in the urban governance context.

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# Planning and Land Use/Cover Scenarios: The Role of Probabilistic Algorithms

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## 1. Introduction

A cellular automata (CA) model is characterized by phase transitions that can generate complex patterns through simple transition rules. As such, this technique seems suited to model the complexity of urban systems (Clarke and Gaydos, 1998; Batty, 1995). Unlike most conventional urban models that focus more or less on the spatial patterns of urban growth, cellular automata based urban models usually pay more attention to simulating the dynamic process of urban development and defining the factors or rules driving the development. By applying different transition rules, a model based on cellular automata seeks to explore how the urban system has been developing and how this system changes under certain rules or forces.

The central component of a CA model is the transition rules that represent the logic of the process being modelled and, thus, determine the spatial dynamics of the system (White and Engelen, 2000). The transition rules define how changes the state of a cell in response to its current state and the states of its neighbours. This is the key component of CA because these rules represent the process of the system being modelled, and thus are essential to the success of a good modelling practice (White, 1998). For a restricted CA, the transitional rules are uniform and applied synchronously to all cells within the system. However, it has been pointed out a large number of different ways to define the transition rules.

The several approaches used to define transition rules, based on the understanding of the urban system and its evolution from different perspectives, resulted in different types of urban CA models. These approaches range from very simple to extremely complex. For example, in the diffusion limited aggregation (DLA) model developed by Batty a vacant cell just changes state (to occupied) if in its neighbourhood there is a occupied cell (Batty, Longley and Fortheringham, 1989). However, other urban CA based models combine different rules in order to simulate the complex behaviour of the system.

A popular approach used in cellular automata (CA) based urban modelling is to incorporate other modelling methodology into the model, especially for defining the transition rules for it. In the effort of using various mathematical approaches to configure the transition rules of a cellular automaton, it is obvious that the primary purpose of employing mathematical approaches in the modelling practice is to evaluate the adequability or probability of land for development. Therefore, this type of model is also regarded as a adequability based CA model (Li and Yeh, 2000).

In our CA urban model, we simulate different scenarios of urban growth to 2021. Our approach is to use different trends (last 2, 8, 10 and 13 years) with and without restrictions and, most important, to apply several different methods for transition rules definition. The methods test site was the Almada municipality in the South bank of Tagus River, near Lisbon (Portugal).

The mathematical models, i.e. submodels, used to define transition rules include artificial neural networks (supervised [MLP] and unsupervised [SOFM and ArtMap]), genetic algorithms (GARP and GARPOM), supported vector machines (SVM), decision trees (CRT and CHAID), generalized linear models (GLM), generalized additive models (GAM), maximum entropy (MaxEnt) and geometric distance models (Euclidian, Manhattan and Chebychev).

## 2. Material and methods

The study area, use to test our methodology, is the Almada municipality (Figure 1), belonging to the Lisbon Metropolitan Area. The choice of this municipality is due to diverse factors of great importance, such as: is near the capital (Lisbon); enjoys of increased accessibility since the construction of the Tagus bridge; as the possibility of urban expansion and rare natural potentialities and, between 1967 and 1986, the territory attended to a unmeasured urban pressure, resulting in a irreversible ground occupation in areas of strong physical restrictions. Between 1991, 2001 and 2011 (dates corresponding to the population census) its population did not stop to grow, even that in differentiated rhythms. The outward job dependence is a reality that the in-out movements between Lisbon and Almada corroborate.

Figure 1. Geographic location of Almada Municipality.

The proposed evaluation method combines cellular automata, with Markov chain analysis and a wide set of submodels, relying on six phases: i) data pre-selection; ii) data normalization; iii) spatial autocorrelation and multicollinearity analysis; iv) transition rules integration; v) Markov time series trends allowing predict future uses; and vi) simulation of future scenarios. In this point we will discuss all points except vi), that will be further analysed in the discussions of the submodels simulation performance.

### *2.1 Data pre-selection*

One of the first things to consider in a model is the selection of the variables to be used. The Geographic Information systems (GIS) allow generating and manipulating information in a way that would not be possible otherwise. As the acquisition methods used, 3 types of variables are produced: (i) variables that result from vectorization of simple themes, e.g. qualitative variables such as hydrological network, road network and land use/cover; (ii) variables resulting from spatial interpolation techniques, e.g. digital terrain model; and (iii) variables resulting from processes of local, focal and zonal operations e.g. slopes and densities. The first type is typically handled in a vector environment, whereas the latter are exclusively handled in raster environments. The proposed model is based on a raster structure, adjusting to the operational characteristics of classic CA models.

There have been developed important efforts to improve the understanding of the mechanisms of production and reproduction of the urban space, as in the case of differentiated development-related positions (Harvey, 1975; 1989), auto-organization (Holland, 1998; Portugali, 1997; 2000) and the study of complex systems (Allen, 1997; O'Sullivan, 2001). Following these experiments and the work of Rocha et al. (2007) we identify the factors of greater importance on explaining urban growth in Almada (Table 1).

Table 1. Pre-selected variables.

| Variable | Type |
|---|---|
| Slope | Quantitative (%) |
| Road Network Intersections | Quantitative (n"/km2) |
| Road Networksit Den | Quantitative (/km2 |
| Distance to Road Network | Quantitative (m) |
| Distance to Urban Areas | (Quantitative |
| Accessibility to Lisbon | Quantitative (m) |
| Accessibility to Almada | Quantitative (m) |
| Accessibility to Caparica | Quantitative (m) |
| Territorial Attraction Index | Quantitative (adimensional) |
| Territorial Valorisation Index | Quantitative (adimensional) |
| Built Up Dynamics | Quantitative (construction licences/ km2) |
| National Ecological Reserve (REN) | Qualitative |
| National Agricultural Reserve (RAN) | Qualitative |
| Planning Master Plan (PDM) | Qualitative |

*2.2 Data normalization*

The input data is developed using a set of transition rules that quantify the spatial effects that prediction cells have on land use/cover changes (Pijanowski et al., 2000). During this conversion process, the cells are encoded to represent constraints (restrictions) or probability of occurrence (factors). In the first case represent binary masks, where the zero (0) represents the absence (or denial) and one (1) presence (or acceptance), and in the second case are continuous variables, normally ranging from 0 (0% of adequability) to 1 (100% of adequability).

To make our data match this 0-1 scale we need normalize (standardise) it. We use fuzzy membership functions (Zadeh, 1965). on the standardisation of the variables. Identify exactly which function to use, depends on the knowledge and understanding of the relationship between the criteria and the set of decisions, as well as the availability of information to infer the degree of membership. In the vast majority of cases, the sigmoidal or linear functions are appropriate to the modelling of reality. The sigmoidal function was applied to the factors which constitute continuous (quantitative) variables and linear function to which correspond to discrete (qualitative or categorical) values.

*2.3. Spatial autocorrelation and multicollinearity*

Some of the common problems that models contain are the autocorrelation and multicollinearity. Statistically, the autocorrelation is a measure that reflects how much the value of a random variable is able to influence its neighbours. For example, how the existence of a higher value influences also high values in is neighbourhood. On the other hand, multicollinearity is a common problem in models where the independent variables have exact (or approximately exact) linear relationships.

The spatial autocorrelation can be measured in different ways. The Moran index is the most widespread statistic and measures the spatial autocorrelation from the product of the standard deviations. This index is a measure of global autocorrelation, as it indicates the degree of spatial association present in the data set.

If the covariance between contiguous cells is null, the neighbourhood has no influence on the values of the variable. In this case, there is no spatial autocorrelation. If the neighbours resemble each other more than the distant cells, then there is a positive spatial autocorrelation, i.e. clustering. If the distant cells resemble more than the neighbours then there is a negative spatial autocorrelation, i.e. sprawl.

In the present we choose to use two types of neighbourhood in the spatial autocorrelation calculation: Moore and Von Neuman (Table 2). Of this analysis, we conclude that all factors have acceptable values of autocorrelation, regardless of the type of neighbourhood adopted in calculations.

Table 2. Spatial autocorrelation.

| Layer | Moore | Von Neuman |
|---|---|---|
| Accessibility to Almada | 0.9822 | 1.0133 |
| Accessibility to Caparica | 0.9844 | 1.0313 |
| Accessibility to Lisbon | 1.0055 | 1.0450 |
| Territorial Attraction Index | 0.9195 | 0.9228 |
| Slope | 0.8570 | 0.8736 |
| Distance to Urban Areas | 0.9817 | 1.0227 |
| Distance to Road Network | 0.9836 | 1.0194 |
| Territorial Valorisation Index | 0.9532 | 1.0340 |
| Road Network Intersections | 0.9949 | 1.0294 |
| Road Network Density | 0.9937 | 1.0206 |
| Built-up Dynamics | 0.9841 | 1.0043 |
| Planning Master Plan (PDM) | 1.0049 | 1.0358 |
| National Agricultural Reserve (RAN) | 1.0049 | 1.0382 |
| National Ecological Reserve (REN) | 1.0049 | 1.0382 |

The clearest indication of the existence of multicollinearity is when the R2 is quite high, but none of the coefficients are statistically significant according to conventional t-statistics. The consequence of multicollinearity is high standard errors in the case of moderate or severe multicollinearity and even the impossibility of any estimation if the multicollinearity is perfect. The absence of multicollinearity is one of the premises to establish a correct model. However, some authors state that it is not a serious problem if the objective of the model is the prediction.

Thus, the choice of the variables to use in the model should take into consideration their possible multicollinearity (Guisan and Thuiller, 2005). This can be detected, among other ways, through the correlation matrix. Other techniques used are the tolerance value or its inverse, called the variance inflation factor (VIF), whose high values indicate the existence of collinearity:

$$VIF \quad \frac{1}{1 \quad R_j^2} \tag{1}$$

where $R_j$ comes from $x_j$ regression with the other variables, i.e. the coefficient of determination of the regression equation.

It is suggested, when collinearity occurs, that those variables are removed from the analysis. In Table 3 we can see that all the factors have values within acceptable parameters, and the only one that stands out for having a higher value is Accessibility to Lisbon. Crossing the values of R2 and VIF, we left out two factors: Accessibility to Almada and Road Network Density. In both cases there is a strong correlation with Accessibility to Lisbon and the Road Network Intersections, respectively. However,

despite the latter having higher values in relation to the first, they are chosen in virtue of the analysis of in out trips still emphasize the importance of movements to Lisbon and the nodes (intersections) represent a real access to road network which does not happen with the routes, e.g. highway access is only possible in some intersections. In addition, although with higher values, both parameters are within acceptable parameters.

Table 3. Multicollinearity values.

| | Factor | R2 | VIF |
|---|---|---|---|
| 1 | Accessibility to Almada | 0.376923 | 1.604938 |
| 2 | Accessibility to Caparica | 0.245495 | 1.325373 |
| 3 | Accessibility to Lisbon | 0.761179 | 4.187239 |
| 4 | Territorial Attraction Index | 0.077739 | 1.084292 |
| 5 | Slope | 0.197143 | 1.245552 |
| 6 | Distance to Urban Areas | 0.473995 | 1.901123 |
| 7 | Distance to Road Network | 0.287069 | 1.402661 |
| 8 | Territorial Valorisation Index | 0.262954 | 1.356768 |
| 9 | Road Network Intersections | 0.588384 | 2.429452 |
| 10 | Road Network Density | 0.321538 | 1.473923 |
| 11 | Built Up Dynamics | 0.564097 | 2.294087 |
| 12 | Planning Master Plan (PDM) | 0.234892 | 1.307005 |
| 13 | National Agricultural Reserve (RAN) | 0.141907 | 1.165375 |
| 14 | National Ecological Reserve (REN) | 0.445719 | 1.804140 |

*2.4. Transition rules integration*

A problem of CA models is determining the weights to assign to each factor. The solo simulation involves the use of several spatial variables. The contribution of each of these variables for the simulation is quantified by a weight, or parameter. The value of these parameters has a important effect on the results of the simulation, i.e. different combinations of values lead to totally different urban forms.

In most situations it is necessary to calibrate the CA model in order to ensure that the simulation generates results close to reality. This calibration is extremely difficult to accomplish. There are two main types of calibration processes: those based on trial-and-error approaches and those based on mathematical/statistical methods. In the first case it is not necessary to use rigid mathematical methods. A simple method is comparing visually the results of simulations made with different combinations of weights. However, when there are many variables it is difficult to define the combinations and access the results visually, since the generated patterns can be very complex.

In the second case, we refer to a fairly common approach in urban modelling with cellular automata, which is the incorporation of other modelling methodologies in the model, with a special focus on the integration of their transition rules, i.e. predictive submodels. The most used mathematical models include the multicriteria evaluation (Wu and Webster, 1998; Wu, 1995), in particular together with Analytic Hierarchy Process (AHP) developed by Saaty (1980, 1986), multiple regression (Sui and Zeng, 2001) and principal component analysis (Li and Yeh, 2002).

In an effort to use various mathematical approaches to configure CA transition rules, normally becomes obvious that the primary purpose of the application of these approaches is the evaluation of their

adjustment to urban develops adequability. Therefore, this type of model is also known as adequability CA model (Li and Yeh, 2000). From here we can see that there is a high and diverse number of statistical integration models can be used in modelling (Guisan and Zimermann, 2000). Their role is to obtain response values that translate the adequability through the combination of the independent variables values relating to the known distribution of the phenomenon.

Taking into account this large variability, the choice of a single method implies the loss of several potentialities present in others. In addition, the holding of several methods simultaneously is suggested on modelling as a way to decrease the uncertainty of the process (Pearson et al., 2006). Considering these prerogatives and the potential gain in predictive performance, we opted for the use of several different models.

The applied methods include maximum entropy (MAXENT) (Jaynes, 1957; Philips et al., 2006), generalized linear model (GLM) (Guisan et al. 2002), generalized additive model (GAM) (Hastie and Tibshirani, 1990), support vector machine (SVM) (Vapnik, 1995), Chi-squared Automatic Interaction Detection (CHAID) (Kass, 1980; Thuiller, 2003) and Classification and Regression Trees (CRT/CART) (Breiman et al., 1984; Thuiller, 2003), artificial neural networks (supervised [multilayer perceptron MLP ((Rumelhart, Hinton and Williams, 1986)] and unsupervised [self organizing feature maps SOFM (KOHONEN, 1993) and adaptive resonance theory ARTMAP (Carpenter and Grossberg, 1987)]), genetic algorithms (genetic algorithm for rule set production - [GARP] and genetic algorithm for rule Set production open modeller [GARPOM]) (Stockwell and Peters, 1999) and geometric distance models (Euclidian, Manhattan and Chebychev) (Tsoar et al., 2007).

### *2.5. Time series trends*

One of the key components of CA models is time, i.e. the change of a cell state at a given time is controlled by the state of the cell itself and the state of his neighbours in the previous step. Thus, the model needs to be configured not only spatially as well as temporally. However, the current practices of urban CA based modelling focus essentially the spatial dimension of urban land-use change. There is little concern with the temporal dimension of the model.

The Markov chain is a mathematical model that describes a certain type of process that moves in a sequence of steps and through a set of States (Baker, 1989). The attractiveness of the Markov chain lies in the fact that the model parameters are easily estimated. The transition probabilities can be estimated statistically from a sample of transitions that occurred during a certain time interval. In this way, the Markov chain only requires the establishment of a finite number of states and that transition probabilities are known. Time steps correspond to land use/cover binary maps (urban/non-urban) obtained by photo-interpretation (Figure 2). Depict having a database from 1960 to 2008 we chose to use just the data from 1995 and later, because this maps were made over ortophotomaps and have a higher positional accuracy than the other (based on aerial photograph).

The Markov chain analysis generated two tables with, respectively, the transition land use areas (Table 4) and the transition probabilities (Table 5), for 4 periods.

The 4 periods considered were of 13 (1995-2008), 10 (1998-2008), 8 (2000-2008) and 2 (2006-2008) years. Based on the values obtained we can then predict the probability of land use transitions to 2021 based on different growth trends, i.e. different periods (4).

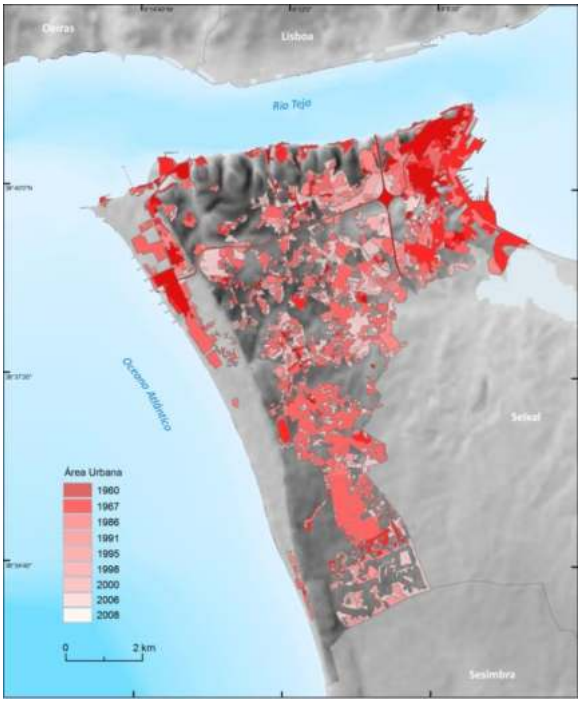


Figure 2. Land use/cover from 1960 to 2008.

Table 4. Transition areas (km2).

| | 1995 – 2008 | | 1998 – 2008 | | 2000 – 2008 | | 2006 – 20 | |
|---|---|---|---|---|---|---|---|---|
| | Non-urban | Urban | Non-urban | Urban | Non-urban | Urban | Non-urban | Ur |
| Non-urban | 25.9464 | 8.1779 | 25.2250 | 8.8993 | 25.0907 | 9.0335 | 32.1285 | |
| Urban | 0.0000 | 34.4108 | 0.0000 | 34.4108 | 0.0000 | 34.4108 | 0.0000 | |

Table 5. Transition probabilities.

| | 1995 – 2008 | | 1998 – 2008 | | 2000 – 2008 | | 2006 – 2008 | |
|---|---|---|---|---|---|---|---|---|
| | Non-urban | Urban | Non-urban | Urban | Non-urban | Urban | Non-urban | Urb |
| Non-urban | 0.7604 | 0.2396 | 0.7392 | 0.2608 | 0.7353 | 0.2647 | 0.9415 | |
| Urban | 0.0000 | 1.0000 | 0.0000 | 1.0000 | 0.0000 | 1.0000 | 0.0000 | 1 |

## 3. Submodels Validation

A receiver operating characteristic (ROC), or simply ROC curve, provides tools to select possibly optimal models and to discard suboptimal ones. Because ROC graphical plots dissociate classifiers performances through the asymmetry of class and cost errors, they have advantages over other evaluation measures.

The usual approach is to establish a threshold or cut-off value in order to split the response variable in dichotomous classes. The value of the threshold is usually set equal to the a priori occurrence probabilities of the phenomenon under study. However, the definition of a threshold is more a matter of using the model than a feature of the model itself. For this reason, it is better to use threshold-independent methods.

Usually ROC curves are used to generate summary statistics. One of the most commons is the area under the ROC curve (AUROC), or just area under curve (AUC). When using normalized fuzzy maps, the AUC is equal to the probability that a classifier will rank a randomly chosen high instance (e.g. 0.8) above a lower randomly chosen one (e.g. 0.2) (Fawcett, 2006).

Table 6 shows the AUC values for all submodels tested against 2008 land use. The results are globally satisfactory ranging from 0.61 to 0.85. It is interesting to note that distance based models, despite being conceptually simpler, are among those who get the best results. This data can be important in a future dissemination by non-specialized users, where the simplification of procedures takes on greater importance.

Understanding that all models have their virtues but also some drawbacks, but being unable to work with all of them, we select those who demonstrated a performance rated as good. So, henceforth our analysis will focus the generalized linear model (GLM), the generalized additive model (GAM), the model of maximum entropy (MaxEnt), the two genetic algorithms (GARP and GARPOM) and the model based on Manhattan distance (Manha).

We should bear in mind that all considerations concerning the parameters obtained by the models are valid only for the range of values (presences and absences) used. As such, these relationships between variables can be widely different, arising from the use of different samples, e.g. for a more extensive study area. All selected submodels, including less performance ones (GARP and Manha), can be used in conjunction, in order to better characterize the potential existence of urban areas. This method consists in the addition of consistent areas of all the six models, using as a limit of adequability the AUC value that maximizes the results of each one, i.e. weighted average. This procedure is relatively similar to that proposed by Araujo and New (2006), for the reduction of uncertainty in predictive modelling.

Table 6. Submodels AUC values.

| Submodel | AUC | Accuracy | Submodel | AUC | Accuracy |
|---|---|---|---|---|---|
| GLM | 0.851 | Good | MLP 1 hidden layer 12 neurons | 0.787 | Reasonable |
| MAXENT | 0.838 | | MLP 2 hidden layers 12 neurons | 0.783 | |
| GARPOM | 0.820 | | MLP 2 hidden layers 4 neurons | 0.782 | |
| GAM | 0.816 | | MLP 1 hidden layer – 8 neurons | 0.779 | |
| GARP | 0.811 | | ARTMAP | 0.771 | |
| MANHATTAN (MANHA) | 0.802 | | CHAID | 0.768 | |
| CHEBYCHEV | 0.792 | Reasonable | CRT | 0.767 | |
| EUCLIDIAN | 0.792 | | SVM100 | 0.757 | |
| MLP 2 hidden layers – 8 neurons | 0.788 | | SVM200 | 0.725 | |
| MLP 1 hidden layer 4 neurons | 0.787 | | SOFM | 0.613 | Weak |

## 4. Submodels Comparison

Analysing submodel-by-submodel (Table 7), it may be noted that, on average, the GLM, GAM and Manha, favour the probability of occurrence of urban use. However, the Manha has a minimum adequability of 0.4941, which does not correspond to reality. This is due to the use of pseudo absences that may not be true negatives. The GAM and the genetic algorithms (GARP and GARPOM) have the higher standard deviation values.

Table 7. Submodels descriptive statistics.

| | N | Average | Minimum | Maximum | Standard deviation |
|---|---|---|---|---|---|
| MANHA | 2729908 | 0.8295 | 0.4941 | 0.9412 | 0.0653 |
| GAM | 2729908 | 0.8336 | 0.0000 | 1.0000 | 0.2369 |
| GARP | 2729908 | 0.5824 | 0.0000 | 1.0000 | 0.3683 |
| GARPOM | 2729908 | 0.6716 | 0.0000 | 1.0000 | 0.3977 |
| GLM | 2729908 | 0.8557 | 0.0000 | 1.0000 | 0.1870 |
| MAXENT | 2729908 | 0.3292 | 0.0039 | 0.8510 | 0.1968 |
| AVG6M | 2729908 | 0.6836 | 0.0000 | 0.9412 | 0.2180 |

Comparing the submodels with each other (Table 8), we can find that they are relatively related, presenting correlation values that oscillate between 0.60 ( GLM GAM ) and 0.96 ( AVG6M GARPOM ). The AVG6M has the greater correlation with all the others (between 0.96 and 0.79), which goes alongside the idea of its use.

To compare the variances of the different submodels we used F-ratio statistic. The F-ratio is used to determine whether the variances in two independent submodels are equal. If the F-ratio is not statistically significant, we can assume that there is homogeneity of variance. This value is obtained by dividing the largest variance for the smallest. If the F-ratio exceeds the critical value, i.e. there is no difference between the variance of the submodels, the null hypothesis is rejected.

Table 8. Pearson correlation coefficient between submodels.

| | MANHA | GAM | GARP | GARPOM | GLM | MAXENT | AVG6M |
|---|---|---|---|---|---|---|---|
| MANHA | 1.00 | | | | | | |
| GAM | 0.76 | 1.00 | | | | | |
| GARP | 0.81 | 0.70 | 1.00 | | | | |
| GARPOM | 0.87 | 0.66 | 0.86 | 1.00 | | | |
| GLM | 0.84 | 0.60 | 0.68 | 0.85 | 1.00 | | |
| MAXENT | 0.77 | 0.61 | 0.80 | 0.83 | 0.79 | 1.00 | |
| AVG6M | 0.92 | 0.79 | 0.93 | 0.96 | 0.86 | 0.89 | 1.00 |

In our case, because the degrees of freedom are always greater than 1000 (>>120), the sample is statistically regarded as . Thus, regardless of the degree of confidence selected (0.10; 0.05; 0.25) the threshold corresponds to 1. The F-ratio values (Table 9) always exceed this value (1), so there is a statistically significant difference between the variances of the models. Despite all, the AVG6M is the one that presents values closer to the threshold, namely 1.36 (with GLM), 1.23 (with MaxEnt) and 1.18 (with GAM). A visual comparison can give the notion of areas where the one submodel (column) has higher (green), equal (yellow), or lower (red) prediction values than another submodel (line).

Table 9. F-ratio statistic for inter-model variances.

| | MANHA | GAM | GARP | GARPOM | GLM | MAXENT |
|---|---|---|---|---|---|---|
| GAM | 13.146 | | | | | |
| GARP | 31.765 | 2.416 | | | | |
| GARPOM | 37.052 | 2.818 | 1.166 | | | |
| GLM | 8.186 | 1.606 | 3.880 | 4.526 | | |
| MAXENT | 9.072 | 1.449 | 3.501 | 4.084 | 1.108 | |
| AVG6M | 11.136 | 1.181 | 2.853 | 3.327 | 1.360 | 1.227 |

To quantify the relationship of each submodel with all others at the same time, we carry out a multiple linear regression (MLR). In table 10 we may find the results of MLR calculations. The diagonal values correspond to the value of the line intersection and the other values match the relationship of each submodel with the one that is being analysed. Here we can see that the AVG6M is a valid option, showing values of R and R2, near 0.999 (higher values among all submodels tested). The residuals, i.e. difference between the observed and expected values, for all the regressions carried out. The areas where the values are higher are those where the worst model represents all others (the green represents positive values and negative red).

Table 10. Multiple linear regression parameters by comparing a submodel (dependente) with all others (independent).

| | MANHA | GAM | GARP | GARPOM | GLM | MAXENT | AVG6M | $R^2$ | R |
|---|---|---|---|---|---|---|---|---|---|
| MANHA | 91.7450 | 0.3942 | 0.4051 | 0.4084 | 0.3654 | 0.4349 | 2.5813 | | |
| GAM | 0.8427 | 8.8040 | 0.9466 | 0.9514 | 0.9878 | 0.9449 | 5.7254 | | |
| GARP | 0.8862 | 0.9688 | 4.6950 | 0.9386 | 1.0261 | 0.9371 | 5.7939 | | |
| GARPOM | 0.8965 | 0.9770 | 0.9417 | 9.8620 | 0.9590 | 0.9455 | 5.7766 | | |
| GLM | 0.6389 | 0.8711 | 0.8841 | 0.8236 | 9.1759 | 0.8206 | 5.1604 | | |
| MAXENT | 0.9189 | 0.9339 | 0.9050 | 0.9101 | 0.9198 | 1.0449 | 5.5463 | | |
| AVG6M | 0.1623 | 0.1684 | 0.1665 | 0.1655 | 0.1721 | 0.1651 | 0.3694 | 0.999 | |

## 5. Results Analysis

The previously discussed 7 submodels calculated served as basis to simulate future scenarios of urban occupation using a 5x5 extended Von Neuman neighbourhood. As the largest gap between records of land use/cover is 13 years, i.e. 1995 2008, it is not advisable to create simulations beyond 13 years into the future, which based on the year of the last record (2008), limits the time horizon to 2021. However, it is common knowledge that the simulation models perform better for small periods than for more extended ones. So what can be done to decrease the risk of developing a simulation so ahead in time? The solution can be easily explained by an analogy to golf training.

The golfer shoots several times the ball toward the hole and the result will be a set of balls around the hole (assuming that it is difficult to get it right in the hole at the first time, as a model does not predict exactly a future situation). Some of those balls fall on left side of the hole, others on the right, still others ahead and so on, forming a cloud of balls. Statistically, there is a high probability of the hole location being in the geometric centre of the balls distribution. This probability increases as the number of balls raises and, consequently, their density increases.

With models the situation is the same. Despite very often the purpose of the model is not to accurately predict a situation, but rather to explain the influence of factors in a given system and make it possible to identify how the system reacts to changes in the parameters, its power of simulation can be greatly increased through the creation of several alternative scenarios. This means that creating various scenarios of evolution of urban area to 2021, assures that there is a much higher probability of find the future real situation between them.

Hence, the importance of the time horizons considered (4 in total). As inferred from the land use/cover evolution changes in Almada municipality, the evolution of urban area did not happen always in the same way in space and, especially, in time. So, it was decided to adopt a set of four situations ranging from the overall trend of the last decade, e.g. last 13 years (1995-2008) and 10 years (1998-2008), to the

latest trends, e.g. 8 years (2000-2008) and 2 years (2006-2008). From the combination of all the elements, we have established 7 predictive submodels and 4 distinct trends of urban growth, originating a 7x4 matrix.

This matrix was further subjected to two distinct approaches. First, the predictive submodels were introduced without changes, i.e. fully consisting of factors. Remember that in the elaboration of these submodels, factors such as REN and RAN, were considered as highly conditioning, but not restrictive of urban use. That leads to 28 urban occupation scenarios for 2021.In the second approach, REN and RAN were used as binary masks, where the existence of the factor would correspond to zero, i.e. inability to build and the absence of a factor, i.e. possibility to build. Therefore, these two sets of information were considered as constraints in all submodels by multiplying the firsts by the seconds. In this way, we fully prevent urban sprawl within areas of REN and/or RAN in the simulations carried out. This second approach resulted in another set of 28 scenarios of urban area in 2021.

In a more quantitative analysis (Table 11) we can observe that the simulations follow the trends of land use/cover change. So, as the last two years (2006-2008) were of urban growth strong slowdown, the simulation based on this rate of growth is the one that generates less urban area for 2021, with values ranging between 35.866 km2 (AVG6M) and 35.869 km2 (Maxent). The most fruitful period is the 8 years one, spanning from 2000 to 2008. The predicted urban are for 2021, according to the 8 years trend, oscillates between 42.74 km2 of GAM and AVG6M, and the 42.751 km2 of manha. As the simulation based on the growth of 2006 to 2008 predicts a small increase in the urban area, it is understood that the 8 years dynamic is due essentially to the situation between 2000 and 2006.

Table 11. Quantitative results of the simulations (UR means unrestricted and RE means restricted).

| | 2 years trend | | 8 years trend | | 10 years trend | | 13 years tre | |
|---|---|---|---|---|---|---|---|---|
| | UR | RE | UR | RE | UR | RE | UR | RE |
| Edmanha | 35.867 | 35.869 | 42.743 | 42.751 | 42.613 | 42.620 | 41.910 | 41.913 |
| GAM | 35.868 | 35.868 | 42.740 | 42.744 | 42.608 | 42.613 | 41.905 | 41.908 |
| GARP | 35.872 | 35.871 | 42.745 | 42.742 | 42.614 | 42.610 | 41.908 | 41.908 |
| GARPOM | 35.869 | 35.869 | 42.744 | 42.746 | 42.612 | 42.615 | 41.908 | 41.912 |
| GLM | 35.867 | 35.867 | 42.742 | 42.746 | 42.613 | 42.616 | 41.909 | 41.913 |
| Maxent | 35.877 | 35.872 | 42.742 | 42.744 | 42.610 | 42.613 | 41.906 | 41.910 |
| AVG6M | 35.866 | 35.870 | 42.740 | 42.743 | 42.609 | 42.613 | 41.903 | 41.911 |

The two next simulations, give predictions of successively smaller urban area. Indeed, considering the trend of the last decade (1998-20008) the urban area in 2021 would oscillate between 42.608 km2 in the case of GAM and 42.62 km2 to the manha. Finally, following the trend of the last 13 years (1995-2008) we have a decrease in growth trend, standing just above the trend of the last two years, although with values much closer to the other two simulations (10 and 8 years) than this last (2 years). The trend of the last 13 years varies between 41.903 km2 of urban area based on AVG6M and the 41.913 km2 generated by manha. In short, we can build three groups of scenarios, one with a fairly moderate growth (trend of the last two years), a steep growth (trend of the past eight years), and an intermediate situation, although tending to be closer to the larger dynamic situations (the last ten and thirteen years).

Still in a global analysis, immediate upraises the fact that, perhaps paradoxically at first glance, the simulations with restrictions predict greatest amount of urban area than the ones without restrictions (Figure 3). The only exception is the simulation based on biennial trend. This was due to the fact that with 2 years of trend, spatial relations are still dull and the time window is too small to model a complex system, as the urban. In this way, the linear functions prevail and the built-up area expands, in this context with logic, more easily than by the more restricted space.

In the simulations based on more years, the interactions between microelements increase, coming into sight non-linear behaviours and the emergence of new behaviours. This forced the urban sprawl to follow alternate routes, because of the restrictions imposed, finding new realities that encourage new behaviours, which in turn enables the discovery of new routes and so on.

In a submodel level analysis it can be seen that in the simulation based on 2 years trend the submodel that more urban area generates is the maximum entropy (MAXENT). The entropy is a measure of the amount of uncertainty in a probability distribution or a system subject to constraints. Entropy measures the number of different microstates that may arise in a particular macrostate. The term has been used as the basis for the maximization of entropy models of spatial interaction.

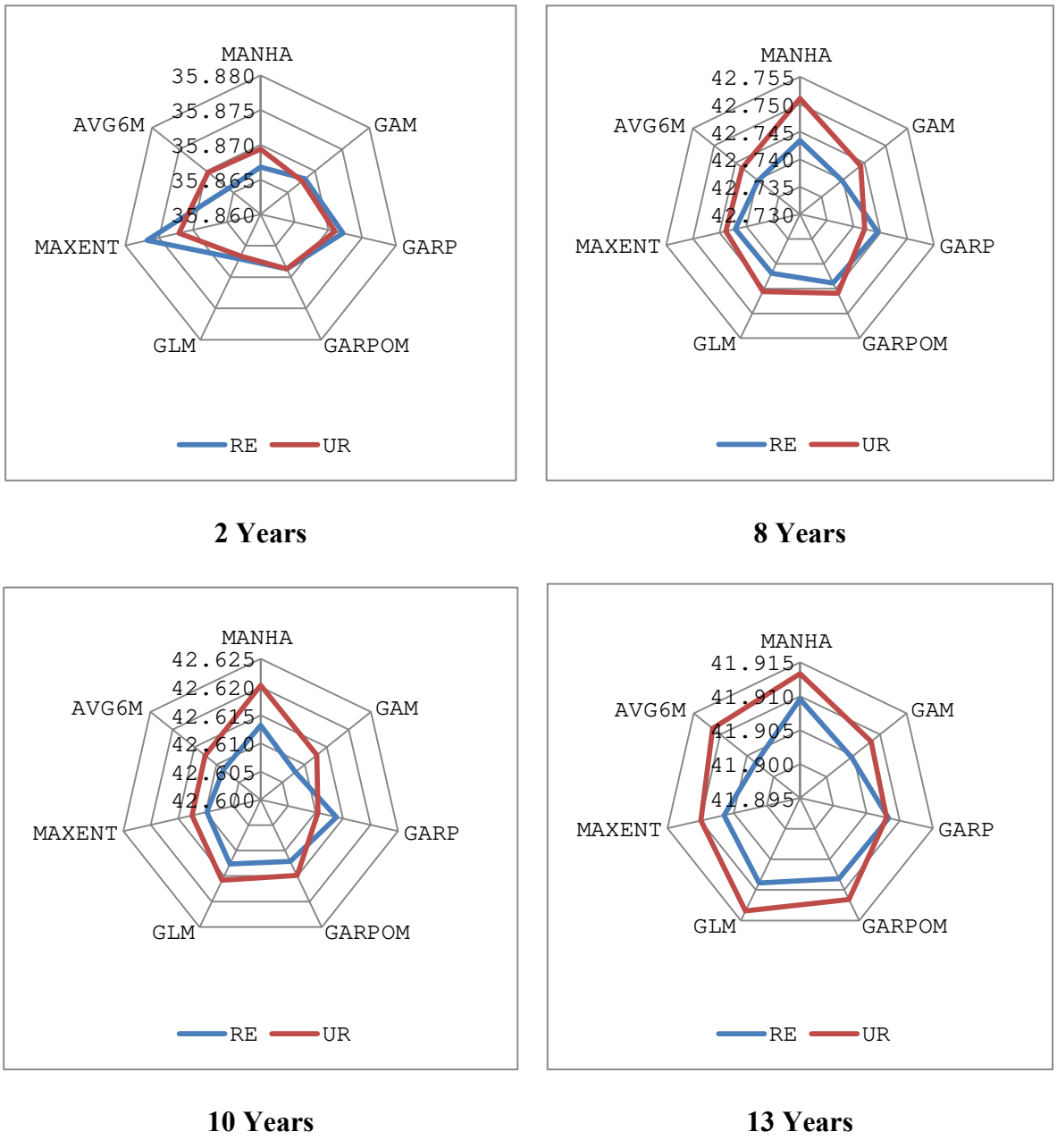


Figure 3. Quantitative results of the simulations.

The maximum entropy models are statistical models to identify the pattern of a spatial location, most likely a system subject to constraints. This approach was introduced in geographic modelling by Wilson in 1967, as the basis for a stricter interpretation of the gravity model. The model of maximum entropy make it possible to easily calculate the effects of new housing, and have been used in varied urban models, e.g. in the Lowry model. As in the situation of two years, there is a relatively small period to set the trend the system don't get auto-organized, predominating, due to the many possible behaviours, the existence of microstates.

In the remaining three simulations, based on 8, 10 and 13 years trends, the system tends to the auto-organization and the MAXENT begins to lose protagonism. In this context, the effect of distance gets predominance from what the model that stands out is the manha, which is based on Manhattan distance. At first (8 and 10 years trends), the manha is the more productive simulation in generating built space when the model is run with restrictions.

With the absence of constraints, the urbanizing space available increases and, therefore, there is an increment of the possible paths to follow. This multiplicity of solutions comes from a competition for space, which favours the genetic algorithms, which duplicate by analogy from biology the competition between species (land uses in this case). Therefore, it is not surprising that when we face an unrestricted space, GARP is the simulation with highest performance.

These claims can be confirmed by comparing the relationships between the simulations with and without restrictions. In the simulation based on two years trends, the two submodels generate more urban area with no restrictions than with restrictions, namely Maxent and GARP. Then, with 8 and 10 years trends, the only submodel that can create greater urban area without restrictions than with restrictions is GARP, for the reasons already pointed out. We cannot help to note, because it is interesting and reinforces our analysis, that GARP being more productive without restrictions, behaves in the opposite way when operating with restrictions.

Finally, in the simulation based on the trend of the last 13 years, as the system is already auto-organized, neighbourhood and proximity relationships acquire particular emphasis, and the manha is the predominant submodel, both with as without restrictions. Once again, when it comes to simulate with restrictions, GARP is the one that generates least urbanized area but, at the same time, is the one whose value are closest in the two simulations ( with and without restrictions). To reinforce the importance of the distance, we must also mention that with restrictions, manha performance is matched by the Generalized Linear Model (GLM).

Analyzing the agreement between the simulations results, we can easily see that this is less when these are made without restriction. This situation is logic, to the extent that there are more possible states and the system can evolve in many different directions. Even so, in 8, 10 and 13 years trends, the number of cells assigned to urban use in all the seven models amounts to 75%. This value is higher, accounting for 94% , in the biennial based simulation, which makes perfect sense, because if this is the least dynamic, when there are fewer state changes it will also be less error probability.

When there is not total agreement, predominates the result presented by just one model (2%), which reflects the specificity of each submodel algorithm. All other combinations have equal distribution among themselves and between models, with the exception of the two-year simulation, whose intra-simulation as also equitable distribution, but in an inter-simulation comparison, their percentages present lower values.

When we use restrictions, the situation is similar but with a slight change of scale. The unique solution continues to represent about 2% in all the simulations, as well as the common result to the seven submodels. However, the decline of the relative importance of the agreement of 6, 5, 4 and 3 submodels in detriment of the 7, allows expanding the percentage of perfect agreement good to 92%. As in the

previous situation, the particular case of simulation with 2 years presents spatially results slightly more consistent, with a value of 96% of total agreement.

In spatial terms it may be noted that the highest degree of disagreement arises on the South side, in every simulation of 8, 10 and 13 years trend, This happens mainly because the South is, in part, a luxury gated community, which does not generate the same rules as the rest of the territory, suggesting that it should be the subject of further studied.

The disagreement is also high in the northern part of the municipality, in the simulations with 8 and 10 years and with restrictions. Here, essentially two zones fail, located at Northwest and Northeast, being created by excess by only one of the models. These areas although theoretically good for housing, are not valued by the population. This situation should have been guarded by the use of the valuation tax of the territory (IMI), but its weak predictive potential turned out to condition the result.

One way to quantify the agreement is through the Kappa index. The Kappa Index of Agreement method ( ), KHAT or KIA is based on a simple cell-by-cell comparison, which checks for each cells pair on two maps if they are equal or not. This results in a comparison map that displays the spatial distribution of the agreement, without requiring any previous parameters. This method evaluates the agreement between the result of the simulation and a purely random assignment of classes to the cells (designated by agreement due to chance).

Another simple cell-by-cell statistic is the correct fraction, also known for overall accuracy. This statistic is calculated by dividing the number of correct cells by the total number of cells. However, the overall accuracy is considered unreliable as a general measure of similarity. The reason is that the correct fraction is a biased method, i.e. tends to consider maps with few categories and/or unevenly distributed, more similar than the ones with many categories and/or equally distributed.

The following (extreme) case illustrates the difference between the kappa statistic and the overall accuracy. Having a model to predict parks locations in an urban area, we have also a binary map of presences and absences. In reality, there is only one park per 100 cells. This means that a model that predicts wrongly parks in this place still gets an impressive result of proper fraction of 0.98 (absence on both maps). Another model predicts the presence of houses in the same area. These are found in 50% of all locations (i.e. cells). A model that predicted 80% of these locations would only achieve a overall accuracy of 0.8. Thus, even though the parks model is clearly worse than the model of the houses, the first produces a correct proportion much higher, simply because of the uneven distribution of absences and presences.

The Kappa values are generally lower than those obtained for overall accuracy. This difference is expected, since each index use different types of information from the contingencies table. Overall accuracy only uses data that lie along the diagonal of the matrix, excluding the omission and commission errors. On the other hand, the Kappa index incorporates the diagonal elements of the matrix as a product of the marginal values of rows and columns. It is impossible to unequivocally point the measure that must be applied and when. Usually, it is desirable to calculate and evaluate the two.

However, in order to obtain a more balanced similarity we often use the Kappa index. The Kappa statistic results from two types of similarities, the similarity of quantity and the similarity of location. In this case the amount refers to the total number of cells attached to each category found on the map, i.e. the histogram, and the location refers to the spatial distribution of the different categories of the map. To know to what extent the measures of of location and quantity similarity are represented in the Kappa statistic, we divided it into two statistics, the Kappa histogram (KHisto) and the Kappa location (KLoc). It can be found more information about the KHisto and KLoc in Hagen (2002). The relationship between the 3 statistics is given by:

$$\text{Kappa} \quad \text{KHisto} \quad \text{KLoc} \tag{2}$$

These statistics were calculated for the simulations carried out without restrictions (Table 12). This option was taken because this is the actual situation, i.e. there has always been urban growth in areas of RAN and REN. In addition, the new legislation of the REN is more permissive in terms of use, establishing some activities compatible with the various levels of protection. These condition, associated with the fact that the management of both the REN and RAN, is made by the local authorities, points for this scenario as the most suitable to follow. For all the reasons already pointed out, we choose as final submodel the average of all models with good performance of AUC, weighted by its predictive power, i.e. submodel AVG6M. The kappa statistics were only calculated for this final submodel.

In Table 12 we can observe the good agreement of the submodel AVG6M with all others, showing always values above 90% (0.9). The agreement of the histogram of the submodel AVG6M with the manha, GARP, GARPOM and the Maxent is always total. The overall accuracy and Kappa are very homogeneous, despite of using 8, 10 or 13 years trends, and increase a little when using only a 2 years trend. This demonstrates that in the first moments of expansion, transitions are more assertive. In all cases the Kappa is always less than the KHisto, due solely to lower values of Kloc, which indicates that even when evolution takes place in same quantity it not necessarily occurs in the same direction.

Table 12. Agreement of submodel AVG6M without restrictions with all the others.

| AVG6M | | MANHA | GAM | GARP | GARPOM | GLM | MAXENT | |
|---|---|---|---|---|---|---|---|---|
| 2 Years Trend | Kappa | 0.98107 | 0.98108 | 0.97771 | 0.98316 | 0.96754 | 0.96528 | |
| | KLoc | 0.98107 | 0.98115 | 0.97771 | 0.98316 | 0.96757 | 0.96528 | |
| | KHisto | 1.00000 | 0.99993 | 1,00.000 | 1.00000 | 0.99996 | 1.00000 | |
| | Overall accuracy | 0.99057 | 0.99058 | 0.98889 | 0.99161 | 0.98383 | 0.982 | |
| 8 Years Trend | Kappa | 0.92805 | 0.93366 | 0.91759 | 0.95260 | 0.93077 | 0.92910 | |
| | KLoc | 0.92805 | 0.93410 | 0.91759 | 0.95260 | 0.93117 | 0.92910 | |
| | KHisto | 1.00000 | 0.99952 | 1.00000 | 1.00000 | 0.99957 | 1.00000 | |
| | Overall accuracy | 0.96661 | 0.96921 | 0.96176 | 0.97801 | 0.96787 | 0.967 | |
| 10 Years Trend | Kappa | 0.92874 | 0.93394 | 0.91894 | 0.95287 | 0.93022 | 0.92948 | |
| | KLoc | 0.92874 | 0.93436 | 0.91894 | 0.95287 | 0.93061 | 0.92948 | |
| | KHisto | 1.00000 | 0.99954 | 1.00000 | 1.00000 | 0.99958 | 1.00000 | |
| | Overall accuracy | 0.96686 | 0.96928 | 0.96230 | 0.97803 | 0.96754 | 0.967 | |
| 13 Years Trend | Kappa | 0.92655 | 0.93564 | 0.92728 | 0.95848 | 0.92842 | 0.93444 | |
| | KLoc | 0.92655 | 0.93603 | 0.92728 | 0.95848 | 0.92877 | 0.93444 | |
| | KHisto | 1.00000 | 0.99959 | 1.00000 | 1.00000 | 0.99963 | 1.00000 | |
| | Overall accuracy | 0.96545 | 0.96972 | 0.96579 | 0.98047 | 0.96632 | 0.96916 | |

## 6. Conclusions

In our CA urban model, we simulate different scenarios of urban growth to 2021. Our approach is to use different trends (last 2, 8, 10 and 13 years) with and without restrictions and, most important, to apply several different methods for transition rules definition. The mathematical models used to define transition rules include artificial neural networks, genetic algorithms, supported vector machines, decision trees, generalized linear models, generalized additive models, maximum entropy and geometric distance models.

In the second part of our work we select the 6 best performing submodels. In addition, another submodel (named AVG6M) was created through a weight mean of these six best submodels. Using the six selected methods and the newly created one, we simulate urban area growth scenarios to the year 2021. Overall, 56 simulations were carry out, using 7 submodels, 4 tends, and 2 different approaches (with and without restrictions). All the simulations were compared in relation to the predicted amount of urban area, spatial distribution of predicted urban area and geographic agreement between them.

In an effort to use different mathematical approaches to configure CA transition rules, it becomes obvious that the primary objective of the application of these approaches to modelling is the evaluation

of suitability or probability of the cell to develop, i.e. change of state. Therefore, we can see that the number of statistical integration models that can be used in correlative modelling of a phenomenon distribution of is high and diverse. Their role is to obtain response values that translate the suitability of the space by the combination of the values of the independent variables, concerning the known distribution of the phenomenon.

Possibly the most important feature of the models, which has been the subject of several studies, relates to the comparison of their predictive performance (Brotons et al., 2004; Tsoar et al., 2007), yet these models differ in several other features that often influence or potentiate their use in modelling. Taking into account this high variability, the choice of a single method implies the loss of several advantages present in others. In addition, holding several methods simultaneously is suggested on modelling the distribution of a phenomenon, as a way to reduce the uncertainty of the process and the variability of the models.

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# GROWTH MISMANAGEMENT, RESIDENTIAL OVERSUPPLY AND HOUSING CYCLES – THE MANIFESTATION OF UN-CONTAINMENT PLANNING POLICY IN ESTONIA

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*Urban sprawl remains a controversial issue in Estonia similarly to many Central and Eastern Europe countries in the spatio-temporal evolution of housing market. In the midst of the debate over flexibility in urban planning and joint-up territorial governance, neo-liberal planning framework coupled with the fact that 97% of the housing stock is owned by private sector has proven itself too weak for growth management, in particularly in urban fringe. This study carries out a comparative analysis of the spatio-temporal behaviour and magnitude of market shocks in uncertain macroeconomic fluctuations and residential development patterns between 2000 and 2013 in Tartu urban region. The results show that the speed and scope of planning cycles have been lagging behind real estate business cycles, having different delays and strengths of path-dependence across councils and spatial allocations. The mismatch between supply and demand amplified by the absence of strategic plans and housing policies has led to extensive detail planning which in turn manifests itself in massive 'overbooking' of residential land parcels as only one fifth of the planned development has been carried out in the suburbs and one third in the city. The discrepancy between issuing plans and the reality of urban development indicates that plans in an uncontrolled planning framework and volatile market are often too rigid respond to change, plus legal fixes as dynamism in national economy, housing market and population of urban region are often undermined by locality-specific local economic and political conditions. A profit-driven supply-side entrepreneurial intervention to planning during the growth years put too much emphasis on delivery of quantity, namely land supply, rather than the benefits of quality, allocation choices and social dimension, often overriding regulative frameworks.*

Keywords: land use, suburbanization, housing

## 1. Introduction

Positioning residential land development and land use planning in changing cities, especially considering the conditions set by a massive economic growth and sudden recession in the last decade has been a challenge for urban planners. Rapid urbanization, along with socioeconomic changes and environmental concerns, rearranges the scene of urban sustainability, switching from business cycles to steady state economy. Uncertainty in financial markets, shifting economic growth drivers, changing demographics such as household size, social equity and e-democracy are just few crucial factors to consider in the discourse of neo-liberal planning (Sager, 2011). In the midst of the debate over flexibility in urban planning and multi-level governance, a neo-liberal planning framework has now proven itself to be unfit to manage urban complexities like never-ending suburban growth, fill-in at heritage areas, brownfield redevelopment and infrastructure provision (Allmendiger & Haughton, 2013). As built environment and urban problems expand and shift to rural surroundings both in physical, environmental and socio-economic aspects, urban dynamism and impacts should be explored as urban region. Among other themes, housing policy and the residential development should deliver a supply of dwellings that satisfies current and expected future demand while minimizing excess (Ford & March, 2012).

The latter, however has proven to be a difficult task, as real estate developments are cyclic in nature and usually lagging a little behind the real economic cycle. Depending on legislative context, planning system and practice, a rather slow public process relates to democratic accountability, participatory civil society and institutional efficiency. As economic growth starts, property developers usually react by initiating new developments in great volumes, and as growth lasts, it turns speculative in nature. So when a sudden decline hits the economy, these foreseen developments are often not fulfilled or can lead to high number of empty unsold dwellings. In a way, the housing market could be almost as

volatile as the stock market. Speculative land use planning in the deregulated neo-liberal conditions can create massive problems in multitude features and implications starting from undeveloped infrastructure with a decline in quality of life to just wasteful use of land as basic commodity. Therefore, it is essential to better understand these processes and develop policies to intervene to these failing market forces accordingly. A key issue for city regions is the ability to adjust to the new socio-demographic conditions, though even strongly economic situation. Tackling with strategic issues and wider, often global trends in local and urban context with flexibility and tolerance is expressed by mutual tension between statutory and non-statutory planning (Evers, 2008).

Urban areas in Central and Eastern Europe alike in Estonia are still sprawling and rapidly transforming. In a European context, Estonian planning system is characterized by comprehensive planning with very strong detail planning at municipality level, legally and strategically very weak regional levels and strong private interest (Roose & Kull 2012). During structural reforms and global economic recession the planning system in Estonia has not been changed though political reorientation towards more neo-liberal planning policies is notable with an increased tension between efficiency and legitimacy alike in the mature Nordic countries (Mäntysalo, Saglie, & Cars, 2011). Against this backdrop, this study takes upon a task to assess the complex inter-relations between economic growth, planning practice and housing development in the Tartu urban region (TUR), a second tier city and regional growth pole in southern Estonia. The aim is to explore complexities of land use and urban growth, how suburbanisation as a process has evolved through uncertain economic conditions and transforming planning practices by examining the spatiotemporal disparities of supply and demand for housing. The paper provides new dimension by focusing on housing market-driven outcomes, discussing what happens to regional city when housing markets respond to the rapid growth in monetary terms as well housing supply. Modelling exercise explores cyclic processes of urban development, physical, temporal and spatial barriers of planning depending on economic cycles, stability and accumulation. A particular emphasis is given to examining the time-to-plan and time-to-build, the reactions of development and planning processes to shocks in the real estate value chain.

## 2. Planning context and framework

Many of the countries in Central and Eastern Europe have undertaken fundamental reforms to the body of planning law to enable changes in the elaboration and operation of their planning systems. In some countries, however, planning system and code have not kept pace with the reality of spatial development and housing market (Economic Commission for Europe, 2008, OECD 2013). Phasing out centralised planning systems and steadily introducing new decentralised systems with high degrees of complexity has been a challenge for all Baltic states (Adams et al 2013). Besides stable legal framework and credibility of public administration the cultural approach has gained the prominence as different 'values', 'truths', and 'interpretations' of discretional planning decisions appear (Knieling & Othengrafen, 2009**).** The shift was more influential in terms of values and learning, less in spatial plans themselves. Approving new planning regulation in late 1990s and harmonising Estonian environmental legislation before entering European Union in 2004 did not automatically mean that these rules are immediately implemented across the society. It has meant gradual institutionalisation and empowering all major stakeholders in planning chain of strategic spatial planning from central government down to municipalities, agents, sectors and spatially aware consultancies. Europeanization for territorial cohesion and insights for balanced growth has embodied in major public infrastructure projects (Raagmaa & Stead 2014). In some European countries, land-use planning has changed significantly to make the planning system more strategic, faster and to provide more effective ways of engaging with governance agents and all sections of the society (Allmendinger & Haughton, 2009).

House-building industry in Estonia is very scattered. The building companies have to progress through multiple stages in the production of the built environment, involving land purchase; application for planning permission; development design, housing construction; and marketing and selling. If availability of land is non-restrictive alike in Estonia, the planning process is often most problematic due to time consuming, bureaucratic, public awareness matters. At these points developer or house-builders and the planning system come into direct conflict.

Land use planning in Estonia is organized hierarchically in the national Planning Act (2003). There are four types of plans in the Estonian planning system: national spatial plan, county plan, comprehensive plan and detailed plans. The latter three are essentially land use plans, while the national plan is a more general strategic development guidelines for the country. The new national plan, Estonia 2030+, was issued in 2013 and its main principles are safeguarding spatial accessibility of basic human needs by means of improved mobility, preserving the qualities of settlement pattern and landscape, spatial balancing of settlement structure, good spatial connection to the rest of Europe and preserving the good condition of the natural environment (Estonia 2030+, 2012). These give general development directions for the counties and local authorities for urban and rural development. The national plan declaring spatial diversity and poly-centricity promotes low-density urbanised territorial structures for integrating compact cities, suburbs and traditional villages, providing the human scale, keeping environmental values and urban networks. County plans deliver regional level planning by directing the territorial development and aiming to keep the specific character of regions. The county plans set the conditions for the development of settlement systems and the location of the major infrastructure for local authorities in a generalised manner. Nevertheless, county level planning has steadily contracted since the early 2000s and retreated to inspecting and supervising detailed plans of land use.

Instead, planning monopoly is given to local authorities, who primarily process detailed plans. Local councils are the focal decision makers for spatial development. Local comprehensive plans which determine functional zoning, general directions and conditions for the development of the territory were issued massively in the second half of the 2000s though due to residential development, facilitation of social and technical infrastructure have been out-dated in many cases. The instant framework for land use development is set by detailed plans or master plans which formally and physically operationalize urban development. Given extensive and excessive residential zoning on the general plans, the allocation of sites for residential development depends of private interest to convert agricultural land to residential one. *Ad hoc* planning practices which are based on masterplanning and focus on siting and speed tackling a specific growth issues are expressed in particular on the city region level and within suburbanisation processes (Roose & Kull, 2012). On the other hand, going beyond traditional land use planning to bring together and integrate policies for the development territorial policies and programmes linked strongly or even loosely to Europe influence the nature of places and how they function. The major public infrastructure projects co-funded by European Union frame other minor developments, including residential. The Europeanization of spatial planning has contributed progressively to the emergence of new discourse, concepts and insights of territorial cohesion in Estonia (Raagmaa & Stead, 2013).

**3. Data and methods**

This survey has mapped the issued master plans and developed a spatial database in order to analyze the residential land supply delivery in the TUR from 2000 to 2014. In order to assess the implications of mismatches between development outcomes and planning objectives, data on the new residential buildings were also added to the database. The planning records were gained from municipalities' planning authorities and the data for population and housing through national statistics databases. The database provides a comprehensive overview and enables to compare master-planned housing supply and actual demand along with the timeframe meet these demands from the initiation of the plan to a completed development both in the core city and in the fringe. In addition, there are around 270 binding local comprehensive land use plans at municipal level and thousands of master plans in Estonia. However, the local and regional governments are having setbacks of the cumulative outcomes, confronting impacts and unwanted synergies of separate residential plans. In temporal scale, the analysis covers the stages of rapid economic growth, following recession and recovery during 2000–2013.

Complementing the typically qualitative nature of spatial planning objectives, the approach quantifies the supply of master-planned residential land and the demand for actual construction characterized by the implementation of these plans, then uses common metrics to measure the duration and scope of

these developments to enable an assessment of the sustainability of the current approach in residential land use planning.

The university city of Tartu with its five fringe municipalities in Southern Estonia with an extent of 740 km$^2$ was chosen as a case study area. Tartu is the second largest city in Estonia which belongs to the group of medium-sized cities on the European scale with its population of 98,000, in addition 22,000 inhabitants in the fringe municipalities. As the regional pole of Southern Estonia it fulfils a central role as Estonia's leading research, educational, health-care, and administrative centre. Currently, the regional importance of the Tartu city has been growing supplemented by functional and demographic expansion of urban region. The extensive cyclical waves of urban development have been ongoing since the late 1990s which makes this mid-size regional case representative and appropriate for other Central and Eastern European countries.

## 4. Results and discussion

Uneven geographies characterize urbanisation process in Estonia in 21st century. Housing development means also unbalanced demographic composition of urban communities: growing elderly population in 1960–80 built core city neighbourhoods versus growing young family population in 2000s built periurban neighbourhoods, high residential mobility in the centrally located neighbourhoods as well low fertility rates in particular in core city. New geographies delineate mismatching of structures, increasing fragmentation of settlement patterns and labour markets which affects directly mobility of labour market and service areas within urban region.

A new wave of urbanisation in Estonia began in the early 2000s driven by economic growth, characterized by extensive master planning and rapid construction of new housing. Between 2000 and 2014, 2360 new homes (4720 residents) were built in the core city out of 6897 planned homes compared to 2694 homes (8082 residents) in the fringe out of 11432 planned homes (Table 1). That is a 10% increase in the total number of housing stock in the core city and 41% in the suburban housing stock in a mere 12 years. In morphological terms, built-up areas enlarged by 93 ha in the city and 450 ha in the fringe, a 10 km transition zone between urban and rural areas establishing 111 km$^2$ urbanised mono-centric settlement pattern. 5 km periurban zone had been a principal locus for new house building attracted by a high quality rural environment within very near commuting distance of Tartu. The fringe development is characterised by parcel-wise low density housing without a clear strategic planning at urban region level (Figure 1,2). As a result, the land use pattern in the suburban zone has become fragmented and patchy, chaotically built-up with detached houses delivering an average residential density in the fringe 40–70 in/km$^2$. The latter is irrational and inefficient in terms of utilities, urban infrastructure and public services.

Table 1. Implementation of adopted master plans of residential development in Tartu urban region, 2000–2014.

| Municipality: urban/ suburban | Adopted master plans | Master plan area (ha) | Planned dwellings | Completed dwellings | Not developed |
|---|---|---|---|---|---|
| **Urban: Tartu city** | **237** | **333** | **6897** | **2360** | **4537** |
| Haaslava | 58 | 357 | 1602 | 97 | 1505 |
| Luunja | 90 | 508 | 1947 | 524 | 1423 |
| Tartu | 110 | 667 | 4206 | 923 | 3283 |
| Tähtvere | 58 | 221 | 497 | 137 | 360 |
| Ülenurme | 128 | 542 | 3180 | 1013 | 2167 |
| **Total suburban** | **444** | **2293** | **11432** | **2694** | **8738** |

Figure 1. New residential plots in Tartu urban region, 2000–2013 (in black).

Figure 2. Sporadic development of new suburban dwellings in Jõeääre, a new suburban settlement in Haaslava parish.

There is constant oversupply of development projects in the form of issued master plans in the core city and surrounding fringe areas. During 2000–2014, every third planned swelling was actually developed. In comparison, the development/construction rate of master planned plots in urban fringe is about 24%. The pace of adopting master plans for residential development at local councils has remained constant in recent years, but the pressure of initiating the plan is once again on the rise since

the recession hit. 4537 dwellings in the core city and 8738 dwellings in fringe are to be developed. As a maximum limit of residential growth, the comprehensive plan of the Tartu city can theoretically in present densities accommodate more than 18000 dwellings which could increase the core city population from 98000 to 135000 inhabitants. Given the economic and demographic trends, it is highly unrealistic. As development rate as well processing speed of plans is higher in the fringe, the core city continues to fade away instead increasing compactness which dominates the political rhetoric. The renovation of inner city neighbourhoods steers gentrification and increasing densities.

Forms of suburban development differ significantly from place to place and vary from greater and rather autonomous new settlements to individual projects of separate single-family dwellings. Inevitably, there has been some dilution of sharply distinguished uses, to create a unique landscape, interfacing town and country, labelled the rural-urban fringe. These areas have been created more by accident than comprehensive planning and design: less favoured urban uses such as sewage works, processing units, wholesale centres have been pushed away from residential areas. Like in most other European suburban developments, there is a clearly distinctive feature affecting suburban development in its early stage – due to an ongoing land restitution process there is a spatially continuous suburbanization along roads. A highly urbanized landscape is actually more homogenous and better-connected than a rapidly urbanizing landscape in the case of Tartu. In-fill development, which can help reduce patchiness, has been rare, though the degree of fragmentation is expected to be reduced through bigger residential developments.

The impending economic recession since 2007 has opened up a phase of increased concern with environmental and social justice and equity in suburban planning. The shocking explosion of price bubble and the moves of financial sector to tighten mortgage lending have cooled the property market. Until 2013, many families were stuck in houses that are worth less than the mortgages on them. Slowing down of residential planning during the recession gave local councils time to reassess the housing trends and streamline planning practices with tightening national level supervision, the adoption of comprehensive plans, land consolidation and cross-municipality thematic planning. The present land management regime, allowing separate agreement of municipalities with developers, promotes further losses of productive farm land, and causes further deterioration of the green network and environment. The old pattern of rural settlement confronts the sprawl but, at the same time, municipalities would like to attract capital in housing investment.

At the operational scale, speed and scope of planning cycles have been lagging behind real estate business cycles, having different delays and strengths of path-dependence across councils and urban districts. In terms of planning process, in average, the getting planning permission has took 5-10 month longer in the city than in the suburb (Figure 3,4).

The housing market in Tartu has been relatively stable due to the growing student population and the dominating public sector. As the market is rather small, it could be volatile by segments, the issue of affordable housing becomes acute. Short-term fluctuations are induced by investors' sentiment, the limited purchasing / borrowing power and the completion of new dwellings. In latter case, the demand for new dwellings is saturated for 4–6 months. Up to one fifth of the new dwellings bought are buy-to-rent. The housing share of real estate market rose to a record 80% in 2013 which is explained by a weak entrepreneurship.

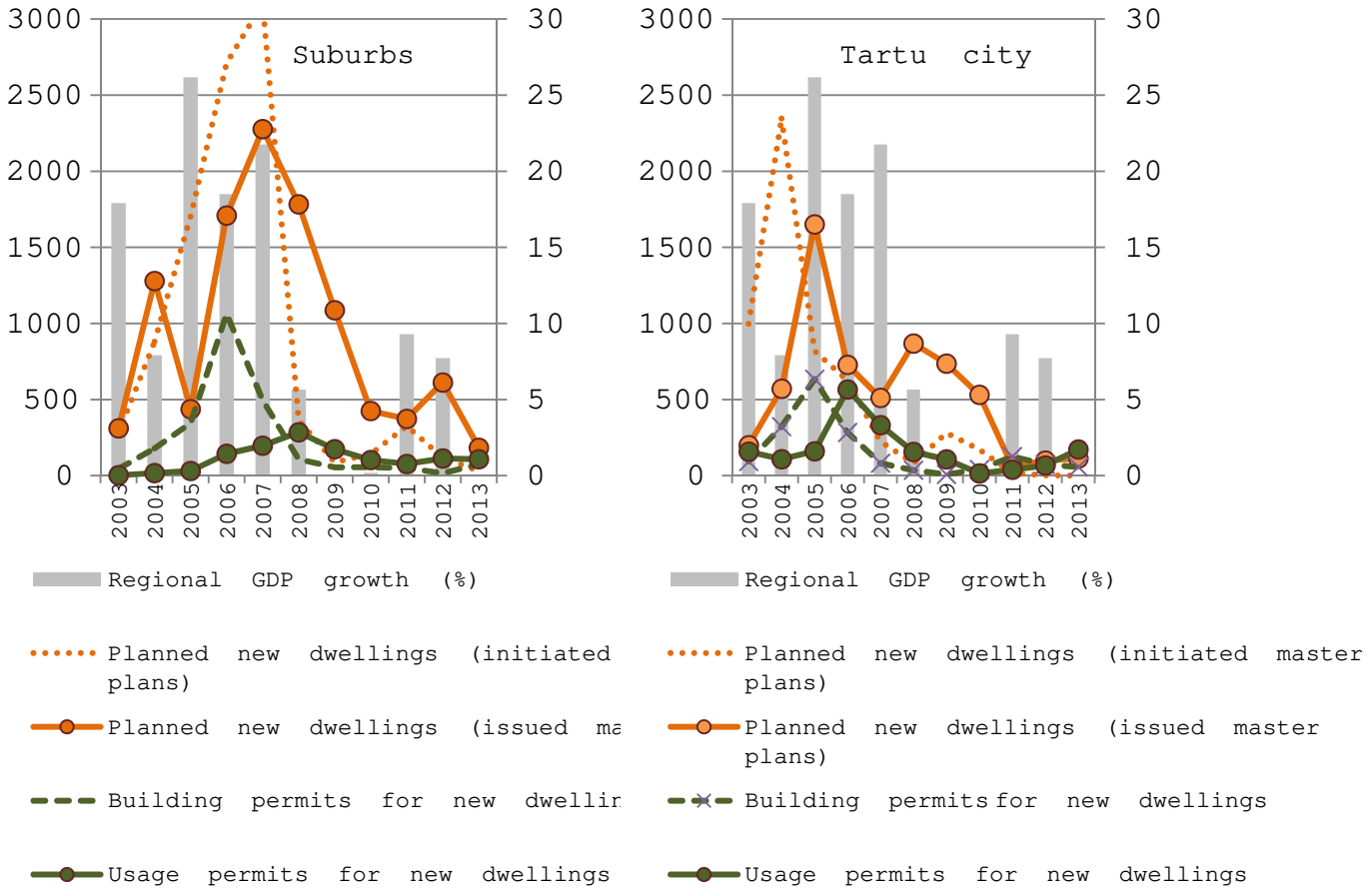


Figure 3. Building permits and completed dwellings in relation to regional GDP change in Tartu city and county (Data: Statistics Estonia 2014).

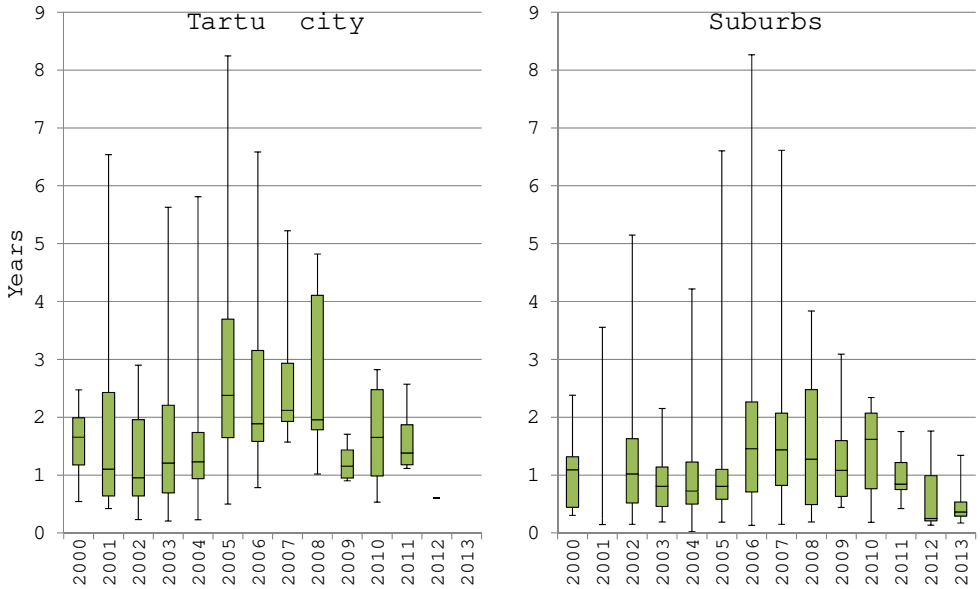


Figure 4. Short-run dynamics of detail planning.

## 5. Conclusions

The Estonian case study of cyclic oversupply of residential development exemplifies hectic and volatile real estate market with few policy and planning instruments. It can happen in the conditions of liberal-conservative market ideology with modest planning. Land management remains biased between aggressive development pressure or unsystematic use. The results show that having uncertain urban growth trajectory with conurbanisation pathologies of fragmented decision-making with no specific planning instruments for urban containment and choice preferences, its manifestation in the housing market and local planning practices, call for a more strategic, integrated and participatory planning between core city and fringe municipalities. The planning 'problem is amplified by the economic recession in addition to inability and inexperience of central and local governments to buffer market fluctuations. The main reasons for excessive oversupply of residential developments are as follows:

- Legal framework is liberal in issuing planning and building permits.
- Moderate or non-existent intervention of central government and regional authorities.
- Long-term strategies and general plans are replaced by tactical and discretional decisions of local politicians, pressurized by developers.

Developers, investors and decision-makers in both public and private institutions are increasingly under pressure to operate in short-term frameworks. The realization of planning projects becomes imperative. Masterplanning remains complex, bureaucratic, time consuming, and static. Aiming to increase the efficiency of planning, planning system attempts to streamline project-by-project decisions and to introduce the development 'flow', compromising quite often public interest. While adjusting legal and institutional framework for planning, adaptive role-setting for authorities as well as for plan-making expertise with a stronger emphasis on community and business needs is contemporary requirement.

To restrict further scattered residential development and plan-making for speculative purposes, the major step could be drafting a new comprehensive plan for the core city as well for fringe municipalities. The new plan should consider realistically demographic trends, declining student population, developments in education, health and service sectors dominating in Tartu labour market. The global economy means the urbanization and concentration of human capital. Tartu is faced with critical threshold in terms of its economic potential in globalisation processes. Within the drafting county plan for smart, sustainable and cohesive development of urban region as, the residential growth zones should be allocated by housing forecasts of residential market and site quality, preferably in-fill mode. The de-concentration of the central city is generally a favourable circumstance, apart from the fact that it poses a great challenge to the administrative and planning capacity of the local government. Land consolidation could be an integrated part of a urban fringe development policy for densification and necklace.

The recession since 2008 has changed sharply planning practice as quality of planning and legal enforcement has improved. Policymakers and developers demonstrate institutional learning and in developing and promoting land use planning capacities to intertwine the key actors of periurban development. The strengthening of urban region and dynamism in urban fringe is also another manifestation of soft planning as Allmendinger and Haughton (2009) discuss the new generation of "soft spaces" and "fuzzy boundaries" that characterize emerging political objectives within new relations, all of which are causing a changed agenda for planners and others charged with formulating territorial-based strategies.

Collaboration between municipalities of urban region is a key to strengthen and consolidate the implementation of county plans, as cases are to be solved on joint spatial developments instead of adopting a competitive approach to land allocations for residential development. A vertically organised political and financial system as well as eclectically designed legislation does not support

cooperation and joint action between neighbouring municipalities. In broader context, the political process is related to amalgamation of local authorities within urban region. On the local level, the major issue is empowering local authorities to implement their comprehensive plans. In the case of suburbanisation, comprehensive plans adopted in late 2000s are already outdated. The concern with the efficiency of the planning system, the appropriateness of procedures and institutional arrangements for decision making need to be continuously addressed (Raagmaa et. al., 2013). The 2000s express neo-liberal pragmatism and fragile inter-municipal cooperation on local level though there are signs of the transition from government-led to governance-led approach in spatial development policies and spatial planning.

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# RESIDENTS AND FLOOD RISK MANAGEMENT IN FLANDERS: TWO WORLDS APART?

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Keywords: flood risk management; Flanders; residents

Although flood risk is usually framed as a physical problem, there is also an i
side to the issue. Potential damages are influenced by a large number of indivi
location choice or private flood protection measures. Flood risk management i
including these elements through responsibilization of spatial planners and civi

However, since flood risk management in Western Europe is strongly government-
were usually confined within the boundaries of the water system itself, there is
to do this. Therefore, this paper looks into the point of view of residents in f
a survey (n=183) in the Dender basin (Flanders, Belgium). The paper first discu
residents knowledge, risk perception, location choice, sense of responsibility,
and seeds of self-initiative. The survey shows that residents are very much atta
at the same time take little action. Remarkable is that even though Flanders
tradition in spatial planning, residents place responsibility for living in fl
government, and therefore they feel entitled to public protection.

## 1. Introduction

Under influence of increasing flood risks and uncertainty, many Western Europear
recently adopted a risk-based approach to flood management (Kellens et al., 201
While the earlier flood protection paradigm considered the socio-spatial contex
and tried to find solutions within the confines of the water system itself
altogether, the risk-based approach incorporates the socio-spatial aspect o
urbanization in floodplains and increases in sealed land. Subsequently this ri
emphasis on avoiding damage due to flooding (Johnson and Priest, 2008). Th
dimensions of natural hazards are becoming more and more important (Raschky, 20
reciprocal interaction between society and water management (Tempels and Hartman

Consequently, there is a growing awareness that spatial planning could play an i
risk management (Jong and van den Brink, 2013, White, 2013, De Smedt, 2014, Pa
2012). Flood management is no longer reactive to changes in spatial developmen
integral part of spatial planning and the conception of spatial developments (Wo
line with the tendency in spatial planning theory towards actor involvement (Bo
press), societal actors should play an increasingly important role in flood ris
et al., 2014, Penning-Rowsell and Pardoe, 2012, Fleischhauer et al., 2012). Ta
limited resources of governments, climate change and inherent limitations o
involving residents in flood risk management can become an important part of th
et al., 2011).

However, until now flood management research has mainly focused on the isolated
technical) systems (Pahl-Wostl, 2007). As a result, the frequency of flooding a
have been well studied (de Moel et al., 2009), while the role of societal acto
debate. Only in the United States, social issues in relation to flood risks
subject to research for some time (Waterstone, 1978, Montz and Gruntfest, 19
Western European context they gained relevance only recently due to the high de
responsibility (Kreibich et al., 2005, Bubeck et al., 2013, Terpstra and Gutte
most of these topics, such as flood risk knowledge and awareness, risk perceptio
individual responsibility and protective behavior, including the economic, psy

mechanisms behind them, have been mainly described individually within diff
geographical or political contexts (see further). Therefore, an integrated unde
risks and societies interact, and how this affects spatial planning and flood
lacking.

This paper analyzes a wide array of interactions of residents with flood risk
(Flanders, Belgium), based on a survey amongst residents in flood-prone areas
include (1) the availability and use of knowledge, (2) the way risks are experie
chose their location and the extent to which they are willing to move, (4) who
for different aspects of the issue and (5) what they do to protect themselves.
these interactions contribute to flood risk management, and how they could becc
flood risk management in the future.

As such, this research contributes to the existing knowledge in two ways. On the
specifically on residents and spatial planning, since the debate on flood ris
conducted from the perspective of water managers. On the other hand, it discus
topics from psychosocial aspects such as awareness and knowledge, to behav
eventually the translation to policy.

In what follows, we will give an overview of the state of the art on resident
based on literature review. Next, the main elements of flood risk management an
Flanders (Belgium) will be discussed, as a context to the survey results pres
paper ends with a discussion on what these results imply for flood risk manageme

## 2. Research design and case study area

### 2.1 Key topics

#### 2.1.1 Knowledge

Knowledge on flood risks is a prerequisite for taking action. As memories of f
trough time, risks are disregarded. Therefore, risk communication is an impor
strategy to activate residents. However, the rigid institutionalization of risks
maps can give rise to a biased and oversimplified perception of complex concep
(e.g. return period). Accordingly, local knowledge is often undervalued.

#### 2.1.2 Risk perception and experience

Since knowledge of risks does not always translate into personal worry, merely p
about risk is not enough (Parker et al., 2009, Willis et al., 2011). Risk percep
personal characteristics, situational factors and risk characteristics (Lind
Explicitly dealing with risk perceptions in risk communication can make flood ri
effective (Buchecker et al., 2013, Grothmann and Reusswig, 2006, Kellens et a
Klijn, 2004). Flood forecasting and warning play a central role in this (Brilly

#### 2.1.3 Location choice and willingness to move

Filatova et al. (2011) state that low individual flood risk awareness leads
developments and increased flood risks. They argue that by increasing individua
likely that flood risks are integrated in the individual economic decisions at
housing prices are often lower in flood-prone areas (Tobin and Montz, 1988, Eves

Individual decisions on private risk mitigation measures and location choice are
extent to which insurance premiums internalize actual variations in risk and

subsidized by the whole population (Bouwer et al., 2007). Possible incentives reduction might include lower premiums, higher coverage and lower deductibles (P However, in practice, premiums generally do not as risk is reduced (Penning-Rowsell and Pardoe, 2012).

### 2.1.4 Sense of responsibility

The limits of the capacity of the state to manage flood risk is widely recognize an overall plea towards more individual responsibility in flood risk management 2008). However, the division of responsibility between state, public organizatio management of flood risk is often not clearly established. Lalwani and Duval (2 personal responsibility is not assumed when there is no clear information inc personally responsible for threat management, even under conditions of high resources to deal with the risk. When governments are assumed to provide protec reluctance to accept responsibility. The strong reliance on and confidence in hampers the private sense of responsibility (Grothmann and Reusswig, 2006). responsibility is clear, it is mostly accepted if individual resources or instru available (Filatova et al., 2011).

### 2.1.5 Protective behavior

Risk perception and awareness are often analyzed in the light of understandi precautionary action against flooding (Waterstone, 1978, Grothmann and Reusswig al., 2013). However, perceived risk does not contribute directly to taking prot et al., 2009). Several studies have shown that there are wider socio-psychologic These include risk appraisal elements (e.g. risk perception, awareness, poten exposure) and coping appraisal (e.g. self-efficacy, resources and outcome expe ratio), within an institutional context (e.g. political focus and reliance (Grothmann and Reusswig, 2006, Waterstone, 1978, Kreibich et al., 2011, Zhai et

On the other hand, the impetus for individual adaptation can be reduced or technological or financial assurances (Smithers and Smit, 1997). The confidence and centrally led, engineered solutions implicitly triggers a low risk awarene efficacy and practicability of private damage prevention, which may contribute towards autonomous adaptation measures (Grothmann and Reusswig, 2006).

The above shows that the interaction between residents and flood risk manageme complex economic, psychological and social mechanisms. Therefore, the transit residents involvement and a more active role for spatial planning in flood man in literature and policy plans alike, is difficult to realize. Existing flood ma a way self-preserving as they reproduce themselves through feedback mechanisms Brink, 2013). The path dependencies following the high expenditures for flood low responsibility awareness among the involved citizens.

## 2.2 Flood management and spatial planning in Flanders

Flanders, the low-lying northern part of Belgium, is densely built (more than and has a dense river network, causing it to be sensitive to flooding. Accord water assessment maps 71,556 ha or 5.3 % of Flanders have recently been floode return period of 100 years with a flood depth of 30 cm. According to the Fle Agency 36,000 to 56,000 buildings and 23,000 building parcels are located within

Until the 1990s, flood risks were not systematically included in the conception plans, due to a variety of reasons such as the limited knowledge on flood risks

political prioritization of flood-related issues in planning, and even fr
(Boussauw and Boelens, 2015). In addition, the impact of the enormous increase
up land and the subsequent increase in flood frequency was not anticipated in
and Van Rompaey, 2009). Moreover there was a strong belief in an engineering
prevention, as exemplified by the Dutch Delta Works. After the 1976 floodi
materialized in the Sigma plan. Within this plan, a remarkably strong divide be
and spatial planners was maintained. Controlling flooding through engineer
considered to be the main or even sole responsibility of water managers, while d
was still not a core issue for spatial planning. Therefore, little effort was
development in flood-prone areas. It was only in the revision of the Sigma pla
based approach was adopted, in which spatial planning for the first time pla
limited to providing space for retention basins.

Since the Spatial Structure Plan for Flanders (in Dutch Ruimtelijk Structuur
1997 and the adoption of the principles of integrated water management in 2003,
is receiving more attention in planning practice. Nevertheless, the integratio
spatial planning is difficult since water management (especially for larger riv
scale, while spatial planning is practiced – to a large extent – on a local le
This complex actor network makes integration, responsiveness and decisiveness ha

To deal with this, the 2003 Decree on Integrated Water Management has led to th
Coordination Commission on Integrated Water Management (CIW), which brings the
domains and levels within the Flemish government administration together (Van
Sutter, 2014, Wiering and CrabbØ, 2006). Over the last decade, they have develo
and tools to improve this situation. Examples include the so-called water asses
mandatory part of the approval procedure for buildings or spatial plans, and th
of signal areas where rezoning is considered because of imminent water issue
The goal is to have a more steering role through regulation, especially fo
However, decision-making remains the responsibility of the individual planning i

Additionally, regulations on insurance and damage compensation, and information
been developed. Federal legislation from 2007 stipulates that flood damages are
the private fire insurance. Even though fire insurance itself is not obligato
households buy such insurance, as it is often a condition for obtaining a mort
risk maps indicate where residents pay a higher premium, as determined by the
legal limit of a 90% surplus premium related to natural disasters. For houses
2008, insurers are free to decide whether they want to provide insurance and a
This accommodates a certain, but limited solidarity principle.

Since 1992, the location of real estate in a flood risk zone (following the fede
be disclosed in the real estate deed. Since 2013, flood risks (based on the re
maps) also need to be mentioned in publicity for real estate for sale or for lon
information on flood risks and possible measures residents of flood prone are
available online, but not actively disseminated. Moreover, the different flood
regional) cause inconsistent communication towards citizens and therefore ambigu

The above shows little involvement of residents in flood risk management on t
weak planning tradition on the other. While the first element suggests a relati
awareness and responsibility, and therefore no inclination toward self-initia
suggest the exact opposite.

## 2.3 Study area: Dender basin

Within these settings, the Dender region is one of the areas with the most freq
devastating consequences within Flanders. The most recent floods took place in

2002-2003, 2010, 2011 and 2014 (Coninx and El Kahloun, s.d.). The Dender basi
Scheldt basin. The upstream part of the basin (675 km2) is located in the Wal
downstream part (709 km2) is located in Flanders and managed by the Flemish go
1). The flooding issue in the Dender basin is often debated in the media and
political debate going on about what needs to be done to reduce floods and fl
Known problems are the (relatively) high density of buildings and sealed land
already reported in the 1960s by Van Nuffel (1969)), the outdated infrastruc
coordination with the Walloon Region, both during floods as in general (CIW, 201

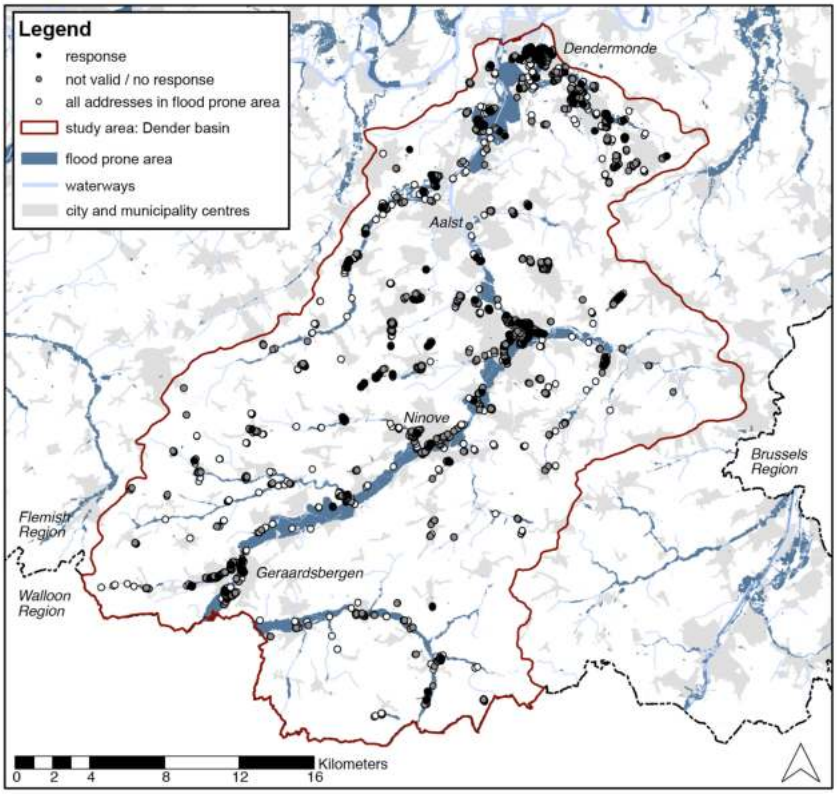


Figure 1. Map of the case study area: the Flemish part of the Dender basin, wit
prone areas according to the water assessment maps and the sample of the

## 2.4 Research hypothesis and design

We conducted a survey amongst residents of flood-prone areas in the Dender basin
attitude and behavior of residents in relation to riverine flood risks for the
questionnaire comprised 66 questions and resulted in a database with 317 u
discussed the respondents experience with flooding, their knowledge on the ris
measures, their housing location choice and flood protection behavior, and the
management. It was the explicit choice of the authors, in line with the researc
broad and comprehensive questionnaire, addressing a wide range of flood-relate
relation to the role of spatial planning in flood risk management, as illustra
given above.

In September 2014 the survey was distributed amongst residents of actual flood-p
the Water Assessment maps (version 1 September 2014). These areas have recently
flood return period of 100 years with a flood depth of 30 cm. From the populati
1,100 were sampled. Businesses and public institutions, vacant homes and incor
omitted, based on onsite assessment. This led to a sample of 916 active pri
relatively small sample was chosen in order to use the available resources to

possible response rate and therefore better representativeness. In order to max
the questionnaire was personally delivered and could be returned on paper and on

We used different explorative methods, including bar charts, chi square tests
Subsequently, we analyzed the pairwise relation between variables from the su
Spearman s bivariate rank tests for non-parametric variables (such as likert
Mann-Whitney tests for dichotomous variables (such as yes/no question). For S
correlation coefficients ($r_s$) and significance level (* = 0.01 < p < 0.05; ** = p < 0.01) a
the Mann-Whitney test, the significance level is reported. Some socio-economic
survey that did not yield significant correlations were left out.

## 3. Results

We received 184 completed questionnaires. One response was excluded be
double entry, resulting in 183 valid responses (response rate 18.8%). Co
of the questionnaire and the relatively small population, this was consider
Representativeness of the sample could not be tested because socio-economic dat
(residents of actual flood-prone areas) are not available for privacy reasons.
the sample can be found in Table 1.

Table 1. Descriptive statistics on the survey sample

| | | total |
|---|---|---|
| N | | 183 |
| age, mean (standard deviation) | | 57.0 (15.5) |
| gender | male | 61.2 % |
| | female | 38.3 % |
| occupation | retired | 39.3 % |
| | non-active | 7.1 % |
| | active | 53.0 % |
| flood experience | none | 41.2 % |
| | without damage | 25.3 % |
| | with damage | 33.5 % |

Following the research design, the results are discussed in five themes: (1) awa
(2) risk perception, (3) location choice and willingness to move, (4) sense of
protective behavior and seeds of self-initiative.

### 3.1 Awareness and knowledge

About two thirds of the respondents are aware that they live in a flood-prone ar
the respondents think their residence is not situated in a flood-prone area. This
with flood experience ($p<0.01$, Mann-Whitney). This is confirmed by the fact that
respondents indicate they were aware of the flood risk when they moved there. Th
to the length of residency: respondents that have recently moved were at that ti
more aware of the flood risk. However, younger respondents are better aware of f
moving ($0.01<p<0.05$, Mann-Whitney).

However, the knowledge on the flooding issue is rather limited. A bit more than
(57.5%) say they know little or very little about the flood risk. Here again
experienced is of significant relevance ($r_s=0.16^{**}$), but also length of residency ($r_s=0.154^{*}$) and
ownership ($r_s=0.25^{**}$). Respondents that were aware of the flood risk at the time of
that they know more about the flood risk ($p<0.01$, Mann-Whitney). Respondents t

they are living in a flood-prone area however do not necessarily feel that the
flood risk (p>0.1, Mann-Whitney).

About 80% of the respondents say they know little about measures they can take
the knowledge on flood risks, the respondents who have experienced more flood
have lived longer in the same house ($r_s$=0.165*), indicate that they know more about possible m
Respondents that know more about flood risks ($r_s$=0.51**) and were aware of the flood risk at th
of housing choice (p<0.01, Mann-Whitney) know more about measures. However risk
not yield a significant correlation (p>0.1, Mann-Whitney).

The above suggests that knowledge on flood risks and measures is for a large pa
This is confirmed by looking into where this knowledge is coming from (Figure
experience, the most important actors that provide information on flood risks ar
parties, followed by governmental bodies (especially local governments) and b
relative importance of these actors in information dissemination is generally t
and possible measures, with the exception of the differences between civil part
smaller for information on measures.

Although over half of the respondents (59.2%) know the water assessment maps, o
respondents (36.9%) know the correct classification. Only18.7% of the respondent
water assessment maps, which is nevertheless most of all information sources (e
conversation, brochure or newsletter). Also the governmental website with infor
reaches 13.7% of the respondents, which is similar to informal conversatio
information.

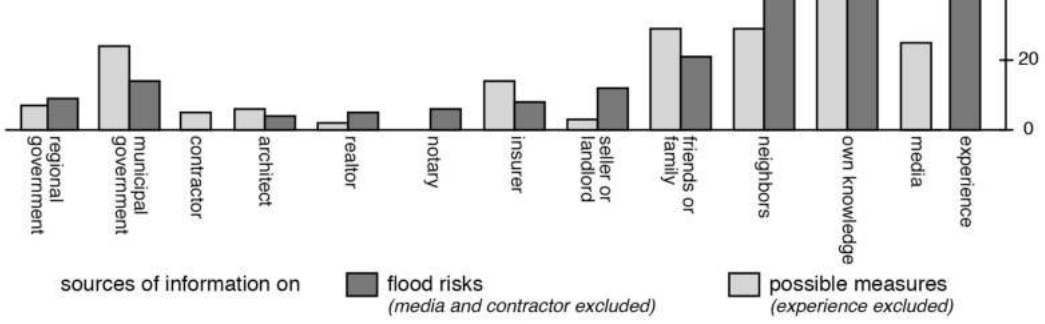


Figure 2. Sources of information on flood risks (a) and measures (b), measure
respondents that have accessed these sources.

## 3.2 Risk perception and experience

Around half of respondents (55.6%) indicate not knowing when the next flood wil
(21.3%) think it will be in less than 5 years, and another fifth (19.1%) betwee
respondents live in areas that have a modeled return period of 100 years (or les
at least 30 cm, these answers might indicate that there is no real underestimat
but rather that there is a great uncertainty or lack of knowledge on the fl
significant difference between the estimation of the current expected flood freq
flood frequency in 2050 (p>0.05, Wilcoxon Signed Ranks test). This indicates tha
expect a substantial increase in flood frequency.

The emotional impact from the flood risk is analyzed for three different aspec
worrying. About 40% indicate that they suffer from these emotional impacts. T
emotional impact is fearing floods (m=3.02 on a 5-point Likert scale, s.d.=1.47
the flood risk (m=3.00, s.d.=1.41), while suffering from the flood risk is p
important emotional impact (m=2.64, s.d.=1.45). All three emotional impacts (
worrying) show similar patterns of association with other variables. Signific
found with the age of the resi$_s$=0.28**, resp$_s$=0.22** and 0.20**), flood experience
($resp_s$=0.61**, $_s$=0.45** and $_s$=0.43**) and risk awareness ($p<0.00$ for all three va
However, only for suffering correlations were found with kn$_s$=0.25**). The flood
suffering and fear also associations were found with len$_s$=0.22** and
$r_s$=0.20**) and state of resi$_s$=0.26** and $_s$=0.19**).

Subsequently, the impact of flooding in terms of the way different types of dama
respondents (with flood experience) was examined (Figure 3). Emotional impacts
effort to clean, and the uncertainty, fear, shock and helplessness appear to be
frequent impacts. More temporal effects, such as the difficult accessibility and
life are frequent, but less disruptive. However, more long-term effects such
negotiation with insurance companies and contractors, and financial and materia
to be less frequent, but very disruptive. These findings largely correspond
Gutscher (2008) have observed. However, it is remarkable that in this case fina
as quite hindering, which is not in line with Siegrist and Gutscher s obser
impacts are greater than material and financial ones.

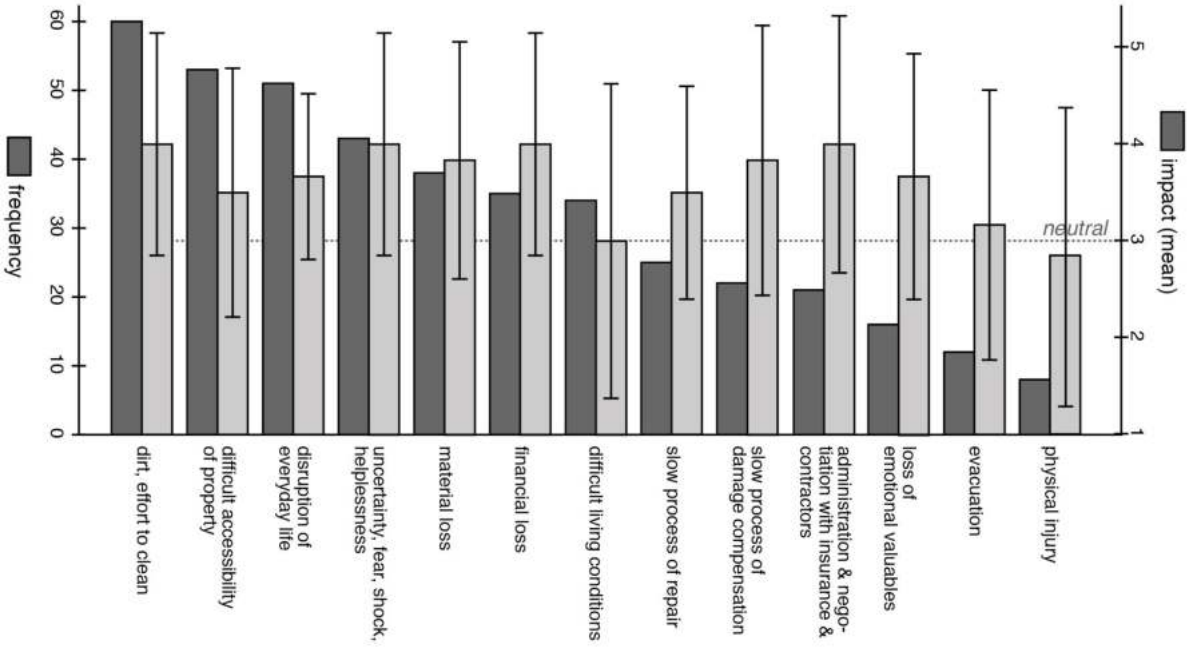


Figure 3. Frequency of different damage aspects (a) and perceived impact of diff
(b). The response categories for this question inspired by the findings from S
(2008).

## 3.3 Location choice and willingness to move

The respondents like living where they reside: more than three quarter of respo
their home and 60.7% are planning to spend the rest of their life there, while o
away within five years. Respondents who know more about flood risks more often
they liv$_s$=0.18*) and plan on staying the$_s$=0.24** longer. Besides that, mainly non-floo
related variables play a significant role. The pleasure of living is associat

residence ($r_s$=0.22**) and income ($r_s$=0.20*). On the other hand, desired future length of r
correlated with ownership ($r_s$=0.32**), how long respondents have lived there ($r_s$=-0.33**) and age
($r_s$=0.33**). It is remarkable that respondents with experience of flooding do no
the idea of staying, as no significant correlation for these variables was found

The overall satisfaction with their home is confirmed by the fact that only 14%
their choice of location. There is a strong correlation ($r_s$=0.49**) with flood experien
respondents that regret their location choice have experienced floods. However,
having regrets correlates with the pleasure of living ($r_s$=-0.38**) and the state of the reside
($r_s$=0.22**), but not with the intended length of residency: respondents that regr
are not planning to move away faster. Respondents that were not aware of the flo
of their location choice, also regret having decided to live there more often (0

The question comes up why respondents live in flood-prone areas. The main motiv
choice are non-water related factors, such as accessibility, proximity of facili
residence and social ties with the area (Figure 4a). These are far more importan
to the location in the flood-prone area, such as proximity of water or possibly
So there is no clear link between location choice and flood risks. On the other
environment is an important attractor as well, but it is unclear whether this is
flood-prone area, or rather to the broader (rural or suburban) environment.

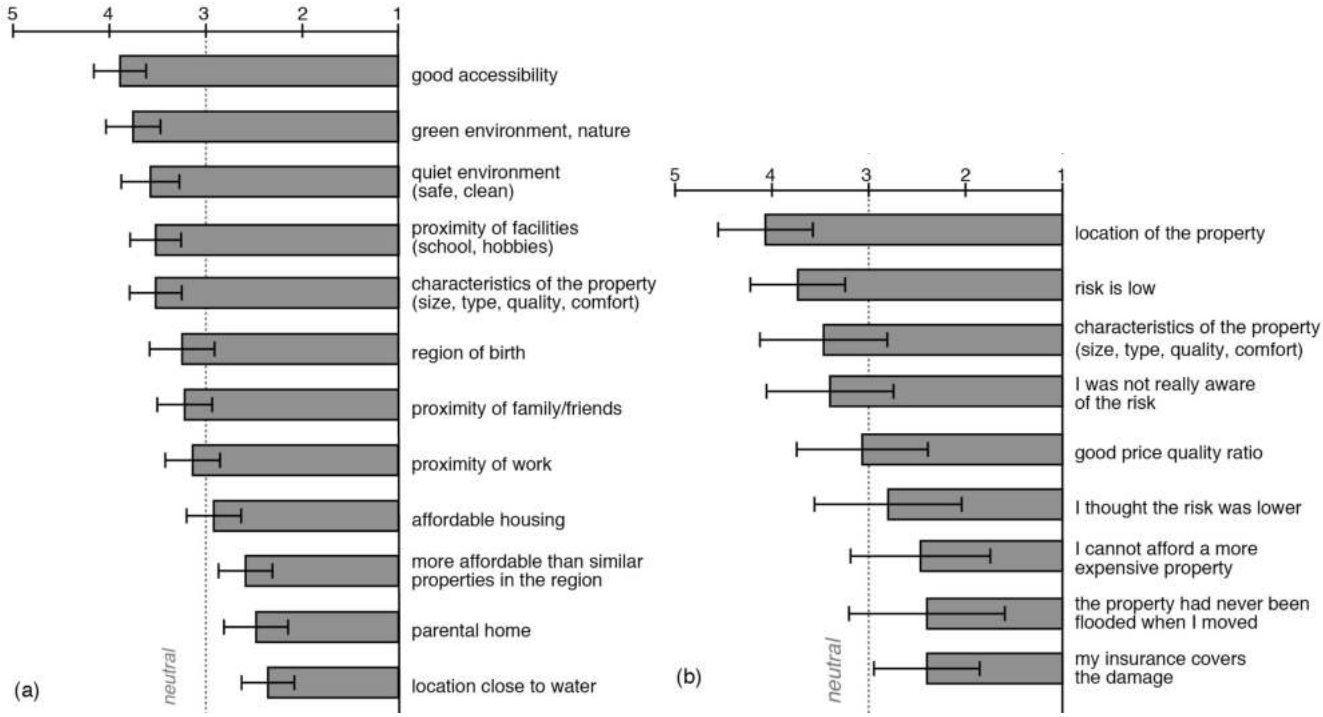


Figure 4. Reasons for housing choice in general (a) and for respondents aware
moment of housing choice (b), measured in mean score on a 5 point Likert scale,
95% CI

For respondents that were aware of the flood risk at the moment of locatio
considerations for their location choice are that the risk is low on the one ha
and characteristics of the residence are favorable on the other (Figure 4b).
desirable from a flood management perspective, such as misjudgment of flood
insurance and financial deprivation are of less importance. This might indicate
for respondents aware of the flood risk is well informed. However, it is possib
be higher than expected and issues could emerge in the near future.

In line with the finding that respondents like to live where they live, the des
low: 5.4% want to move, while 85.5% do not want to move. The desire to move i
flood experience ($r_s$=0.27**) and risk awareness at the moment of location choice (0.01
to the state of the environment ($r_s$=-0.17**). Also the willingness to move (as a flood protecti
is low: only 10.8% are willing to move, while 89.2 % are not willing to move. T
correlate with risk-related variables such as knowledge or flood experience, bu
related variables such as age ($r_s$=-0.21**) and length of residency (rs=-0.19*): the you
respondents and the shorter they live there, the more willing they are to move.
and willingness to move away is associated with high emotional attachment ($r_s$=-0.22**) for respec
suffering (only desiring to move, $r_s$=0.37**), and $r_s$=0.29** for fearing, $r_s$=0.37** and $r_s$=0.29** for
worrying, $r_s$=0.39** and $r_s$=0.38** for regretting their location choice.

When asked after how many floods respondents might want to move, 40.5% of respo
that they would never move due to flooding. Surprisingly this persistence corr
flood experience ($r_s$=0.25**). This means that respondents with flood experience are m
in wanting to stay there than respondents without flood experience. These are
with the highest knowledge on risks ($r_s$=-0.22**) and measures ($r_s$=0.31**), and the respondents that
have lived there longest ($r_s$=0.28**).

Parallel to the considerations of respondents aware of flood risks at the moment
main reason why respondents do not want to move is that the risk is low (Figure
second most important reason is that the respondents can live with the flood ris
a certain acceptation of the flood risk, although again, it is possible that
Notwithstanding the low desire to move, 20.1% of respondents indicate that if
would be at least partly because of the flood risks, and a third of the respon
they would move to a similar residence outside of the flood prone area if it wou

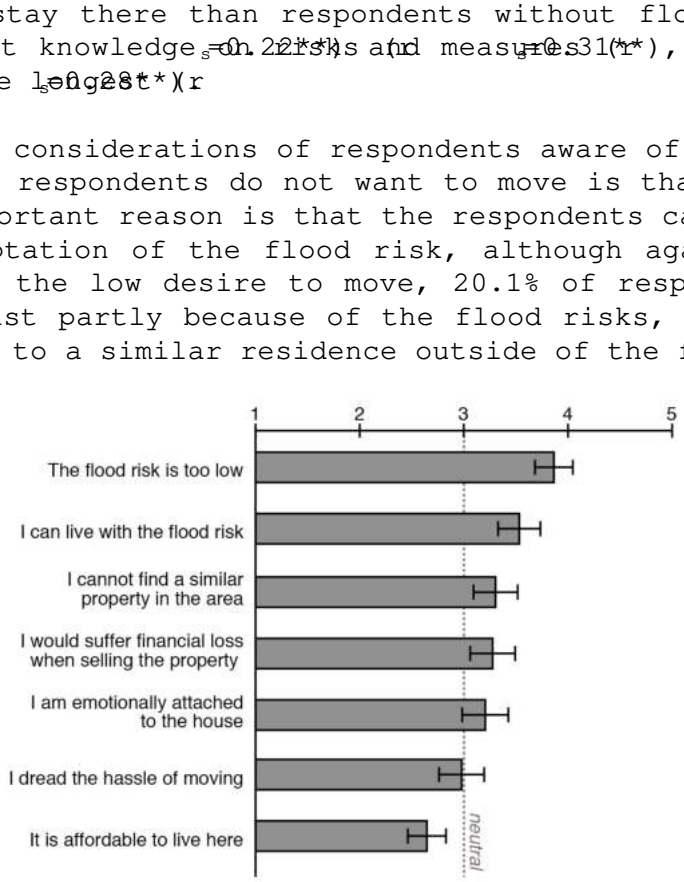


Figure 5. Reasons not (willing) to move, measured in mean score on a 5 point Li
indicate 95% CI

Thus, the attachment of respondents to their homes is rather associated wit
variables, such as socio-economic and real estate characteristics, while flood
not necessarily reduce this attachment. Also the willingness to move seems to
economic variables, rather than flood risks.

## 3.4 Sense of responsibility

The respondents consider the government (both local and regional) to be the mai
existing flooding issue, while they perceive the residents to be least respon

remarkable that there is a large consensus on this: the vast majority of respon
with the statement that the government is responsible for the existing problems,
with the statement on residents being responsible for the existing problems.

The extent to which different actors are expected to be able to help in resolvi
shows a similar pattern: 89% of respondents also deem the government to be respo
the issues, while only 19% believe that residents can help resolving the issues.
respondents wish to be involved in finding solutions to the flooding issue.

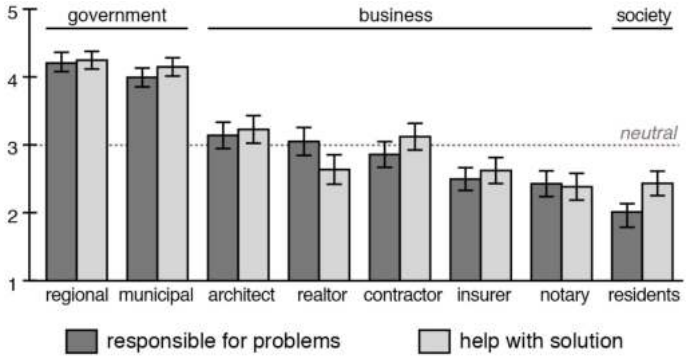


Figure 6. The extent to which different actors are responsible for the existing
help solving problems (b), measured in mean score on a 5 point Likert scale, er
CI

In relation to location choice and flood risks, 70.6% of respondents agree with
authorities have allowed me to come and live here, they are responsible to
flooding , while only 19.5% of respondents agree with the statement I have m
responsible to protect myself against flooding . This is quite remarkable con
regional zoning plans originally did not sufficiently take flood risks into acco

So the government is perceived as the leading actor in both causing and solving
respondents see only a limited role for themselves. However, the extent to whic
themselves to be responsible for the existing problems and can help in resolvi
with knowledge on flood risks ($r_s$=0.28**, respectively $r_s$=0.18*) and knowledge on measures (resp.
$r_s$=0.19* and $r_s$=0.30**). High levels of knowledge are thus associated with a hi
responsibility. Also risk awareness at the moment of location choice is of rele
were aware of the flood risk at the moment of location choice put less responsi
problems on the government (0.01<p<0.05) and more on residents (p<0.01), while
more often that residents can help in resolving the issue (p<0.01). This indic
knowledge on risks and measures, and risk awareness at the moment of location
responsibility.

When asked to what extent governments and residents take sufficient action
respondents indicate that they themselves take sufficient action while only 30%
does so. This is associated with flood experience: respondents with flood exper
that the government is not taking sufficient action ($r_s$=0.19**) while they themselves do so ($r_s$=0.26**).

## 3.5 Protective behavior and seeds of self-initiative

About a third of respondents indicate they have taken initiative to inform them
risk and the measures they can take. These respondents indicate that they know
risk (p<0.01) and the possible measures they can take (p<0.01). Information-seek
risks seems to be inspired by risk awareness at the moment of location choice
information-seeking behavior on measures is related to flood experience (p<0.01)

A bit less than half of respondents (43.4%) are willing to take measures against that are willing to take measures have more often sought information on risks possible measures (p<0.01). The willingness to take measures is also associated ($r_s$=0.33**) and knowledge on measures ($r_s$=0.27**). Considering under which conditions respon would be willing to take measures, we see that an increased flood frequenc incentives such as subsidies, tax reduction and practical support are most pre low score for the option  if the rest of the neighborhood does this as well  inc collective action.

If we look at what type of measures the respondents are willing to take, it is low-cost and low-key measures are preferred (Figure 7b). However, it is remark action scores high, especially since the previous results showed little belief capacities in dealing with flood risks.

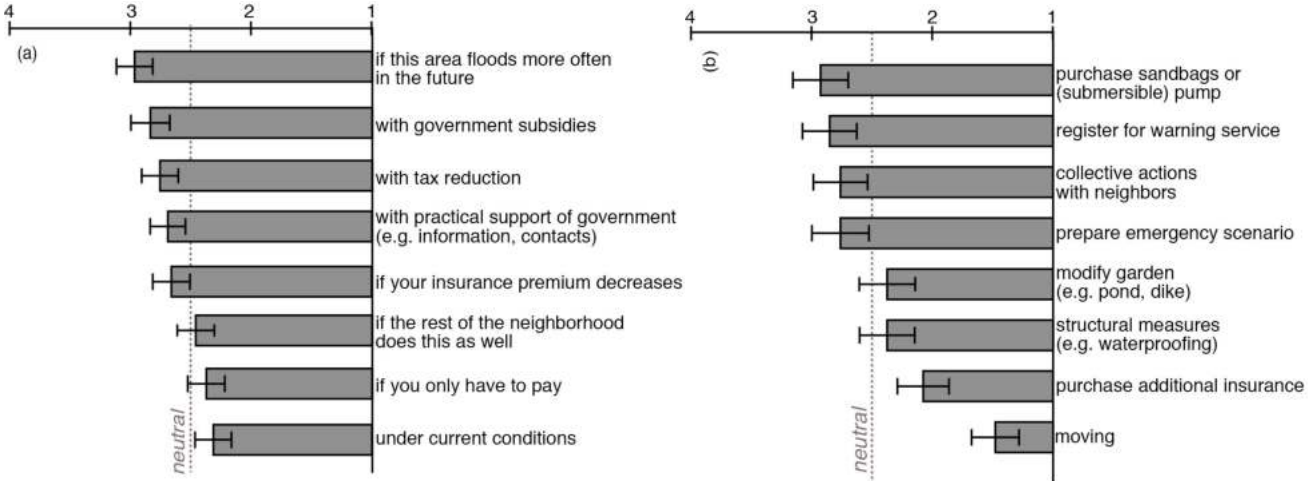


Figure 7. Willingness to take measures to reduce flood damage under different c type of measures (b), measured in mean score on a 4 point Likert scale, error b

Nevertheless, half of all respondents have already taken action to reduce the co Taking action is mainly associated with flood experience ($r_s$=0.63**), where of respondents without flood experience, 47,6% of respondents with flood experience without damage respondents with flood experience and damage have taken measures. This indicate is mainly reactive to flooding. Other significant flood-related variables ar ($r_s$=0.22**) and measures ($r_s$=0.31**), information-seeking behavior on risks (0.01<p<0 measures (p<0.01), but also non-flood related variables such as condition of th and age of residence ($r_s$=0.27**), and length of residency ($r_s$=0.34**) play a significant role.

However, the investment in these measures is rather limited: 60% of the respond action, invested less than  500 in these measures. The invested amount is a experience ($r_s$=0.31**), knowledge on measures ($r_s$=0.29**) and the extent to which respondents to live there ($r_s$=0.30**). The most frequent measure is purchasing sand bags or installation) (73%), followed by storing valuables on an elevated spot in the measures (around 30%), while only a small fraction (around 5%) joined a neighb waterproofed their interior, registered for a warning service or purchased an ad again, low-cost and low-key measures are preferred above structural measures observe very little collective action, although the findings above have indic willingness to take collective action. About half of the respondents that have t with the measures they have taken. Nevertheless, only about a third of respo measures protect them sufficiently against flooding and feel more at ease since

The motives to take action (Figure 8a) are mainly flood-event related. We notic
more ad-hoc decisions in the context of a specific flood event, rather than
reasoning. In addition new information appears to be quite unimportant as a mot
So even though our survey has showed strong correlations between knowledge lev
responsibility on the one hand, and willingness to take action on the other, it
itself is not sufficient as an incentive to take action. However, if we lo
respondents do not take action (Figure 8b), we see that the main reasons are
collective action and government responsibility, followed by the consideration
the distrust in individual actions. Personal circumstances were mentioned least.
in collective action again conflicts with observed protective behavior.

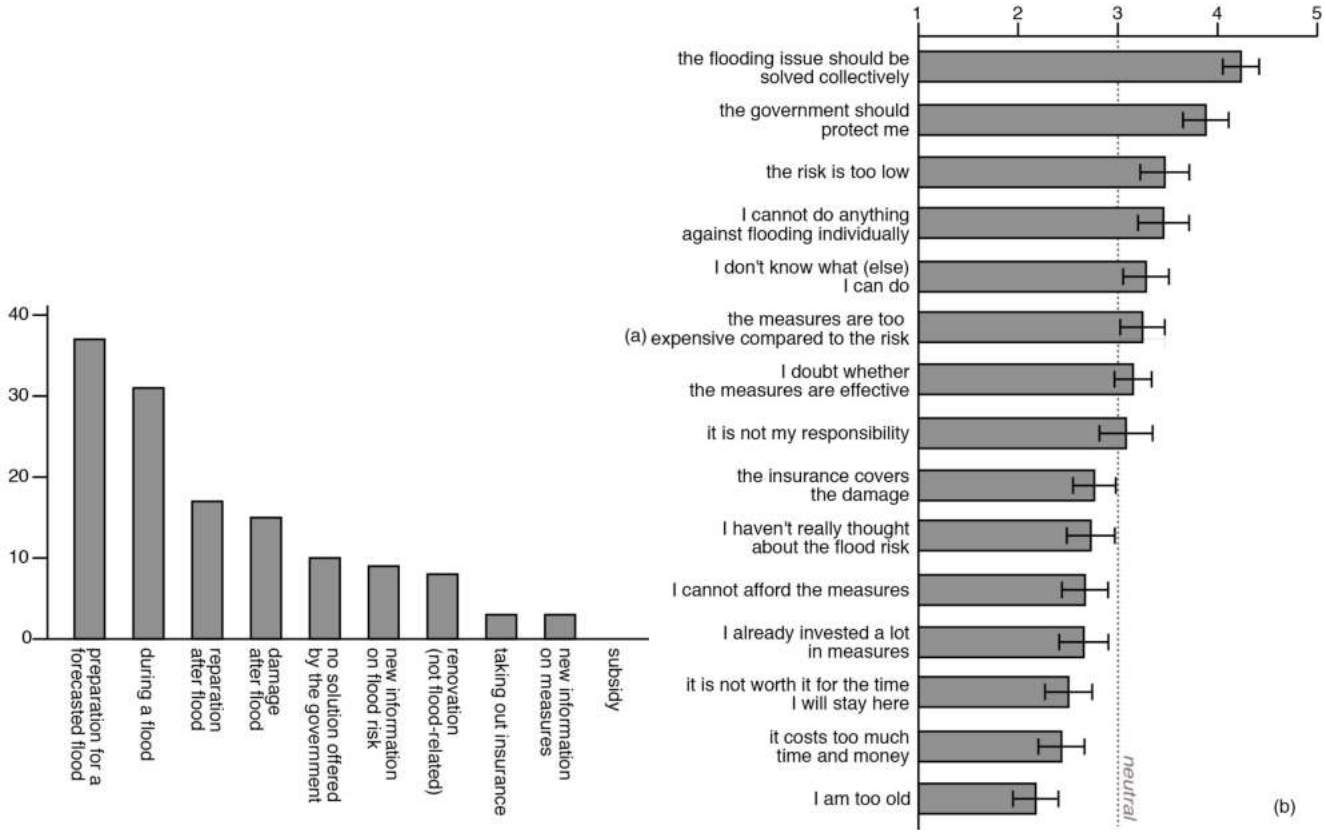


Figure 8. Motives to take action (a), measured in number of respondents, and m
action (b), measured in mean score on a 5 point Likert scale, error bars in

## 4. Discussion and conclusions

Research in water management and planning often presents the flooding issue as
matter, while the interrelationship with broader social dynamics and institutio
discussed thoroughly. We have therefore conducted a survey that assesses how r
prone areas in the Dender basin (in Flanders, Belgium) deal with the risk to wh
Our survey has probed for the residents knowledge of the flood problem, thei
associated risks, the measures they take, the satisfaction with their home
responsibility. We started from a sample of households whose residence is design
area in official maps. This research base is interesting since Belgium is kno
position in steering development (Boussauw and Boelens, 2015, Verbeek et al.,
neighboring countries such as the Netherlands. This context would suggest tha
active role in flood risk management. However, very little efforts have been
activate residents in flood risk management, as opposed to for example the Un

would suggest that residents included in our research would show a relatively awareness and responsibility, and would not be inclined toward self-initiative.

This hypothesis has largely been confirmed. A large majority of residents ar informed, have little or no intention to relocate, and strikingly often impose risk they run on the authorities. Residents do not really see themselves as bei do not believe they can actively contribute to managing flood risks. Neverthele action, but these actions are low-key, individual and ad hoc. So far, recent gov as publishing and regularly updating flood risk maps, adjusting insurance polic mandatory notification on flooding issues when a house is sold, seem to bring li

These findings represent a clear connection with the Belgian institution of re area-wide set of land use plans that are in force since the seventies and dis which in principle could be developed, and zones that are intended for agricul (and where construction is, in principle, not allowed). Although these plans hav managed to keep some open space areas free of any construction, they also impli build on land that was actually never thoroughly evaluated as being appropriat Therefore, today a number of flood-prone areas are still considered to be const by owners, developers and residents, while the responsibility to keep the lot c the house on it as well) is placed on the government.

A number of measures that are currently being taken by the government, aim at i and raising awareness and sharing responsibility between governments and citizen in the future these will contribute to improved control of the flooding issue. (2001) state that increased knowledge does not necessarily lead to declining dam of flood-prone areas may be in denial about the flood risks, and expect to be recent developments in policy-making are looking into the possibilities to loo between a particular land use designation in the zoning plan and the actual rig cases to cancel such existing, although inappropriately awarded development ri still unclear what how these policies will be implemented. Moreover, a st governmental technical protection has proven to be counterproductive in te community refusing responsibility. Therefore, we should also look at the unin common protective policies. In the context of budget cuts and uncertain clima growing need to rethink this position.

This research contributes to this discussion. On the one hand policy-making sh what residents think and do. On the other hand, individual action is framed by even if this is not addressed explicitly. Flood risk management choices generate towards civil society and the way they deal with flood risks through experience long time, flood protection was a governmental activity and flood risks were no account in spatial plans and developments. Dissemination of information has only form and there is very little experience in private flood protection measures. transition towards citizen responsibilization does not comply with the p responsibilities in flood risk management, and therefore, this discussion needs

From a resilience stance, one cannot expect that residents are spontaneously sel deal with flood risks has co-evolved with a flood risk management paradigm t importance to a technical, top-down approach. The shift towards more resident i needs to be openly addressed and supported in all aspects of the interactions risks. In this light, the survey provides some promising results. Respondents a their current homes, and civil parties play an important role in knowledge disse there is quite some confidence in the power of collective action, although cu seems to be lacking to put this into practice. These elements can be interpret could lead to more resident involvement and active contribution in flood risk conditions of appropriate support.

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**Spatial integration and administrative complexity: Housing, employment, and mobility in the case of the Munich Metropolitan Region**

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## Abstract

*The Munich Metropolitan Region (MMR) is experiencing strong population and employment growth. Already under strain, housing, infrastructure and services need coordinated region-wide efforts to cope with the rising demand and infrastructure bottlenecks. These efforts, however, call for thorough analytical knowledge about locational choices of households and employers, as well as the requirements for transport infrastructure and services, and how these three structural dimensions interact simultaneously with each other.*

*This paper introduces a study that aims to understand this complex interplay within the MMR. It includes preliminary results of a web-based survey, which invited newcomers to the region as well as citizens who have recently moved to state their locational preferences. The respondents geo-referenced and assessed qualities of their present and former places of residence and work as well as locations considered during the process of apartment search. With this data it is possible to uncover trade-offs and preferences.*

*A key hypothesis and preliminary finding of the survey is that functional relationships within the city-region have become increasingly integrated, polycentric and complex. This is in contrast to the hierarchical but fragmented administrative reality, which consists of multiple overlapping layers of formal and informal regional planning between diverging local and federal state agendas, further complicated by artefacts like the airport and its economic and governance embedding. A truly regional, strategic approach might be better suited to handle the consequences of growth.*

## 1. Introduction

This paper discusses recent developments in the spatial organisation of housing, employment, and mobility, and their impact on planning and policymaking on the case study of the Munich Metropolitan Region (MMR). In a residents' survey conducted in late 2014 and early 2015, we asked more than 7,000 individuals who have recently moved to or within the metropolitan region on their motivations for moving, the locations they chose for work and residence, and locations they considered during their apartment-search. The paper is footed on the premise that public administration is most efficient if functional and administrative spaces are congruent, and it examines the current governance setup in Munich on the backdrop of this premise and the survey results. After demonstrating the theoretical background in section 2, we will describe the circumstances of the Munich case in more detail in section 3. In section 4, we will outline the methodology used in our survey before we will present the first preliminary results. We will show how functional relationships across traditional nested hierarchies are now significant in our study area in the fifth section. Finally, we will ask what this means for the local and regional decision-making structures and policies on urban and transport development in our concluding remarks.

## 2. Theoretical Background

Territorial organisation is a fundamental aspect of public administration. The problem of good territorial delineation for an efficient delivery of public services and the question of the right scale for certain policy tasks has thus often been discussed in geography, political science, and planning theory and practice (Blotevogel, 2001; Swyngedouw, 2005; Gabi, Thierstein, Kruse, & Glanzmann, 2006; Parr, 2007). As opposed to socio-cultural or physical geographic attempts to regionalise space, economic geography is interested in spatial economic relations as explanatory factor for such a delineation.

An important aspect of this debate is the congruence between functional relations within geographical entities on the one hand and their administrative subdivision on the other, and the alleged negative effects of its absence. From an economic point of view, a high congruency of administrative areas with functional units, such as commuting areas reduces external effects and therefore inefficiencies and transaction costs for collective action problems. In planning, this challenge is best known to arise in situations where a municipality provides certain amenities that the population of neighbouring municipalities can use as 'free-riders' without contributing to its construction and upkeep with their taxes. The idea to avoid inefficiencies of differing incidences today lies at the heart of spatial economic benchmarking models (Frey, 1984) and is used by NGOs, consultancies and international organisations such as the OECD as a policy standard (OECD, 2013, p. 38).

Accordingly, the first practical attempts to address the problem were territorial reforms to re-match functional and administrational spaces. Early practical approaches for a rational regionalisation of a territory date back as far as the establishment of départements in post-revolutionary France. The territorial reform agenda was strongest throughout the first half of the 20$^{th}$ century as part of the modern project, with a late heyday in the 1960s and early 1970s, when urban growth was strongest. During this time, many European countries went through several waves of municipal and regional incorporations, mergers, and reorganisations. In then West Germany, for example, the number of independent entities at the lowest local level was reduced from about 23,000 to 8,000 between 1969 and 1978.

Despite some positive effects on public service provision (Priebs, 2005) academic debate and public opinion on the matter reversed soon after, often in contrast to the political reality of public administration (Evers & de Vries, 2013, p. 537). The majority of the body of literature on the topic today takes a critical stance on territorial reform on the grounds that constant adaptation to functional contexts is futile and compromises citizen identification with the local authority (Evers & de Vries, 2013, p. 543). This was associated with a general shift of the policy mode from hierarchical government to more multi-stakeholder 'governance' and from comprehensive to incremental planning (Lindblom, 1959). The problem of differing scales for old and new policy areas remains, however. To solve this, the need for (often sectoral and voluntary) cooperation within existing territorial boundaries is emphasized instead (Salet, 2006).

In the German case, many regional transport authorities founded in the 1980s are generally considered a good example of the success of this model of sectoral cooperation (Evers & de Vries, 2013, p. 544), and so are the regional municipal co-operations started in the last decades, such as Stuttgart with an elected regional legislative, or Frankfurt with an integration of regional plan and comprehensive land use plan (Freund, 2003; Heeg, 2003).

Despite the success of the model of joint decision making, it has sometimes led to a proliferation of increasingly fuzzy administrative structures with dispersed responsibilities, especially when it was expected to take place on a voluntary basis, effectively excluding matters that could not yield win-win situations. The effect can be observed best on the backdrop of areas that are characterised by rapidly changing – often growing – functional interconnectedness, where functional urban structures

of the past often continue to exist in the form of administrative delineations (Boussauw, Allaert, & Witlox, 2012).

From the late 1990s on, "new regionalism" emerged as a new paradigm within human geography (Brenner, 2003). The forces of globalisation and liberalised markets as well as the rise of information and communication technologies, it is argued, lead to a weakening of the traditional welfare state, new functional spatial arrangements on a (metropolitan-)regional scale and thus the pressure for territorial administration to reconfigure accordingly (Brenner, 1997; Lambregts & Zonneveld, 2004, p. 300; Evers & de Vries, 2013, p. 539). Metropolitan regions world-wide were seen in growing competition with each other for skilled labour and investments, requiring former local rivals to team up to compete on the global stage (Sassen, 2001, p. 30).

This was accompanied by insights from evolutionary economics that extended the neoclassical economic model. The release of the idea of an inter-regional equilibrium meant that permanent imbalances between regions, lock-ins and path dependencies were theoretically possible, as well as regional specialisations and complementary division of labour within regions (Martin & Sunley, 2006). This also meant a shift of the focus of research towards a polycentric and complimentarily specialised organisation of economic activity in space, which could be identified in different cases (Meijers, 2007; Burger, Meijers, & van Oort, 2014), linking formerly independent cities to form networked mega-city regions (Hall & Pain, 2006).

These trends, together with the deficits of the incremental governance mode, ultimately also meant an increased pressure for administrative restructuring on a metropolitan scale. Metropolitan Regions are in constant state of flux with overlapping forces of centralisation and decentralisation. These developments are strongly linked to the choices of individuals (Storper, 2013). For example, employees have their own spatial logic in order to combine private and working life. Firms depend on the qualification of the labour market and proximity to local partners. These spatial logics might cross the boundaries of administrative regions. While working life is becoming more and more flexible with regard to the place where people work and the time when they work. Consequently, individuals have multiple anchor points within their daily lives (Parr, 2013, p. 10). The question arises what the differences between the individual uses of space and the ascription of functions to space are.

## 3. Case Study: Munich Metropolitan Region

*Economic and Demographic Situation*

The city of Munich with almost 1.5 million inhabitants is the third largest city in Germany and a major centre in terms of economy, education, culture and transport. It holds political decision functions as the capital of the federal state of Bavaria and is the seat of several important high-tech and manufacturing enterprises, such as BMW and Siemens, as well as advanced producer services, especially insurances. It also hosts several renowned universities. Since the 1950s, it has shown a remarkable phase of economic growth that is unrivalled by other German cities and that continues until today, making it one of the most prosperous places in Europe. At the same time the high recreational value of its surroundings and its cultural institutions continue to secure it high positions in quality-of-living-rankings.

Together with the surrounding districts it forms a functional city-region of 2.6 million inhabitants, using a travel-to-work area definition. This functional city-region is, according to (Storper, 2013, p. 4), "the principal scale at which people experience lived reality". Pütz (2004, pp. 137-138) accordingly describes it as the "everyday region", as opposed to the "business region" in the core, which attracts most company headquarters.

But Pütz also finds a third type of functional region in the Munich case, a "marketing region": It also integrates the neighbouring regional centres of Augsburg, Ingolstadt, Kaufbeuren, Landshut, and Rosenheim with their respective hinterlands. This larger "Metropolitan Region Munich" (MMR) can be interpreted as outcome of the debate on increasing global competition of cities and the formation of metropolitan regions (Blotevogel, 2002; Fürst, 2003), as well as polycentric mega-city regions with internal division of labour (Goebel, Thierstein, & Lüthi, 2007; Lüthi, 2011). The MMR exhibits a growing functional interconnectedness and complementarity as well as similar characteristics in terms of economic structure (Goebel et al., 2007; Bentlage, Thierstein, & Lüthi, 2015, forthcoming) much more than only in the tourism sector. In its spatial extent it covers 35% of the state of Bavaria, but almost half of its population and more than 50% of its GDP. It is home to 5.8 million inhabitants in 2015 (Figure 1).

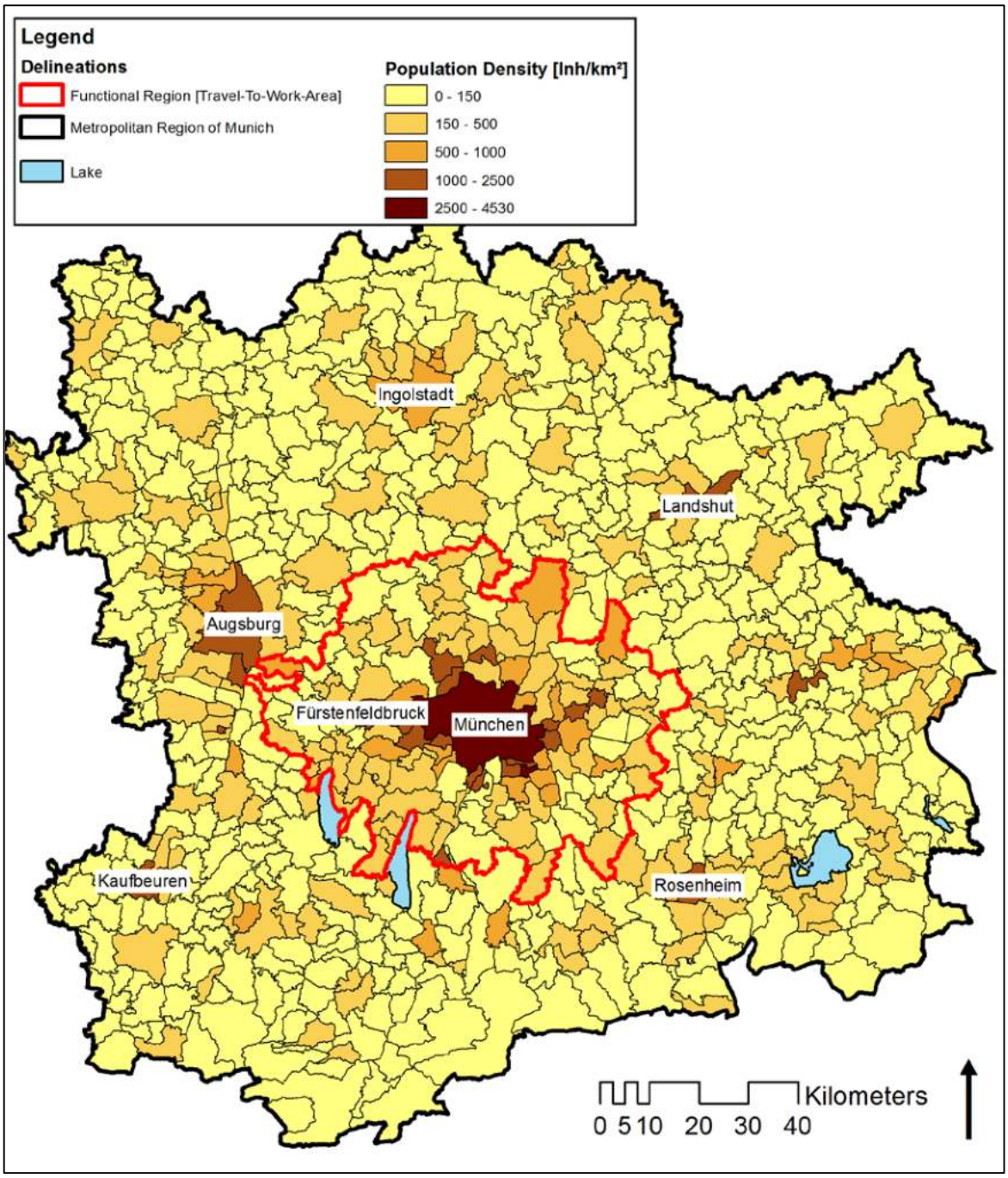


**Figure 1: Functional Relationships in the Munich Metropolitan Region**

These favourable conditions continue to attract businesses and people, so that Munich and its hinterland are expected to grow further (BBSR, 2014). Despite strong effects of demographic change in other parts of Germany, the official population projection for the city of Munich predicts 1.73 million inhabitants in 2030, an increase by more than 15% compared to today. The population growth is mainly due to migration from other parts of Germany and other European countries, but also positive birth rates. The majority of the influx are people between the age of 25 and 40 (Landeshauptstadt München, 2013, p. 19). Further growth is also estimated for the for the associated city-region, though not as pronounced as for the city itself, and a stable development for most of the wider metropolitan region (Bayerisches Landesamt für Statistik und Datenverarbeitung, 2014).

For a long time, Munich could profit from a good infrastructure and public service endowment that partly came as a legacy from the 1972 Olympic Games. With a certain vanity, city administration and parts of the local population long maintained an image of Munich as a 'large village' or a 'city of villages', a world-city by importance, but not in its built environment.

The recent upsurge in immigration as part of an international trend 'back to the city centres' however puts this narrative into question, and the land markets as well as public services and infrastructure under increasing strain. Munich is a victim of its own success: It shows growing signs of residential segregation on a regional scale, and key workers find it increasingly hard to sustain their livelihood. At the same time, many inner-city building potentials have been used and both public transport and road infrastructure have reached their capacity limits on key sections (Thierstein, Förster, Conventz, Erhard, & Ottmann, 2013; Büttner et al., 2014).

In this context, it is important to note that historically Munich had a relatively monocentric structure in functional terms, with a strong concentration of workplaces and retail in the centre of Munich itself. The most prominent descriptions of this spatial disposition of the Munich region certainly goes back to Walter Christaller (1933) and his central place theory: Christaller, whose research area was southern Germany and whose work has been very influential in German regional planning had described the (conflicting) forces of segregation (administration) and supply (function) on spatial structure and the location of towns. Christaller characterised the spatial structure of Munich as above-average monocentric and the surrounding regional centres as underdeveloped and functionally dependent in comparison to other large cities in southern Germany. He also identified cases where the "administrative" principle of segregation had prevailed over the "supply" or "transport" principles, which dominated spatial structure under unimpeded circumstances in central place theory, leading to a higher number of sub-centres oriented towards Munich, such as Augsburg and Passau. This structure prevails until today, and is reflected by the built radial structure of public transport and highways, but to a large degree also by commuting patterns. The recently identified upscaling of interdependencies from the Munich functional region to the larger metropolitan region could not reduce pressure on transport infrastructure so far.

*Administrative structure and planning powers*

The growing functional complexity and upscaling in the Munich Metropolitan Region is in contrast with its administrative (non-)organisation. It consists of a five-tiered government as part of a federal nation state, with at least three more additional bodies with relevant powers in the planning field (see Table 1, Figure 2).

| Administrative Entity | Planning Powers |
|---|---|
| National government | Nonbinding national planning strategy |
| Federal State of Bavaria | Binding state plan |
| European Munich Metropolitan Region | Voluntary association of municipalities, districts, public institutions and enterprises for marketing and strategic purposes |
| Administrative Region [Intermediate tier] | Building Permission Appeals<br>Planning of large infrastructure projects, e.g. airports |
| Outer Munich Planning Cooperation | Voluntary association of municipalities and districts, consultation on planning matters |
| Regional Planning Area | Binding regional plan |
| Regional Transport Authority | Strategic Transport Planning |
| Districts [Cities have functions of Municipality and District] | Building permissions, Heritage conservation<br>Property valuation, reallocations and expropriation |
| Municipality | Binding land use plans (zoning)<br>Comprehensive land use plans for entire municipality<br>Setting of land tax multiplier, beneficiary of land tax and business rates |

**Table 1: Important planning and related powers in the German planning system for the case of Munich**

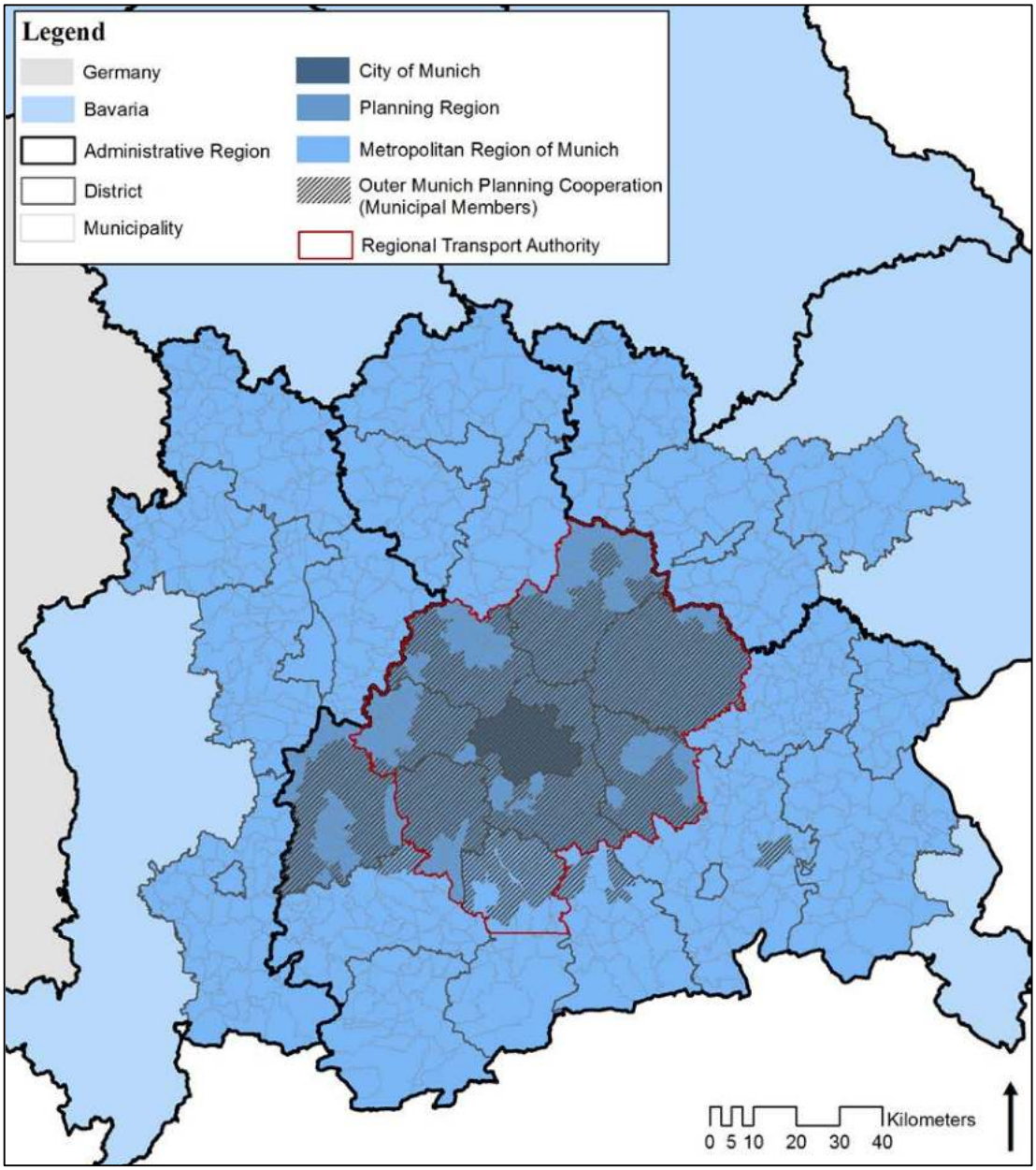


**Figure 2: Governance Structures in Southern Bavaria**

Planning powers in Germany, like in most jurisdictions, mainly rest with the municipalities as lowest tier of government. They have the responsibility to set up two different types of plans: On the one hand, binding land use (zoning) plans ("Bebauungsplan") for single plots or larger areas which legally determine allowed construction in terms of both use and dimension. On the other hand, a comprehensive land use plan ("Flächennutzungsplan") for their respective territory, which is however only legally binding for the administration itself and has a more strategic scope. Binding land use plans and comprehensive land use plans may not be in conflict, however, and either has to be adapted in case of a change to the other, which occurs frequently. For new construction to take place it is not necessary that a binding land use plan is in place – in fact, most neighbourhoods that were built before the 1960s have no binding land use plans. In this case the usage and size of the existing surrounding built environment determines the allowed form of construction instead, for example in the case of infill housing.

Municipalities are not entirely free in their decisions on land use, since the municipal plans have to conform to the relevant aims set out in the applicable regional plan and the state-wide plan. These set out land use decisions of regional importance such as transport infrastructure and large industrial zones as well as strategic decisions on growth poles, central places and axes (Bayerische Staatsregierung, 2013). Their functioning is not entirely top-down, however: For their development, existing municipal plans have to be taken into account in turn. Thus the plans on different layers of government influence each other mutually (Principle of countervailing influence). Studies on the functioning of regional planning in Munich have shown however that its actual capacity to direct development is limited, as municipalities manage to exempt development frequently (Pütz, 2004, p. 156; Thierstein, 2015). The German national spatial plan on the other hand is non-binding, as regional planning powers rest with the federal states. All plans include statutory participation processes in their preparation.

In the case of Munich several other institutionalised stakeholders are also involved in planning: The "Outer Munich Planning Cooperation" is a voluntary cooperation of municipalities and districts in the functional region to pool expertise on planning issues and consult on questions of regional importance. It was founded in the 1950s as a first attempt at regional coordination and is thus older than the regional planning bodies. Despite personal overlapping with the regional planning authority, their membership differs significantly.

A very recent addition to the regional governance is another voluntary association, the "European Munich Metropolitan Region" (EMM). It unites municipalities, districts, public institutions and enterprises and covers a much wider area also encompassing neighbouring centres within the Metropolitan Region with their own travel-to-work areas such as Augsburg, Ingolstadt and Rosenheim. It has no planning powers, however, and so far mainly fulfils marketing purposes, even though it is trying to spark a common identity in the region. The EMM can be interpreted as an outcome of the up-scaling of functional ties and global competition of metropolitan regions.

These co-operations have to be understood on the background of the political alignment of Munich and its surrounding municipalities. While Munich is governed by a social-democrat majority for almost 70 years in a row, the environs municipalities as well as the Bavarian parliament are largely dominated by the conservative party since the post-war times.

Further government agencies are important players in the region: The regional transport authority Münchner Verkehrs- und Tarifverbund GmbH (MVV) covers an area that is almost congruent with the regional plan and strongly influences commuting patterns as well as a sense of community. Munich airport, the seventh largest in Europe, is located 40 km north-east of the city and has a profound influence on spatial structure. The airport premises sit amidst two municipalities and its airside operations have been followed by strong non-aviation activities on the landside. The municipalities within the airport corridor between the City of Munich and the airport itself have shown above average benefits from the continuous settlement and expansion of companies in the past few years since the start of the airport's operation in 1992 (Droß & Thierstein, 2011). From an

economic point of view, the axis between the airport and the city of Munich is considered the most powerful airport-city corridor across Europe, and it is home to a variety of multinational corporations, such as SAP, Microsoft, Baxter, Airbus-Aerospace, BMW, GE Electric, Swiss RE, and others.

To sum up, planning in the Munich Metropolitan Region is characterised by a multitude of hierarchical layers of government, weak regional governance, overlapping and fuzzy but influential informal governmental bodies and private actors. Of course, planning and its organisational structures are just one player in the management of complex urban regions.

It has not followed other metropolitan regions towards greater institutionalisation so far. At the same time Munich faces strong economic and population growth. It is also important to note here that the city of Munich itself has a relatively small perimeter, which also makes it one of the most densely populated places in Germany statistically. The city administration resisted schemes for an amalgamation with neighbouring municipalities in the 1970s in order to retain the two-tiered internal administrative structure (Vogel, 2015). Now, few land reserves are left within the city and regional effort to cope with the rising demand are needed.

## 4. Methodology

*Study*

As described above there is an awareness among scientists of the deficiencies that a mismatch of functional relations and administrative responsibilities can cause. Hence, there is a need for a thorough understanding of households' decision making processes and their influence on spatial developments on the macroscopic scale. In order to obtain new findings on these interrelations we conducted a large resident's survey that addresses three main issues: housing, working and mobility and underlying interdependencies.

Core element of the study is a web-based survey, in which inhabitants – newcomers and long-established – as well as people working in the Munich Metropolitan Region were invited to report residential and workplace location choices they made. A condition for participation was that a change of either workplace or place of residence had occurred in the last three years. The study has been supported by a large board of stakeholders, consisting of not only public authorities but also enterprises based in the region and interested in the topic. This cooperation provided the opportunity to spread the survey throughout various channels. The survey was conducted between November 2014 and April 2015.

The survey is largely based on the approach of revealed preferences, which means household's preferences are indirectly expressed by their decisions made in the past. Survey-participants therefore provide not only information on their current residential and workplace location, but also on former locations as well as locations considered during their last apartment search, including quality assessments and price information. The questionnaire is linked to an interactive map, so that all indicated locations are geo-referenced, which allows a comparison by spatial features among them. Additionally participants are asked about the importance of certain spatial characteristics such as accessibility of the indicated locations (stated preference). Questions on peoples' mobility enable analyses of their mobility behaviour before and after residential or workplace relocation. The revealed preferences are combined with socio-demographic data such as income of the household.

*Hypotheses*

Preliminary works and literature research led to a set of hypotheses, which where the base for the development of the research design of the study and the questionnaire. There are numerous underlying socio-economic trends, which are highly diverse and complex: reorganization of labour, changes in household structures, which go along with a shift from suburbanisation to reurbanisation and an unprecedented importance of networking for individuals and enterprises combined with growing individualization at the same time.

People choose their locations based on a number of influencing factors, which are highly individual and very much dependent on a household's specific situation. The choice is usually result of complex considerations; however, compromises often have to be made. The revealed preferences approach ties up on these compromises by analysing taken decisions.

One of our main hypotheses was that, besides a general increase of commuting distances, a high level of commuting patterns across municipal borders could be detected. By the analysis of individual search patterns, which can be detected by the geo-referenced locations, we expect not only data to test our hypothesis, but also to better understand trade-offs and patterns of changing spatial preferences within the MMR.

A second hypothesis was that, on a regional as well as inner-city scale, centripetal forces of the knowledge economy and the "trend back to the cities" would lead to a more pronounced polycentric functional structure instead of dispersed development. This polycentric structure would, as described earlier, be characterised not only by its network, but especially by reciprocal complementarity.

Therefore we combined a macro-perspective analysis of indicators of socio-economic structures and spatial accessibility with the micro level of individuals who face decisions where to live, where to work and how to optimize daily mobility patterns. Comparable longitudinal data on simultaneous workplace and housing decisions was not available for Munich before, and it is rarely available for other areas in Germany.

## 5. Preliminary Results

After the closure of the survey on April 19, 2015, and a data quality assurance phase, we could undertake some first evaluations. Due to the short timeframe between the end of the survey and the finalisation of this paper, the results presented here have to be seen as a first approximation to the data and are of a preliminary nature.

The questionnaire was answered by 7,308 respondents, which is equal to 0.126% of the MMR inhabitants. The turnout was higher than expected, also thanks to a distribution strategy that involved both social media and traditional channels such as mailing lists of cooperation partners and flyers. With 2,523 respondents living in Munich, the city itself is slightly overrepresented in the sample (0.17% of inhabitants). In some municipalities, the turnout was exceptionally high due to the participation of the municipal administration in the promotion (e.g. Ohlstadt 1.48%, Pfaffenhofen 1.41% of inhabitants). It is hence very important to consider the impact of this uneven spatial distribution on a small scale if generalising statements for certain areas are made. This also applies to the sociodemographic distribution of participants, since the dataset is also biased towards people with a high social and educational status.

In a first step, we examined the location pairs of residence and primary workplace for the respondents who were in employment (Figure 3). Due to the even distribution on a region-wide scale, generalising statements can be made.

Expectably, the commuting patterns show a strong concentration on Munich as the dominant centre of employment in the region. To a lesser degree, regional centres around Munich such as Rosenheim, Landshut, and Ingolstadt emerge as commuter destinations. Regarding the choice of transport modes, the dominance of private transport in the regional centres is surprisingly high (65%), while a high share (61%) of in-commuters to Munich use public transport. Cycling only plays a significant role within the larger cities Munich, Augsburg, Landshut, and Rosenheim.

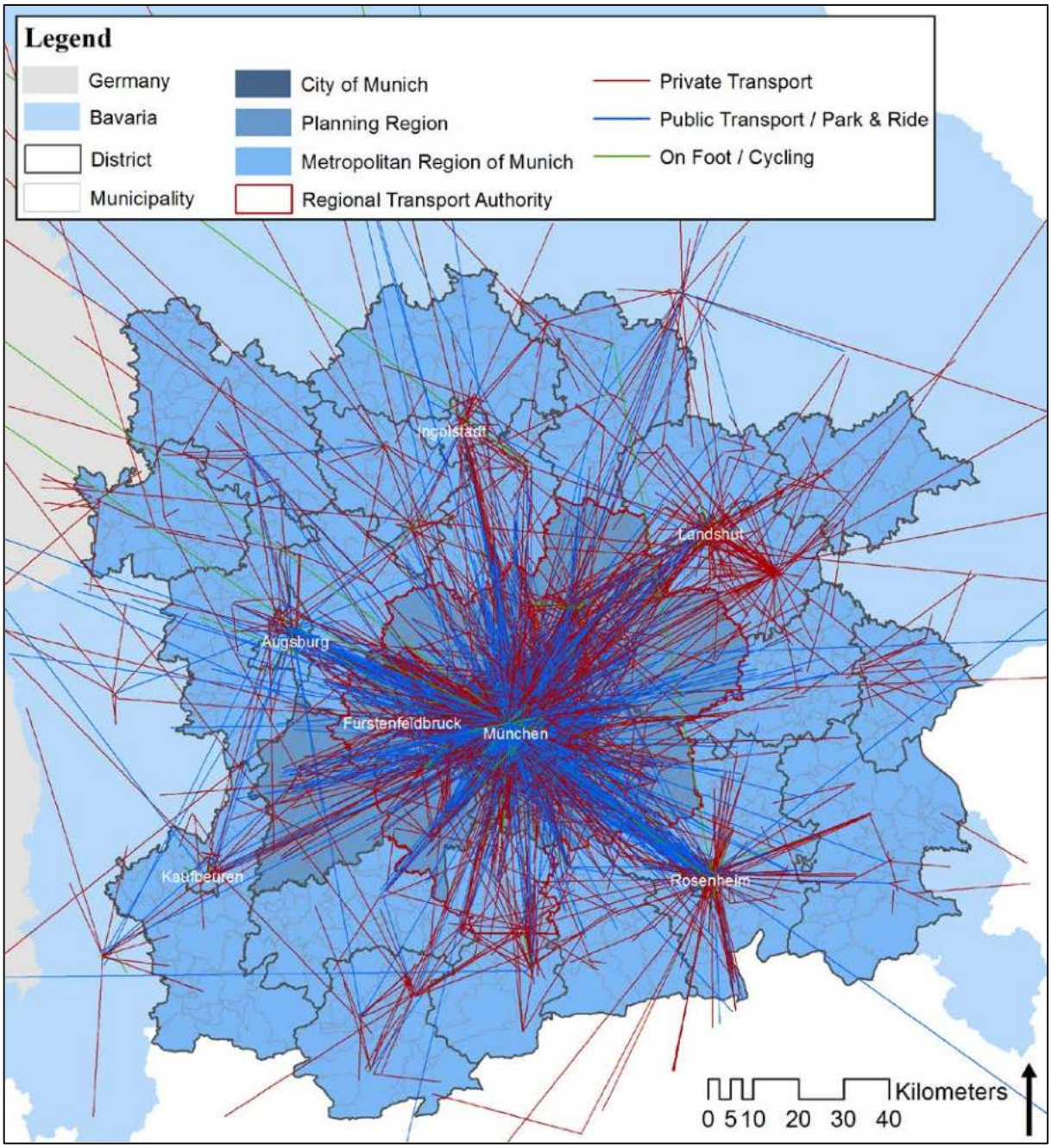


**Figure 3: Commuting Patterns in the Munich Metropolitan Regions**

Regarding our first hypothesis, it becomes obvious that a large share of the functional relations within the Metropolitan Region is not contained within the boundaries of the Planning Region, or the Regional Transport Authority. Instead, regional centres like Augsburg and Ingolstadt, which used to be relatively independent city-regions, now show a significant level of functional interaction in the Metropolitan Region, confirming basic tenets of the "new regionalism". The high rents in Munich contribute to an overspill of population to the wider region, as stated by many respondents (27.9% of those moving further out).

Households aim to optimize distance and transportation costs between residence and work place without consideration of municipal borders. Statistical analyses of past spatial developments show clear links of the development of residences and employment. But a zoom to the smallest scale of municipalities also reveals that the links on this scale are not as distinct as on the regional scale. It seems that there is a general trend towards short distances until a certain scale, the actual choice

however is highly dependent on local circumstances, whereas municipal borders become less important.

As for our second hypothesis, an emergence of a polycentric metropolitan region cannot be observed from the first evaluation of the residential location movement data. More respondents moved from the centres (Munich, Augsburg, Ingolstadt, Landshut, Rosenheim, Kaufbeuren) to other districts then vice versa (Table 2).

| | | Before Moving | | | Total |
|---|---|---|---|---|---|
| | | Regional centres | Other districts in MMR | Outside of MMR | |
| Now | Regional centres | 1340 | 642 | 744 | 2726 |
| | Other districts in MMR | 1121 | 1457 | 650 | 3228 |
| Total | | 2461 | 2099 | 1394 | 5954 |

**Table 2: Movement between regional centres and other districts in the MMR and outside the MMR**

On a region-wide scale, a trend away from the cores seems to prevail. To appreciate this result better, one has to take into account however that our dataset covers mainly people in employment (83,7%), most of them in their 30s and 40s. This group has the highest share of 'family starters', who typically move outwards. Students, who have the opposed movement profile, represent only 9,8% of our sample. Furthermore, Munich is a special case within the German and most European Metropolitan Region since it is growing strongly and thus causing a high overspill of movement into the region. Thirdly, people moving from outside the region to the MMR predominantly chose the centres as their new residential location, contrary to the inner-region trend.

From statistical government data, we know that areas with access to a high number of opportunities and to a choice of different transport modes are characterized by the highest growth rates within the MMR. The general societal trends lead to an increasing need to be flexible, stay connected and able to easily adjust to changes to remain successful in competition for labour and housing. In this context accessibility becomes one of the key location factors, and thus a driver for a more central location choice. So, polycentric development might still be happening, but it needs further analysis on different scales, combining also workplace and residential location changes. Further clarity in this question can also be expected from the study of the location options not chosen in the course of apartment-searching which we also asked for in the survey.

## 6. Discussion

What do these preliminary results mean for the management of the Munich urban region? We want to raise three points here.

Foremost, the observed increase in functional relations across boundaries requires steps to rematch functional and administrative space, i.e. a stronger cooperation of relevant municipalities in the metropolitan region, especially on the domain of transport provision, integrated transport and settlement development policy, as well as open space protection. The perimeters of the Planning Region and the regional transport authority are too small for these institutions to adequately deal with the challenges resulting from the upscaling of functional relations. We think that, for these policy areas, the recently founded voluntary municipal association for a "European Metropolitan Region" (EMM) reflects a more suited scale. The existing fuzziness and fragmentation with respect to regional governance furthermore prompts that the Munich Metropolitan Region needs not only more cooperation, but also a certain streamlining of forums and hierarchies. A truly regional, strategic approach might be better suited to handle the consequences of growth.

Second, the evaluation of transport modes for commuting in the metropolitan region has shown that while for radial commutes public transport dominates, it is almost absent for tangential relations. A sustainable, transport oriented development policy must aim to encourage a polycentric settlement structure where adequate on the one hand to make public transport more efficient on these tangential links on the other. This goes with the mentioned extension of the regional transport authority. Furthermore, the airport has turned out to function as a significant centre of employment, which is however only appropriately served by public transport in direction to and from the city of Munich. All commutes from other residential locations, especially to the east and north, are done with private transport. Here, adequate tangential links should be established.

Third, by asking the citizens themselves about their locational choices, preferences and wishes in a survey, we can hope to trigger innovations in our management approaches for example by creating a broader understanding of existing challenges. This can also contribute to initiate a change in awareness and provide further arguments for future research and policy-making that are ultimately necessary to cope with the challenges of growth.

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# COMPLEXITY, SCALE AND PRAGMATISM IN SUSTAINABLE URBAN REDEVELOPMENT

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Keywords: devolution, multi-level governance, scale mismatch

## Abstract

*In complex cases of sustainable urban development, particularly in high-density, mixed-use areas, it is argued that (inter)nationally issued environmental standards may be too restrictive and that, instead, local stakeholders must negotiate joint objectives to meet all of their interests, including an adequate environmental quality. In this contribution, we present two case studies examining the practical outcome of trade-offs between environmental standards and other objectives in highly complex inner-city redevelopments. These networked decision-making processes, involving multiple stakeholders in multiple arenas, can be classified as aggregate complexity. Complexity science has contributed modelling methods to try and understand how stakeholders interact in such intricate networks. In practice, we found a great deal of pragmatism with stakeholders taking sides in an argument which transcends the simple conflict between environmental quality and other interests. Rather, economic interests of stakeholders at higher spatial and temporal* scales, local resident s health and the ar environmental quality on the one hand conflict with the municipality s (and the *and social interests on the other. Highly pragmatic attitudes of stakeholders in decision-making arenas at different spatial scales appear to defy theoretical modelling and justify the conclusion that trade-offs involving environmental quality standards cannot be left with municipal authorities. Higher tiers of government play a necessary role in safeguarding both environmental and economic interests that transcend the local scale.*

## 1. Introduction

Sustainable urban quality is the outcome of a decision-making process in which economic, social and environmental interests are weighed (Campbell, 1996). Environmental quality in a strict sense, namely the level of pollutants, noise and risk is an integral part of this negotiating process. Particularly in cases where land is scarce, where different types of land use are in close proximity to one another and where many stakeholders have claims on the little space that is left amidst a host of activities, environmental impacts are usually high and cumulative and desired spatial development may be hampered by environmental standards that put limits to the levels of noise and pollution in the area (Howley, Scott, & Redmond, 2009; Van Rij & Korthals Altes, 2014; Van Stigt, Driessen, & Spit, 2013). As cities all over the world respond to the challenge of sustainable urban development by converting previously developed land into high density and mixed-use urban areas (e.g. Chen, Jia, & Lau, 2008), such conflicts between environmental quality and urban development are widespread.

Generally, as a way out of the aggregate complexity (Manson, 2001) of which this type of conflict is an example, administrative powers are devolved from the central state upon lower levels of government typically municipalities and upon non-governmental institutions, in a process of decentralization (De Roo, 2000; Lane, 2003), often in combination with deregulation, understood as the deliberate relaxation or complete abolishment of (environmental) regulations.

As some aspects of decision-making about spatial plans are left to the discretion of municipal authorities, all within certain limits and under certain substantive and process conditions, other aspects remain within the competence of higher tiers of government. Thus, an intricate legal framework is created, in which rules, laid down by national government are interpreted and implemented by lower levels of the state to create their own, local, decision-making framework.

Decentralization and deregulation originate not only from the necessity to improve decision-making in highly complex societal contexts, but demonstrably also from a neoliberal political agenda (Lord & Tewdwr-Jones, 2014). It can be argued that, as a result, in spatial planning *inadequate weight is given to pollution prevention* (C. Miller & Wood, 2007). Similar fears have been uttered in Scotland (Prior & Raemaekers, 2006) and the United States (Allison & Lents, 2005).

In this paper, we illustrate how decentralisation and deregulation may work out in the Dutch context, where municipal authorities are allowed more room for manoeuvre in cases where, in the pursuit of sustainable development, urban space is used in a particularly efficient and economical way. In the Netherlands, policy instruments have been implemented that permit local governments to make trade-offs between environmental quality and other interests (Glasbergen, 2005; Runhaar, Driessen, & Soer, 2009; Verschuuren, 2010).

We examine how one of these policy instruments is used in practice and how trade-offs are made, i.e. what interests are at stake, who is involved in weighing them and how they interact. More particularly, as it can be expected that economic interests prevail over ecological considerations (Hofstad, 2012), we are interested in the level of environmental quality that results from these trade-offs. The research question that is being addressed in this paper therefore is: in what way is environmental quality influenced by allowing local authorities to make trade-offs between environmental interests and other interests in pursuit of efficient and economical land use?

The paper is constructed as follows: First, we look at the interactions among scales in environmental governance. Second, we discuss the Dutch approach to enlarge local governments room for manoeuvre. In section 4, the paper describes the research method used, after which the case study is presented. The paper then discusses these results and draws conclusions about the effectiveness of the approach and how this is influenced by the complexity of the issue.

## 2. Dynamic interactions among scales

### 2.1. Scales, levels and cross scale dynamics

Cash et al. (2006) define scale as the spatial, temporal, quantitative, or analyt used to measure and study any phenomenon and any point on such a scale is termed a l Here, we are interested in the *ecological* or geographical (Cumming, Cumming, & Redman, 2006)and *jurisdictional* scales (Cash et al., 2006). The geographical scale is determined by the spatial and temporal extent of the bio-geophysical processes that underlie an environmental problem and by the resolution of our observations (see also Görg, 2007). Typical levels on this scale are local, regional, fluvial, continental and global. The jurisdictional scale is a social construct (Bolin, Collins, & Darby, 2008) describing the institutions and social processes involved in managing the ecosystem s resources (Cumming et al., 2006). On this scale, e.g. municipal, provincial, national and supranational levels can be distinguished.

To avoid scale mismatches, i.e. a misalignment of geographical and jurisdictional scale (Cumming et al., 2006; Termeer, Dewulf, & Van Lieshout, 2010; Young, 2006), environmental governance can be rescaled from the national level, either upwards or downwards. Authority is devolved upwards to the supra-national tier in order to deal e.g. with trans-boundary air pollution at the level of the European Union (EU) or with climate change at the level of the United Na Convention on Climate Change. It is devolved downwards to regulate regional and local environmental problems (Van Rij & Korthals Altes, 2014), such as odour nuisance and traffic noise.

If, however, a phenomenon occurs at multiple scale levels, there also will be multiple interactions between geographical and jurisdictional scale. Noise, for instance, is considered to be a local phenomenon, yet it is influenced by local environmental policy e.g. permitting industrial

activities as well as regional policies regarding infrastructure or even national policies concerning aviation. Cash et al. (2006) term this *cross scale, cross level dynamics* or *multiplicity*. Termeer et al. (2010) argue that these cross-scale and cross-level issues are dealt with by increasing the fit between scales and improving the links between administrative levels.

## 2.2. Repairing scale mismatch: devolution and subsidiarity

Which government tier is most suited to secure environmental quality? And how should securing environmental quality be institutionalised? In the scientific literature about environmental governance, these questions are addressed from different frames, invariably involving both devolution and participation. Newig and Fritsch (2009, p. 197) frame the debate as a response to insufficiently effective environmental policies. They argue that one response is to adapt the level of governance to the spatial scale of the environmental problems to be solved. Such devolution addresses scale mismatch quite in accord with the subsidiarity principle, which states that *decisions within a political system should be taken at the lowest level consistent with effective* action (Jordan & Jeppesen, 2000, p. 66). This principle can be traced back to political theories from the second half of the 19th century, in relation to efficiency of government action, but has gained a more specific meaning in the context of the European Union (EU), where it pertains to the allocation of national and supranational responsibilities (Jordan & Jeppesen, 2000).

The other response observed by Newig and Fritsch (2009) is to enhance participation of non-state actors in decision-making about solving these problems. Participatory governance *is expected to* contribute to improving the quality of decisions by incorporating locally hel *opening up the political arena for environmental interests* (Newig & Fritsch, 2009, p. 198).
Lord and Tewdwr-Jones (2014) observe the same trend towards downwards devolution of authority and involvement of non-state actors, but frame it, in contrast, as part of a neoliberal agenda in western countries that, at least in England, was motivated by a necessity to fix the sys *grounds that it is a chronic obstacle to growth* (Lord & Tewdwr-Jones, 2014, p 346).

Thus, subsidiary devolution and participation of non-state i.e. civil society and business actors lead to a multi-level governance landscape, in which lower tiers of government, rather than replacing higher levels of the state, execute the authority that was devolved onto them, in deliberation with civil society and business actors and all within certain limits and under certain conditions set by higher tiers of government (Hooghe & Marks, 2003; Steurer, 2013). These conditions can be either substantial or procedural. In the case of substantial rulings, the result of participative deliberation at the lower-level must comply with regulations issued at higher government tiers. This may cause friction between objectives of authorities at different levels, sometimes referred to as cross-level issues (Cash et al., 2006; Termeer et al., 2010), that may lead to stalemate in local development.

That is why Garmestani and Benson (2013) argue that environmental law and institutions are too rigid to account for scale and to accommodate experimental solutions at the local level. They suggest *legal reform by identifying the principles of reflexive law as a possible mechanism for achieving a shift to resilience-based governance and leveraging cross-scale dynamics to provide resilience-based responses to increasingly challenging environmental conditions* (Garmestani & Benson, 2013, p. 1). In such a decentralised reflexive setting, national government merely establishes procedures in order to secure that all relevant interests and actors are involved in the conclusive deliberations (Gaines, 2002). Thus, the required level of environmental quality results from a deliberative process, conducted at the appropriate scale, and aimed at finding a tailor-made solution.

Decentralized reflexive environmental regulation, however, is not uncontested. First, Moss and Newig (2010) conclude that participation introduces difficulties of legitimacy and power (see also Richardson, 2005). In much the same vein, Cumming (2013) worries that the interests of actors in colloquial terms: the interests of polluters and those impacted by pollution are fundamentally

too far apart to be negotiated about in a reflexive law setting; he therefore advocates implementing reflexive law arrangements in tandem with conventional regulation.

Moreover, in cases of environmental dispute, actors are known to rescale an issue by linking it to issues at other, higher, spatiotemporal scales (Bolin et al., 2008). In doing so, they also link to the matching governance levels. As a result, an intricate web of governance relationships is created which easily complicates decision-making (for an example see Bolin et al., 2008).

### 2.3. Is devolution the solution to pollution?

In sum, instead of facilitating decision-making in environmental governance and enhancing considerations of environmental aspects, downward devolution, together with deregulation that often accompanies it, can be expected to result in quite the opposite. However, deciding about environmental quality at higher tiers of government may paralyse local decision-making. Different elements of urban development appear to require decision-making at distinct levels of governance, introducing a problem of co-ordination between these levels. In the remainder of this paper, we will investigate how devolution and participation work out in cases of inner-city urban redevelopment where desired spatial development is hampered by environmental standards that put limits to the levels of noise and pollution in the area (Howley et al., 2009; Van Rij & Korthals Altes, 2014; Van Stigt et al., 2013).

## 3. Addressing cross-level issues: a Dutch approach

The Dutch City and Environment (C&E) approach (Eerste Kamer, 2005) is a decentralized reflexive approach that allows local stakeholders to set aside regulations issued by higher tiers of government and to renegotiate the desired level of quality locally. The C&E approach is intended to promote efficient use of space and reaching an optimal quality of the urban environment in highly-burdened mixed-use developments (Boeve & Van Middelkoop, 2010; Evaluatiecommissie Stad en Milieu, 2004; Van Staalduine & Simons, 1999). In cases where, demonstrably, state-issued legal environmental quality standards cannot be met, it offers local administrations the opportunity to define their own quality standards, deviating within certain limits from the generic legal framework. Accompanying this relaxation of standards is a procedure regulating deviation, ensuring compensation of quality loss and ensuring participation of all stakeholders.

The procedure consists of three steps: First, environmental aspects must be considered from the onset of plan making. Second, in case national environmental quality standards are expected to be violated, the urban design must be tailored to prevent non-compliance. Thirdly, and only after it has been demonstrated that neither the usual measures nor tailor-made creative solutions can secure compliance with national environmental quality standards, deviation from these standards is in order. If lower, local environmental quality targets are set, compensation must occur in such a way that the total urban quality of life is optimized, i.e. turns out to be highe of the plan. Such an optimum quality is not determined by individual standards for air, water, soil, noise et cetera, but is the result of a trade-off among the stakeholders preferences regardin whole range of quality aspects, including architectural design, urban landscape, the presence of amenities, the proximity of public transport facilities and so on. Deviating from national environmental standards requires a formal decision by the municipal government. This so-called step 3 decision must be underpinned by the municipality s vision on the level life being pursued, the way in which compensation is offered and the way in which stakeholders have been involved in the deliberations.

Driessen et al. (2012) have characterised several modes of environmental governance according to three basic types of features: policy content, institutional features and actor features. In much the same way, we characterise the C&E approach, based on the prominent perspective on urban environmental quality, the role of law, the way in which responsibilities are allocated to actors and the interaction among these actors. Table 1 summarises these main characteristics.

Table 1. Characterization of the C&E approach

| | |
|---|---|
| Perspective on urban environmental quality | Holistic; focus on urban quality of life.<br><br>Accounting for objective as well as subjective quality aspects. |
| Role of law | Reflexive, i.e. regulating procedures for establishing quality objectives as a last resort, ensuring compensation and participation. |
| Allocation of responsibility | Devolved onto local state and non-state stakeholders. |
| Interaction among actors | Local government, market parties and civil society interact in open planning process, arriving at broadly supported urban environmental quality objective. |

## 3.1. Perspective on urban environmental quality

The literature about urban environmental quality recognises that it is multidimensional and multifaceted (Moore et al., 2006). Depending upon the disciplinary perspective taken, urban environmental quality may comprise merely the classical environmental aspects noise and industrial safety or include aspects that belong to the domain of urban design, such as the vicinity of amenities, the availability public transport, the amount of open and green space or the identity of the built environment, conveyed by e.g. architectural features and cultural heritage. From a reductionist point of view, each of those aspects must meet a certain criterion, e.g. an environmental quality standard for water or air (Davis, 2005; Davis, 2007) or for the area of green space per dwelling (VROM, 2006). In the literature about urban quality of life, a more holistic approach is taken, in which the quality of the urban environment is explained to some varying extent by individual quality indicators.

Some of these urban environmental quality indicators can be expressed in objective terms, often using some quantitative measure like microgram per cubic metre or decibel. Other quality indicators take into account the perception of these objective conditions; when assessing noise, for instance, it is the degree of annoyance that is relevant, rather than the objectively measured sound level. These indicators are fundamentally subjective in nature and, thus, are highly dependent upon the preferences of the people involved (Howley et al., 2009).

In the C&E approach, the central concept is urban quality of life, which amounts to a holistic and predominantly subjective approach.

## 3.2. The role of law

States seek to protect weak interests, such as environmental quality, biodiversity and other aspects of sustainable urban development, by law. National environmental standards, however, by definition do not provide enough flexibility to adapt the level of protection of the environment to the particular circumstances at the regional or local level. Furthermore, issuing national standards may well provoke evasive behaviour on the part of those regulated. In order to amend these shortcomings, reflexive law (Teubner, 1983) proposes the establishment of legal procedures that assure adequate deliberation amongst stakeholders, rather than issuing substantive norms in advance (Dernbach, 2008; Dorf, 2003; Gaines, 2002).

In Step 3 of the C&E approach, clearly there is procedural, rather than substantive regulation. The C&E approach can therefore be characterised as reflexive. This third step clearly is a last resor can only be taken after it was proven, in both preceding steps, that standards cannot be complied with, not even through tailor-made solutions.

### 3.3. Allocation of responsibility

From the 1990s and, more pronouncedly, from the 2000s, Dutch environmental policy has shifted from a centralised to a more decentralised and interactive mode of governance (Driessen et al., 2012). This is not to say that one mode has completely replaced the other; rather, the new mode has gained prominence, whereas the existing mode still prevails.

The C&E approach has several features of decentralised interactive governance: in Step 3 of the C&E approach, responsibility for establishing urban environmental quality objectives has to a large extent been devolved onto the municipality. In an open planning process, civil society as well as market parties involved can have their say and, if they feel unheard, have a right to court appeal. Ultimately, it is the municipal Council that has to validate the outcome of this process in a formal Step 3 decision. Although there is no formal new jurisdiction, this gover does remind of what Hooghe and Marks (2003) describe as Type II multi-level governance, where authority is distributed among different state and non-state actors.

### 3.4. Interaction among actors

In the C&E approach, local government, market parties and civil society interact in an open planning process, to arrive at new urban environmental quality objectives that can count on all stakeholders support. Such a process of interactive governance requires legitima al., 2012) which, in theory, is conferred by the legally established process ensuring compensation and participation. Here, trust is also important (Lange & Gouldson, 2010).

## 4. Method

Only a handful of Step 3 decisions have been made in the Netherlands under the Interim law C&E. We selected two cases in which municipalities made use of Step 3. Table 2 provides the important features of each of these cases.

Table 2. Characterization of the cases used in this study

| Case | Type | Problem | Status |
|---|---|---|---|
| Roosendaal | Mixed-use development in railway and industrial zone. | Industrial noise above maximally allowed level. | In part being executed; rest on hold due to economic crisis. |
| Vlaardingen | Mixed-use waterfront development near industrial zone. | Industrial noise above maximally allowed level.<br><br>Flood risk; increasing due to climate change. | Overturned by appeal court. |

Our analyses are based upon desk research into the underpinnings of the ste underlying documents (land use plan, master plan) and, in case an appeal was filed, the appeal court rulings. Desk research was complemented by interviewing representatives of stakeholders.

Spit and Zoete (2006) distinguish three types of actors: those with only a private (business) interest in the development as such, those with an interest in the solution the development offers in a societal problem and those who have an indirect interest. We had interviews with representatives of the first two groups: municipal project leaders, their political administrators, their environmental advisors, the developer and, if applicable, representatives from local and regional industry. Interviews were conducted either face to face or by telephone, in a five-month period (January through May 2015). Interviews were semi-structured, lasted between half an hour and an hour and a half and were digitally recorded. A summary was prepared in writing and sent to individual interviewees for approval.

## 5. Case descriptions

### 5.1. Roosendaal

In Roosendaal, a former industrial estate near the train station has gone derelict. It is situated in between the historic city centre (on the other side of the railway) and, since the late 1950s, a residential area. Transformation into a mixed-use (amenities, education, offices, including a new city hall, and residential) area was thought to improve the city s spatial sti Acquiring and remediating the land would be costly; a relatively high number of houses and apartment buildings was planned in order to optimize the proceeds of the real estate.

The remaining industry causes levels of noise that exceed national standards and, in one small corner of the area, odour nuisance. The odour problem was solved by repositioning vulnerable real estate and planning less sensitive buildings instead. Railway noise falls below national norms; rail transport of dangerous substances causes a high level of societal risk for which type of risk, however, no compulsory national norm is in vigour.

The urban planners, realizing that the noise resulting from the remaining industry was severe, had optimized the positions of the residential buildings. However, some dwellings could not be made to comply with regulations concerning industrial noise. Noise reduction at the source had been accomplished at an earlier stage and, after extensive deliberations with the companies concerned, it was concluded that any reduction of source levels at the time would be offset by the desired future expansion of the industry. The obvious solution to accommodate future expansion would have been to fit the buildings design with a so-called deaf fa ade (i.e. a fa ade tha and as such does not have to comply with noise regulations).

For some of the buildings, the view of the surroundings was thought to contribute much to their specific quality and the idea of a deaf façade was rejected (Gemeente Roosendaal, 2008). The C&E approach was therefore deemed necessary to alleviate the restrictions due to excess industrial noise. Affected buildings will be equipped with an extra insulation. In dwellings where noise was particularly problematic at night, bedrooms were situated at the least impacted side of the building. Possible damage to residents health was deemed negligible (Gemeente Roosendaal, 2008 relatively small excess of noise was compensated for by an unusually high quality design and layout of buildings and public space. A step 3 decision to deviate from nati and guarantee compensatory measures was taken by the city council and approved by the provincial authorities. During preparation of the plans, deliberation with the companies in the area and public participation was secured through the usual channels.

One of the remaining industries just outside the area filed an appeal to th arguing that insufficient compensation was offered to potential residents and that compensatory measures were not legally secured. The court ruled that compensation was indeed in accordance with the C&E approach. It also ruled that some of the compensatory measures were not firmly established and ordered repair of the decision in this respect. The appeal was unsuccessful.

## 5.2. Vlaardingen

Vlaardingen is situated near the River Meuse, close to extensive industrial estates on either side of the river. Over time, the historical centre has been cut off from the river bank by an industrial area that recently has become derelict as some plots were abandoned. The municipality arranged for the few remaining industries to be located on a new industrial estate elsewhere within municipal boundaries, so as to restore the connection between the river and the city centre. The area, that is bounded by the historical harbour, will be redeveloped allowing amenities and high density residential use. Users and residents are expected to have a great view of the river, while enjoying the proximity of the city centre.

The area is surrounded by several industrial complexes, including the Port of petrochemical industry and therefore considerable noise and odour nuisance exist. It is also prone to incidental flooding, which is expected to be worsened by climate change. It is, however, the last available piece of municipal territory where a new residential area can be developed within the framework of a larger plan to modernize outdated neighbourhoods consisting mainly of galleried flats. Developing the area would not only upgrade it, but also improve Vlaa structure, reducing the current barrier formed by the river dike and the road on top of it.

The area is heavily impacted by industrial odour and noise (Gemeente Vlaardingen, 2004). Dutch environmental law limits exposure of residential buildings, with an exemption for existing homes and small extensions of residential areas situated near a sea port (where noise levels may be up to 5 dB higher). However, the Vlaardingen development did not qualify for this exemption because of its size, about 2000 dwellings, which was not regarded as a small extension of a pre-existing residential area.

During a previous regional remediation programme, emissions of industrial noise had already been cut back, so that further limitation was deemed unfeasible. Yet, as the area was deemed to be attractive, a participative process was initiated to systematically assess environmental threats and opportunities (Gemeente Vlaardingen, 2006). With respect to noise, highly impacted residential buildings were designed in such a way that bedrooms were at the side of the building that, at night, was least burdened. A Step 3 decision was necessary because at some points, e 5 dB above permitted levels and the project did not meet the criteria for the sea port exemption which would have allowed for such high levels (Gemeente Vlaardingen, 2003).

There is a high amount of tension between the intentions of the Port of Rotter the left bank of the river, to expand and the municipalities in the area, on the right bank, to build adequate housing for their residents. At the regional level, Rotterdam, and other municipalities, the industry and the province had jointly established a framework for further local agreements about building and industrial noise. The framework stated that no new development would lead to further restrictions on industrial noise emissions and that municipalities would communicate to prospective residents about the level of noise they were about to be exposed to. Vlaardingen, acting in accordance with the framework, expressly opted for a Step 3 decision in permitted noise levels that would not further restrict industrial emissions. Compensation was offered to residents through providing extra insulation up to 5 dB and situating bedrooms on the quiet side of the building; other compensatory qualities include the river view, the proximity of the train station, the city centre and other amenities.

Nevertheless, the Rotterdam area industry s organization Deltalinqs and a number of i companies filed an appeal because they feared that future extension of activities would be limited by the piecemeal encroachment on the area by apartment buildings. The appeal court ruled that this particular objection by Deltalinqs was inadmissible. Although the court was given a favourable advise about the underpinning by its technical advisor, it overturned the ste grounds that in preparing it, the municipality had failed to assess compliance with the limit for the

daily average concentration of particulate matter (although it did assess compliance with the yearly average limit, as was common at the time).

There is also friction between national resilience policy and local trade-offs between flood risk and cost. The municipality intended to level up the area, looking ahead 50 years. The national authorities demand considering a longer time frame of 100 years. This, however, would bring extra cost and change the area in what one interviewee termed a fortress .

## 6. Discussion

### 6.1. Perspective on urban environmental quality

Both municipalities that took a Step 3 decision substantiate it by meticulously underpinning the necessity of the area s development and by detailed calculations of environmental impacts. Although environmental impacts, particularly industrial noise, are relatively high, exposure is deemed limited because of extra insulation and smart layout of homes. Yet, we found neither the actual exposure of residents nor the compensation of this loss of quality to rest on any scientific assessment of overall quality in the area. In other words: a holistic vision could not be observed.

### 6.2. The role of law

The Roosendaal and Vlaardingen cases illustrate the reflexive role of law (Gaines, 2002) in relaxing national standards in favour of a more integrated perspective on urban environmental quality. However, such a relaxation is not necessarily in the interest of industry. Rather surprisingly, we found that surrounding industries, in fear of future conflicts with the new residents interests, argue against the relaxation of standards, intended to residential areas in their proximity. This illustrates that law also plays the traditional role to protect citizens against undue use of authority by the government.

Particularly the Vlaardingen case makes clear that state-issued standards serve to protect not only environmental interests, but also economic interests i.c. of the regional industry at higher geographic levels and interests at higher temporal levels i.c. flood risk in the area.

### 6.3. Allocation of responsibilities

The C&E approach in Vlaardingen shows that devolution and participation only in part solve the problem of scale mismatches, precisely because urban environmental quality dimensions of a local development are manifest at multiple spatial levels. This is in line with other research that found no significant correlations between governance effectiveness and decision making scale, nor between policy delivery and institutional fit to ecosystem scale (Newig & Fritsch, 2009). In Sweden, the results of the so-called Constructive Dialogue were disappointing (Smedby & Neij, 20 terms of environmental quality reached.

### 6.4. Interaction among actors

Both cases show that trust is important. Neither in Roosendaal, nor in Vlaardingen, extensive deliberations with industry could ultimately prevent all parties from filing appeal. In Vlaardingen, the harbour industry s lobby organization, despite the acceptance of high levels of noise and smel through the Step 3 decision, industry felt that planning residential buildings in the area was against the agreement framework to respect the industrial noise contours. Playing the public health card, industry expects provincial government to draw clear borders between zones of industrial activity and areas with sensitive types of land use in the greater Rotterdam area; this is in line with findings by Bolin et al. (2008). This seems to be highly pragmatic behaviour, as ultimately the appeal court based its ruling on formal grounds that were brought forward, rather than considering the

municipality s perspective on urban environmental quality. Unfortunately, there whether this particular trade-off between economic use of space, and urban environmental quality would stand up in court.

In both cases discussed here, participation was carried out following the elaborate procedural regulations prescribed. This is quite according to the principles of reflexive law. Yet, concerns of abuse of such a reflexive approach cannot be totally dismissed by our results: in both cases, municipalities are known to have invested a great deal of money in acquiring land in the area; one way or another revenues must come from these investments. Communications about the new residential areas (in area visions and plans) stress that noise standards are exceeded to merely a small extent and a quality discourse (Hofstad, 2012) highlights the unique features of the place: view, the character of the area, amenities, proximity of public transport and the city centre, and the like.

Meadowcroft (2007) argues that participation of actors who have no democratic constituency like, in our cases, industry introduce the question of legitimacy and that, therefore, there is always a role for the state. Aspects of that role could be clear guidelines for municipalities with regards to goals and means, hierarchical regulation of polluters and better alignment of policies among government sectors (Hanssen, Mydske, & Dahle, 2013).

### 6.5. Dealing with complexity

The type of issue discussed here is complex because of multiple interactions among multiple actors in multiple decision-making arenas, trying to achieve distinct objectives that impact environmental quality at various spatial and temporal scales. Manson (2001) terms this aggregate complexity . Complexity theory offers modelling methods to try and understand how stakeholders interact in such intricate systems. Theoretically, a combination of development scenarios, environmental impact models and an agent based model (cf. B. W. Miller & Morisette, 2014) could support planning in the face of uncertainty and complex interactions. In practice, however, we observe that municipal decision-makers act in a highly pragmatic way: they slice up the complex issue of urban environmental quality into separate quality aspects, such as noise, and focus on local rather than regional or even wider ranging effects as well as on short-term rather than long-term impacts. Furthermore, actors who fear that their future interests are compromised, may pragmatically fight local decisions.

## 7. Conclusion

We conclude that trade-offs leading to stretching environmental limits cannot be left with local authorities alone and that higher tiers of government play a necessary role in safeguarding both environmental and regional economic interests at higher spatial and temporal scales. Admittedly, environmental standards here were exceeded only to a small extent. However, in rapidly growing megacities in newly industrializing countries situations much worse than those in relatively quiet and well-regulated cities and towns in the Netherlands can be expected to occur, both in terms of affected population density and of noise levels.

In both cases, but more pronouncedly in Vlaardingen, we observed a conflict between the surrounding industry s economic interest, local resident s health and environmental interests one hand and the municipality s (and the developer s) economic and social inte This conflict is shaped by the complexity of the issue, resulting from the fact that a single urban development has environmental impacts at multiple spatial and temporal scales and therefore requires attention in multiple decision-making arenas at multiple administrative levels. Although, obviously, we merely explore the issue here and more research would be needed to come to grips with it, our findings provide a first suggestion that a wide gap exists between complexity theory and the practice of governing sustainable urban redevelopment and its impact on environmental quality.

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# ADVANTAGES OF SELF-ORGANISATION IN URBAN PLANNING – LOCAL LESSONS OF URBAN DEVELOPMENT IN HELSINKI METROPOLITAN REGION

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Jane Jacobs asked already in 1961: What kind of problem is problem in organised complexity . However, in complexity theorie thinking, the problems caused by organisation represent just one ty other types are simple problems and problems of disorganised comple methods of different types of complexity differ from one another. organizing urban planning, and the contest between local development regional ones. Action research is way to conduct studies on u It provided methodology not only to collect data, but also to from the perspective of stakeholders in the Herttoniemi neighbourho of Finland. The paper will answer three questions: What is urban complexity? What is of citizen activism in complex urban development? How can comple turned into an advantage in urban planning?

Key words: Urban complexity, self-organization, action research

## 1. Introduction

The objective of urban planning has been to plan and design well-functioning urban environments. However, many urban problems are complicating this task (Christaller, 1933; Bettencourt and al., 2007) and the expanding scope and scale of problems have turned the latter into ´wicked` ones. Wicked problems are intricate by nature comprising several environmental and societal issues at the same time (Skaburskis, 2008; Weber and Khademian, 2008). There has been two ways to respond to wicked problems in urban planning. The first one has focused on the substance of planning, aiming at a better physical appearance and performance of urban functions. The second one has laid emphasis on the procedure; processes, their actors and the stages of planning.

Unfortunately, the analysis of the current urban development of the Helsinki Metropolitan Region reveals severe defects in the application of both approaches. I will reflect in the following on the development of a Helsinki neighbourhood called Herttoniemi. As one of the oldest suburbs of the capital city, with a central location and good accessibility, it has followed the urban transformation of the Metropolitan Region and faced the problems and promises of urbanization: shortage of housing, required urban densification, and belt-tightening of public expenses which have transformed the neighbourhood. The population has increased up to 53 000 inhabitants during the

past ten years, and the change will continue (Statistical Districts, 2014; Helsinki City Plan Draft, 2015). Herttoniemi can be regarded as the mirror of urban development in the Helsinki region in which the internal and external push and pull factors take turns, enabling and constraining one another.

Herttoniemi provides a rich context for studying urban complexity. For example, the idea of enhancing sustainable urban development through densification and a compact urban structure has become an accepted norm in urban planning. It is assumed to provide better services nearby and therefore less traffic. However, densification has not led to a more sustainable environment in Herttoniemi, because service policies are not following housing policies. The former service structure developed in 1950s is being replaced by the structure of 2010s in which services are concentrated in large scale units that are shared by several neighbourhoods. Services that used to be designed for 5000 or 10 000 inhabitants are now produced for 50 000-100 000 units of inhabitants. This has become tangible already in health and child care services. The former is an important daily service for elderly people and the latter for young families. The hospital of Herttoniemi was put down already in 2014. The health station will move to another neighbourhood, Kalasatama, in two years. Accessibility of the daily services is related to the mobility and consumption patterns (Heinonen, 2012), which together are increasingly burdening the ecosystem as an increasing number of inhabitants is trying find services.

At the same time, it has become ever more difficult for citizens to shape their own living environment and daily life. According to service surveys (Häkkinen and Wallin, 2005; Jarenko, 2007), as well as heated debates in local newspapers, the inhabitants are not willing to give up their local public services. Neither are they willing to have more neighbors especially, if it reduces the green space and recreational areas (for example the Kivinokka area). However, the aspirations of citizens are not reflected in the administrative and decision-making system. Even if public participation is endorsed by legislation, the statutory measures in urban planning are limited to the specific phases of the planning or zoning process. At the same time, the role of citizens is very small in social and health policies, as they are steered by other type of legislation, detached from urban policies. As the Metropolitan and City administration has not mobilised local people, these have adopted other coping mechanisms to design and produce their everyday urban functions.

The aim of this paper is to analyse the role of self-organising citizen activism in the urban planning and development of Herttoniemi. The paper is based on action research and longitudinal data gathering during 2004-2012 (Wallin and Horelli, 2010; Saad-Sulonen and Horelli, 2010; Wallin and Horelli, 2012; Wallin, 2015). The paper asks and answers three questions: What is urban complexity? What is the role of citizen activism in complex urban development? How can complexity be acknowledged and turned into an advantage in urban planning? The paper sheds light on action research as a method in urban planning as well as the local patterns of urban development.

## 2. Three types of urban complexities

The city has been described in urban planning research with diverse concepts. In the era of modernism, rational planning conceived the city as a machine. It was an engine, produced by design and steered by administrative systems. The machine was a source of livelihood that promised a society where global economic and political domination was possible (Faludi 1973; Porter, 2011). In the post-modern era, cities have prevailed their role, but the concept of urban planning and development has changed. Due to urban growth, social segregation and economic differences, cities look more like a self-organising organism than a disciplined machine (Taylor, 1998; Urry, 2003).

Jane Jacobs asked already in 1961, in her book Death and Life of a Great American City: "*What kind of a problem is a city?"* She answered that: "*A city is a problem in"organised complexity"*. In complexity theories based on systems thinking, the problems caused by organising represent just one type of complexity. The two other types are simple problems and problems of disorganised complexity (Baynes, 2009). The management methods of different complexity types vary from one another. According to Baynes (2009, 215), *"The basic assumption behind simple problems and disorganised complex problems is that the system being described seeks equilibrium and that this can essentially be approached with reductionist, deterministic methods*".

In this paper, simple complexity is a problem, which can be solved. At least, it can be split into units that can be detangled and therefore solved. Simple complexity is not about simplicity. Quite the contrary, it can also be intellectually a highly demanding problem. Traditional engineering questions seek to answer these issues. Examples of solving methods are life-cycle thinking and efficiency consumption calculations that are used in the planning of urban structures and functions.

Problems emerging from disorganised complexity are difficult to perceive and comprehend, as they take place in changing situations, contexts and logics. They have to be studied by applying advanced statistical analyses and modelling. Methods like forecasting and evaluation, are common in the field of economics and policy studies, but these are also being applied in urban development issues, such as demographic change (Baynes, 2009). Disorganised complexity cannot be solved as such, but it can be examined and anticipated which provides solutions for adoption and adaptation.

Organised complexity differs from the other types of urban complexity. Baynes (2009, 215) claims that " *The problems of organised complexity are characterized by heterogeneity, coherent local interactions, irreducibility, and persistent disequilibrium. Deterministic approaches and statistics cannot adequately represent the diversity or importance of interactions and dynamics that lead to aggregate observations in organised complex systems"*.

Organised complexity is a meshwork of formally acknowledged organising, apparently rationally-led and well-steered but, when implemented in practice, they often end up in a ridged, competitive and overlapping system of administration that triggers wicked urban problems. Splitting them into smaller units does not solve the consequences of organised complexity, but this might even worsen

it. In addition, the mere description of the complexity is not enough, since the causes of the problem are known even without new research. The resolution lies in deliberation and social reconciliation, new models of governance and practical innovations that take over current systems and practices. However, they are seldom plausible. New technology or political decision might be ”a juggernaut of destruction”, a new layer on the prior mess, which makes the situation even more complicated (Urry, 2005).

Consequently, the different types of complexity affect the scope of urban planning, the understanding of what urban planning is and the means that can be used to resolve wicked problems. Administrative and resolution devices that are based on the deterministic approach have limited impact on urban planning. Knowledge production that is based on the causalities of phenomena and quantitative methods, such as technical and economic statistics, falls quickly into a cul-de-sac in the changing context (Fainstean, 2001).

Also a lack of capacity prevails concerning the understanding of organised complexity in urban planning processes. According to research on participatory urban planning, the participants – local actors, inhabitants, entrepreneurs and different service provider communities – have not been sufficiently integrated in urban planning (Innes and Booher, 2010; Staffans, 2004; Bäcklund, 2007). Several approaches have been created to involve the public and to mediate uprising conflicts, but so far no successful integration of procedural and content theories of urban planning exists. Manzo and Perkins (2006, 341) claim that ”*While this process may indeed require special management techniques, it has an uncovering of place meanings and values at its core*”. This means that inhabitants` place- based knowledge has not been sufficiently acknowledged in urban planning. Participatory urban planning should mobilize people to bring their own history, the assets of their social relations and dreams of a better future to the content and substance of planning.

Versatile methodological competence is part of a larger capacity to understand urban complexity and to resolve wicked problems. At the same time, it makes urban planning more transparent and more fit for purpose (Wallin and Horelli, 2009). The faculty to combine knowledge, produced through traditional quantitative methods with qualitative knowledge and modelling, enriches urban planning and decision making (Anttiroiko, 2012). The key is new knowledge sources, such as the place-based knowledge of inhabitants and other real-time urban informatics (Batty, 2013). Novel data and its application enrich the planning material and enable the understanding and anticipation of complexities (Horelli and Wallin, 2010). The expansion of data produced by the civil society increases the participation of residents and new groups – both in the process and substance of urban planning.

The systemic [1] gathering, and systematic use of planning information, can make the planning system more transparent, reflective and agile than it is today. In practice, this means the adoption of new approaches and new methods, not only during the on-going planning process, but before

[1] Systemic refers here to the systems approach, which means the comprehension of isolated systems as affecting one another and making a whole or a system. (Hummelbrunner & Reynolds, 2010; Reynolds & Holwell, 2010).

the actual planning begins. These contribute to the planning objectives, but also to the implementation of the plans, when the ex-post evaluation of the urban setting takes place. Thus, they produce planning information for initiatives of linear procedure, but also for those of visionary or even disrupted future (Figure 1. Horelli and Wallin, 2010).

The next section seeks to justify Jane Jacobs´ claim about urban complexity. The claim is still valid in Herttoniemi, a Finnish neighbourhood of 45.000 residents, although Jacobs made it 50 years ago in New York. The section comprises an analysis of urban complexity at the neighbourhood level, which was perceived, explained and partly resolved by action research on urban planning and community development.

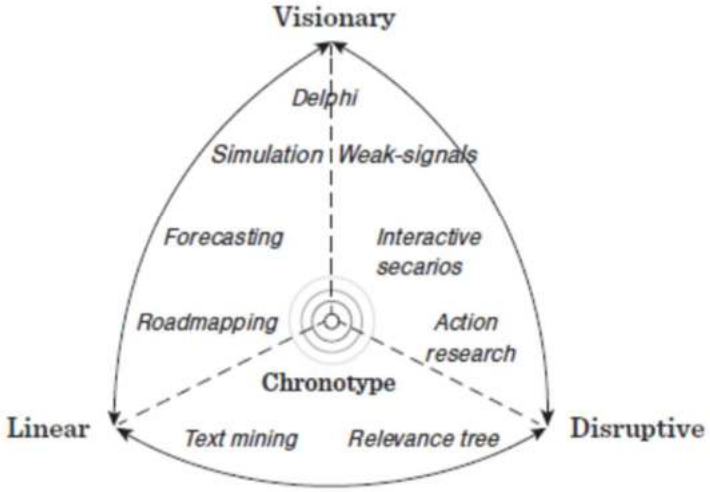


*Figure 1. Examples of urban planning methods suitable for resolving different types of urban complexities (adapted with permission from Aaltonen, 2007 in Horelli and Wallin, 2010).*

## 3. Research on self-organising urban planning and development

Action research is one way to conduct studies on urban change in a systemic way. Action research is an established research approach in social and behavioural studies (Lewin, 1946; Kuula, 1999). Action research is a strategy in which the researcher, together with the subjects in the study, implement various interventions[2]. These comprise simultaneous observation, monitoring and analyses. The process is transparent and co-evolves with the context. Systemic refers here to a trans-disciplinary approach in which, besides the structural and temporal transformation of the context, also the different agents and their rationalities are recognised as part of urban planning interventions.

[2] The dual role of the researcher, the so called ´sitting on two chairs`, poses a dilemma as the research is simultaneously an explanatory and transformatory factor in terms of the research object (Alasuutari, 1993).

In the action research on Herttoniemi, urban planning and community development interventions were entwined in order to study the different actors and their activities in the neighbourhood. The adapted action research approach was called LENA, *A Learning-based network approach to urban planning and action research*. LENA expanded formal urban planning that traditionally deals with specific zoning and building projects to comprise multi-stakeholder processes. It transcended administrative and areal borders and explored new ways to gather inhabitants` place-based knowledge.

In the light of the action research, the neighbourhood is no longer seen as an object of the town fathers or professional town planners. Herttoniemi unfolded as a self-organising, co-evolving system in which all actors had some meaning, even if the roles were not similar or comparable (Boolens and Boonstra, 2011). The prior actors had been officials, land owners and construction companies, who wanted to engage local actors in planning, but only in the role of the end user.
The self-organization in urban planning means that residents, civil society organisations and the workers of local associations, even passive actors who do not come to planning events and gatherings, carry weight in terms of shaping the environment. The urban transformation can take place by conscious, self-made development interventions or just by having an impact on the setting through everyday practices, such as walking (Kuoppa, 2013). Not only active involvement in a workshop or writing a statement, but even the chosen route or service, and a lived moment can be part of the evolving urban texture.

This kind of urban development might seem chaotic, when diverse interventions and research are simultaneously taken forward. However, in practice it is clear that the redesigning of the location of children´s afternoon care, building of a community yard and the changing of local bus routes are tasks for urban planning, yet initiated and completed by others than urban planners. These acts together make the neighbourhood a better place to live. The co-planning, timing and taking forward of the locally identified activities through action research enabled the description and even certain steering of the transformations in the neighbourhood.

## 4. Urban complexity in Herttoniemi: simple solutions and the identification of non-solvable challenges

The neighbourhood of Herttoniemi has been a functional part of Helsinki since the 1950s. Industrial activities found their place there, and offered to the whole city harbour and warehouse services. Right after the Second World War Herttoniemi turned into one of Finland´s first suburbs, which attracted people who wanted better housing conditions. Thus, Herttoniemi became a classic neighbourhood unit that provided its inhabitants all public and commercial services in addition to work places. Gradually its identity as a neighbourhood got stronger. It was divided into two residential areas: West-Herttoniemi and Roihuvuori, which were separated from one another by an industrial and harbour area, and later by the eastern motorway and the Metrorail towards East-Helsinki and the South-East Region (Packalén, 2008).

By the beginning of the Third Millennium the urban structure of Herttoniemi is decisively different from the Post-War one. In practice, the neighbourhood has been rebuilt in terms of its functions, population, image and position in the central hierarchy of the metropolitan area. Herttoniemi has always been the transport node of South-East Helsinki. Consequently, it is scaling up to a new level, while it is simultaneously being internally changed. Once a labour-class neighbourhood has now become a concentration of green urban activists. Its architecture underlines the change, as the point-access block houses and slab blocks are being complemented by new buildings of latest architecture. A completely new neighbourhood, called Kruunuvuorenranta, is being built South-East of Herttoniemi.

Urban functions have changed even more drasticly. The old suburban structure is dissolving. The former harbor area has been replaced by a new high density housing area, called Herttoniemenranta. Its services are provided around the metro station, and the former industrial area has evolved into an office and retail district. The old shopping centres in the West-Herttoniemi and Roihuvuori have been emptied of commercial services, except for small grocery stores. All the public services, such as the library, youth house and the local parish have been suggested to move to the commercial centre around the metro or even further to the city center or to other neighbourhoods, such as Kalasatama.

The above described factors have transformed the urban landscape and the role of Herttoniemi in the region. The original aim of action research was to examine this transformation and to find out, how to support people´s everyday life and opportunities to participate in urban planning. The action research comprised several distinctive development projects with different foci.

In each phase, data was gathered from the area. Two large surveys covering the residents of the neighbourhood, as well as focus group and individual interviews were conducted, in addition to observing the meetings of administrators and associations in Herttoniemi. The objective of the data gathering was twofold: first of all, to collect views of different actors concerning the ways to develop the neighbourhood and to disseminate information for deliberation. Secondly, the data enabled the monitoring of the evolving context. The planning solutions and interventions have been described in several PALCO-publications (https://wiki.aalto.fi/display/Palco/Publications).

The planning targets and needs that came up during the action research have been gathered in Table 1. They have been analysed from the perspective of urban complexity and the role that participation had in the problem solving.

*Table 1. Urban complexity recognised by action research at the neighbourhood level.*

| **Problems of urban complexity** | **Target of planning/action research** | **Role of participation** |
|---|---|---|
| Simple problems | New timetables and routes for the bus, common yards, local websites | Speeded up the finding of problems and their solutions<br>Enabled the implementation of solutions even through the means of co-production<br>Increased the fit of the solution and its sustainability |
| Problems of disorganised complexity | Uncertainty brought about by a multitude of service providers and a lack of planning data, such as childcare in the afternoon and the mobility for hobbies of young people | Produced information about phenomena, events and trends that cannot be found in statistics or via surveys to particular groups<br>Enabled the comprehension and deliberation of different perspectives |
| Problems of organized complexity | The chaos brought forth by different administrative systems, their varying ´temporal windows`, and the evolving context in general, for example the raising of real rents and the urban development of the new Herttoniemi Centre. | Brought forth new active user groups as producers of planning knowledge – some of which might change the future direction<br>Enabled the use of digital data (e-planning) and time planning for foresight and anticipation, providing opportunities to envision solutions in the changing urban context |

From the perspective of urban complexity, described at the beginning of this paper, the first result was the recognition of the disorganised complexity of the neighbourhood (see Table 1.).

The action research took place in collaboration with the Department of Urban Planning and the Social Department of the City of Helsinki. The former was interested in Herttoniemi due to the need to find novel places for housing, as well as due to the many zoning and transport projects in the new centre of Herttoniemi, which was the consequence of the future Kruunuvuori neighbourhood. The Social department of Helsinki was worried about the lacking services of the 20.000 residents in Herttoniemenranta. They had not been built due to the financial recession in early 1990s. The Social Department also lacked local data on services. The social services were planned at that time according to age groups for the whole city in general and no longer according to local needs, as before. The principle meant, for example that the services of members in the same family were planned in different administrative units. The problems of children did not relate

to the problems of their parents, even if their connection was indisputable. This also hid the fact that social problems were concentrated in certain neighbourhoods, even in particular blocks.

Despite officials, there were many activists in the area, who had resources and the motivation to organise services or to take part in the planning and financing of spaces in the neighbourhood. These were members of local associations or private service providers, who offer spaces for activities. The neighbourhood had also traditional residential activities among better off people who lived in the owner occupied area. The new residents of Herttoniemenranta and the tenants of social housing did not participate in the residential activities. The ways and instruments to increase social interaction were scarce, especially between the residents in different parts of the neighbourhood. The surveys disclosed that even if the different residential groups appreciated the neighbourhood for the same reasons, they could not find shared goals, except for the need of a public swimming pool. The location of the services became a conflict between the different subareas, especially as the newest one was almost totally without services. On the other hand, the centralisation of services around the metro station worsened the services of West-Herttoniemi, known for its activism. These were examples of problems in disorganised complexity that cannot be solved as such. However, they can be described which means that they can be divided into smaller controllable units (Table 1.).

These smaller units were not easy problems but it was possible to solve them. The simple complexities, which were separately solved, were found through surveys and participatory observation. Some of the solutions were strategic, such as the creation of participatory arenas and instruments for local co-governance and the founding of the local websites. Others were operative, for example, the hiring of a community worker. All of them were ground stones for the participatory structures that enabled residents to resolve the provision of child care in the afternoon based on different partnership models, to reconfigure the transportation system and to plan, build and turn the unsafe area of Roihuvuori into a multi-generational community yard (Saad-Sulonen and Horelli, 2010; Wallin and Horelli, 2010; Wallin, 2015).

Participatory planning proved to be essential for dealing with ‘simple urban complexity’. The precondition for solving the complexity was the collaboration between the residents, associations, entrepreneurs and the administrators. The solution turned out to be successful, if the official responsible for the planning collaborated with the service provider and the users. The transition from participatory planning to participatory co-production speeded up and enabled a satisfactory outcome, for example, in the case of the Roihuvuori yard.

Participatory planning was also fundamental in the controlling of disorganised complexity. The participatory means produced new knowledge about the current and future situation of the neighbourhood. Besides statistics and expert surveys, a variety of co-planning methods was applied, ranging from informal events to structured workshops and charrettes. Thus, it was possible to approach the complex situation from different perspectives, to plumb the background of problems and to find common denominators, which made it easier than before to understand varying causal relationships. Although complexity as such was not decreased, the Lena approach

of the action research enhanced the finding and creation of shared means and arenas for the neighbourhood actors, which in turn, enabled to make complex, even conflicting issues visible.

The recognition of the two types of complexity did not, however, solve all the challenges of the Herttoniemi neighbourhood. The solving of specific planning problems, or revealing different perspectives and creating shared understanding, are not enough to bring responses to the situation that will emerge from the unknown future of the larger contextual transformations. The disruptive future cannot be completely coped with, even if the anticipation of and preparation for changes are the purpose of different administrative departments, especially that of the Department of Urban Planning.

In Hertoniemi, the administrative and decision-making machinery was not capable of controlling the urban organism, especially as the timescale seemed to extend to years or decades. Thus, the planning system and city government could not steer, not even together with the neighbourhood activists or associations, the most important activities and events related to urban spaces.

One example of organised complexity that is difficult to steer, was the raise of real estate taxes. The city decided to triple the rent of the old housing areas, although these needed desperately renovation. This, in turn, increased the dwelling costs to a level that was unbearable, at a time when housing and living had become extremely costly in the metropolitan region in general. The raised rent endangered the possibilities of the residents and real estate owners to maintain their houses and even to live there. On the one hand, not increasing the rent was inconceivable. Old rental agreements were ending and new ones had to be made. According to legislation and good governance, lower rents were not possible due to the equality of citizens.

Another, similar problem of organised complexity was the structural and functional challenge of Herttoniemi. It is 10 years, since the statutory plan of Herttoniemi metro station was made, but its implementation has not yet begun. The old suburban structure dissolves and services escape from housing units, not only to the metro station, but even further away from the everyday life of the residents. It is impossible to prevent the development during the times of current economic priorities. Services will be produced less expensively to larger groups of people, which means that the services will no longer be situated in the near environments of residents, like before. Urban planning fails to guarantee the benefits of urban densification due to the policies of other administrative sectors.

How should urban planning relate to organised complexity that is emerging from the established administrative and planning practices, especially if the challenges cannot be solved through planning? The action research on Herttoniemi discloses that urban planning should be seen both as techno-rational problem solving and as part of a larger understanding and anticipation of the socio-political development of society.

It is not suggested, that action research should be applied as a planning device. However, urban planning could profit from the applied methods and the understanding of the meaning of

participatory planning in different planning cases. With the aid of multiple methods and sufficiently long term research, it is possible to understand the neighbourhood and to solve its challenges. Expanded urban knowledge that participation brings forth might enable the anticipation of the future and the understanding of plausible continuities or loose trends which organised complexity will be made of.

In sum, the new approaches to urban planning, which are based on localities and local actors instead of administrative sectors, can identify and split different types of complex urban problems and resolve many of them. This is, in fact, what urban planning has always been about. However, the contribution of the approach presented here implies that the limits of planning have to be understood. The city is a living organism, a co-evolving adaptive system that transforms space and time. The steering through straight forward urban planning processes do not work in each case. The contributions of incremental and rationalistic planning approaches have to be understood with their limitations in the context of the changing, multi-actor and even disruptive urban reality in which planning takes place.

## 5. Conclusions

This paper has described urban complexity in Herttoniemi from the perspective of action research at the neighbourhood level. It has asked and answered three questions, concerning what urban complexity means, how one can be prepared for it in urban planning and what the role of public participation is in the complex urban development. Consequently, all of them are also relevant in urban development and policy-making at the metropolitan level.

The action research described here supports the outcomes of classic studies on urban planning. Complexity is an urban characteristic that emerges as a result of different activities, polymorphous structures and varying features of different people. In addition, both internal and external pressure affects the changing context. The pressure comprises, among others, urbanisation and the increase of population, the technological change and the transformation of everyday life. Worth naming are the new consumption patterns, the changing governance style and the rise of self-organisation, as well as the events and networks in different spatio- temporal dimensions which can be examined in the context of urban planning. So, what are the lessons?

The first lesson concerns the comprehension of complexity in urban planning. It means that instead of turning the watchful eye of planning and governance to future urban structures and fragmented planning processes, it should be turned to the ways people live, especially to the curbing of consumption and mobility and to the development of the existing urban structure and its functions. The objective of planning interest should thus be human communities, not the implementation of specific activities or certain urban structures.

In the light of systems-based urban research and the action research on participatory planning in Herttoniemi it can be claimed that it is possible to solve wicked urban problems, if the understanding of urban functions takes place locally, comprising the acknowledgement of the

special characteristics of local actors. The local perspective is frequently missing in the metropolitan context.

Secondly, it is important to understand that the urban planning solves best simple problems. These are well- defined, often techno-rational planning objects and single cases in which building or reorganisation can change the neighbourhood and consequently improve the inhabitants´ daily lives. The action research indicated that participatory planning and even co-production can have a significant role in this respect. Collaboration with local actors succeeded in implementing some construction projects (the common yard of Roihuvuori) and in organising participatory structures for deliberation (Local committee and Herttoniemi website).

In order to be able to solve simple problems, they have to be distinguished from the group of situations and systems that represent disorganised and organised complexity. This is where urban planning can contribute by producing diverse planning information. The knowledge creation in urban planning can support other sectors of administration, as long as it is based on high quality knowledge production. This means in practice that traditional data gathering modes, such as statistics and surveys, are complemented by data and methods of urban informatics comprising e-planning instruments and new deliberative models of action which engage self-organised resident activism.

The third lesson is that, due to a multitude of planning information about the complex situation, it is possible to distinguish the different types of complexity-related problems, but not always to resolve them. Sufficient knowledge production can make urban complexity understandable. It is also possible to distinguish simple problems whose solving might decrease disorganisation. However, it becomes clear which issues are caused by organised complexity. Neither urban planning, nor the means of participatory planning, can manage this type of complexity. Yet, the anticipatory knowledge production illustrates the situation for all parties. Thus, it is possible to change the urban policies and to affect the causes of organised complexity in the future.

In sum, the City is not only a problem in organised complexity, as Jane Jacobs claimed many years ago, but that of different types of complexity. It is not possible to solve all forms of complexity, but it is evident that the planning policy in Finland and the production of planning should be renovated by increasing the recognition of new urban knowledge brought about by participatory planning, urban informatics and the self- organisation of citizens. Currently, this is not the case in the Helsinki Metropolitan Region.

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# Strategic Planning and Housing Crisis: Fuzzy Boundaries and Fuzzy Responsibilities

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## Abstract

Following the recovery from the global financial downturn, the underlying policy issues of house price inflation, a high demand for owner occupation, restricted land supply, and a relatively small social sector new build programme are resurfacing again in the UK. The boom and bust housing cycles have long been a major challenge to successive governments. The way the Coalition Government managed the economic downturn was to dismantle regional planning and strategic planning in England and replaced it with an open source, local-oriented style of neighbourhood planning. This paper examines the spatial patterns of recovery in different housing markets and provides a critical review of the policy experiments and fragmented institutional framework in house planning. It argues that strategic coordination of spatial development has to be part of the policy package to tackle the major housing crisis.

## Introduction

The nature of the housing issues facing Britain has changed markedly over the last twenty years. There are now less physical problems with housing stock, but more concerns over housing affordability and the external environment that goes with housing consumption (Barker, 2004). Following the recent recovery from the global financial downturn, the underlying policy issues of house price inflation, a high demand for owner occupation, restricted land supply, and a relatively small social sector new build programme are resurfacing again. The boom and bust housing cycles have long been a major challenge to successive governments. There is thus a need of providing a comprehensive package with different policy levers and instruments that will help to make a step change to deliver the right type of housing in the right location. The way the Coalition Government managed the economic downturn was to dismantle regional planning and strategic planning in England and replaced it with an open source, local-oriented style of neighbourhood planning. This paper provides a critique of the fragmented institutional framework and lack of political leadership in house planning and argues that strategic coordination of spatial development has to be part of the policy package to tackle the major housing crisis.

## Variegated spatial patterns of housing market recovery

As the UK emerges from the recession, housing market conditions are spatially varied, with some areas experiencing a dramatic oversupply of housing stock and others a lack of supply due to the reluctance of the private sector to commit to new build activities. This has had strong implications for house prices, creating affordability issues in some areas as well as negative equity concerns in others. The Joseph Rowntree Foundation (JRF) commissioned study (Wong et al, 2011) suggests that

recession did bring a degree of convergence between the regions, but that this has been diminishing as the South pulls away fastest as the economy recovers. Nonetheless, rapidly growing regions such as London and the South East can be strongly segmented with considerable social and housing problems found in the inner areas of the capital.

The JFR study shows that average English neighbourhood standardised house prices decreased by 10.4% between 2007 and 2009. However, different neighbourhoods had very different patterns of change, with the greatest decrease found in a Birmingham neighbourhood (-40.3%) and the greatest increase in the London borough of Camden (+81.4%). Despite the overall drop in house price levels, house prices remain high resulting in continued housing affordability issues, particularly in Southern England where the house price to household income ratio is particularly high. In 2009, the ratio between prices to income for Great Britain was 7 times, only slightly down from 7.7 in 2008. Repossessions and mortgage arrears also increased significantly during the recession.

The recession has significantly impacted upon housing supply as private and social house building decreased, resulting in a decline in both prosperous areas such as Southern England and more industrial areas. The number of new housing starts in the UK decreased by 50.8% between 2007 and 2009. In 2009 there was a closely matched balance between housing supply and demand. There has been a 48% increase in new social housing starts in England between 2007/08 and 2009/10, though the picture was highly variable geographically.

The ratio of households to dwellings is an important indicator in the long-run models of housing supply and affordability. In 2009, the England average of 0.98 suggests that there was a reasonably close balance between housing supply and household number. The areas with the highest levels of pressure are in London where the boroughs of Camden (1.15) and Westminster (1.13) have the highest ratios. Housing supply will be further pressurised when taking into account of the potential demand from projected household growth.

The Coalition government s commitment since 2010 to reducing public spending in key areas of housing, welfare benefits, and regeneration has inevitably produced variable spatial impacts. The JRF analysis suggests that socio-economic conditions and economic growth dynamics vary considerably across different areas. Most of Greater London, South East and the East Midlands saw a rise in new enterprises despite an overall UK decline between 2007 and 2008, which mirrors the patterns of high levels of employment rate and the stronger housing market performance in these areas. The recovery period has seen areas that are more market-orientated emerge better positioned in socio-economic terms, while those areas that are more dependent on public sector support will most likely be worse off as the impacts of funding and public sector job cuts manifest themselves spatially.

The strong recovery of southern England was supported by the statistics from the National Housebuilding Council (2014). Increasing number of new home registrations was found across all regions in England. Greater London had the strongest growth through 2013, with a 60% rise on 2012. The Midlands also enjoyed strong regional growth. Figures from the second quarter of 2014 show that the average UK house price is around £186,000, but over £400,000 in London; which represents an 11.5% annual increase for the country and an even bigger leap of over 25% in London. Considering the average starting salary for graduates is around £20,000 and slightly more in London, it is not a surprise that there is a major housing affordability crisis in the UK.

**Successive planning policy regimes: fuzzy responsibilities**

The main cause of the poor supply responsiveness has been long recognised as an issue. The challenges associated with the land-use planning system have been widely debated and successive

governments have introduced different reforms and experiments to make the system more effective and efficient, though the outcomes tend to receive mixed reception.

*The PPG/PPS and RPG/RSS regime*

During the first term of the last Labour government, the allocation of additional housing land was largely the outcome of a top-down approach that began at the national/regional interface with the preparation of Regional Planning Guidance (RPG), which was then being replaced by Regional Spatial Strategies (RSS). Following the publication of Planning for the Communities of the Future White Paper (1998) and Planning Policy Guidance Note 3: Housing (2000), the Labour Government introduced a revised notion of plan, monitor and manage as a means of handli allocation process. Further elaboration was made in the White Paper (1998) of the need to have housing provision indicators such as house and land prices, housing standards and local housing needs in RPGs. This signified a departure from the government s long-standing practice, allow de-standardisation and de-institutionalisation of national household projection figures from local and regional housing provision policy.

The technically-driven assumptions on household projections were usually supple based considerations, although the nature and extent of these appeared to vary rather mo region-by-region basis. In broadest terms, economic factors or environmental constraints were particularly common, and the relationship between metropolitan areas and the adjacent shires in terms or urban regeneration and housing capacities was also evident. An examination of the annual housing requirement figures in the RPGs for 1996-2016 and the 1996-based DETR household projection figures covering the same time period clearly revealed the north-south division over housing land policy.

The differential between housing requirements and projected growth can be broadly classified into three groups: (1) areas which have housing allocation requirements similar to their projected growth (e.g. areas around the eastern side of England and the South West and they tend to be in more rural areas); (2) areas that had a lower housing allocation than the projected growth (e.g. areas in the South East and London and the shire counties of the North West); and areas with an above projected growth housing requirement (e.g. areas in the northern regions and many had significant amount of brownfield land). The relative differentials between policy allocation and projected growth were most remarkable in the North East (an over-supply of nearly 55%), followed by the West Midlands (39%) and Yorkshire and the Humber (20%). At the other end of the spectrum, there are potential problems of under-provision in the South East (by 15%) and London (by 11%).

The introduction of the Planning and Compulsory Purchase Act 2004 continued to reaffirm a plan-led approach to development control and replaced land-use planning with a spatial planning approach via RSS and Local Development Frameworks (LDFs). However, by 2011, seven years after the 2004 planning reforms, 70% of local planning authorities still had not adopted a core strategy of their LDFs. In order to encourage the release of more housing land, the Labour Government also introduced growth areas and growth points, eco towns, the establishment of the NHPAU and explicit reference to affordability criteria in PPS. However, this policy had limited success as c when the financial crisis struck.

The Government s Sustainable Communities Plan (2003) had focussed thinking on linkages and strategy-making with its identification of four major growth areas that mostly straddled regional boundaries (Milton Keynes / Northampton; Stansted / Cambridge; Thames Gateway) and nine Housing Market Renewal Pathfinders in areas with failing housing markets in the north and midlands.

The latter were incorporated into the Northern Way (2004) strategy documents that represented collaborative working between the three northern RDAs.

The Labour Government also announced a more ambitious brownfield land target in 1998, specifying that at least 60% of all new built housing in England would be on brownfield land by 2008. This target was subsequently achieved eight years ahead of schedule. While the government s target was met, the actual amount of brownfield land for residential use during 2000/06 (2,774 ha per annum) was only marginally higher than that throughout the period in 1989/98 (2,644 ha per annum). There had actually been a decline in the total amount of land used for residential development from 5,660 ha per annum in 1989/98 to 4,765 ha in 2000/06. The meeting of the brownfield target was therefore a function of a parallel decrease in the use of greenfield land (Wong and Schulze Baing, 2010). Schulze Baing and Wong (2012) found that high levels of brownfield reuse activities had successfully accomplished the objective of injecting dynamics into the housing markets in the most deprived areas, particularly the market for flats, since the mid-2000s. This shift was related to the spatially targeted activities of the National Neighbourhood Renewal Initiatives and the Housing Market Renewal Pathfinder programmes. In terms of economic impacts, the outcomes were mixed - significant change in population growth and the improvement in economic deprivation were associated with the process of social upgrading by the incoming new residents of b developments.

*NPPF and Localism*

The Coalition Government heralded a wholesale dismantling of inherited regional strategies and institutions in 2010. The publication of the Localism and Decentralisation Bill (2010) placed the emphasis squarely at the local level. The National Planning Policy Framework (NPPF), introduced in 2012, has subsequently replaced all previous planning policy statements with a single planning document. Under the NPPF local planning authorities are required to have in place an evidence-based, up-to-date Local Plan, which includes a five year land supply.

In order to drive the pro-growth agenda, the NPPF introduces the presumption in favour of sustainable development, which means that when a local authority does not have an up-to-date Local Plan, then planning permission should be granted unless there would be significant adverse impacts or specific breaches of the NPPF. This has created an incentive for LPAs to complete and update their local plan core strategy. Nevertheless, only 55% (185) of local authorities had adopted local plans by May 2014, according to the figures of the Planning Inspectorate (PINS). There proportion of local authorities with plans that fully comply with the NPPF is much lower. This system heavily relied on the judgement of the PINS to assess the soundness of the evidence base underlying core strategies in local plans.

The Localism Act stipulates that all local authorities have a Duty to Cooperate with other government bodies (e.g. Environment Agency) on issues that are beyond their sphere of responsibility. This cross-authority working is seen as important for large-scale developments. However, this bottom-up approach offers relatively weak incentives for local authorities to collaborate with each other in meeting the so called greater than local housing requirements. This be problematic in authorities in southern England, which reflects the continuation of the entrenched culture of under-supply of housing land in the RPG era. The limitation of the Duty to Cooperate was partly evident in the overall under-provision of housing land allocation. The weakness of this cooperation approach requires further adjustments to allow effective implementation.

The abolition of the RSS has left a gap in strategic spatial planning, especially when the Duty to Cooperate is found to be problematic is some areas. While the RSS targets for house building was not always welcomed by all communities, they did drive the provision of housing by bypassing local

politics. As identified by the Building and Social Housing Foundation (2014), since the abolition of the RSS housing targets, the level of identified housing need has dropped dramatically in some areas, with only the North East of England increasing targets. This has resulted in an overall reduction in the amount of land allocated for housing through the granting of planning permission. However, others such as the Home Builders Federation and the Royal Institute of Chartered Surveyors suggest that the NPPF and the five year land supply are having a positive effect on the supply of land for residential development.

*Issues arising: s106 agreement, CIL and affordable housing*

Planning obligations under Section 106 (s106 agreement) of the Town and Country Planning Act 1990 have been a mechanism which makes a development proposal acceptable in planning terms that would not otherwise be acceptable. S106 agreements are often referred to as 'developer contributions' for site specific mitigation of the impact of development. S106 agreements have been used to secure affordable housing, and to specify the type and timing of this housing; and to secure financial contributions to provide infrastructure or affordable housing. The 2008 Planning Act has introduced a new mechanism, the Community Infrastructure Levy (CIL), for developers to make a contribution for local infrastructure development. Since CIL is not allowed to be used for affordable housing, s106 agreements continue to be the main mechanism for affordable housing provision.

Both s106 agreements and CIL are designed to capture some of the uplift in development values as a result of planning permission for community benefit. However, it is not easy to decide the level of payment - if such payments are too high, development can become unviable. This has been a particular problem since the depreciation of land following the global financial crisis. Payments negotiated on the basis of previous land values are still required of developers, even when current land values are significantly lower. Unrealistic s106 agreements negotiated in differing economic conditions can be an obstacle to house building.

According to the Joseph Rowntree Foundation (2014), about a quarter of affordable units delivered through s106 agreements with no grant are delivered in London (12%) and the South East (13.9%), whilst the West Midlands (17%), the South West (16%) and the Eastern Region (14%) show higher proportions of delivery in general (2004Q2-2013Q1). This variation can be a result of skills and political will in negotiating for affordable housing. JRF commissioned research suggests that even among some of the London case studies where neighbouring boroughs with very similar housing market conditions have wide variations in units negotiated (15-20% as opposed to 35-40%) via s106 agreements. This variation suggests that in some areas planning obligations are not as effective in delivering affordable housing.

The NPPF introduced a viability test of development that To ensure viabilit
requirements likely to be applied to development, such as requirements for affordable housing, standards, infrastructure contributions or other requirements should, when taking account of the normal cost of development and mitigation, provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable . The test aims t of unrealistic planning obligations to thwart housing developments. However, viability assessments only capture a snapshot of assumed land value and property sales, which are su

The introduction of new permitted development rights in 2013 to allow office buildings (B1(a)) to be changed to residential use (C3) without the need for a planning application has created some side effects (London Borough of Lambeth, 2014). Local authorities are unable to control where these new homes are located, or to require compliance with minimum space standards, amenity space standards and other best practice design standards including Lifetime Homes and wheelchair accessibility. The

permitted development rights may also be used by landowners to generate a higher existing use value for a site, with residential rather than office use becoming the baseline. This means the margin between the existing use value and the proposed use value will be lower, which will have an impact on the viability considerations for the proposed scheme and will affect the autho affordable housing from these sites.

**Strategic Housing Market Assessment: fuzzy boundaries**

Policy monitoring often relies on the adoption of spatial boundaries including housing and labour market areas, administrative boundaries, or national territories to frame any analysis. Therefore, how spatial boundaries are drawn, and the spatial resolution that is chosen to frame any spatial analytical exercise, is crucial in the construction of an understanding of spatial structures and outcomes. Despite the change to the new localism agenda in 2010, the emphasis on the flexible use of functional geographies and the creation of the local enterprise partnerships very much echoes the spirit of spatial planning.

The former Labour government introduced sub-regional Strategic Housing Market Assessments (SHMAs) to the English planning process in 2005. The ODPM then published housing market assessment guidance (DTZ Pieda, 2004) to identify broad approaches to defining sub-regional or local housing market areas (HMAs). HMAs are seen as areas within which people are prepared to search for housing and, related to this, they will contain both the origin and destination of the great majority who move home.

A desk-based analysis (Baker, 2010) of the SHMA across all English regions in a NHPAU commissioned study highlights a number of key challenges. First of all, the methodological approaches adopted to identify sub-regional housing market areas have generally adopted a hybrid approach of house prices, commuting and migration patterns, reflecting the DCLG Advice Note. Secondly, many housing market areas cover more than one local authority, necessitating the creation of effective joint working and partnerships to adequately address shared housing market issues. However, occasionally (e.g. along parts of the south coast of England) political or other issues appear to have prevented strategic housing market assessments of areas that clearly form a single sub-regional housing market area. Thirdly, SHMAs do not generally appear to provide a fine-grained analysis of the issues faced by the more rural parts of the regions, with issues relating to the more rural parts of larger strategic housing market areas often being obscured by the issues and influence of the more urbanised parts of their shared housing market areas. Fourthly, the particular characteristics and issues relating to National Parks in planning policy terms are not generally reflected in the identification and assessment of sub-regional housing markets and different parts of individual National Parks have been split between a number of separate housing market areas.

There was a general consensus from the interviews and workshop discussions with local and regional stakeholders (Jones, Coombes and Wong, 2010) that a consistently defined set of HMAs could facilitate cross-border policy interventions as well as helping local authorities and key stakeholders to think strategically in spatial terms beyond their own administrative boundaries and better recognise the reality of local and sub-regional housing markets. One of the consequences of failing to adequately reflect functional or market areas within measures of the spatial planning system is that policy can unwittingly encourage displacement activity. Differences in local planning regimes and market outcomes can lead to housing-led migration flows between neighbouring local authorities and that these exacerbate local house price differentials (DCLG, 2007).

The Coalition Government s NPPF (DCLG, 2012, para 159) made clear that local pl have to carry out a Strategic Housing Market Assessment (SHMA) to assess their full housing needs.

More importantly, it stipulates that each local authority has to work with neighbouring authorities where housing market areas cross administrative boundaries. However, there is no clear guidance of what constitutes a housing market area and the responsibility is simply placed on the local authorities concerned on the ground of duty to cooperate . On the basis of the SHMA, local have to prepare a Strategic Housing Land Availability Assessment to establish availability, suitability and the likely economic viability of land to meet the identified housing needs. This system has proved to be problematic to enforce.

The benefits of aligning housing market areas with grouping of local authorities include practical, political and administrative issues relating to accountability, delivery, data availability, spatial planning policy (local development framework) preparation and the ease of establishing appropriate partnership working. Nevertheless, there are also clear disadvantages in ignoring evidence that housing market areas often cut across existing local authority boundaries. The nature of sub-regional housing markets does not always easily fit to local authority boundaries and this has been exacerbated in places where recent local government re-organisation has resulted in much larger unitary authorities than the previous pattern of smaller district councils. Although there was evidence of successful collaboration and joint-working on local housing market analysis and policy development since the Labour government, but there are also examples where political or other issues appeared to have prevented the adoption of cross-boundary housing market areas in areas that clearly formed a single sub-regional housing market area from a technical perspective (Baker, 2010).

**The need for a strategic spatial planning approach**

The gravity and spatially diverse problems of housing delivery remain an imperative for strategic thinking even if the region is no longer seen as the optimal spatial focus for this. Spatial planning issues of commuting, migration, pollution and transport flows seldom respect lower-tier administrative boundaries and will still need addressing on a cross-boundary basis. Better understanding and analysis of functional inter-relationships via the use of coherently defined housing market areas, travel-to-work areas and environmentally derived spatial units can be used to underpin collaborative initiatives between neighbouring local authorities and key stakeholders (Hetherington, 2006; Wong et al, 2000; Wong et al, 2006).

The relationship between administrative boundaries and functional areas is highly variable and that no single set of boundaries can fully satisfy the needs of complex spatial policies. Since there is no perfect set of boundaries, rather than arguing and shifting the spatial scales that are deemed as most appropriate to carry out strategic spatial planning, what really matters is that planners and stakeholders can think *spatially* (Jones et al, 2010; Wong et al, 2008); that is, have a good understanding that different planning issues are taking place and interacting at different spatial scales and creating differential spatial impacts.

While the introduction of a duty to co-operate through the Localism Act 2011 r collaboration cross local authority boundaries, the response has been, so far, sporadic. Whatever happens, the need for continued spatial analysis and evidence-based policy development at a strategic scale has not gone away, even under the current drive towards localism (Baker and Wong, 2012). The most effective future collaborative arrangements will probably be a more voluntary approach to sub-regional collaboration, which may mean a greater chance of delivering innovative and visionary outcomes. City regions and newly-formed Local Enterprise Partnerships (LEPs) can be expected to provide a focus for much of this activity, but other initiatives and spatial units may also emerge. Varied and multi-scalar approaches will be needed to best address different issues, so both collaboration and geographical coverage are likely to be fluid.

While the LEPs are clearly charged with the local growth agenda and free to work with partner planning authorities to develop strategic planning frameworks, the Local Growth White Paper did not mention any similar arrangements for the governance structures, or the delivery approaches, of sub-regional spatial planning. There is clearly a serious institutional void between the need for some forms of strategic spatial planning and the government s localised approach to plan-making. O help fill the institutional vacuum outlined above is to introduce an explicit national spatial planning framework for England; the case for which has been made analytically by the Royal Town Planning Institute, the Town and Country Planning Association and the Royal Society for the Protection of Birds (Collingwood Environmental Planning, 2011).

From a strategic planning perspective, it is crucial that policies are sensiti outcomes and able to coordinate and address the impacts and changes brought by the interaction of different policy sectors. The NPPF makes it clear that the government s key housin significantly increase the delivery of new homes, but does not articulate the spatial distribution of future housing supply and demand. Instead, it requires local planning authorities (with neighbouring authorities where housing market areas cross administrative boundaries) to prepare a SHMA and SHLAA to ascertain the spatial requirements of different types of housing within the local plan. A lack of strategic governance and accountability has led to a policy vacuum in the current planning system. The weakness in the bottom-up approach of Duty to Cooperate means that SHMA may not be carried out to reflect the functional Housing Market Areas. A set of nationally derived HMAs should be used as a reference point to identify cross-boundary issues to facilitate the process of Duty to Cooperate. There is a need to develop sub-regional working mechanisms, e.g. city-regions / LEPs to have a strategic role to ensuring that housing needs are fully met and SHMAs are conducted in a robust and holistic manner.

Research commissioned by the RTPI (Wong et al, 2012) clearly illustrates that there is a lack clear long term national overview of the inter-relationship between housing delivery, environmental constraints and other infrastructure delivery across different parts of the country. For example, the study shows that the areas with the highest projected household growth are mainly found in London and the South East, part of the South West, the eastern part of England, and part of West Yorkshire. By overlaying the major planning constraints, the areas that are assessed with high flood risk and water stress (drought risk), it is clear that strategic planning policy framework is required to plan for housing supply rather than just following the market demand. These challenging issues cannot be addressed at even sub-regional level, but the NPPF does not provide such an overarching perspective of long term strategic planning and coordination. The situation is more daunting when the household projection figures are overlapped with proposal for high speed broadband and transport infrastructure proposals there is no major plan for the high growth areas in the eastern part of England.

The broad political interest and support in creating new settlements such as urban extensions, Garden Cities, Eco Towns, and New towns. While these major new development concepts have the potential to deliver win-win solutions by resolving housing shortage as well as injecting economic dynamics and to rebalance regional development when linked to regeneration. However, these proposals are complex, controversial and challenging to deliver. They will require high level strategic, national planning and government commitment, as the private sector has not proved adept at driving these ideas forward alone.

A strategic spatial approach is needed for meeting the challenge of housing planning and delivery:

- *to devise spatially sensitive strategies:*
  There is no a 'one size fits all' solution to the house building challenges in England. The headline housing need figures tend to mask substantial mismatch between supply and demand across the country (Meen et al, 2008; Whitehead et al, 2009) in terms of location, size and dwelling type. The non-spatial housing policy guidance in PPS and NPPF often fails to address the very different housing requirements in different parts of England. Attention tends to focus on the housing pressure in the south. However, great housing pressure is found in parts of northern England such as North Yorkshire and Cheshire; major opportunities for housing-led regeneration are desired in core city-regions such as the Greater Manchester City Region and the Tyne and Wear City Region; and some northern industrial towns continue to suffer from the problem of low demand. With the very different housing markets in England, intervention that works in one location may not be feasible in another. Indeed, it is wrong to assume that there is one single housing market in London as different parts of London have different housing stress and needs.

- *to coordinate infrastructure and local facilities provision*:
  Sustainable housing development has to be coordination with essential physical and social infrastructure and amenities and connected to the wider job market to be liveable. Previous research suggests house prices are highly correlated with low crime rates, good local schools and good access to employment locations (Orford, 2000). This coordination is particularly important for large scale housing development.

- *to deliver quality homes within the wider place-making agenda:*
  Housing delivery is not just about quantity, but also their quality to achieve more balanced and sustainable developments. Quality is seen as critical for large scale urban extension, new settlements and garden cities and strategic coordination will be required across different policy sectors to deliver the place-making agenda.

- *to collect information and monitor policy on a consistent and frequent basis:*
  There is a need to collect information in relation to household projections and housing requirements in a consistent manner rather than a compartmentalized approach. On the whole, there is a lack of an overall national framework for housing development. Initiative-driven delivery framework can be characterised as fragmented and ad hoc, rather than strategic and visionary. The economics of housing development also vary from location to location, depending upon the value base of an area or a site, the requirement of physical infrastructure to bring forward development, and the cost of the associated s106 agreements and affordable housing policies. Information in relation to land ownership and land values and other information should be frequently collected to monitor policy delivering.

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# Eco-city planning conditioned by the growth ideology: The case of Copenhagen

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**Abstract**
*This paper aims to investigate how the eco-city planning is framed and conditioned by the growth ideology and propose an alternative urban development and planning for long-term sustainability inspired by the degrowth paradigm. Setting well-being, ecological sustainability and social equity as the goals of societal development, the degrowth paradigm differs from the growth paradigm in how to interpret and achieve them. Drawing on this distinction as a conceptual framework, this paper scrutinizes how the current growth-oriented planning for the Copenhagen Eco-metropolis in Denmark functions as a hindrance to the transformation to real sustainability. An agenda for reorienting eco-city planning towards degrowth is laid out by focusing on the purposes of planning and strategies for urban development in the domains of land use, housing and transportation. The paper concludes with pointing out the capitalist economic structure as the fundamental reason for the growth ideology embedded in eco-city planning and suggesting a degrowth alliance with urban planners to confront it.*

## 1. Introduction

Since it is coined in the 1980s, many cities have undergone a transformation to eco-cities. At first glance, literally, the global proliferation of eco-city initiatives in urban policy and planning is a response to the growing concerns on local environmental problems and climate change. However, it is reported that eco-city is transformed in practice where political and economic neoliberalism provides the context conditioning the real interpretation of eco-city practice. Motivated by this critical stance on eco-cities, the aim of the paper is to study how the growth ideology is manifested and influences the development of Copenhagen eco-metropolis and its limitations in delivering long-term social and environmental sustainability, and discuss the potentials of an alternative urban development and planning inspired by the degrowth paradigm.

The paper is structured as follows. In section 2, the degrowth paradigm is contrasted with the current growth paradigm, with the purpose of providing a theoretical understanding of the societal background of urban development and planning and setting out a normative conceptual framework for degrowth planning. The contrast revolves around the distinctive interpretations of and approaches to well-being, ecological sustainability and social equity by the two paradigms. Section 3 analyses how the current urban planning for Copenhagen Eco-metropolis is shaped by the growth ideology, followed by a discussion on the limitations of such a planning paradigm. As a response to the analysis, section 4 lays out an alternative planning paradigm informed by the degrowth paradigm for long-term environmental sustainability and social justice. Finally, the concluding section provides reflections on how the growth imperative derived from the socio-economic

structure shapes the growth-oriented planning and functions as the deep-rooted barrier to degrowth transformation, and argues for the potential proactive role of urban planners in confronting it.

## 2. The contrast between the growth and degrowth paradigms

Faced with multiple crises characterized by ecological deterioration, social injustice, and economic recession, degrowth is put forward as a possible alternative to the economic growth paradigm in response to these crises (Bonaiuti 2012; Schneider et al. 2010). Simply put, degrowth challenges the hegemony of growth and calls for a democratically led redistributive downscaling of production and consumption in industrialised countries as a means to achieve *environmental sustainability, social justice and well-being* (Demaria et al. 2013: 209, emphasis added). By radically confronting the configuration of contemporary socio-economic structures and their associated norms and values, degrowth represents a new paradigm in economic and societal spheres and attempts to construct an alternative sustainable future. The streams of thoughts constituting the degrowth movement are diverse, embracing bioeconomics, quest for deeper democracy, social justice and equity, culturalist critique on development, anti-utilitarianism movement, meaning of life, and environmentalism (Demaria et al. 2013; Muraca 2013; Schneider et al. 2010).

Degrowth is a normative project in the sense that its goal is pursuit of well-being, ecological sustainability and social equity (Schneider et al. 2010: 502). Arguably, these goals are also shared by the growth paradigm. However, the two paradigms differ greatly in how to interpret the connotation of these concepts and through which approaches they can be obtained. Generally speaking, degrowth adherents believe that human prosperity without economic growth is possible (Jackson 2009; Victor 2008), while for growth advocates, economic growth is a necessary pre-condition for the achievement of societal progress.

For the goal of well-being, degrowth dismisses the prevalent utilitarian way of defining quality of life as maximizing individual utility by satisfying preferences. Under the prevailing neoliberal agenda, competitive market mechanism through providing an extensive set of choices of commodities is often claimed to be able to fulfil peoples preferences and enhance happiness (Sen 1993). This creates a life-style trapped in materialism and consumerism wherein people work more in order to get the freedom to consume more. However, the lack of proportionality between increase in purchasing power and happiness, a phenomenon known as the Easterlin Paradox (Easterlin 1974; Inglehart & Klingemann 2000), makes the utilitarian and neoclassical economics approach to well-being rather untenable. In the view of degrowth, modern growth society through unfettered supply of commodities and services forces people to become increasingly dependent on material goods and thus deprives people of the freedom and autonomy to satisfy their own needs (Deriu 2015). Instead, degrowth confronts the meaning of well-being based on possession of material wealth, and believes that people can live meaningfully and happily by maintaining a minimally sufficient material living standard, i.e. voluntary simplicity, in exchange for more time and freedom to pursue non-materialistic sources of satisfaction and meaning (Alexander 2015).

Regarding ecological sustainability, the idea of decoupling economic growth from adverse environmental impacts through technological efficiency strategies dominates the environmental discourse in the growth society (WCED 1987). The belief in green growth is strongly influenced by the ecological modernization theory which portrays a paradigm reconciling economic growth and environmental sustainability within the capitalist organization of production and consumption (Spaargaren 2000). In light of the decoupling idea, continual economic growth is a prerequisite for successfully dealing with environmental problems, a contention partly derived from the so-called

environmental Kuznets curve hypothesis (Barry and Paterson 2003). The possibility of maintaining economic growth through decoupling has been questioned by growth critics who argue that absolute decoupling is implausible and even a delusion (Nørgaard 2009). Empirical evidence investigating the extents of decoupling both at the aggregate economy level and sector level substantiate this critique (Azar et al. 2002; OECD 2002; Tapio 2005; Xue 2012). In addition, as with increasing purchasing power due to economic growth, eco-efficiency improvements are likely to generate rebound effects, offsetting the expected environmental benefits or even making the efficiency strategy counterproductive (Alcott 2005; Schneider 2008). Hence, as argued by the degrowth advocates, the key to reduce the environmental impacts as much as is needed in order to stay within the biophysical limits of the planet consists in the reduction in the scale of the total economic output (Martinez-Alier et al. 2010). The sufficiency strategy seeking to lower the affluence level in the Global North is proposed as the way to cope with unsustainability.

The goal of equity is multi-faceted. It refers to social equity across space, i.e. intragenerational equity, across time, i.e. intergenerational equity, and environmental justice (Arler 2001). It is widely assumed by the growth proponents that economic growth is a necessary pathway to a more equitable society both locally and globally through the trickle-down mechanism, whereby th benefits of growth will spread and eventually benefit the worst-off parties (WCED 1987). In terms of intergenerational equity, although it is admitted that the continuation of current growth rates will result in higher risks of undermining the capacity of succeeding generations to create well-being, the depletion of natural resources may lead to a number of substitutions that defenders of weak sustainability rely on (Beckerman and Pasek 2001). However, degrowth refutes the trickle-dow assumption by pointing out the more pronounced relative poverty during the latest decades of economic growth (OECD 2008; Stutz 2010). Furthermore, the prevalence of neoliberal policies as a global trend will reinforce the inequality tendency of economic growth (Harvey 2005). The viewpoint represented by weak sustainability is criticized to ignore the irreversibility of key and fundamental functionalities of nature once they are destroyed, which makes substitution rather limited (Ekins 2003). In order to save ecological space for following generations and for people living in poor countries where economic growth really makes a difference, degrowth holds an ethical stance of distributive justice achieved by less competition, large scale redistribut sharing and reduction of excessive incomes and wealth (Demaria et al. 2013: 199).

## 3. Growth-oriented urban planning for eco-city and its critiques

### 3.1 The case city and methodology

Employing the discussion above as a conceptual framework, the main task of this section seeks to unfold how the eco-city planning for Greater Copenhagen are framed by the growth ideology and discusses the limitations of it in delivering sustainability and equity. Based on the moral premise that ecological space is to be left for poor nations, transition to sustainable degrowth should take place in wealthy countries and is of necessity and urgency to cities in the developed world. Since Greater Copenhagen represents a typical metropolitan area of the Western Europe, it is illuminating to look at how planning is dominated by the growth ideology and the challenges of implementing a degrowth-oriented planning for such a city region. In light of this, the Copenhagen case can be understood as a *representative* case, the lessons learned from which are assumed to be informative about the experiences of similar city regions (Yin 2009). Furthermore, with Copenhagen being internationally known for its sustainable development agenda and non-motorized urbanism model (e.g. it has recently won the award of European Green Capital 2014), a critical scrutiny will show how limited the growth paradigm is in delivering long-term sustainability and social justiceIn this sense, the presentation of Greater Copenhagen is put forward as a *critical* case.

Defined by The Danish Planning Act 2007, Greater Copenhagen is a cohesive functional metropolitan area across municipal borders, covering an area of 3132 $km^2$ and consisting of 34 municipalities with the municipality of Copenhagen the most populous. It had in the beginning of 2014 about 1.97 million inhabitants. The spatial development of Greater Copenhagen has back to the 1940s been planned into a finger structure and could be characterized as hierarchical polycentric. The downtown Copenhagen has an unchallenged status as the dominating center. The central parts of five towns in the fingers form the second-order centers, along with some major regional retail districts included in the continuous urban area of Copenhagen. The third-order centers are those more local centers in connection with urban rail stations and smaller-size municipal centers.

Greater Copenhagen has a long tradition of spatial planning on the regional scale, which can be traced back to the first finger plan in 1947. The original ideas behind the plan have laid a foundation for succeeding plans at the regional level and strongly impacted the spatial development of the city region. Until the local government structural reform in 2007 in Denmark, the planning authority for the Greater Copenhagen lied in various metropolitan institutions, the last one being the Greater Copenhagen Authority (Hovedstadens Udviklingsråd), who prepared the last regional plan 2005. Since 2007, the metropolitan institution was abolished and planning authority for the Greater Copenhagen was transferred to the Ministry of the Environment, who made the national planning directive titled Fingerplan 2007 for the city region based on regional plan 2005. According to the Planning Act 2007 (Ministry of the Environment 2007b), this directive aims at providing guidance for the spatial development of the metropolitan area and is legally binding for the municipal planning in the city region. According to Olesen and Richardson (2012), the Fingerplan 2007 on one hand represents a conscious ministry attempt to strengthen the spatial framework for the metropolitan area, and on the other hand allows the municipalities to designate areas for local urban development through only regulating designation of urban development of regional character.

The analysis of the case is mainly informed by a critical scrutiny of key official plans published at different governmental levels, including the 2006 National Planning Report, the Danish Transport Infrastructure 2030, Fingerplan 2007, Regional Plan 2005 for the Capital Region, and the 2011 Municipal Plan for Copenhagen. The analysis of the plans seeks answers to three questions: Is economic growth formulated as a goal of urban development and planning? How is the growth ideology embedded in the understanding and pursuit of well-being, environmental sustainability and social equity? And what are the concrete planning strategies for urban development? In so doing, the analytical focus is on the goal-setting and contents of plans instead of how plan-making is carried out. The investigation of planning strategies will concentrate on land use, housing development and transport infrastructure. Although other components of spatial urban development, such as retailing, public facilities and industry, are also important in terms of their consequences on environmental sustainability and social justice, given limited space, I have decided to focus on the three above-mentioned aspects.

### 3.2 The manifestation of growth-oriented planning

#### *A shift in the role of planning from growth management to growth stimulation*

The purposes and agenda of state spatial planning in Denmark has undergone constant reorientation since its genesis in the mid-20$^{th}$ century. Since the late 1980s, following a similar trajectory of many European countries, the Danish national planning has typically shifted from a welfarist approach addressing balanced and equal development across the country to a neoliberal approach in the pursuit of competitiveness by stimulating growth in major cities and regions (Galland 2012; Olesen

& Richardson 2012). The early planning emphasis on equalization across Denmark in the 1950s was a response to the negative socio-spatial consequences from rapid economic growth and imbalanced concentration of economic growth and population in the eastern part of the country and in the capital. The objective of equal development fits well with the idea of spatial Keynesianism that the state seeks to equally distribute welfare services, economic activities, population and investment across the entire country. Throughout the 1960s and 1970s, equal development has remained a central objective in the Danish national planning. These periods were characterized as rapid economic growth and planning can thus be seen as playing the role of *growth management* which aims at distributing economic development in a spatially equal way.

However, the economy in the 1980s and 1990s experienced periods of stagnation and recession. Together with globalization as the main driving force and an emerging neoliberal political climate in Europe, it has promoted a growth-oriented planning in order to strengthen Denmark s competiveness and secure its position in the global economy. Since the 1990s, planning has been gradually advanced as an instrument to *stimulate growth*. The discourse on planning towards economic growth culminated in the 2006 national planning report, wherein the vision of the government for spatial development in Denmark is evidently manifested in the title planning for economic growth (Ministry of the Environment 2006: 10). Spatial planning should play an important role in pursuing growth and enhancing competiveness:

> getting globalization to continue to positively influence Denmark and its
> that Denmark strengthen its ability to create innovation and to develop solutions that add value
> and cannot easily be copied They place demands on spatial planning, which m
> Denmark s special qualities and nature and also create a favourable framework
> actors as companies, knowledge institutions and employees and ensures that they thrive. (*ibid.*: 8)

The consequences of this neoliberal turn on planning are not only confined to the substantive aspect that focuses on creating a spatial environment that can promote economic development, but involves the liberalization of market in providing and allocating goods and services. The role of planning is changed from the provider of welfare to the enabler of development.

The shift of state spatial strategies from equal development to growth and competiveness is of significance to the planning for the Greater Copenhagen. For a long time until the late 1980s, the capital region has suffered from the planning objective of equal development, which attempted to contain growth in workplaces and populations in the Greater Copenhagen (Hansen et al. 2001). When strengthening the international competiveness of the capital became a national interest, the national policy for Greater Copenhagen skewed towards growth stimulation . Th Greater Copenhagen as the locomotive for all of Denmark in the global competition is highly emphasized: A strong and competitive capital city is an important prerequisite spatial development. Denmark must have a capital that can attract companies, jobs and employees in global competition (Ministry of the Environment 2006: 11). This has led the national priority for the Greater Copenhagen to ensure that spatial planning strengthens its international competiveness (*ibid.*: 16).

With the awareness that urban region s physical design is a decisive competiti of the Environment 2007a: 8, author s translation), the Fingerplan 2007 is committed to enhancing the quality of living and working environment in order to attract business, private sectors and entrepreneurs. A similar vision is highlighted in the latest Copenhagen municipal plan, as stated by

the Lord Mayor in the preface that: The City of Copenhagen Municipal Plan 201
economic growth in the entire Øresund Region while at the same time maintaining Copenhagen as a good city to live in and to visit (City of Copenhagen 2011). The Copenhagen municipality even goes further to target an average annual growth rate of 5% up to 2020 (*ibid.*)[1].

***Growth ideology embedded in planning***

Both the national government and local authority of Copenhagen consider the commitment to growth is of importance to the pursuit of well-being and prosperity. The framing of planning at the national level steered by the growth and competiveness rationality is seen as necessary in order to meet the demands set forth by globalization and to secure Denmark s future prospect the Environment 2006). The attainment of growth in the capital region is crucial not only for the development of the region, but also for the whole country s growth prospects Environment 2007a: 8). In the Copenhagen municipality, it is believed that growth and go hand in hand because the sectors which the city lives by support a greener, healthier and more exciting city (City of Copenhagen 2011: 15).

The emphasis on growth in spatial planning goes alongside a concern on nature and environment. Copenhagen has a strong vision of being a green growth metropolis where environment and growth go hand in hand. One one hand, it is believed that Copenhagen municipality can become the first carbon neutral capital by 2025 while increasing employment and spurring growth, reflecting the decoupling notion in planning. On the other hand, the motivation of being green is to further strengthen the region s competitive edge and attract investment and business. Both national and local planning authorities are very aware of how urban competitiveness itself partly relies on the sustainable remaking of urban environments. As stated in the 2006 national planning report: G spaces, recreational areas and attractive urban environments are key prerequisites for attracting companies, jobs and employees. The municipal councils should therefore give high priority to valuable landscape, natural and cultural features (Ministry of the Environment 2006: 17 Municipality of Copenhagen aims to become the green growth hub through attracting clean-tech enterprises and investments that will become the city s new growth engine and generate new jobs (City of Copenhagen 2011). In addition, successful reduction in carbon emissions will become a showcase of Copenhagen and Denmark s leading role in global environmental developmen Interestingly, even green growth *per se* is regarded as a competition field where the world s cities are fighting hard to top the green growth agenda If the city does not have a clear strategy and remain in control, Copenhagen is at risk of becoming marginalized in low-growth Europe (*ibid.*: 26).

At the national and metropolitan levels, this growth-oriented planning has predominantly focused on economic development and environmental sustainability, leaving the social aspects largely in the background. The concern on equal distribution of public resources and welfare, a primary goal of early planning, is almost out of the picture. Only in the Copenhagen municipal plan has the challenge of social and health inequality in the disadvantaged residential areas been briefly mentioned.

***Fragmented planning strategies***

Greater Copenhagen has a long history of spatial urban expansion in the 1960s and 70s, leading to a sharp decline in population densities within the inner city and a low-density residential development characterized by single-family homes in the suburbs. This trend began to reverse in the mid-1980s

[1] Its current GDP growth rate is slightly below 2%.

since when the urban expansion has stagnated with slight increase in population density within the inner part of Copenhagen. However, in the suburbs, and in particular in the parts of the metropolitan area located outside the continuous urban area, development has still predominantly taken place as spatial urban expansion (Xue et al. 2011).

Stipulated in the Fingerplan 2007, new urban zones cannot be designated in the inner part of the metropolitan area where development should take the form of densification and redevelopment of brownfield areas. However, in the outer part of Greater Copenhagen, despite the oversized scattered development and low population density which was around 22 persons per hectare in 2008, densification has not been suggested as a major land use strategy. Instead, municipalities along the five fingers are allowed to convert rural land to urban areas as long as they can justify the development. In the rest of the metropolitan area, new urban development of local nature is still permitted. Locating new developments close to urban rail stations is strictly regulated in the finger plan and a high density near the stations is sought for. According to this plan, urban functions of intensive use should be located less than 1000 m from an urban rail station and preferably within 500 m.

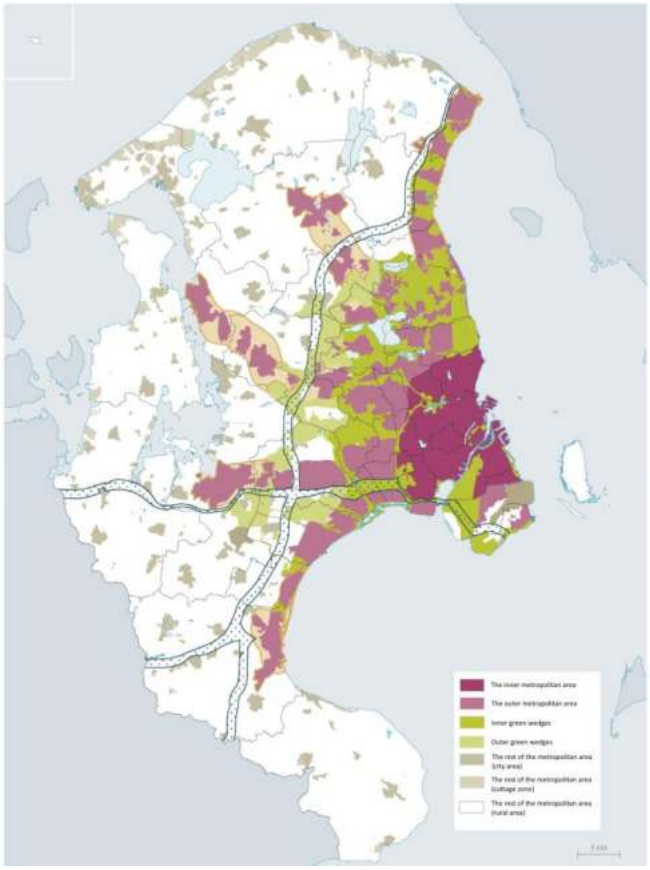

Figure 1. Geographic demarcation of Greater Copenhagen and its finger structure (Source: Ministry of the Environment 2007a).

Planning for transport infrastructure is based on a predicted ever-increasing mobility and traffic volume. In the report The Danish Transport Infrastructure 2030, mobility is considered a element in the competiveness of businesses and thus for the growth conditions of Danish soci (Danish Infrastructure Commission 2008: 306). It is taken for granted that traf

according to our prosperity (*ibid.*: 36). Although there is an awareness that expected increases in traffic volume will strain the environment, channeling large part of the traffic growth to public transport is recommended as the solution. In Greater Copenhagen, traffic flows have been primarily towards the central part of the metropolitan area, accommodated by the five radial transport corridors. Today, it is argued that transport infrastructure should be provided to strengthen the ring connections across the five figures so as to accommodate increased traffic flows from commuting across the region (Ministry of the Environment 2007a). This intention to intensify regional economic activities leads to the approval by government of a new inner-city metro circle (Cityringen), adding to the already extensively networked metros and S-trains (City of Copenhagen 2011). Initiatives enhancing the ring connection also include a light rail (Ringtre) that will connect 11 Copenhagen suburban municipalities, with the expectation of promoting urban development along the rail and easing congestion issues in the region (The Ringby Light Rail Partnership 2013). Although these infrastructures are provided in the form of public transport, they are all aimed at enhancing mobility and economic activities. Arguably, the increase in the aggregate traffic volume may offset any environmental benefits from such strategies.

Already one of the leaders in cycling infrastructure, the municipality of Copenhagen continues its efforts to increase the share of biking for commuting trips through improving physical conditions for accessibility and expanding the bike network. A variety of initiatives have been carried out to support cycling (cf. Nielsen et al. 2013 for an overview), some of which have also been extended to the metropolitan area. In cooperation with the Capital Region and 17 surrounding municipalities, a new initiative called Cycle Super Highways (cykelsuperstier) is established targeting commuters who travel long distances between 5 and 20 km.

On the other hand, increasing road capacity, e.g. the harbor tunnel project, has been part of the transport policy in Greater Copenhagen, with the motivation to eliminate existing or projected future congestion. An economic rationality has underlined this motivation, as motorway and railway capacity is considered a bottleneck for the economic growth in the Øresund region in the longer term (City of Copenhagen 2011). One of the main recommendations proposed by The Danish Infrastructure Commission is to complete the ring connections in the Copenhagen area both on roads and rail (Danish Infrastructure Commission 2008). Moreover, municipalities in the metropolitan area are required to reserve space for future road expansion and extension (Ministry of Environment, 2013).

In Greater Copenhagen, after decades of growth (with stagnation in the 1990s and slight decline in 2010 as a result of economic crisis), the average residential floor area per capita has reached 51 $m^2$, among the highest standards in the world. Seen in a shorter and more recent period, the share of detached single-family dwellings in the total new housing stock has declined from over 30% in the second half of the 1990s to a level of 12% after 2000. Even though the majority of the new dwellings have still been located in the rest of the metropolitan area, the inner city has shown a tendency of increasing its share of the total number of newly completed dwellings.

Housing strategies in the Greater Copenhagen are to ensure that there is a plentiful and varied supply of housing opportunities (Hovedstadens Udviklingsråd 2005). In the regional plan 2005, based on projected population growth, replacement of existing housing and expectation of increasing housing standards, it is estimated that there is a lack of 75,000 dwellings that needs to be built over the period 2005 2017. The guidelines for the densities and types of new housing differ in different parts of the metropolitan area. Residential development in the inner city will take place in the form of densification and urban renewal and the type of housing to be built is confined to

apartment buildings. In the inner parts of the fingers, although concentrated types of housing, such as apartment buildings and compact and low-rise housing are recommended, single-family houses can also be added. Land regulation in the outer parts of the fingers is further relaxed where the designation of new urban zone for housing purposes and the construction of space-consuming types of dwellings are allowed. It can be seen from these strategies that the impacts of housing types on environment and transport are downplayed in the plans of Copenhagen, which do not dare challenge the predominant preference for single-family houses among citizens. Seen from the above examination, under the growth paradigm, the urban development plans of Copenhagen exhibit a feature of fragmentation and even internal confrontation. Growth-oriented planning has the potential to result in fragmented measures with some tilted to growth and others to environmental protection. It tends to confine environmental policies to those that can enhance a ci edge, while constraining other, more radical environmental measures incompatible with growth.

The fragmentation of planning strategies reflects the idea behind urban planning that through creating opportunities in the built environment enlarges citizen s freedom of choices so that different preferences can be satisfied. As formulated in the national planning, spatial planning should ensure diversity and continue to prevent everything from becoming unifo the Environment 2006: 11). Urban planning has done this mainly via two approaches. One is the supply of efficient and reliable infrastructures to enable people to choose residences, workplaces, and functional facilities on a larger geographical scale, such as the proposed ring connection in Greater Copenhagen. The other is to offer a rich variety of products in the built environmen meet different demands, such as infrastructure provision for car, public transport and cycling, and a diverse supply of housing with different types, geographical locations, densities and amenities. From this perspective, the differentiated components in the planning strategies can be viewed as different products provided for diversified market segments (Næss and Vogel 2012).

**3.3 Critiques of growth-oriented planning**

There are several arguments against the belief in and the possibility of decoupling urban economic growth from its negative environmental impacts. The Greater Copenhagen case indicates that the pursuit of economic growth entails the construction of new building stock and expansion of infrastructure (either on brownfield land or new urban area), which both constitutes part of economic growth and accommodates increased economic activities. The growth in the physical elements is heavily reliant on material, energy and land resources, in addition to the energy consumption induced by the use of these physical structures (such as building operation, travel-related energy consumption). Densification and creating a compact urban structure, as illustrated in the planning strategies for the development of Copenhagen, can to some extent prevent rural land from converting to built-up areas and reduce energy consumption of transportation. However, there is a limit to what the densification strategy can fulfil, as the opportunities for densification will sooner or later be taken up and continuous growth will then have to be channelled to undeveloped land. Resource and energy saving benefits from eco-efficiency measures in the field of urban planning represented by high density land use and promotion of public transport tend to be counteracted by growing traffic volume and consumption level in the floor area. Unless the increases of eco-efficiency can catch up with the growth rates of the building stock and traffic volume, the absolute environmental impacts will increase.

As indicated in the Greater Copenhagen case, an overall planning strategy facilitating consumerism and diversity to meet different tastes implies a mixture of sustainable and unsustainable strategies to urban development. People have different preferences and differentiated economic and social capabilities to make free choices. The better-off usually can afford a luxury and environmentally-

unfriendly lifestyle, like spacious dwellings and car driving. Hansen et al. (2001) reported that growth stimulation policy in Copenhagen embraces the housing policy as an instrument to attract a so-called economically sustainable population to reside in the capital reg constructing spacious, expensive and upscale housing. This segment in the planning strategies will largely counteract the overall environmental benefits derived from strategies that adapt the development of land use, housing and transport towards a sustainability direction. Without a consistent and coherent planning strategies, sustainable and unsustainable solutions will end up with competing each other, leading to an inefficient investment in infrastructure and attempts for urban sustainable development.

Having said these, empirical studies on the environmental performances of Greater Copenhagen s urban development reveal that growth in land conversion for urban purposes has been relatively decoupled from metropolitan economic growth during the period 1991-2008, suggesting an expanding urbanized area though at a lower growth rate than the economy (Xue 2014). The same finding applies to the residential energy consumption which despite Denmark s high building energy standard has experienced growth at the aggregate level due to increased aggregate floor space and possession of domestic appliances (*ibid.*). The discussion above points to that attempts to resolve the tension between growth stimulation and environmental sustainability through a green growth approach are subject to limitations and not adequate in leading to reducing absolute environmental impacts from urban development in the long run, in particularly when green strategies are themselves considered as a trigger for further growth.

The social consequences of growth stimulation planning are dependent on the approach through which the growth is allocated. There is a difference in the impacts between a Keynesian approach with strong public intervention to ensure that urban development benefits all societal groups, and a neoliberal approach with market playing the major role in leading urban change and distributing benefits and burdens. As Rydin (2013) notes, planning reliant on the market to generate growth is likely to reinforce socio-spatial inequality through gentrification that displaces local residents and gives more location choice to higher-income groups than those with lower income. As indicated before, the distributive function of Danish spatial planning rooted in Keynesianism is under a neoliberal transformation (Andersen and Pløger; Olesen 2011). The shift to market-led planning does not only take place at the level of strategic spatial planning, but also in urban renewal project, waterfront redevelopment (Galland and Hansen 2012), and housing policies (Vagnby 2008), generating socio-spatial consequences such as gentrification, segregation, ghettoization, and housing unaffordability.

## 4. Reorientation of eco-city planning towards degrowth

The previous discussion shows that planning of Copenhagen Eco-metropolis in its current form is employed as a vehicle for the pursuit of economic growth and underpins the growth-associated norms and values. This section sets out to expound the implications of degrowth for urban development and planning and propose an agenda for eco-city planning that is committed to the degrowth-oriented interpretation of well-being, sustainability and equity.

### 4.1 Socially sustainable degrowth as the purpose of urban planning

Planning informed by the degrowth paradigm should discard some of the taken-for-granted but misconceived assumptions underlying the current planning strategies that are evident in the Greater Copenhagen case. These include the ideas that growth is the primary goal of urban development, ever-increasing mobility is essential for prosperity, planning should satisfy different preferences by

enlarging freedom of choice, and economic growth can be reconciled with environmental sustainability. The degrowth-oriented planning would require to amend the national planning report and finger plan to reflect the central ideas of degrowth. Growth and competiveness as the primary vision of planning should be substituted by societal goals with reference to well-being, sustainability and equity.

Degrowth emphasizes the non-materialistic sources of well-being apart from the achievement of minimally sufficient material living standard, which implies that planning should not prioritize the way of land use and types of infrastructure that fulfil the need for productivity and economic efficiency. Instead, planning will be people-oriented rather than profit-oriented, prioritize use value of land over exchange value, and seek to improve city and neighbourhood liveability (Brenner et al. 2012). The remaking of an attractive urban environment is not for the sake of attracting inward investment and creative class, but aims at enhancing the liveability of local residents.

Although environmental sustainability is already given emphasis in planning, it is framed in the conceptual setting of ecological modernization with a focus on efficiency. A degrowth approach to sustainability would require planning apart from addressing efficiency to draw on the sufficiency in urban development in relation to mobility, land use, residential floor space and infrastructure. It is proposed that planning should purposely and in a socially sustainable manner reduce, first the level of consumption per capita, and then shrink the total volume of urban built environment and decline mobility in order to reduce energy consumption and carbon emissions, protect rural land and the integrity of habitats of other species.

A commitment to social equity which is neglected in current planning should be incorporated as one of the goals explicitly formulated in planning documents. Social equity refers to the pursuit of distributive justice and democracy in urban planning. Here, planning will strive for an equal distribution of environmental hazards and benefits, ensuring the access to affordable housing, public facilities and transportation for the low-income groups (Fainstein 2010). Social issues like social segregation, housing unaffordability, ethnic integration and ghettoization should draw more attention from urban planners.

### 4.2 Degrowth-oriented planning strategies for eco-city development

#### *Planning strategies for land use*

In Greater Copenhagen, principles of land use including densification on brownfield sites has been adopted in the inner part of the metropolitan area, while the peripheral areas are left with rather relaxed land regulation allowing the conversion of rural areas into urban zones. In the context of strong inter-municipal competition, local authorities in suburban municipalities will tend to employ generous supply of vacant land as a vehicle to attract investment, leading to low-density outward urban sprawl. Suburban expansion is more likely to contribute to increased need for transportation due to on average long distances between destinations and to increased need for motorized modes of transport (Næss 2012; Stead and Marshall 2011). Although the latter tendency is meant to be remedied by the principle of station proximity that encourages public transportation, this will only counteract the negative environmental impacts from increased aggregate traffic volume to some degree. Given the fact that the density of the outer part of Greater Copenhagen is already very low which provides opportunities for densification, an amended land regulation banning the conversion of rural areas to urban zones in the finger cities should be favoured in the finger plan.

Locating offices and residential development close to rail stations discourages car travel, but does not contribute to reducing the total amount of traffic. In general, there is a lack of concern in the finger plan on the traffic impact of locating different urban functions relative to the main city centre. Studies have shown that increasing distance from residence to urban centres is associated with increasing travel distance (Næss 2012; Stead and Marshall 2011). In recent two decades, residential development in Greater Copenhagen has shown a trend of concentration. If new dwellings are going to be built in future, an emphasis on proximity to the downtown Copenhagen should be reinforced in the metropolitan plan.

High-density urban development, despite its positive effects on energy saving and preservation of natural land, does not go without negative consequences on certain aspects of well-being (Neuman 2005). Residents living in dense urban areas are exposed to higher levels of noise and air pollution and run higher risk of traffic accidents. In addition, densification may deprive citizens of opportunities for access to city greenery by building on green areas. The lack of greenery, nature and outdoor activities may be compensated for by possessing second homes a rebound effect that undermines the effectiveness of planning strategies for sustainable urban structure (Strandell and Hall 2015). These potential negative impacts suggest the limitations of the densification strategy based on an assumption of ever-growing building stock and infrastructures. Urban development in the degrowth society will therefore aim at non-growth or even shrinkage of the size of built-up area and volume of the building stock, a topic that will be dealt with in the next section.

***Planning strategies for residential development***

As mentioned before, sufficiency in consumption is proposed as an organizing societal principle in the degrowth paradigm in order to reduce absolute consumption. This strategy is apparently highly relevant to the consumption of housing. Considering the high housing standard in Greater Copenhagen, it is pertinent to ask if further growth in per capita floor area is morally acceptable if an equal distribution of natural resources on a global scale is to be achieved. Moreover, a further growth is probably not socially necessary since the contribution of material goods to well-being tends to decline above a certain level. In view of the degrowth planning, the goal of residential development should be non-growth or even shrinkage in residential floor area on per capita basis and avoid inequality in access to housing. Such a view will have implications on the amount, composition and location of future housing supply.

The total amount of new housing measured by floor area therefore should be based on projection of population growth and annual replacement of existing housing. In the regional plan 2005, the prediction of housing growth, apart from these two segments, also took into account an expected rise in the average housing standard. This latter segment should therefore be excluded in planning for residential development in the degrowth paradigm. Stabilization or even shrinkage of per capita floor area also implies that the construction of space-consuming type of housing, i.e. detached single-family dwellings, should be discouraged in future. Therefore, the existing plans that allow the construction of this type of building in the outer areas of Greater Copenhagen should be amended. This requires planning to confront the idea that the supply of housing should be varied so as to meet different tastes and demands. A maximum standard of per capita consumption of residential space can be stipulated in planning documents as a control of the volume of housing supply.

Houses to be demolished annually should be the least environmentally friendly ones, like single-family homes in highly car-dependent suburban areas disconnected from the inner city, and dwellings with poor thermal performance. Suburban brownfields where the o

dismantled can be used for nature regeneration. On the other hand, the replacement of those demolished dwellings should take place as densification with availability of public transport and other city facilities and take the form of concentrated types of dwellings (Næss 2011).

With a ceiling on the consumption of residential space, every increase in floor area per capita among some population groups must be balanced by reduced floor area per capita among some other groups. The poor are usually the losers in such a situation because a limit on the size of the housing stock will induce housing scarcity and push up housing prices. The issue of social inequality can be worsened if no proper policies are in place. Under the neoliberal political climate, urban planning for the Greater Copenhagen area has gradually shifted away from focus on certain social groups, but given way to market to determine how wealth, such as housing, is distributed. Driven by market profits, development aims at meeting the needs of people who have purchasing power and consequently those low-income groups are in face of housing unaffordability. Social justice in the degrowth paradigm calls for the redistribution of wealth and pays more attention to the vulnerable social groups. The interests of the marginalized and vulnerable population should be fully represented by urban planners, who would to some extent need to work as advocates.

First buyers and needy families would demand redistribution measures like subsidies or tax reduction. Tax can be levied on empty owner-occupied dwellings to reduce overconsumption of living space. Some present institutions can be made use of as part of the redistributive strategies. For instance, social housing - traditionally an important part of social welfare in Denmark can be used permanently for renting. In the same vein, the long tradition of rent control in the rental market needs to continue. In addition, economic incentives and planning strategies can be employed to encourage cohousing and reusing empty dwellings (Lietaert 2010).

***Planning strategies for transportation***

In line with the degrowth paradigm, Banister (2008) proposed a sustainable mobility paradigm that focuses on people and accessibility instead of mobility, and aims at slowing movement down rather than speeding up traffic. This represents a departure from the current transportation strategy in Greater Copenhagen based on the idea that increasing mobility is a symbol of prosperity. The implication is that initiatives to expand motorways and increase road capacity in Copenhagen and reserve land for such infrastructure in order to facilitate economic activities with Malmö in Sweden should not be prioritized. Instead, planning strategies will aim at reducing traffic volume through proximity, rather than triggering more traffic by encouraging commuting from a wider area.

Besides aiming at reducing traffic, the degrowth planning will also change the composition of transport infrastructure supply in favour of more transit-oriented development and non-motorized modes of transportation. It requires a significant increase in the environmentally friendly elements such as biking infrastructure, walkable neighbourhoods, and better public transport services, replacing those that facilitate resource-demanding and polluting activities, such as high-speed transport infrastructure.

## 5. Conclusion

This paper has illustrated that eco-city planning for Copenhagen is conditioned by the growth ideology which seeks to reconcile the strategies for dealing with the pressure of environmental degradation with strategies for city competitiveness. Such an eco-modernistic eco-city planning leads to fragmented planning strategies for urban development and abstain the implementation of more radical solutions to urban sustainability transition. With the awareness of the limitations of the

eco-city planning under the growth paradigm, the paper attempted to propose an alternative planning paradigm informed by the degrowth debates which focuses on the pursuit of human prosperity without economic growth.

When asking why the growth ideology is the very essence of urban planning and the dominant driving force of built environment formation, the answer lies in the growth imperative inherent to the capitalist market economy (Gordon and Rosenthal 2003; Harvey 2010). The significant role of cities in perpetuating and expanding capitalist accumulation through the arrangement of built environment has long been discussed (Harvey, 2010; Lefebvre 1974/1991). Land use and built environment are wrought to adapt to the needs of capital, and provide necessary physical conditions to facilitate the capitalist production, consumption and exchange processes. As a consequence, propelled by the growth compulsion from the deep economic structure, promoting local economic growth and enhancing the city s competitive edge have become the most ambitiou local government. It therefore suggests that degrowth transformation necessitates a political movement to establish a new kind of socio-economic structure beyond the capitalist market economy (Fotopoulos 2007; Kallis 2011). In this respect, urban planners can be a mobilizing force through involving widespread public participation in the planning process to catalyse collective critical consciousness on current society, enhance public awareness of sustainable choices, build strategic alliances, and advocate vulnerable people (Rankin 2012; Rydin 2013).

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# TRACK 19

# Smart Approaches to Responsible-minded Planning Practice

## Track description

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There is no single best practice for how to do successful spatial planni process will differ depending on location, society, economy, market pressures, and the size and the particular planning culture. Spatial planning is typically oriented to the legal framework, the institutional circumstances as well as the particular time in its history. In addition, power and responsibility shift and cities and regions are in constant change.

However, the transfer of ideas and practices in urban and regional planning happens all the time around the globe and it is increasing with higher connectivity between individuals, governments and institutions across nations and continents. Furthermore, many adopted in the developed world are transferred to the developing world without necessary critique and adaptation. Successful experiences embedded in very specific contexts are exported as panaceas.

This tracks looks for innovative planning projects and practices on different levels (transnational, national, regional and local) that foster responsible and critical knowledge transfer in the planning practice in both developed and developing countries, and that contemplate common challenges of implementation, understanding of specific contexts and differences in planning cultures. Attention to the local political economy and governance frameworks is essential.

The following issues will be highlighted:

- Attention to context and governance frameworks, power and responsibilities
- Smart approaches and innovative methods, products, processes that rely on an understanding of differences in planning cultures and practices
- Challenges and gaps between formal planning and informal development
- Lessons learned
- Discussion of transferability hurdles
- Accounts of success stories where the transfer of ideas and practices was successful and a discussion of the elements that made success possible.

# WHAT CAN PLANNERS DO ABOUT HARDCORE LAND VACANCY?

Paper presented to AESOP Congress, 13-16 July 2015, Prague, Czech Republic

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**Abstract**

Property developers and investors have been at the forefront of urban regeneration in the UK since the 1980s. This has produced an emphasis on prime office space, luxury apartments, shopping centres and leisure attractions, which has been widely criticised on social equity grounds. But there has been only limited interrogation of the failure of property-led regeneration to deliver on the development it promises or on whether it represents good value for public money. Nottingham Eastside is one such example of market failure, where over a 25 year period, property developers and investors have come and gone, none of four masterplans have been implemented, decontamination and infrastructure provision has never been completed, and most of the land is still vacant. By reconstructing the story of Nottingham Eastside and evaluating its experience against Jessop's strategic-relational approach, this paper asks whether it is now time to create an alternative place-based model of urban development, drawing on best practice from continental Europe.

**Keywords**
Property-led urban regeneration, hardcore land vacancy, place-based urban development

## 1. INTRODUCTION

Walk ten minutes from the busy shopping streets of central Nottingham, and you will come across over 10 hectares of urban wasteland. This is Nottingham Eastside, once a thriving hub of industrial activity, but characterised now by waste ground, rough grassland, leftover concrete foundation slabs, and decaying fire-damaged buildings. Significantly, much of the site has been vacant since the late 1980s, when former occupiers began to depart. Since then, four major masterplans have been published for its redevelopment. None have been implemented, although the scattering of small office blocks, a budget hotel and a media centre on the western edge of Eastside bears testimony to the modest progress made on one of those plans.

The purpose of this paper is twofold. First, it is to explain why such a large area close to the centre one of England's eight 'core' cities and the principal business centre of the East Midlands has remained largely vacant for so long, despite significant policy efforts and substantial public resources devoted to securing its redevelopment. Although development on the ground has been limited, the current condition of the land cannot be attributed (as might be the case in some other countries) to policy neglect or disinterest. Instead, the story is one of frustration as a series of developers and investors have come and gone, with the public sector left largely reacting to events, rather than taking charge of them. These events set the scene for the second purpose of the paper, which is to provide a reflective critique on the market failings of that particular response to deindustrialisation and decay known as property-led urban regeneration, which came to dominate policy thinking in the UK from the 1980s onwards. This prompts the paper to consider whether an alternative approach to major urban redevelopment might be more productive and, over time, generate better returns for the public purse.

The next section of the paper explores the concept of property-led regeneration, connecting it to what is known about the critical success factors that may need to be present if hardcore urban vacancy is to be overcome. This highlights the theoretically contentious relationship between structure and agency in urban redevelopment. Here the paper introduces the strategic-relational approach favoured by Jessop, which is later used to help explain the particular course of events taken at Eastside.

Against this broad context, the third section of the paper summarises the Eastside story, concentrating on the years between 1990 and 2015. It documents key events and turning points, and traces those responsible for important decisions and actions. The style in this section is deliberately factual, both to contain its length and to provide a clear basis for subsequent evaluation in the section that follows. The research method employed to build up the case study was akin to much historical research, with a heavy reliance on documentary analysis, but with the benefit of interviews with key actors. These were used to expand and cross-check material, and wherever possible achieve triangulation.[1]

Section 4 of the paper seeks to evaluate what happened at Eastside and, from this, to open up broader debate on how best to achieve such large-scale urban redevelopment. Applying a strategic-relational approach, the section acknowledges that Eastside was never an easy site to redevelop and considers how different strategies deployed by different actors in their attempts to 'break through' structural constraints, achieved varying results. The final section of the paper summarises the main findings of the research and considers its implications. While recognising the particularities of the Eastside story, it seeks to draw out lessons that may have broader applicability in helping to chart an alternative policy direction to property-led urban regeneration.

## 2. PROPERTY-LED URBAN REGENERATION AND HARDCORE VACANCY

As part of the entrepreneurial turn in urban governance, 'property-led urban regeneration' (PLUR) became the primarily thrust of UK urban policy in 1980s (Healey, 1991). Although property development had often formed part of previous renewal strategies (Turok, 1992), PLUR represented a significant shift in the power relations, products and funding of urban regeneration. Whereas in the past, the private sector was seen as subservient to the planning strategies of the public sector, PLUR overturned that balance of power with planning strategies, at least for major redevelopment areas, coming to reflect the priorities of the private development industry. In some places, this was facilitated by the creation of urban development corporations, enterprise zones, and other measures that bypassed the jurisdiction of elected local planning authorities, but in others, planning authorities themselves enthusiastically adopted the new agenda.

The immediate result of such changing power relations was to fundamentally alter regeneration products. Prime office space, luxury apartments, shopping centres and leisure attractions, facilities, for instance, began to appear in places long considered 'off-pitch' by most private-sector developers. To achieve financial return and ensure market appeal, PLUR needed to operate, at least initially, at a large enough scale to create entirely new locations that could be branded as quite separate from their poorer surroundings. This is why PLUR often focused on grandiose or flagship projects (Loftman and Nevin, 1995), creating high value uses in what had previously been low value areas. Market-making on this scale was not simply a private-sector responsibility but became a core component of planning strategies. Indeed, despite political rhetoric, the public sector provided much of the baseline funding for PLUR through land assembly, decontamination, new infrastructure and direct development subsidies. Those who championed PLUR argued that such redirection of public funding was justified by the extent of private funding it subsequently levered into regeneration areas.

Nevertheless, PLUR was widely criticised as socially divisive (Imrie and Thomas, 1993), directing scarce public resources towards the urban rich rather than the urban poor and creating up-market environments intended for incomers, rather than the workplaces and decent homes needed by local people. Although some suggest that PLUR reached its heyday in the UK during the early 1990s, and was replaced by more community-based approaches to regeneration, others argue that its fundamental tenets became entrenched within broader regeneration policy and are still very much alive today (Dillon and Fanning, 2015). There has certainly been strong evidence that PLUR is widely practised internationally, for example in Ireland (McGuirk, 2000), across Europe (Carbonaro and D'Arcy, 1993), in Chile (López-Morales, (2013), and even in China (He and Wu, 2005).

The literature around PLUR is resplendent with case studies and critiques of schemes that were eventually built, but there is remarkably little written on projects that failed and were never implemented. Property market conditions are too often taken for granted in PLUR evaluations (D'Arcy & Keogh, 1999), which means that studies tend to focus on the implications of PLUR for social equity, important as these are, but not directly on the efficiency and effectiveness of PLUR itself. This is where the Nottingham experience, reported in this paper, provides an important new contribution to the literature. As it shows, understanding the management and distribution of development risk between the public and private sectors is crucial in assessing whether PLUR represents good value for public money.

In this context, PLUR can be contrasted with the European experience of place-based regeneration (Hall, 2014), discussed later in the paper, in which municipalities contain risk by acting as direct place-promoters. This rarely happens in the same way in the UK, with the result according to Falk (2011: 38) that "numerous masterplans are often produced for the same site and yet little happens on the ground (over 70 masterplans have been produced for the Royal Docks in London for example)." It has been argued that PLUR is a response to the embedded failure of urban property markets (Jones, 1996) in which "Low demand, dereliction, and risk in development costs prevented new construction" (Larkin and Wilcox, 2011: 3). In the case of land that has been vacant or derelict for more than nine years, it is officially defined as having fallen into semi-permanent or 'hardcore' vacancy (English Partnerships, 2003).

The significance of hardcore vacancy is twofold. First, the overall amount can be expected to be disproportionately weighted towards problematic sites requiring, for example, expensive decontamination. Second, the very fact that hardcore land has remained vacant for so long normally means that it has survived the demand pressures from at least one development boom. In 2001, some 16,523 hectares of all vacant or derelict land in England, representing around 25% of the total, was estimated to be hardcore vacant (English Partnerships, 2003). By 2014, unofficial estimates suggested this total had increased to 17,740 hectares, a 7% rise on the 2001 figure (CPRE, 2014).

Whether PLUR can provide an effective market response to hardcore vacancy will depend on its ability to generate what Dixon *et al*., (2011) call seven 'critical success factors' that enable long-term barriers to redevelopment to be overcome. From their comparative study of 10 hardcore sites in Manchester and Osaka, they consider these to be strong local property markets, developers able to exploit recession by purchasing land cheaply, long-term vision capable of spanning market cycles, strong brands often established through flagship projects, strong partnerships between the public and private sectors, achieving large-scale development, and prioritising infrastructure. The Nottingham experience reported in this paper explores whether the converse of these factors helps account for continued hardcore land vacancy.

The 'critical success factors' identified by Dixon *et al*., (2011) sought to link economic and property market change to the strategies of key stakeholders. If we wish to know whether PLUR is likely to resolve or perpetuate hardcore urban vacancy, it is indeed important to understand how structure and agency are constituted in each specific context and by what means they interact with each other. Applying Giddens' (1984) theory of structuration, Healey and Barratt (1990) suggest that although actors define and pursue their strategies, interests and actions in the context of a structural framework, structure itself is established, re-established or replaced as the resources, rules and ideas by which it is constituted are deployed, acknowledged, challenged and potentially transformed through agency behaviour. However, one of the most prominent critics of this conceptualisation (Ball, 1998), claims that agency behaviour cannot produce significant structural change, and argues that it is conceptually problematic to offer structural explanations of the existence and roles of agencies.

The strategic relational approach developed by Jessop (1996, 2001 and 2007) helps to resolve such criticisms through a more nuanced understanding of the relationship between structure and agency which avoids any theoretical separation between the two. Jessop attributes the weakness of Giddens' structuration approach to its concentration either on structure while temporarily ignoring agency or on

agency while temporarily ignoring structure. He describes this as the 'bracketing' of "structure and agency in a rather mechanical fashion" (Jessop, 2001: 1223) producing what he calls a 'dualism masquerading as a duality'.

Jessop's response is to "to examine structure in relation to action and action in relation to structure, rather than bracketing one of them" (Jessop 2001: 1223). What this means in practice is that the same element of structure may have different impacts on different actors at the same time, or on the same actors at different times. In short "a given structure may privilege some actors, some identities, some strategies, some spatial and temporal horizons, some actions over others" (Jessop 2001: 1223) while, crucially, those actors who realise this through their 'strategic-context analysis' and 'feel for the game' will adopt strategies and tactics that enable them to take advantage of 'conjunctural moments'. These comprise those structural elements that can be modified by a particular actor pursuing a particular strategy at a particular time and contrast with 'structural moments' that cannot be so modified. Of course "the self-same element can operate as a structural constraint for one agent (or set of agents) and as a conjunctural opportunity liable to transformation by another agent (or set of agents). It also implies that a short-term structural constraint for a given agent (or set of agents) could become a conjunctural opportunity over a longer time horizon or even within the same time horizon if there is shift in strategy" (Jessop 2007: 42).

Instead of a 'dualism masquerading as a duality', Jessop claims to have reached a 'dialectical duality' in which structure has been transformed into 'structurally inscribed strategic selectivity' and agency into 'strategically calculated structurally orientated action'. Despite their theoretical relevance, few attempts have been made to test and apply Jessop's ideas to planning and development. The Nottingham experience of changing actor strategies pursued over 25 years within a dynamic and complex structural context, as recounted in the next section, provides a valuable opportunity to attempt this in the subsequent section.

## 3. NOTTINGHAM EASTSIDE: A CASE STUDY

Nottingham Eastside is a 13.9 hectare redevelopment area, located immediately to the south-east of the city centre of Nottingham. By 2015, much of Eastside had lain vacant for at least 25 years, although some 2.8 hectares on its western edge have been redeveloped in recent decades. As shown on Figure 1, Eastside comprises three main parts; namely Boots Island to the north (Site A), Boots Warehouse in the centre (Site B) and the former railways lands to the south (Site C). The Eastside story is best recounted in five acts, each of which is summarised below.

### Act 1: Deindustrialisation, dereliction and departure (Pre-1990)

By the 1980s, the pharmaceutical giant Boots had occupied A & B as its main manufacturing hub for almost a century, while C had been in railway use for even longer. However, during that decade, Boots decided gradually to decant its central Nottingham operations to a modern campus in the west of the city. To the south, the once-busy rail-based activities fell into decline and then disuse. The prospect of significant redevelopment potential on A & C (Site B remained in operational use as a major warehouse for Boots until around 2005) seemed inhibited only by numerous decaying buildings and extensive contamination left behind from decades of heavy industrial use. To accelerate the redevelopment process, in the late 1980s Nottingham City Council threatened to take compulsory purchase action against both Boots and the then nationalised British Rail. It also published planning briefs for A & C, setting out redevelopment options, albeit in quite generalised terms. The council's prime objective was to secure new employment, through the development of new offices and light industry. More ambitious plans, however, were soon tabled by the landowners.

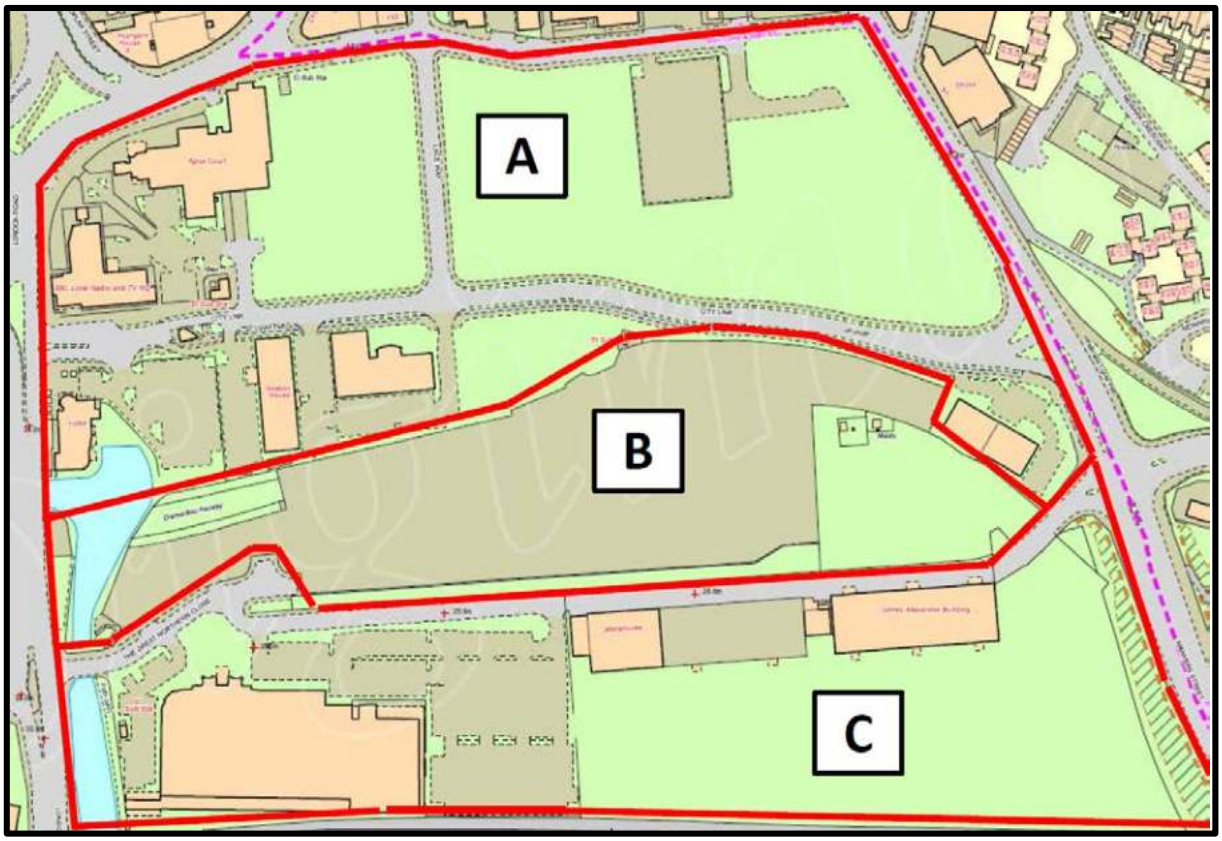


Figure 1: The three component parts of Eastside

**Act 2: Piecemeal property-led redevelopment (1990-98)**

In early 1990, Boots announced proposals for a massive commercial redevelopment of Site A, including 57,000 m² of speculative offices, a 'World Trade Centre' of 13,500 m², an upmarket hotel of 10,300 m², along with luxury apartments, shops, canal marina and 1,100 parking spaces (see Figure 2). This was the first of four major masterplans produced for the site. At an estimated development cost of £150 million, it was said to offer the prospect of 2,500 new jobs for the city. Not to be outdone, in late 1990, British Rail then announced its own plans for comprehensive commercial, retail and residential development on Site C. But had such longstanding industrial landowners really turned into real estate developers? Looking back some 25 years later, one regeneration expert long associated with the area was quite dismissive of the Boots proposal, commenting that "This was all part of a strategy to create some hype and excitement about the site prior to selling it …The notion of having a World Trade Centre was a bit fanciful but it got lots of coverage in the press. Lots of people got excited about it and then the City probably overpaid for it."

While this view may well be correct, the interview conducted earlier with Boots Properties in 1997 revealed another important motive – the desire to access funding from 'City Challenge', the high-profile regeneration competition launched in 1991 by the then Environment Secretary, Michael Heseltine. Nottingham City Council had successfully bid for £37.5 million 'City Challenge' monies over five years to regenerate the deprived inner city neighbourhoods of St Ann's and Sneinton, in which Eastside is located. But once it turned out that the council was unwilling to hand any of the cash to subsidise the Boots scheme, a land sale was agreed, with the council buying Site A from Boots for £2 million in 1994. By this time, the Island site had been designated as a City Challenge 'flagship project' and almost £6 million of public money was allocated for clearance and decontamination work, which subsequently took place between 1995 and 1997. Moreover, even before the land purchase from Boots was finalised, a well-regarded local developer, Simons of Lincoln (partnered by Gulliver Development Property Unit

Trust) had been selected to take forward the development on a 'back-to-back' deal. This meant that shortly after the council paid out the £2 million for the purchase from Boots, it would receive just as much, if not more, from Simons for a 999 year lease of the land.

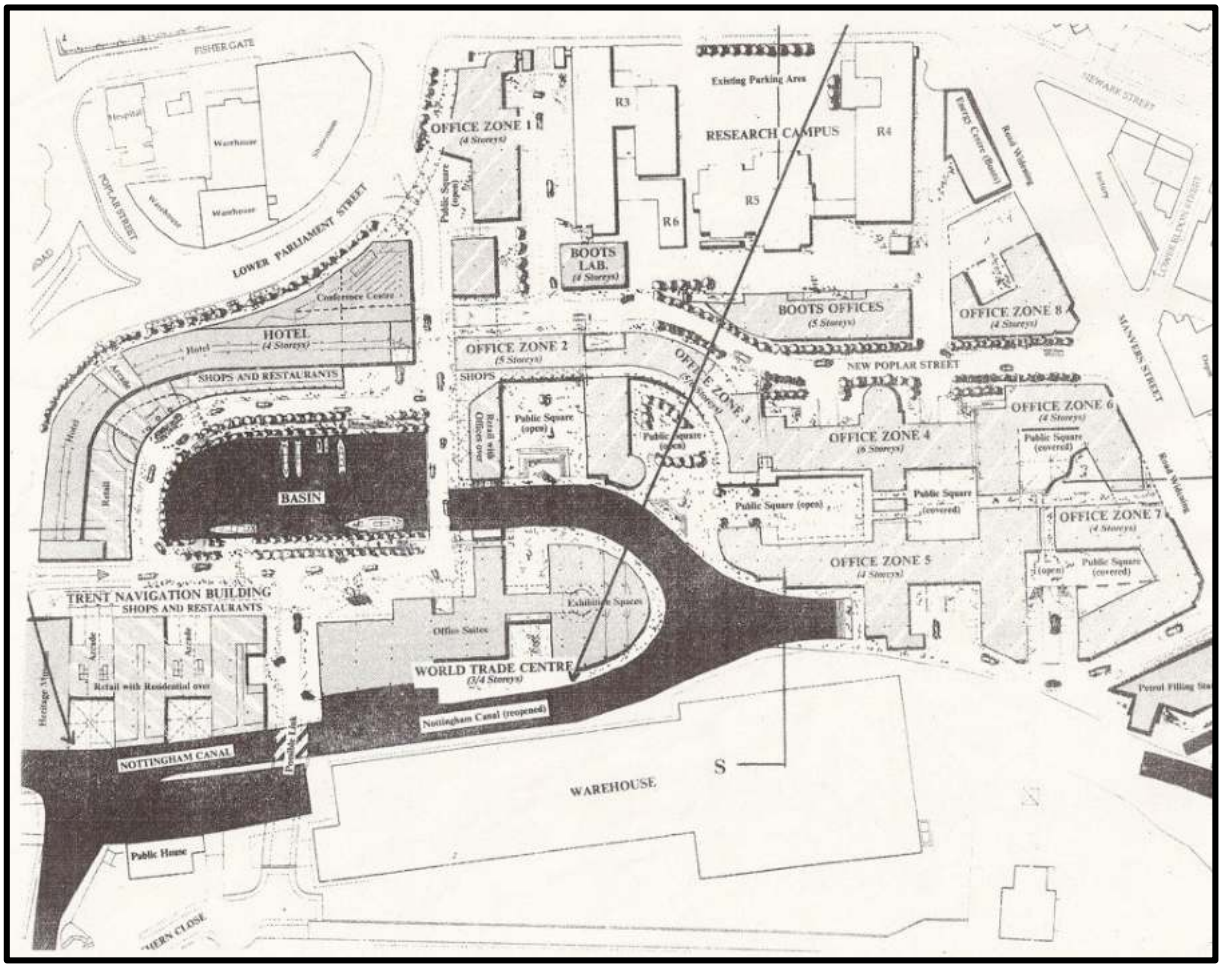


Figure 2: Boots Masterplan (1990)

Simons then launched its own masterplan for the Island site – the second to be produced, but one that was far less ambitious than the earlier Boots scheme. This proposed campus-style office development in central and western parts of the site, with light industrial development to the east. The latter was included at the insistence of the council, even though Simons thought only the office development to be commercially viable. Again jobs were promised – up to 2,000 on completion of the scheme. Yet, by the time Simons exited the development partnership in late 1998, its achievements at Site A were limited to building an east-west link road, constructing a new media centre for the BBC, and securing planning permission for two nearby office blocks. This was modest progress, at best, in comparison with earlier hopes.

To the south, the council had also bought out British Rail in 1993/94, paying around £1.6 million for the railway land and buildings. Initially, the council supported a community-based proposal for a transport museum in the former station, but then pulled out of this proposal. Instead, it again engaged Simons as preferred developer for the whole of C, except two former nineteenth century warehouses. Keen to divest itself as soon as possible of any repair responsibilities for these structures (one of which had been listed in the 1980s), the council quickly sold them to a local antiques dealer.

On the rest of the site, the agreement with Simons remained dependent on obtaining planning permissions and securing occupiers via pre-lets. Ironically then, Simons' first proposal for a cinema and leisure complex was withdrawn after it was 'called in' for a decision by the Secretary of State, while its second proposal for car showrooms and a 'drive-thru' restaurant was again withdrawn, this time after the council threatened to refuse it. Simons did manage to turn the former station and adjacent land into a health club, but after that, its agreement to take on rest of the site lapsed. The council was then left holding a significant chunk of the former railway land without any immediate prospect of development, while subsequently seeing the adjacent listed warehouse it had previously sold to the antiques dealer go up in flames, with the shell soon falling into decay.

By 1997, when City Challenge ended, substantial public funding had generated only limited piecemeal development at Eastside and certainly nothing to match the ambition of the 'World Trade Centre' proposed by Boots at the start of the decade. Disappointing as this was to Nottingham's civic leaders, it was time to take stock and consider what alternative strategy might be pursued.

**Act 3: Emergence of greater ambition (1999-2002)**

The turn of the millennium produced limited on-site change at Eastside. Gulliver Development Property Unit Trust, which assumed had responsibility for Site A after the exit of its partner Simons, was itself taken over by a series of property investment trusts, which then presided over the development of three 'campus-style' office blocks and a Premier Inn Hotel on the western edge of the site. Meanwhile, on the vacant former railway lands to the south, not even the hint of any development was evident. But with the election of a New Labour Government in 1997, the institutional landscape for urban regeneration and economic development in cities such as Nottingham changed markedly. The East Midlands Regional Development Agency was established (one of nine RDAs covering the whole of England) and the role of English Partnerships (the Government's own urban regeneration agency) was much expanded. These two bodies came together with the council and private-sector interests in the city to set up Nottingham Regeneration Limited (NRL), as a non-for-profit urban regeneration company. NRL's focus was "on physical regeneration though spreading the benefits more widely. The company commissions masterplan and regeneration studies and then seeks appropriate partners. They are developer of last resort" (URBED 2002: 33).

NRL was immediately asked by the council to prioritise plans for Boots Island and the wider area within which it sits. As a result, it commissioned a new Eastside Masterplan (the third in our series) from a team led by Latham Architects. This was published in 2002. It covered both the 13.9 hectares of the Eastside site itself and another 42 hectares of fringe city centre neighbourhoods to the north. Although termed a masterplan, it was no architectural blueprint of the kind produced earlier by Boots, but rather an informal development framework intended "to help deliver a vibrant, sustainable, high density and mixed-use urban area in line with national, regional and local policy" (Latham Architects, 2002: 1).

Turning specifically to the 13.9 hectare Eastside site, the Latham report (2002, para 7.2.7) concluded that office development had "faltered in market terms" and that it represented the "wrong product … in this location." Extending the canal basin into the very heart of the site would, it was argued, create the opportunity for higher-value and higher-density commercial, and especially, residential development. The report recognised that as well as private-sector contributions, further public-sector support would be needed to deliver this vision. Since its publication fortuitously coincided with an improving national economy and a rapid upturn in real estate development, the report did not go unnoticed outside Nottingham. Very soon, London-based property developers "came into town, promising to do wonderful things and putting money behind it… They commissioned a crack team and spent proper consultancy money" (Nottingham-based regeneration expert). The fortunes of Eastside were about to experience quite radical change.

**Act 4: Grandiose property-led visioning (2003-09)**

These new entrants to Nottingham were Eastside and City Developments (ECD), a joint-venture development company specifically formed in June 2003 with the intent of promoting one of the biggest single developments ever to take place in Nottingham. ECD was a partnership between Barclays Bank, Laing O'Rourke (one of the UK largest construction companies) and a relatively small firm of project managers and development consultants, called Roxylight. Its public face in Nottingham and beyond was Nigel Brunskill, Roxylight's Managing Director. Up to 2005, ECD spent what Brunskill later described as "tens of million" "painstakingly" assembling the whole of the Eastside site from 15 different landowners. He described this as "the most complicated land assembly I have ever been involved with" (quoted in Cunningham, 2009).

The main purchases were that of Site A from ING Real Estate Management (successors to Simons and Gullivers), Site B from Boots (which finally closed its major warehouse and last operational use on the site in 2005) and Site C from Nottingham City Council and the local antiques dealer who had previously bought the two nineteenth century warehouses from the council. What is remarkable about land assembly of such a scale is that it was undertaken in a relatively short timescale entirely by the private sector and without any threat of compulsory purchase. For the first time, it brought the whole of the Eastside site into single ownership, opening up the real possibility that it could be planned and developed as a single integrated project.

Figure 3: The Hopkins Masterplan

When ECD's masterplan for the whole Eastside was unveiled in 2004 (the fourth in our series: see Figure 3), the scale of ambition for the site was quite staggering. Masterplanned by the international architectural practice of Hopkins Associates, the proposed 270,000m² comprehensive mixed-use redevelopment included 131,000m² of prime office space, 123,000m² of luxury apartments, almost

12,000m² of shops, bars and restaurants and 4,000m² of leisure space, all centred around a major new public space and a new canal basin, first envisaged in the Latham Report. The estimated total development cost was £900 million.

It took four years of detailed negotiations with the council before planning permission was eventually granted and accompanying legal agreements signed. However, by that stage, the Global Financial Crisis (GFC) had produced rapid downturn in investment property values, bringing the long development boom of the 2000s to an end. At around the same time, ECD sold its interest in Eastside to the specially created Guernsey-based investment vehicle called Heathcote Holdings (HH). The reason, according to Nigel Brunskill was that "A project of this size and geographical importance requires substantial equity investment, and the Guernsey structure has the ability to achieve this … Overseas investors, family funds and sovereign wealth funds would expect and often demand ownership through a non-UK entity" (quoted in Cunningham, 2009). HH retained Brunskill as project manager, but the funding required to commence the development never materialised.

It could be argued that, by taking four years to grant planning consent, Nottingham City Council ironically saved ECD and subsequently HH from what might well have been financial disaster had their development commenced in the period immediately before the GFC. Looking back, those interviewed in 2014 and 2015 were firmly of the view that the Hopkins masterplan was just too large and ambitious for a provincial city such as Nottingham. In retrospect, the Chief Executive of Nottingham Regeneration Limited thought that everyone had been "seduced by glorious images of docklands-like development, with a massive amounts of apartments centred around public squares and fancy fountains etc. etc. They were all very seductive." This view was shared by another Nottingham-based regeneration expert who considered that even the council had been "swept up in the hubris of the moment" trying to re-create Kings Cross, London in central Nottingham. He added the proposal "was driven by a London developer who was a bit disconnected from the provincial world … They didn't understand the dynamics of the (local) market." In the end, Nottingham Eastside was no further forward in 2009 than it had been in 1999. Indeed, as one interviewee poignantly suggested, the site had once again been left standing at the altar.

**Act 5: Hard reality dawns (2010-15)**

Despite the demise of the Hopkins masterplan, Heathcote Holdings had one last card to play. Even in the post-GFC recession, the main UK supermarkets continued to expand their store numbers, with Tesco taking prime market position. So in 2010, HH linked up with Tesco to make a joint planning application for an 11,800m² superstore on part of Site A, which would have been one of the largest such developments in the UK. This time, the number of jobs promised by the developers was smaller than before, at only 300 to 500. Yet, it soon became clear that this proposal faced fierce opposition from the council, owing to its perceived negative impact on retail activity in the city centre. The application was therefore withdrawn in 2011, possibly to avoid a formal planning refusal. Ironically, within three years, Tesco itself ran into financial difficulties and made a strategic decision to slim down, rather than expand its estate portfolio, casting doubt on whether the Nottingham store would ever have been built, even if planning permission had been granted. For Heathcote, the end result of this failed venture with Tesco was to undermine any support it may still have had from NRL and the council, making relationships, according to the NRL's Chief Executive "quite confrontational" and "unpleasant" at the end. In his view, the Guernsey-based company was by then perceived as being "very absentee landlordish" and without any long-term investment interest in the city.

By 2012, the council had agreed a new 'City Deal' with central government in which the wider Eastside area was designated as a new Creative Quarter for the city and support was promised for "the redevelopment of Nottingham's prime Eastside Island regeneration site." But with still no proposals coming forward from Heathcote, the council eventually lost patience in December 2014, and resolved to take control of the site itself, either through voluntary acquisition or compulsory purchase. Justifying this decision, Councillor Jon Collins, the Leader of Nottingham City Council said "We have done all we can to encourage and support the site owners to progress with the site's redevelopment but after

years of inaction from them, we have no confidence they have any intention of doing so" (quoted in Nottingham Post, 2014). Ironically, some 20 years earlier, the same Councillor Collins, at that time Chair of the City Challenge Board, had commended the council's decision to sell Site A to Simons of Lincoln on the basis that the number of jobs then promised were "realistic predictions if you look at the balance of the development" (quoted in Bell, 2013).

Figure 4: Nottingham Eastside 2014

Perhaps anticipating the council's move, in October 2014, Heathcote Holdings placed the entire 13.9 hectare site on the market through the international property agents, Savills, seeking expressions of interest from potential purchasers. At the time of writing, it is not known whether any deal has been agreed either with the council or another party, but Eastside remains much as it has been for the last 25 years – an urban wasteland (see Figure 4). That's not to suggest it is wholly unused. Instead, it seems to function well as a location for informal recreation, since "People use it as a running circuit, or commuters who cut through from the station to Sneinton - there's also a lot of dog walkers, cyclists, people who picnic there - there's lots of people using it in lots of different ways" (Griffin, 2013). It has even been informally 'twinned' with another area of wasteland in Indonesia. But, despite some limited redevelopment on its western edge, none of the plans of the last 25 years have produced any substantial transformation in how most of Eastside appears to, and is used by, the people of Nottingham. In the next section, we seek to discover the deeper reasons why it remains vacant after all these years.

## 4. EVALUATION

This section seeks to apply Jessop's strategic-relational approach to understand what really happened at Eastside and to evaluate why a property-led approach failed to transform the area. The section has a twofold focus on both the differential impact of structure upon actors and the differential response of actors to structure. Three main structural elements are identified: locational and site-specific constraints, economic and property market cycles, and the broader policy context. All three made development difficult, although the impact of this varied between actors and over time. Elsewhere, PLUR has delivered major redevelopment in the face of challenging structural circumstances. Why then at Nottingham did no single actor or combination of actors succeed in breaking through the site's inherent structural difficulties?

Locationally, although close to the centre of Nottingham, the site is separated from the commercial and retail hub of the city by major arterial roads and it is only on the fringe of the city centre. It is generally bordered by relatively low-value uses, consistent with its location within a broader regeneration area. Decades of heavy industrial activity meant Eastside was highly contaminated and, within the site itself, deficient in modern roads and sewers. Ownership was fragmented at the start, and became ever more so before ECD eventually pieced it together.

At the start of the 1990s, the council saw this as classic 'employment generating' land, by which it seems to have meant industrial workshops, with some office activities on the edge. This would have provided only limited financial reward for the departing industrial owners, Boots and British Rail. To raise land value expectations and secure significant exit payments from the council, they 'reimagined' the location as one suitable for significant PLUR. This early 1990s vision of major mixed-use redevelopment radically changed structural perceptions of what might be achieved at Eastside, but it did not make actual redevelopment any easier. The conjunctural moment created and exploited by Boots and British Rail allowed them to depart without even paying for the contamination they had created, while leaving other actors to grapple with the consequences. No-one was subsequently able to overcome the locational and site-specific disadvantages of Eastside, apart from at the western edge closest to the city centre. As argued below, to do so would have more required more effective institutional arrangements for the management of risk in the development process.

Broader economic and property market cycles provide the second structural element which served to open up and close down opportunities to act. Developers who can successfully 'read' this structural element and act accordingly by starting development early in a cycle will normally be expected to outperform those who start late. Although Eastside saw its existing uses wind down in the 1980s, the site missed the development boom of that decade and emerged as a real redevelopment opportunity only in the midst of the recession in the early 1990s. Even by 1994, it was still not a fortuitous economic moment for Simons to launch its masterplan and when the company withdrew in 1988, this was because it felt that local market conditions were still "going badly by this stage." Yet, within two years, the long development upturn that lasted until the onset of the GFC in 2008 had begun. Why did no-one take advantage of this upturn to commence major redevelopment at Eastside?

Again, the answer lies in the deficient institutional arrangements at Eastside. PLUR normally requires lengthy preparations to be made over several years. In 1998, it fell to NRL to pick up the pieces and chart a new direction for the site but as an urban regeneration company, rather than an urban development corporation, it had no control over planning policy and never gained ownership control of the site. Its Eastside masterplan, published in 2002, transformed the structural perception of the site's potential with cleverly created visions of high-value commercial and residential development, but was not directly linked to any means of implementation. But it helped create the conjunctural moment that ECD's Hopkins masterplan, produced in 2004, sought to exploit. By then, the development upturn of the 2000s was well underway. ECD's late arrival was exacerbated by the four years it took the council to grant consent for the Hopkins masterplan. Whether the plan would have succeeded if it had been tabled in 2000, gained early planning permission, and started on site in 2002 will never be known and, in many ways, is irrelevant. This is because PLUR, especially when deployed at such a large-scale as

Eastside, creates very significant development risks which cannot easily be managed by individual actors operating alone within a single development cycle and which lessen their ability to challenge and transform difficult structural conditions. The conclusions of the paper highlight alternative ways to manage major urban redevelopment which it is argued can help developers of large sites more easily handle the ups and downs of economic and property market cycles.

The broader policy context, which provides the third structural elements, reinforced site-specific and broader economic constraints. After a decade of neoliberalism, by the 1990s local planning authorities were no longer expected to drive or deliver change, but merely to regulate it. The rapid increase in unemployment experienced during the 1980s also meant that councils were easily swayed by any promises made about future job creation, whether reliable or not. PLUR offered the chance to capture a greater share of central government funding for development projects at a time when mainstream budgets were under severe strain. Early experience from Canary Wharf in London, Salford Quays in Manchester and elsewhere had indicated the apparent potential of ambitious PLUR projects, making other localities keen to attract such up-market development. At the same time, disempowerment and institutional fragmentation increasingly encouraged local authorities to share city leadership with the private sector through relatively short-term programmes such as City Challenge. Although Eastside benefited from almost £6 million of City Challenge money spent on decontamination and infrastructure, this limited subsidy seems not to have been able radically to transform the fortunes of the site

From a private-sector perspective, almost all the uncertainties of planning regulation remained at Eastside. There was much planning controversy, for example, over Simons' various designs on Site A and the company eventually withdrew two major proposals for Site C after planning refusals seemed imminent (despite having already agreed to buy the land from the council). ECD appears to have underestimated the time it would take to secure planning permission for the Hopkins masterplan, while later on Heathcote Holdings badly misunderstood the policy context, even though it recognised the market potential of the supermarket boom.

There is little sense that the council ever wished or even knew how to drive development forward at Eastside. It provided no long term vision for the site and seemed indifferent between the cost minimisation strategy pursued by Simons and the value maximisation strategy favoured by ECD. Published planning documents offered no clear or consistent sense of what the council wanted to achieve but appear to have served merely as a baseline for negotiations. Indeed, the council mainly reacted to proposals from others, not really appreciating local market conditions or its own ability to shape them. Crucially, when it might have taken overall control of the site after those initial purchases from Boots and British Rail, the council appears to have wanted to divest itself of direct ownership responsibility as soon as possible.

Even if its role was intended to be that of mere development facilitation, it seems not to have fulfilled this with any vigour, still less to have challenged and transformed the structural context. Apart from the scattering of development on the western edge of the site, it now has little to show for the £9.6 million spent on land acquisition, decontamination and infrastructure, not to mention all the administrative costs incurred over many years. Although its authority was never usurped by an urban development corporation (as happened elsewhere with other PLUR projects), its largely reactive role created a vacuum in local place leadership which the private sector struggled to fulfil.

In summary, no single actor or combination of actors ever adopted strategies and tactics capable of breaking through the structural constraints at Eastside. It could be said that ECD came closest to this with the Hopkins masterplan, but the view emerged from those interviewed for the research that this proposal was too late, too ambitious and never likely to secure the massive amount of development funding it would have required. Indeed, by unduly raising expectations, in terms of both value and product, ECD's property-led regeneration proposal might well have impeded other less ambitious proposals coming forward.

Of the 'Critical Success Factors' identified by Dixon et al. (2011), only three were actually present at Eastside, and then only partially. The scale of site was certainly large. While substantial monies were spent prioritising infrastructure that enabled some development to go ahead on the western edges, infrastructure provision and decontamination work has yet to start on the former railways land to the south. Although strong markets were experienced during the 2000s, by the time this was widely appreciated, it was too late to promote the Hopkins masterplan. Conversely, Eastside lacked strong partnerships, a strong brand and any real long-term vision, while land assembly, even in the recession, proved expensive not cheap. As this suggests, 'Critical Failure Factors' are recognisable from the converse of those identified by Dixon et al. (2011). In the final section, drawing on European experience of similar sites, the paper thus argues that there is thus much to be learnt from events at Eastside on how best to promote major urban redevelopment at sites of this type.

## 5. CONCLUSIONS

Some 25 years after much of Nottingham Eastside first fell vacant, it remains a major potential redevelopment site close to the centre of one of England's core cities. Its experience offers some insights for similar kind of sites in similar kinds of cities, but the conclusions presented here should not be over-interpreted as necessarily applicable in all circumstances. For despite powerful criticism of PLUR on social equity grounds, it has indeed delivered substantial urban reconstruction in other locations. What this paper argues is that even that should not be taken for granted and that, in particular circumstances, PLUR may be as much an ineffective and inefficient means to deliver major urban change as an inequitable one.

At Nottingham, these circumstances derived from the financial risk posed by three elements of the structural framework identified in the previous section. While the economic and property market cycles provided relatively short windows of opportunity within which development could take place, the particular locational and site-specific characteristics of the site demanded long-term commitment extending beyond a single development cycle. Ironically, the policy context offered no such commitment from the public sector, but instead assumed that the private sector would lead the development of the site over the long-term. At times, there was even no integrated commitment to the site over the short-term, as evident when Simons was encouraged by the council's estates committee to pursue plans for car showrooms and a drive-thru restaurant on Site C, to which the planning committee then took exception.

Specific risks consequently faced by private-sector developers included first, the cost and extent of decontamination, second, the means and timescale for recovery of any infrastructure expenditure, and third, the distinct possibility that development of any scale could not be completed and occupied before the next cyclical downturn. On Site A, the first two of these risks were reduced, but not eliminated, by public subsidy. Simons, for example, claimed the east-west link road it built across the site had detracted from its ability to invest in new office development. Sites B and C received no public similar subsidy, and still remain to be treated for contamination and equipped with infrastructure. The third risk proved to be the major reason why ECD was unable to finance the Hopkins masterplan. As the Nottingham experience demonstrates, when such risks are divided up between development actors, rather than shared among them, it becomes very difficult for any single actor to create that 'breakthrough moment' when a difficult structural context is challenge and transformed, enabling development to move ahead.

There is now much evidence from across continental Europe that a locally-led and place-based approach to regeneration can be equally if not more effective than a property-led one (Hall, 2014). Place-based approaches emphasise the importance of creating new urban quarters, with high quality design and public realm, which are well connected and 'knitted in' to the existing urban fabric, rather than standing apart from it. Masterplans prioritise place creation and infrastructure provision and normally provide the basis for packaging up large development sites into much smaller parcels which can then each be built out by different developers, thus reducing any individual developer's exposure to risk. As phased land sales take place over time according to a parcel map, infrastructure investment is gradually

recouped, with the expectation that later parcels will be worth more than earlier ones, reflecting development that has already taken place.

Crucially, this place-based model requires someone to take on the leadership role of 'place promoter' (Adams and Tiesdell, 2013), providing what Leinberger (2007) calls the 'patient equity' for long-term investment. While there are some good examples of individual landowners or private development consortia acting as place promoter, in most of the classic continental cases such as Hamburg in Germany, IJburg in the Netherlands and Hammarby-Sjöstad in Sweden, a powerful public agency or empowered municipality has fulfilled this role. According to Hall (2014: 35) the single most important conclusion from his study of urban development across Europe was the need for "Strong city planning departments (or city agencies) with real planning powers and a willingness to take a positive lead, particularly in developing overall master plans as a framework for development or regeneration of specific areas."

Until the 1980s, the UK was well used to this type of model. But with the privatisation of urban development widely promoted since then, local authorities have mostly lost the capacity to drive forward development of their areas. The purpose of this paper is not to argue that the property-led approach is always ineffective, even if it may inequitable. In favourable circumstances, it has clearly regenerated parts of many British cities. But in Nottingham, opportunities to transform a difficult structural context were missed, primarily as a result of uncoordinated actor behaviour. Property developers and investors came and went, four masterplans were produced but never really implemented, decontamination and infrastructure provision was partial and most of the land is still vacant after all these years. Perhaps most ironically, the City Council is now trying to buy back, possibly by compulsory purchase, the very land it sold to the private sector all those years ago.

None of this can be defended on grounds of economic efficiency, still less on those of social equity. In places such as Nottingham, is it not therefore time to create an alternative place-based model of urban development, drawing on best practice from continental Europe, in which the risks and rewards of major urban transformation are more effectively assigned and shared between the public and private sectors?

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# Approaching a Polycentric and Compact Mode of Sustainable Urban Development: the Case of Shanghai

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## Abstract

*This paper discusses issues relating to the urban structure of contemporary megalopolises in China. As the urbanization rate is over 50% in China, the New Mode of Urbanization Planning (2014-2020) specifies new ways for Chinese cities to optimize their urban structure. Many Chinese megalopolises propose to focus future urban development plans on the polycentric and compact urban structure that would address sustainable development concerns. Shanghai is one of the cities taking the lead in adopting this mode.*

*This paper also reviews theories about both urban polycentric structure and compact city in order to identify new ways to integrate them. To understand how this integrated mode of urban development might work, an urban concept model is established to analyze the relationships between inner city, suburbs, new districts and new towns.*

*Taking Shanghai as an example and making reviews of its previous planning, this research explores the reasons and motivations for adopting the integrated mode and examines the effect of the spatial expansion of population and industry, as well as the role of the intervention and organization of* government. This research also shows how Shanghai s urban structure has tra *monocentric system towards a polycentric structure with compact form.*

The paper s final section presents a quantitative and qualitative analysis of *stage of approaching the polycentric and compact urban structure. Preliminary findings indicates that,* for China s megalopolises, this development *mode is both sustainable and particularly well suitea national conditions.*

## 1. Introduction

### *1.1 Research background*

#### *1.1.1 Demand for optimization of urban spatial structure*

Chinese cities have experienced profound changes since the period of reforms in the late 1970s, and in 2011, the urbanization rate reached 50% (Figure 1).Although the speed is so fast the quality is not satisfactory, some big cities spatial structure and urban scale is not reaso Chinese government enacted a New Mode of Urbanization Planning (2014-2020), in which new ways for Chinese cities to optimize their urban structure are specified. It emphasizes that the extensive way of developing should be changed, the scale of built area and the boundary of the city should be reasonably controlled, and the land use efficiency should be promoted.

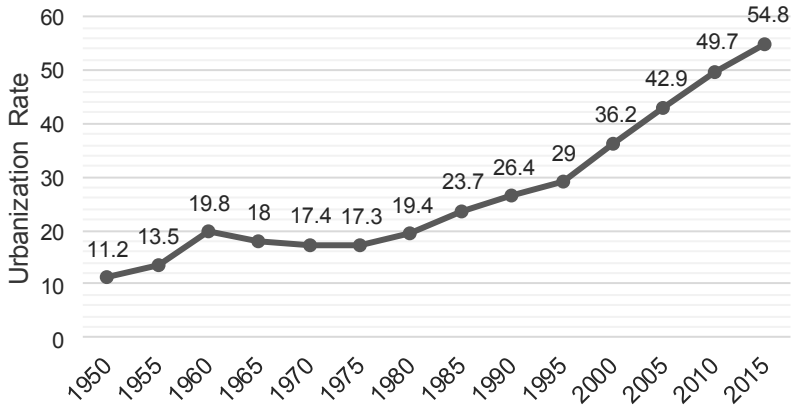


Figure 1. Urbanization Rate of China (Source: National Bureau of Statistics of China)

*1.1.2 Trend of the polycentric structure and compact form*

At present, the number of megalopolises that have fast growing population is still increasing in the process of urbanization in China. In addition, with limited resources, the extensive development approach makes cities sprawl unceasingly and disorderly, leading to many problems like traffic congestion, deterioration of ecological environment, and lack of green space, disease . In order to meet the demands of complex functions and promote the q many cities begin to evacuate pressure from inner city and develop new centers in different levels, thereby gradually changing the urban structure from monocentric to polycentric type. Cities like Beijing, Shanghai, Guangzhou, and Chongqing are proposing to establish a polycentric urban structure and apply the ideas of compact city in their new master plans.

*1.1.3 Concerns for sustainable development*

China is short of many resources though it s a big country, especially arable land because o population. What s more, McKinsey Global Institute (2008) predicted that there will be people living in cities in 2030, which give cities great pressure and a great amount of energy and resources will be wasted as a result of redundant construction unless they apply a sustainable pattern. But luckily, Chinese government has realized the disadvantages of extensive development mode and try to seek a sustainable one, which encourages intensive public transportation oriented development and advocates green traffic system with mixed land use.

*1.2 Research problem and hypotheses*

This study aims to explore the theories and practices about the urban development mode of polycentric structure and compact form, and also identify new ways to integrate them. As nowadays many megalopolises in China are facing great challenges of enormous population, scarce resources and ecological crisis, this mode of development may be a sustainable solution because of low energy consumption and high efficiency of land use.

*1.3 Research objective and scope*

The purpose of this study is to empirically test a polycentric and compact model of sustainable development in whole Shanghai city that comprises 16 districts and 1 county (Figure 2). To understand how this integrated mode of urban development might work, an ideal urban model is

established to analyse relationships between the inner city, new districts and new towns. Making reviews of the previous planning of Shanghai, the research shows how Shanghai s urban structure has transformed from a monocentric system to a polycentric structure with compact form. With a quantitative and qualitative analysis, this research also give an evaluation on stage of approaching this mode.

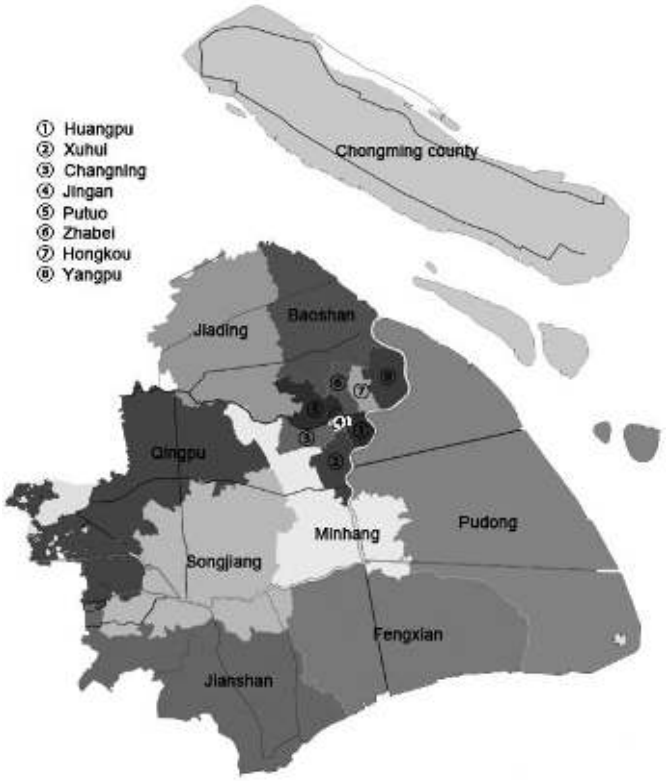


Figure 2. The Administrative Divisions of Shanghai (Source: Self-drawn based on Wikipedia)

## 2. Literature Review

### *2.1 Literature about the urban polycentric structure*

Howard (1898) first suggested an embryonic polycentric urban system garden city , clai city should stop growing when it reaches a certain scale, the excessive part should be joined to adjacent cities to develop a new urban agglomeration. Later, "regional city" put forward by Mumford (1938; 1961) is also a support of polycentric spatial development pattern, which pushed on the ideas of Howard under the background of urban regions. He thought as a geographical presentation, multicenter in terms of spatial form can be measured quantitatively by the method of geography or morphology. Then, the organic decentralization theory proposed by Saarinen (1943) also maintained that population and employment should be decentralized to several districts that have their own characteristics, thereby transferring the disorder concentration to orderly decentralization. In addition, taking Tokyo as a case study, Kawakami (1988) studied how the polycentric structure could form and shape its characteristics, finding that the emergence of polycentric structure has close relation with the size of the city and its change of the transportation means. In regard to the measurement method, Bertaud (2004) proposes the population density, the gradient of the density profile and daily travel mode can reflect the degree of polycentric spatial form. Based on this, Wei Yaping (2006) proposed a quantitative method for spatial structure measurement through density performance, spread

performance, population density gradation performance and OD performance, and extended four modes of the polycentric network structure in the metropolitan area. Finally, taking 8 cities in northwest Europe as examples, Hall (2006), the leader of Sustainable Management of European Polycentric Mega-City Regions (POLYNET), made "grade-scale" analysis on urban functional areas about their degree of self-sufficiency and calculated commuter flows to measure their connection.

*2.2 Literature about the urban compact form*

"Compact city" is one of representative theories of controlling urban sprawl and promoting sustainable development in European countries, which was first put forward in Green pa environment (Commission of the European Communities, 1990). Later, many scholar researches about its mode, objective, strategy and so on. They think "compactness" is a spatial form with high density and mixed function (Glaster, et al., 2001; Mubareka, et al., 2011), is a development mode towards high density (Gaigne and Riou, 2012; Dempsey, et al., 2012). Furthermore, Jenks (1996; 2000) summarized the five aspects of compact city theory and its development in the first 10 years and discussed the sustainable development of urban form and the urban problems in the developing countries. Kaido (2001; 2007) introduced different theories about compact cities in Europe and the United States, finally discussed how to build compact cities in Japan. In 2012, Organization for Economic Cooperation and Development (OECD) made comprehensive assessment and comparison on the implementation and performance of the compact city policy among its member states, providing by far the most comprehensive definition of compact growth and valuable advice for policy makers. On the aspect of measurement and evaluation of compact city, Ma Li and Jin Fengjun (2011) from Chinese Academy of Sciences established a compact degree evaluation system according to Chinese condition and applied it to more than 120 cities, finding that 67.2% of Chinese cities are not compact and compactness has strong links with urban population and economy.

About how to integrate these two theories that may seems contradictory at first, the Network of European Metropolitan Regions and Areas (2010) provided a base that a polycentric metropolitan area can be a compact city if it has the identified characteristics. In addition, only Rogers (1997) roughly proposed a pattern of polycentric and compact urban structure for sustainable development (Figure 3). From the above statement, it can be learned that the integration of polycentric structure and compact form is less researched, in the following sections, we will analyse the case of Shanghai s development mode to understand how these two ideas can be combined for sustainable concerns.

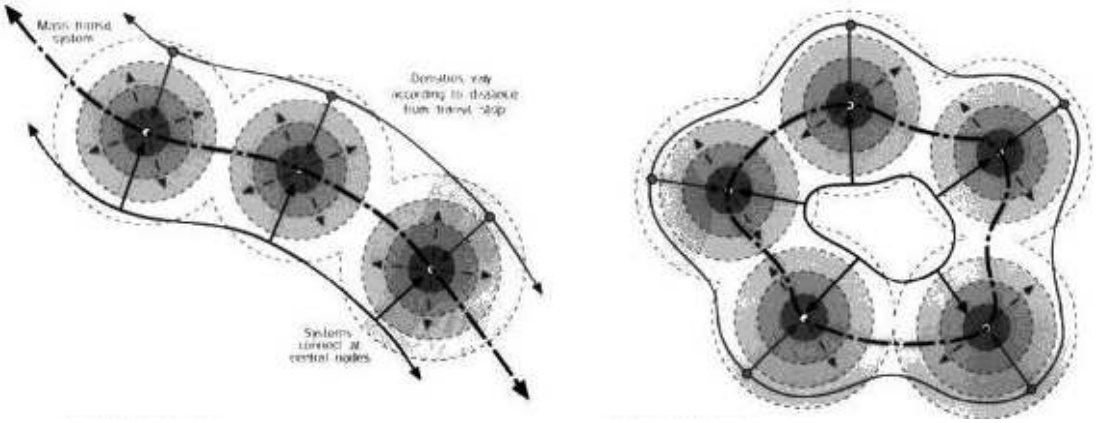


Figure 3. Rogers s Polycentric and Compact Urban Pattern (Source: Cities for a Small Planet, pp.39)

**3. Methodology and Analysis**

*3.1 Polycentric and compact urban concept model*

*3.1.1 The definition of multicenter*

City center is an area of highly concentrated urban functions. As living and working are the two main functions of the city, the residential and employment center can be chosen to analyse the polycentric structure. Residential center refers to a geographical unit in which resident population or residential density is higher than a certain value, so does the employment center (Giuliano and Small, 1991). Furthermore, the essence of employment center is that it is the node of the information flow of economic activity and it can dominate surrounding employment, population and housing prices (McMillen and McDonald, 1998).

*3.1.2 The definition of compactness*

OECD (Organization for Economic Co-operation and Development) has given an authentic interpretation of compact city, they consider that the key characteristics of a compact city are dense and proximate development patterns, urban areas linked by public transport systems and accessibility to local services and jobs (Figure 4).And the report also proposes a set of 18 core compact city indicators that are considered essential for analysing compact city (OECD, 2012, pp.87). The indicators are selected to represent effectively the compact city and compactness as here d

Figure4. Key Characteristics of a Compact City (Source: Compact City Policies: A Comparative Assessment, OECD, 2012, pp.28)

*3.1.3 The integrated model*

In order to integrate these two concept, based on Rogers s pattern this study polycentric and compact urban model as shown in the figure below (Figure 5). As polycentric structure is the best city form for megacities when the population reaches 5 million (Bertaud, 2004), the largest radius of the city with 5 million population is about 12.6 $km^2$ according to indices for land area per capita (about 100 $m^2$/p in China). When the population is over 5 million, the city extends outward to develop new centers. The polycentric structure includes two aspects. First, within the scope of the whole city, the layout of inner city, new districts and new towns that have their own characteristics is polycentric. Second, the inner city even each new districts also have their own polycentric structure. Similarly, compact form also includes two aspects. First, all the centers have a compact distribution with some overlapped suburban areas, and second, the concept of compact city is applied to each center and they will keep appropriate scale of population and space. Thus, the urban agglomerations are not necessarily located contiguously but are not widely dispersed. Last but not the least, they must be linked together by public transport systems as proximity of urban cores is an important notion for a polycentric compact city (OECD, 2012). This mode emphasizes the spatial intensiveness, though the centers are separated with each other, the land use in each new district is compact.

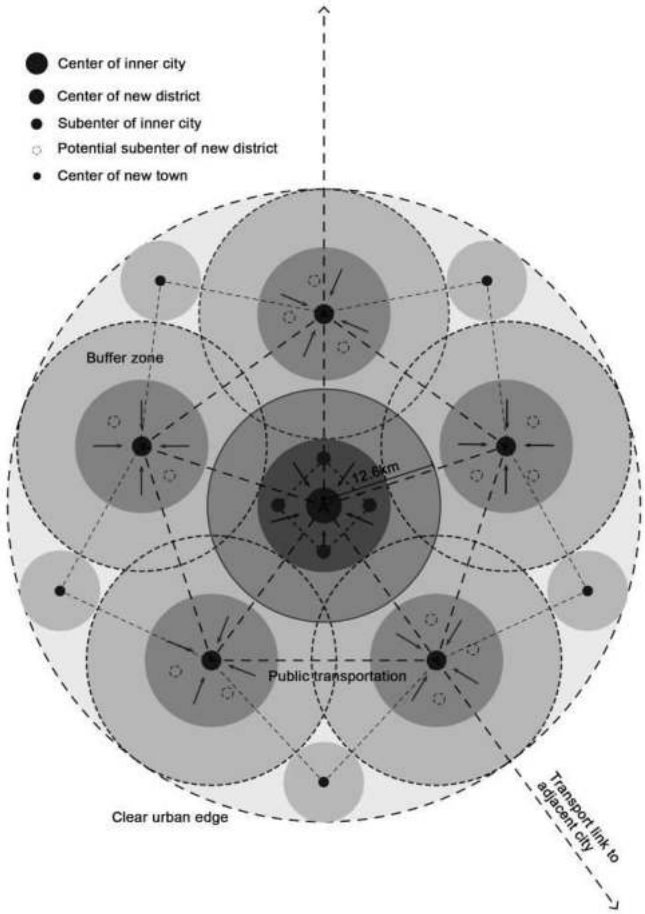


Figure 5. The Polycentric and Compact Urban Concept Model (Source: Self-drawn)

*3.2 Mapping and planning review*

The evolution of Shanghai urban spatial structure are closely related to urban planning and its implementation. From port opening to now, four strategic plans have significantly influenced the urban system of Shanghai, also deeply affected urban development. The four most important plans are City Planning of Grand Shanghai in 1946, Preliminary Views on Master Plan of Shanghai in 1959, Shanghai Master Plan in 1984 and Shanghai Master Plan (1999~2020) in 1999. The implementation of these four plans directly contributed to Shanghai today's urban system. Making a review of the development and evolution of Shanghai s spatial structure, we can easily find t historical periods.

*3.2.1 From the founding of new China to early 1980s: A typical monocentric urban system*

After the victory of Anti-Japanese War in 1945, Shanghai government set up Shanghai Urban Planning Committee, and drew up a "Draft Report of Shanghai Master Plan in December of 1948.A the time, the population and economic activity was concentrated in the downtown area, three million people, 3/4 of the whole, lived in the city center that had just about 80 km$^2$, 9.6% of the total area. The report found that the central city capacity was limited and it was necessary to search a method that can evacuate population, thus proposing to build satellite towns near the city center, which had great influence on the later development of Shanghai city. After the founding of new China, Shanghai government authorized Works Bureau was responsible for the city planning, some architects and

engineers returnees adopted the new urban planning theories like organic decen
planning in the draft of Shanghai master plan (Figure 6).

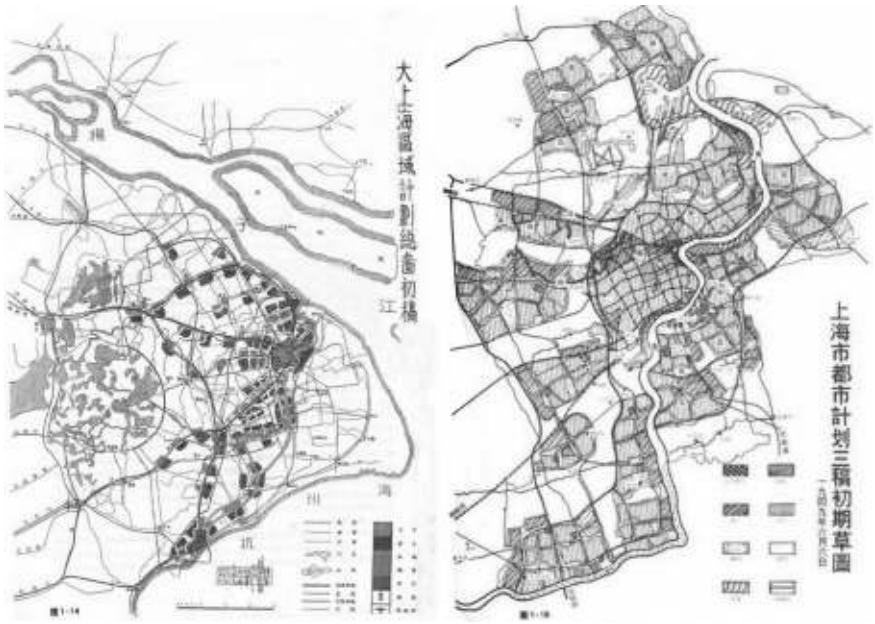


Figure 6. City Planning of Grand Shanghai, 1946~1949(Source: Shanghai Works Bureau)

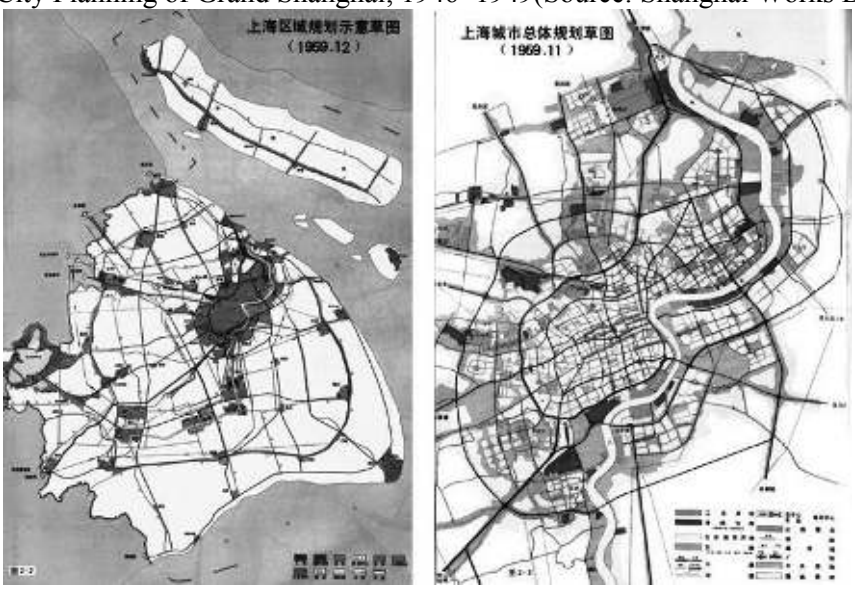


Figure7.Shanghai Master Plan, 1959 (Source: Shanghai Urban Planning and Design Research Institute)

Later, during the time when planned economy was dominated, Shanghai became a single-functional domestic productive center, gradually become China's important industrial base and financial support. In 1959, Shanghai Municipal Council invited the urban planning group of architectural engineering department to work on the Master Plan of Shanghai (Figure 7), which aimed to compress the old town, control the suburbs and develop satellite towns . After 1959, Shanghai st towns, by 1970s seven satellite towns were built, and in 1982, central Shanghai had 10 districts such as Huangpu, Luwan, and Hongkou, whose density was about 28000 hab / km$^2$.

In this period, Shanghai expanded around the inner city as a core, monocentric urban space layout was very obvious, but what cannot be ignored was that the ideas of decentralization was about to appear.

*3.2.2 In late 1980s and 1990s: Transferring from monocentric to polycentric structure*

After the Reform and Opening up, dominated by market economy, Shanghai s urban function had transferred to a multi-functional export-oriented economic center. In 1984, Shanghai Urban Planning Institute began to make a new master plan under the organization of the government (Figure 8). In this plan, urban system were divided into four levels: inner city, satellite towns, suburban towns and rural towns. In inner city, mixed functional districts were established to give people access to work, residence, recreation, social communication in their life. Each districts can be divided by green space, river, and railway but linked by convenient transportation. Then, the satellite towns integrity of urban function was stressed, which insisted that satellite towns should have its own leading industry and a well-developed environment for living and working. In addition, the suburban towns can be the political, economic and cultural center of the locality. Finally, the rural towns can be dispersedly distributed among satellite towns and the rural towns.

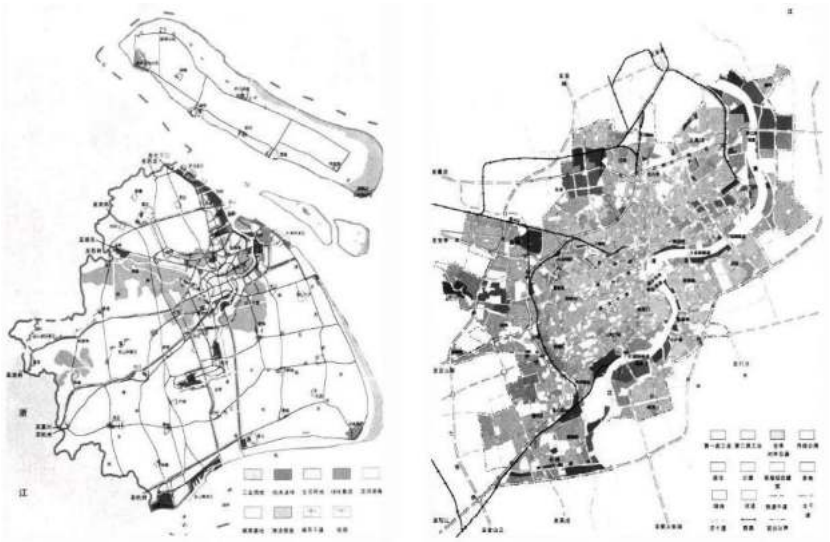

Figure 8. Shanghai Master Plan, 1984 (People's Government of Shanghai Municipality)

This plan strived to change the concentric spatial structure of Shanghai, to integrate the inner city, satellite towns, suburban towns and rural towns and to take the ideas of polycentric city with conglomerate structure as the important guideline for urban construction, thereby making Shanghai spatial structure gradually transfer from monocentric to polycentric type during this time.

*3.2.3 Since the new century: Approaching a polycentric and compact development mode*

In order to adapt to the development of Pudong area and the social and economic development of Shanghai, Shanghai Urban Planning Institute finished making the Master Plan of Shanghai (1999~2020) that was approved by the State Council in 2001(Figure 9). In the whole city level, a multi-axial, multi-level and multi-core urban spatial structure was fixed in this plan, and the urban system changed to inner city, new districts, key towns and common towns. And in the inner city level, the polycentric and open layout was adopted to shape the one center (Lujiazui and The Bund) and four sub enters (Xujiahui, Wujiaochang, Huamu and Zhenru) pattern. Besides, as satellite towns had gradually transferred to new towns that had larger scale and higher independence, urban spatial structure also was gradually developing towards polycentricism.

Shanghai continued to push forward the polycentric urban system in its "11th five-year plan (2006~2010)". A 1966 urban system was put on the table, namely a system comprised o

city, nine new cities, about 60 towns and about 600 villages, to take into full account the issues of population regulation, industrial development, infrastructure construction, resource utilization and environmental protection. The construction of the suburban towns was the key issue of this planning, which first clarified the specific number of them.

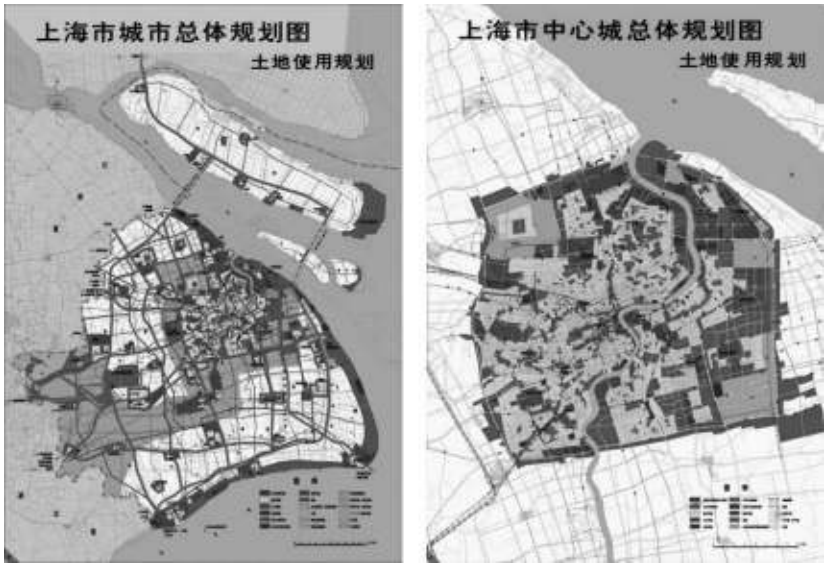


Figure 9. Shanghai Master Plan, 1999~2020 (Source: People's Government of Shanghai Municipality)

At present, government are preparing to make a new master plan for Shanghai 2040, they will take measures to strictly control the scale of the population and the land, for instance, decentralizing population from inner city and accelerating population aggregation in new cities and towns that are well developed, optimizing land use and prohibiting the growth of built area. The urban spatial structure still keeps polycentric and open and establish an intensive and compact network. As a result, Shanghai is approaching a polycentric urban structure with compact form.

### *3.3 Qualitative and quantitative analysis*

#### *3.3.1 Measurement of multicenter in Shanghai*

The measurement of multicenter can be carried out in two ways: form and function. Based on the geographical spatial distribution, morphological multicenter can be described by three elements: average population density of built area, vertical density gradient and daily travel mode (Bertaud, 2004). Functional multicenter emphasizes the information communication of company s ir organization, which generally appears in the urban areas with a high integration of economy. It is only when different urban functions are complementary and specialized that it works (Hall and Pain, 2006). Based on population and employment density, I chose the former way to find out the distribution pattern and evolution characteristics of residential center and employment center respectively.

On the aspect of residential population distribution, most is concentrated in the inner city with a little agglomeration in Minhang, Songjiang, Jiading, and Chuansha in the suburb in 1996. Before 2005, population soared in inner suburbs and was stable in the outer suburbs. But after 2005, the outer suburbs like Jiading, Baoshan, Qingpu and Songjiang also showed a sharp growth of population. Generally, the changes in the population indicated a trend that it decreased in inner city and increased in suburbs. Population density dropped sharply in the central area, and had a rapid growth in the inner suburbs and Jiading, Songjiang and Qingpu in outer suburbs, but inner city was still the main residential center (Figure 10).

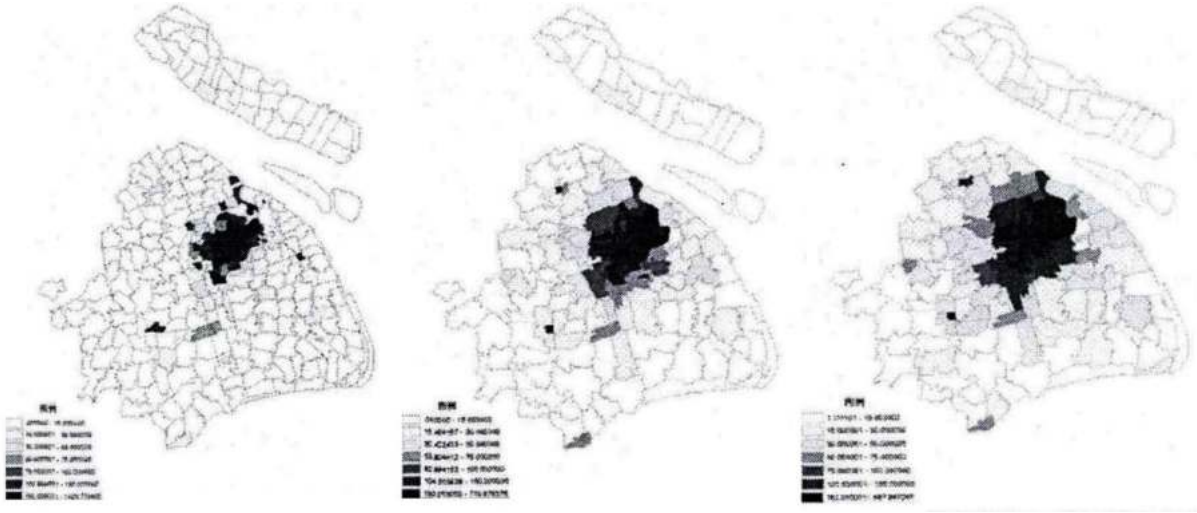

Figure 10. Variation of Residential Population Density in Shanghai 1996, 2005, 2010 (Source: Shanghai Bureau of Statistics)

If we further analyse the change of the employment population since 1996, we can find in different stages, the employment population increased in different ways. Before 2004, we saw the decrease in the core area of inner city and part peripheral area, also most of Chongming County. Meanwhile the employment population showed a trend of rising in suburbs, especially the inner suburbs. After 2004, the main declining area was still the inner city, but suburbs still kept increasing, with the key growth point transferring to some outer suburbs like Songjiang, Jinshan and Fengxian, approaching a trend of polycentricism (Figure 11). Here we found a big difference from residential population is that employment population spread along transportation lines while the residential population sprawled concentrically.

Figure 11. Variation of Employment Population Density in Shanghai 1996, 2004, 2008 (Source: Shanghai Bureau of Statistics)

*3.3.1 Measurement of compactness in Shanghai*

As developing countries have unlike backgrounds and characteristics of urban development, the content of compact city is different. Referring to the indicators of compact city put forward by OECD (2012) and combining with China's national conditions, this research proposed a compact degree

evaluation system from three dimensions: form, structure and efficiency (Figure 12). On the form aspect, it reflects the saving of urban scope, namely having reasonable population capacity and economic activities as much as possible in a limited area, and occupying less arable land and green space. Structure dimension mainly refers to the structure of roads and land use, which should match the growth of population and economy. Efficiency dimension is comprised of the accessibility of transportation, public facilities and infrastructure with efficient use and less energy consumption.

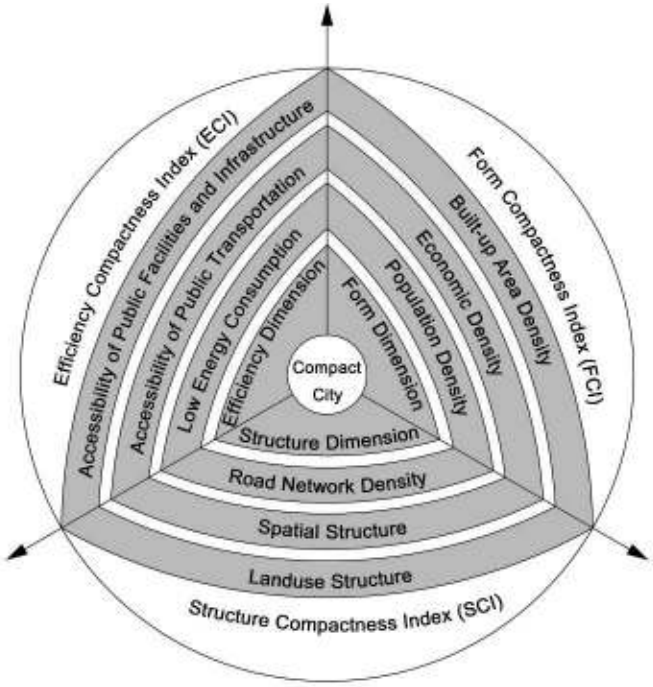


Figure 12. The Compact Degree Evaluation System from Three Dimensions (Source: Self-drawn)

*3.3.2 Measurement of compactness in Shanghai*

This study selected the whole Shanghai city as research object, including 16 districts and 1 county. After zero-mean normalization, data about these 17 zones can be used for factor analysis. Since there are 9 items in this evaluation system, so the scores of each item in each zones should be calculated. But now I only chose the 3 items in form dimension because of the limitation of data collection. Taking the covariance score as the weight of each factors to calculate comprehensive score of each zones, I got the form compactness degree score of these 17 zones after 0-1 normalization (Figure 13).

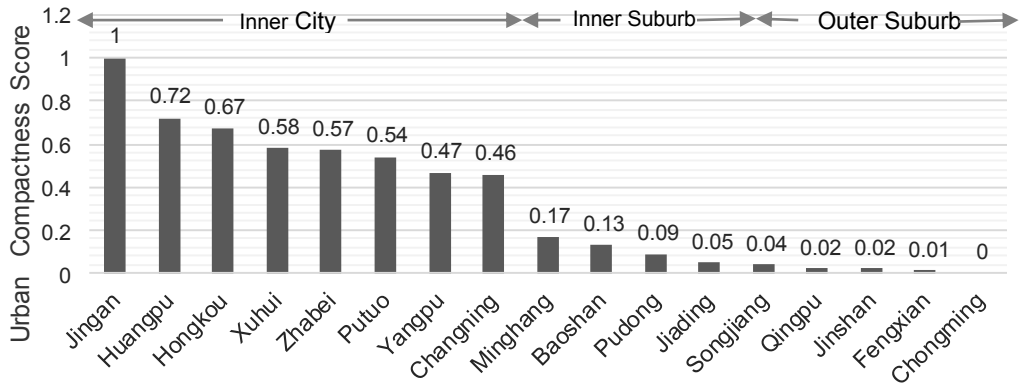


Figure 13. Urban Compactness Score (Source: Self-drawn based on Shanghai Statistical Yearbook)

## 4. Findings and Discussion

### *4.1 The advantages of polycentric compact urban structure*

The model above shows that the most significant advantage of polycentric compact development mode is that it can control urban sprawl efficiently. More precisely, the advantages of this integrated mode are as followings. First, from the perspective of resources consumption, compactness is beneficial to saving resources, including fuels, water, materials, products, manpower and time, it also reduces pollution at the same time. In one word, it saves individual and social cost of travel, which are the negative externalities of environmental pollution and traffic congestion. Second, it helps improve the quality of life. This compact polycentric structure can improve the convenience for social communication, enjoying services and making use of various facilities, which will make people inspire creativity and understand each other better, thus promoting social development and harmony. Third, it increases the density so as to improve the utilization efficiency of urban space. This kind of high density is a suitable high density that does not have negative impacts such as overcrowdings. Compact urban development will first develop the urban land that has not been fully developed and redevelop existing buildings or previously developed areas while subdividing, transferring, consolidating and expanding. Finally, polycentrism means networked, it will neither causes overloads of the inner city, nor creates excessive dispersion. Polycentric compact structure is a basic urban spatial form in information society. Linked by highway network and information network, cities will develop a regional constellation structure for specialization and cooperation (Figure 14).

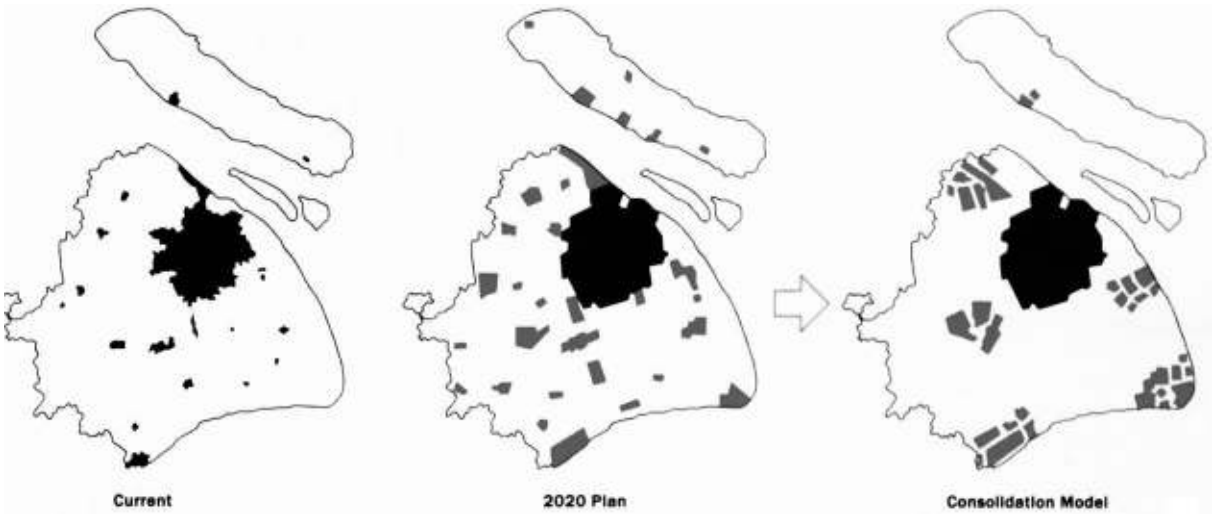


Figure 14. A Regional Constellation Structure (Source: Rem Koolhaas s proposal for future Shan in 2003)

### *4.2 The economic explanation and strategic drive of polycentric compact development mode*

Almost all cities started growing from the center of downtown. The centripetal force brought by agglomeration is the original power of urban development, the game between the centripetal and centrifugal force push on the development of urban system (Fujita, Krugman, and Venables, 2000). The process of urban extension is the result of the scale effect and agglomeration effect of the growth poles, the marginal revenue will increase with the growth of scale, but decline when scale reach to a certain size (Figure 15). When marginal cost equals the marginal revenue for second time (P3), it indicates that all the residents in the city gain the maximum net benefits, in other words, the whole city reaches the best scale with reasonable compactness. When the average cost is equal to the average

revenue for second time (P4), the urban scale reaches maximum. If the city continues growing, the increase of marginal cost caused by long commuting time and traffic congestion will exceed the marginal revenue produced by agglomeration effect, leading to that population and the economic elements will spread to the surrounding areas and develop a new growth pole. Gradually, the city will transfer to a polycentric structure.

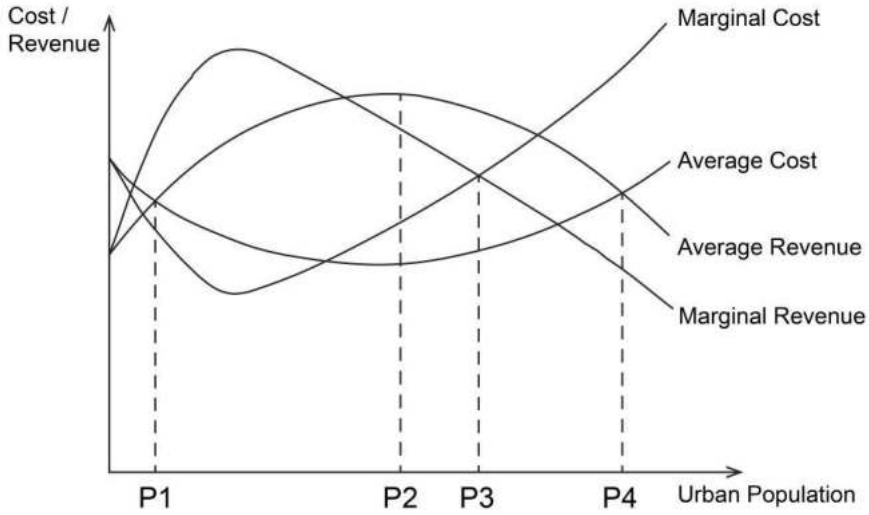


Figure 15. The Economic Explanation of Reasonable Urban Scale (Source: Urban Planning Forum)

On the other hand, the strategy of polycentric compact structure can make maximum urban comprehensive benefit, whose success depends on the effective correction of the external negative effects of the market from the government. In other words, the essence of this strategy is a game between the market and the government behaviour that regards the maximization of urban comprehensive benefit as the value orientation. From the past plans, we can see the intervention of government or even legislation is very essential. Therefore, the development of polycentric compact structure of Shanghai is not a product of the market economy, it needs governm involvement and organizations. As urban planning is a policy instrument to execute the will of the government, it should stand up in new town construction and play a positive role in pushing on the process of polycentric compact structure evolution.

*4.3 Evaluation on* Shanghai s development stage of approaching *the integrated mode*

Based on the spatial evolution of the residential and employment centers in Shanghai, some conclusions can be made. First, suburbanization process has begun in Shanghai, and the residential and employment centers are gradually developing in the suburbs. Second, in term of residential density or employment density, monocentric structure still exists, the polycentric structure is not well developed in the whole city, but as Songjiang and Jiading are becoming two powerful sub enters and several potential residential and employment centers also formed in outer suburbs, the monocentric structure is being broken. Finally, compared the connection between each districts and the inner city with the result of Europe POLYNET program (Hall and Pain, 2006), Shanghai is in a phase of the transition from monocentric to polycentric structure. Besides, with the improvement of road network and subway system, polycentricism is expected to be further improved.

In term of form compactness degree, it is relatively high in the inner city and the inner suburbs and outer suburbs is low, which is almost in line with the model. Specifically, Jingan District shows the highest form compactness degree, which is lowest in Chongming County. It also indicates that the

more the economy is developed, the higher is the intensiveness of the land use, conversely, the intensiveness of the land use is low in where the level of economic development is also low as the result of cheaper land price. Above all, the compactness degree in Shanghai still have space for improvement, especially the suburbs .

## 5. Conclusion

In this paper we have analysed the polycentric and compact development mode of Shanghai. This integrated mode also has been the hot pursuit of many metropolises and areas with limit resources. In this mode, polycentric and compact concept are embodied in both the whole city level and each districts, as it can save resources and promote land use efficiency because of high density, it is particularly well suited to Chinese national conditions for sustainable development under the background of stringent constraint of resources. For instance, restricted by the regulation, the built area of Shanghai cannot increase any more, this mode will become the inevitable choice of Shanghai, which also can give some reference to other metropolises in China.

There also exist some limitations in this paper. The paper used a method of generalization and induction when explaining the model, lacking quantitative detail. The concept model of polycentric and compact structure is abstract and it must be modified if used into practice and it is hard to find what proper high density is. The method of multicenter measurement just takes care of the morphological one, and the method of compactness measurement only gives a relative value from internal comparison, they still needs promotion. Other problems existing in this paper also need improved. In the future, more works can be done around the model this paper proposed, including seeking strong links between this mode and sustainable development, searching better ways to measure multicenter and compactness, and exploring how this integrated mode can provide reference for other cities in different conditions.

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# URBAN ENTERPRISE ZONES AND THE BRUSSELS ZONE OF ECONOMIC EXPANSION IN THE CITY (ZEEC)

*Brussels' policy instruments and strategies for mixed-use development in a European context*

Sarah De Boeck, David Bassens, and Michael Ryckewaert

> *When dispassionately evaluated, the evidence suggests policy can in truth do relatively little to change the basic trajectory of underperforming urban areas, but misguided policies can have very bad unintended outcomes on all cities. In other words, governments have limited power to directly improve urban economies and a great deal of capacity to damage them.*
> *(Cheshire et al. 2014:6)*

## 1. Introduction

Urban enterprise zones (UEZs) are part of a toolbox of spatial policy instruments that are used worldwide to stimulate economic development and growth (*Briant et al. 2012, Givord et al. 2012, Green et al. 2001, Ham et al. 2012, IWEPS 2014, and Mayneris 2014)*. The Brussels Capital Region (BCR) will shortly introduce a UEZ along the canal Brussels-Charleroi, named Zone voor Economische Uitbouw in de Stad, or in English, Zone of Economic Expansion in the City (ZEUS-ZEEC). This zone will be used specifically to attract enterprises in deprived neighborhoods (BHG 2013, 2014a). The stimulation of job creation by attracting enterprises with fiscal benefits is used as a strategy to reduce unemployment. The ZEUS-ZEEC was approved by Ordonnance (BHG 2014a) in January 2014 but is not implemented yet, because the authorized Minister is awaiting an evaluation of several policy instruments for economic expansion, including the ZEUS-ZEEC (BHG 2008, 2015).

Researchers are mostly negative to moderately positive about UEZs because they do not reduce unemployment as they are supposed to do, because land prices rise in that particular zone, etc. (Givord et al. 2012, Green et al. 2001, Mayneris 2014, and Rousseau 2010). The underlying question is whether UEZs reduce or reproduce inequality? An analysis of international cases shows us that the *Zone Franche Urbaine* (ZFU) – the French variant of UEZs– of Roubaix, Lille, is an exception and is seen in its beginning period as very successful by researchers (Colomb 2007, Green et al. 2001).

How can we understand the success of Roubaix? Can we trace policy elements that have contributed to Roubaix' success that are transferable to other contexts? Can the BCR learn from the ZFU Roubaix to enhance the ZEEC' succeeding, so that the UEZ can rather reduce inequality instead of reproducing it?

In the first part of this paper we try to qualify territorial policy instruments in a broader political-economic context. Based on the social- and economic geographical insights about uneven development we place these policy instruments within the historical transition from Fordism to post-Fordism (Brenner 2004, Harvey 1989, and Swyngedouw 1997, 2002). We also look at how this transition is reflected in spatial policy instruments (Graham 2010).

In the second part of the paper we zoom in on the case of the ZFU Roubaix and compare it to the ZEEC. We describe the French and Brussels variants of UEZs, we make an inventory of the effects of these spatial policy instruments, as well as of the arguments used to explain the success of the ZFU Roubaix.

Every listed effect and argument related to the ZFU Roubaix will be compared to the ZEEC in Brussels. We make use of policy documents, reports and literature about the functioning and effects of UEZs.

## 2. Territorial policy instruments in a broader political-economic perspective

### 2.1. Rescaling and fragmentation

Until the 1980s, other strategies were used than those we know today by European governments to conquer uneven development on their national soils. The concept of *spatial Keynesianism* describes a body of spatial policy instruments and strategies used on a national scale to influence the geography of capital investments (Brenner 2004, Harvey 1989). These planning strategies can we see as a way to spreading, managing and softening the inequality within the national boundaries.

Brenner (2004) describes a transition of policy making at the national level to policy making at smaller scales (local and regional level) starting in the second half of the 1970s. He depicts this transition as the emergence of *new state spaces* as a result of the use of *urban locational policies* which causes new patterns of geographical uneven development. Policy shifts from a redistributive agenda towards a growth oriented agenda and the enhancement of territorial competitiveness. This fragmentation of policy spaces happened in a context of heavy deindustrialization causing an immense structural unemployment on the one hand, and a weakening of the fiscal revenues of cities by a continuous suburbanization on the other hand (Harvey 1989; Fainstein 1991). We can link these processes of rescaling also to a parallel transition in governmentality, namely of a controlled economy (Fordism, Keynesianism) to a rather *reregulated economy* (post-Fordism) and see a growing importance of the local scale against the backdrop of globalization known as *glocalization* (Brenner 1999, Peck et al. 2002, Swyngedouw 1997). *Urban locational policies* are seen by Brenner (2004) as an attempt to answer to the heavy deindustrialization and the unification of the European market. They are place- and scale-specific regulatory interventions, used to regulate urban development, and include *state spatial projects* and *state special strategies*.

Graham (2000) observes a parallel shift in the realm of urban planning, which he describes as a *splintering* of urban planning. Policy spaces, who before were experienced as coherent and comprehensive spaces, become divided in whether or not contiguous fragments since the 1980s. Examples are cultural, heritage and sporting zones, business improvement districts, enterprise zones, technology zones, shopping malls etc.

We situate UEZs, like the ZEEC and the ZFU Roubaix, within this broader political-economic perspective of rescaling and identify them as forms of a splintered urban planning.

### 2.2. Competition and rivalry

After the 1980s, governments change their strategies to answer to the deindustrialized economy by trying to enhance the supranational competitiveness of their strategic cities and city regions.

Where site- and scale specific interventions were previously oriented on intranational and intraregional redistribution, they are more and more oriented to the strategic positioning of major cities in a broader global and European history (Brenner 2004). To attract investments, local authorities try to put themselves in the spotlight by taking a series of initiatives to revitalize local economies. Where once by

national borders the intercity and interregional competition could be somewhat buffered, this competition just fanned by the unification of the European economic market. This means that cities and regions, more than before, become each other's competitors in attracting investment capital, companies and funds. The fragmentation and competition also takes place on smaller scales, namely –such as Graham (2000) cites above – in terms of zoning within one region or even within one city.

### 2.3. Metropolitan regions

Starting from the 1990s, we see that local authorities try to organize themselves again on a larger scale in the form of metropolitan regions. These are mainly European regions that are already embedded in or connected with European and global circuits of capital and transport networks (Brenner 2004). The parties assume that removing or mitigating the competition within the region, makes them more competitive on a supraregional scale. The ZFU Roubaix works within a metropolitan spatial planning framework – Colomb (2007) speaks of a *metropolitan consensus* – where one has managed within the Lille region to weaken the internal competition between the municipalities.

Some metropolitan regions manage to weaken competition within the region and to achieve a form of territorial cohesion. Below we'll see that implementing a ZFU within a *metropolitan consensus* operation indeed may partly explain the success of the ZFU Roubaix (Colomb 2007). In some cases, UEZs within metropolitan regions, can thus be seen as a tool to combat social and spatial polarization within a region. Today, the BHG is not operating within a metropolitan spatial planning framework. However, it is important to mention the competition-weakening operation within metropolitan regions. The competition arising from the relocation of jobs and businesses to a UEZ, is accepted to some extent because local governments are cooperating. The *affected* areas within the region can then rely on accompanying measures such as investment in urban renewal, building a network of public transport with extra stops, etc. (Colomb 2007).

Areas outside the metropolitan region are less fortunate. Brenner (2004) describes the formation of metropolitan regions as a particularly aggressive form of rescaling. While they weaken the interregional competition, the metropolitan levels increase instability on interregional scale. This is partly because inequality is going to (re)organize according to principles of connectivity and disconnectivity. Who is not or less well connected and thus has difficult access to services, training, work etc. starts from a weaker position to connect to society.

## 3. Comparative case study between the ZFU Roubaix and the ZEEC of Brussels

Since many years, both the BCR and the region of Lille are confronted with the challenge to deal with a vast and structural unemployment. The ZFU Roubaix is considered as a pretty successful territorial policy tool to address unemployment (Colomb 2007, Green et al. 2001). The numbers used to legitimate this success are among others an increase of 5.000 jobs between 1997 and 2001 in the ZFU (60% business transfers and 40% new businesses), primarily in the service sector and in construction. Hereof, a little more than 20% or approximately 400 jobs went to local inhabitants[1]. In *table 1* we give an

[1] Despite this success, one speaks of *the paradox of Roubaix* (Colomb 2007). This paradox is similar to the paradox of the BCR, namely a parallel presence of a big amount of jobs and a vast unemployment.

overview of the important characteristics of the ZFU Roubaix and the ZEEC. Subsequently, we discuss the effects of UEZs and the arguments that are used to explain the success of the ZFU Roubaix.

**Table 1 – Overview of the important characteristics of the ZFU Roubaix and the ZEEC Brussels.**

| | **Zone Franche Urbaine Roubaix, France** | **Zone of Economic Development of the City, Brussels** |
|---|---|---|
| **Objective** | Job creation for residents of the zone.<br>Attracting economic activity as leverage of city renewal. | Job creation for residents of the zone.<br>Attracting economic activity as leverage of city renewal. |
| **Actors** | The central government allots zones based on criteria of 'deprivation' and a system of auction. | The Brussels regional government allots zones based of criteria of 'deprivation'.<br>Authority of the regional administration Brussels Economy & Employment[2] (BEE). |
| **Zoning allocation criteria** | 5 criteria:<br>> 10.000 residents.<br>Unemployment of 25% lower than the national average.<br>The share of youngsters <25 years is higher than 36%.<br>The share of youngsters >15 years without qualifications is higher than the national average of 29%.<br>A local tax potential lower than 3.800FF per resident. | 3 criteria, of which the average has to be lower than the average of the BCR:<br>Unemployment.<br>The share of unemployed people with the profile of worker.<br>Income per tax return. |
| **Location** | 1 of the 44 'Quartiers en difficultés' spread over France, and part of the metropolitan region of Euralille.<br>Roubaix is the only ZFU that is located in the city center. | 1 Zone of 'deprivation', located on both banks of the canal Brussels-Charleroi, from Vorst to just past the site of Tour & Taxi (*see figure 1 & 2 below*). |
| **Size** | 525ha.[3] | Estimation between 550ha and 650ha.[4] |
| **Which companies are eligible to be chosen?** | Small companies of max. 5 employees. | Micro, small, medium and large companies with a place of business in the zone.<br>A minimum of 3 employees.<br>No account is taken of the amount of jobs per m². |

[2] The Brussels regional administration in Dutch: Brussel Economie & Werkgelegenheid.
[3] The average surface of a French ZFU is 189ha. Only 4 ZFUs are bigger than 300ha, among which the ZFU Roubaix (Green ea. 2001:58). This shows that also the Brussels ZEEC has a big size in comparison with the average French ZFU.
[4] For now, we haven't found any numbers of the exact size of the ZEEC, so we made an estimation to be able to compare the size of the ZEEC with the ZFU Roubaix. The canal area of the BCR covers 9,2% of the territory and has a surface of 161,4km² (ATO-ADT 2013). The ZEEC is a little bit smaller than half of the canal area. Therefore, we estimate the ZEEC covers 4% of the surface of the BCR.

| | | |
|---|---|---|
| | No account is taken of the amount of jobs per m². | |
| **Company benefits** | Most important benefits:<br>Exemption of municipality tax for 5 years.<br>Exemption of surface tax for 5 years.<br>Partial exemption of employee tax (social security, work accident insurance) for 5 years. | Benefits:<br>Partial takeover by the government of the annual salary and social contribution of staff who live in the zone: 30% in year 1, 15% in year 2.<br>Partial exemption of surface tax: unlimited in time as long as the criteria and constraints are respected. |
| **Conditions for companies to get involved?** | 20% local recruitment. | 30% local recruitment of residents living at least 6 months at the moment of recruitment. |

*Sources: BHG (2014a, b, d), Briant et al. (2012), Colomb (2007), Green et al. (2001) IWEPS (2014), Mayneris (2014), République Française (2015a, b) – own assembly.*

### 3.1. How do urban enterprise zones work?

Below, we give an overview of the effects of urban enterprise zones. The size of this paper keeps us from giving a complete overview. The high costs per job created[5], processes of gentrification (Rousseau 2010), and short-term effects (Green et al. 2001, Mayneris 2014) will not be addressed for now.

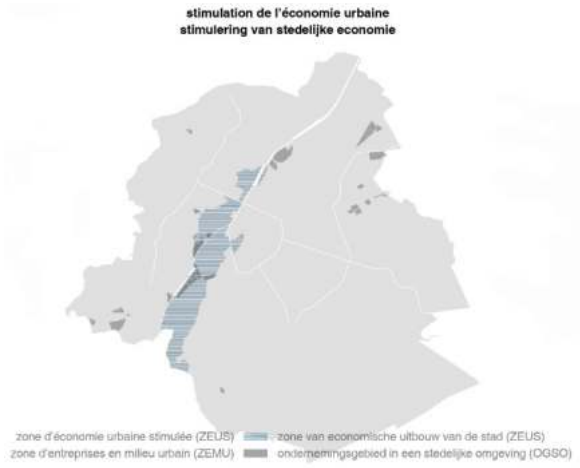
**Rising land prices who price away businesses:** Green et al. (2001) notifies the increase of price of buildings and available parcels within the ZFU Roubaix. He warns that this markup can have a negative effect on the attraction of new enterprises. Not only new enterprises might no longer be attracted by rising land prices, but also the existing companies can be priced away through mixed-use development (Wolf-Powers 2005), with a risk of relocation or even disappearance of jobs. Real estate agents probably will start speculating to maximize the benefits of their properties (Smith 1987, Swyngedouw 2002). Companies in for example the construction sector – one of the growing sectors in the ZFU Roubaix – pay lower rent and land fees than offices or lofts. Rousseau (2010) counts at the end of 2009 400 lofts in Roubaix and describes the rise of forthcoming loft development since a change of the political majority who's policy switched from countering inequality to maximizing benefits by closing the rent gap;

We can describe this as competition on a micro level, namely on the scale of a parcel. With the splintering of space by private property we see mechanisms of competition arise who are placed in time, namely between the actual and the future use of the parcel. The pricing away of functions who are less profitable is described in literature as *speculation*, *closing the rent gap* and *property-led development* (Smith 1987, Swyngedouw et al. 2003, Wolf-Powers 2005). We wonder whether this mechanism happens systematically in UEZs or even, whether it is inherent in their functioning. If so, we have to ask ourselves to what extent it is desirable? If one wants to preserve the companies within the zone then the government should take accompanying and support measures to keep the land prices for economic activities under control (Wolf-Powers 2005).

[5] Green et al (2001) counts more or less 27.000 US Dollar per job created.

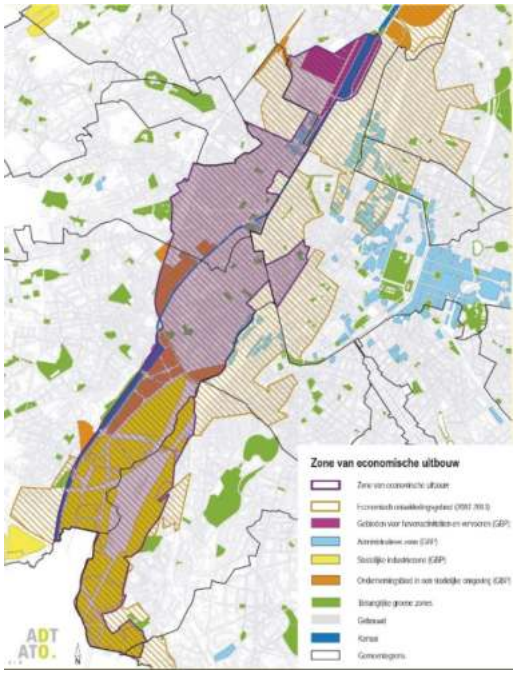
Mechanisms of speculation are already taking place at some parts of the future ZEEC along the canal Brussels-Charleroi, especially in those parts where the BCR changed zoning plans from monofunctional development to mixed-use development by adding a residential function to the existing industrial function. These areas are called *Ondernemingsgebied voor Stedelijke Ontwikkeling* (OGSO) or *Enterprise Area for City Development* (EACD). Private developers and investors, like for example Atenor in the EACD Biestebroek area in Anderlecht, are buying land and clearly prefer residential and other profitable development over industrial development. That means that the amount of affordable land for industrial development is already shrinking and that land prices in some parts of the future ZEEC become too expensive for industrial activities. Here we see that the policy of the EACDs is conflicting with the policy of the ZEEC: the upzoning to mixed-use development actually increases speculation and prevents the ZEEC to achieve its objective of attracting enterprises that create jobs for low-skilled people because of the disappearance of affordable land.

**Fig. 1 – Location of the Brussels Zone of Economic Expansion (ZEEC)**




*Source: GPDO 2014 – map 6 Economic Development*

**Fig. 2 – Zoom on the Zone of Economic Expansion (ZEEC)**




*Source: GPDO 2014:91*

**Effects of displacement**: Research of Mayneris (2014) shows that when we see a growth of the establishment of companies and an increase of the amount of local jobs, effects of displacement are involved. Effects of displacement or business transfers can be qualified as mechanisms of competition on a local scale whereby the periphery of the zone is forced to compete with the zone itself. During the first 3 years of the ZFU Roubaix, between 1997 and 1999, already 40% of the companies in the zone were transfers and came from another area within the metropolitan region of Lille (Green et al. 2001). Colomb (2007) mentions that only 2 years later, in 2001, already 60% of the companies in the zone were transfers.

Where Mayneris (2014) describes business transfers as a negative effect, Colomb (2007) writes how in the ZFU Roubaix those transfers were part of a deliberate strategy to attract decentralized enterprises to

the city center of Roubaix. This is confirmed by Green et al. (2001). Colomb therefore concludes that an urban enterprise zone is a suitable policy tool to strengthen polycentric cores and to counteract the suburbanization of enterprises.

In the Brussels ZEEC it is likely that a significant proportion of companies will come from the surrounding areas of the zone. These already existing but relocated companies will probably not create new jobs, but will merely be attracted by the fiscal and other benefits. Our hypothesis is that competition will take place between the company locations in and around the zone. Important for the BCR is to consider whether it is desirable to instigate such a mechanism of competition in the surrounding area of the ZEEC.

**Few or no benefits for local residents:** Green et al. (2001) notifies a significant increase of companies in the ZFU Roubaix. Data between 1997 and 1999 show an increase of 544 companies. Unfortunately, there are no numbers available about the permanency of the created jobs. Mayneris (2014) disputes the permanency of jobs. He concludes for all French ZFUs that residents of the enterprise zone might come out of unemployment a little bit faster than non-residents of the zone, but only to a small degree and only for a short time. Further research is needed to determine the permanency of the jobs and the settlement of enterprises, because also Green et al. (2001) can't find any positive long-term effects for the whole of all the French ZFUs.

Following these conclusions, this might imply for the Brussels ZEUS that the jobs created for local residents could not be permanent, but will only be there for the duration of the fiscal and other benefits.

Nevertheless, it's difficult to trace demographic data that can bring possible long-term success to the surface, because local residents climbing on the social ladder tend to move out of the neighborhood (Mayneris 2014). We haven't found any research until now[6] that took data from out of the urban enterprise zone into consideration. Especially in neighborhoods that function as an *arrival city*, there is a strong correlation between social and residential mobility (Oosterlynck et al. 2012, Saunders 2011). In *arrival city neighborhoods* the data about unemployment, income etc. often stay the same or even become worse. This makes people often think that no effort is worth its cause, because it seems that nothing is changing. Saunders' (2011) identifies this way of looking as a static way of looking at those places. His research shows that if we continue to look at those neighborhoods only as static spaces of miserable living conditions, we miss a big deal of what is really going on. He introduces a dynamic perspective demonstrating a continuous passage of people coming and going. Migrants moving in, climbing on the social ladder, and moving out of the neighborhood. In some cases we could say that the people moving out are taking their success with them.

Linking social to residential mobility has big implications for measuring the success of this policy tool in neighborhoods that function as an arrival city, which is the case for large parts of the Brussels ZEEC. We estimate that few or no changes will be detected in the social-economic living circumstances of its local residents, as long as the residential mobility is not taken into account. Further research could clarify if and to what extent UEZs function as social mobility machines in arrival city neighborhoods.

[6] We continue to look for it.

**Mainly small and mobile companies:** Mainly small and mobile companies are attracted by the fiscal benefits of UEZs (Givord et al. 2012, Green et al. 2001, IWEPS 2014, Mayneris 2014). This is also the case with the ZFU Roubaix (Green et al. 2001). The question is whether these small companies – in France there is a limit of 5 employees – are able to solve any structural unemployment of an area?

In the Brussels ZEEC there is no such limit and all enterprises with a minimum of 3 employees can make use of the benefits. Nonetheless, if we examine the degree of participation of enterprises of the existing policy[7] of economic expansion in the BCR, we see that micro enterprises[8] are represented the most. Their degree of participation balances between 57% and 74% depending on the type of subsidies to be granted, for the year 2013 (BHG 2014c). This might indicate that also with the ZEEC, which is seen as a measure of economic expansion, especially micro enterprises will make use of the support measure. We wonder if and to what extent micro enterprises are really able to create enough volume of new jobs to help conquering the vast and structural unemployment of residents within the ZEEC? Beside it, there is a considerable risk that a significant part of the companies will move out of the ZEEC from the moment the support measures end.

### 3.2. Circumstances that enhance the succeeding of a UEZ

Some researchers pinpoint the ZFU Roubaix as a successful exception (Green et al. 2001, Colomb 2007). Therefore, we will pay extra attention to the circumstances that are used by the researchers as arguments to explain this success. We also try to put these circumstances within a broader political-economic perspective.

**Metropolitan consensus or collaboration on a bigger scale, a strong leader:** Under the impulse of Pierre Mauroy[9] the four municipalities of the Euralille region – Lille, Roubaix, Tourcoing and Villeneuve d'Asq – came to a *metropolitan consensus*. This consensus, the making of which was a process of 25 years (!), made it possible to implement the ZFU Roubaix (Colomb 2007). The municipalities started working together on a bigger scale. Together, they made a strategic plan about what spatial interventions were needed in what zone of the region with the objective of transforming the deindustrialized economy. According to Colomb (2007), this collaboration through consensus on a metropolitan scale plays a crucial role in the improvement of the social-economic circumstances of the residents of Roubaix. Brenner (2004) describes how the social-economic circumstances of an area can improve by weakening the mechanisms of competition between local governments. In that sense, the collaboration of a metropolitan region is indeed a way to counteract inequality in certain areas.

In the BCR there is no such collaboration on a metropolitan scale and we do only detect some informal collaboration on an interregional scale. This means that inevitable mechanisms of competition will play on different levels the day the ZEEC is implemented. On a local level there will be competition within the municipalities themselves (the ZEEC never overlaps totally with one municipality). There will also

[7] The support measures of economic expansion exist in many ways: subsidies for research by research bureaus, subsidies for travel to international trade fairs, investment subsidies etc.
[8] A micro enterprise in the BCR is a company with less than 10 employees.
[9] Some elements of the biography of Pierre Mauroy (1928-2013) which shows his knowledge of and his access to the highest political networks and administrative functioning on different government levels in France: Prime Minister of France from 1981 until 1984, Mayor of Lille from 1973 to 2001, President of Lille Métropole Communauté Urbaine (LMCU) from 1989 until 2008 (Wikipedia 2015).

be competition between the Brussels municipalities on a regional level, and an interregional competition will arise with the municipalities on the border with Flanders.

**Degree of physical isolation:** Briant et al. (2012) writes that the success of French ZFUs depend on the degree of their physical isolation. He defines the degree of isolation as the connection of the zone to principal lines of public transport, the centrality of the zone (proximity to services for example, and the presence of urban ruptures who make it impossible for commuters to go to work. This is confirmed by Green et al. (2001) and Mayneris (2014), who add an extra dimension, namely the availability of land. If the needed competences for the job profiles are not present with the local residents, managers need to be secured that they will able to attract commuters with the needed profile.

The ZFU Roubaix is the only French UEZ of the first round (1996) that covers a city center. Green et al. (2001) sees this central position of the zone as an explanation of its success. In the city center of Roubaix we can find all kinds of public services and it was already well connected to public transport in the 1990s.

In the ZEEC we find areas that are well connected and areas that are not well connected to public transport. There is no public transport along the canal. Neighborhoods like Kuregem and Birmingham are very accessible. Main thoroughfares, like for example Sainctelette, might function as barriers. As we have seen in the chapter about *Rising land prices who prize away companies* speculation on land is already going on in some parts of the ZEEC, especially in the EACD mixed-use development zones. Further research is needed to make an inventory of available and affordable land and buildings for companies. Further research is also needed about how the different parts of the ZEEC will function according to their degree of accessibility/isolation and the proximity of the city center.

**Comprehensive approach combining different policy tools:** The ZFU Roubaix is part of a comprehensive approach of the city center of Roubaix, combining urban renewal and spatial interventions with a whole package of measures to improve the social-economic circumstances of the local inhabitants (Colomb 2007). Colomb describes how economic development and investments are linked to training, integration and insertion programs for unemployed people. This policy of insertion obliges projects funded by public money to recruit jobs for local residents. This rule is explicitly stipulated in the open tendering procedures of construction projects financed by public investments. Training programs focus on skills of reception and communication, because these competences were not present with the local residents after a long career of factory work. Also Green et al. (2001) and Mayneris (2014) point to the importance of combining spatial interventions with training programs to align the supply and demand of competences.

The researchers mentioned above, all point to the enormous importance of a comprehensive approach where training, integration and insertion programs are combined with spatial policy measures. This implies for Brussels that the succeeding of the ZEUS can be enhanced, if the fiscal and other benefits for companies are combined with training, integration and insertion programs.

**Awareness of cultural/discriminating barriers:** The municipality of Roubaix was aware of the fact that CEOs are not always fond of recruiting local residents. CEOs were not only concerned about the lack of competences in the area, but also had a cultural reserve (Colomb 2007). A special team of the municipality negotiated with companies to recruit local residents in exchange for public investment

(Colomb 2007). Next to this special team, the municipality has put other means into operation to stimulate the recruitment of local residents such as available land, management agreements, surveillance, cleaning services etc.

Following the actual debate in Belgium about the recruitment of immigrants or people from neighborhoods 'to avoid', such as 1080 Sint-Jans-Molenbeek, we see that also in the Brussels ZEEC cultural and discriminating barriers will play a role in the attraction of new companies. A lot of persuasion, consisting of extra support measures next to the benefits of the ZEEC, is needed to convince companies to recruit locally. On the one hand, we can ask ourselves whether the BCR is willing and able to go so far as to – what Colomb (2007) calls – a win-win arrangement for companies and the government? On the other hand, we can also question whether extra costs must be added next to the already high costs per job created in an UEZ?

**Located in a European Zone of Development:** Research about the functioning of UEZs in Wallonia (IWEPS 2014) can't find any significant results of improvement of the unemployment rates between 2006 and 2011. UEZs who are located in a Zone of Development, give slightly better results than UEZs not located in a development zone. The IWEPS report (2014) tries to make a difference between new companies who made use of the benefits of UEZs and companies who made use of the support measures of the development zone. The use of support of the development zone was significantly higher and the report states a positive effect of this policy, where it doesn't find any positive impact of the measures of the UEZs. Following these results, the report questions whether the benefits of UEZs are large enough to be really interesting for companies. This is a question about the costs that governments are willing to pay to attract companies to their territories. We also wonder if a territorial approach is well suited here. How do the budgets invested per job created relate to the budgets invested in policies of empowerment (for example training programs)? Fact is, that the ZEEC will overlap with the Development Zone 2014-2019 [10] which will be implemented in the BCR via the European Commission and the Federal Government. This means that, almost certainly, we can expect some positive results on a short term because the subsidies of the Development Zone will reinforce the functioning of the ZEEC.

## 4. Conclusion

Using the theoretical framework of Brenner (1999, 2004) about *new state spaces*, and the concept of *splintered urban planning* of Graham (2000), we start from the hypothesis that UEZs are part of a *post-Fordist-Keynesian* policy tool box that apprehends space as a collection of fragmented pieces of land whereby each piece of land has its specific problems, challenges and needs, and where we see a policy shift from a redistributive agenda towards a more growth-oriented agenda. We recognize this movement not only in the planning instrumentation in Brussels but also in other regions of Europe, including the *Zone Franche Urbaine* (ZFU) of Roubaix, Lille. Together with other comparable conditions between the two regions like a history of labor migration, labor market changes, deindustrialization etc. the introduction of a logic of growth in the planning instruments, makes the ZFU Roubaix an interesting case for a comparative analysis with Brussels. Next to the recognition of growth-oriented agendas of deprived areas as well in Brussels as in Lille, we would like to understand the possible socio-spatial consequences of this policy shift and thus see whether UEZs rather reduce or reproduce inequality. The *Zone of Economic Expansion of the City* (ZEEC) of Brussels is a special case, because it is not operative

[10] The European Structural Fund EFRO-FEDER.

yet. In that way, this research tries to grasp the functioning of UEZs who are used by governments of deindustrialized cities and regions desperately looking for solutions to deal with structural unemployment. Thereby, we use the Brussels ZEEC as a test case.

Where growth is stimulated, processes of competition are unavoidable – in the case of UEZs as well on a local (intermunicipality) as on a regional (between municipalities) scale (Green et al. 2001, Colomb 2007, Mayneris 2014). An UEZ is thereby understood as a solution to conquer structural unemployment by making that zone grow through the attraction of enterprises, often to the cost of other zones through transfers of enterprises (Mayneris 2014). Looking at the costs that governments are willing to pay to attract these enterprises, the creation of jobs for low-skilled people can be conceived as a happy byproduct.

In our research to understand how UEZs work, we are not convinced whether they are able to reduce inequality, since they generate also perverse effects that function as hindrances to attain the objective of job creation for low-skilled people like mechanisms of speculation (Rousseau 2010, Wolf-Powers 2005), effects of displacement (Green et al. 2001, Colomb 2007, Mayneris 2014), only short-term effects because of the attraction of small and mobile companies (Givord et al. 2012, Green et al. 2001, IWEPS 2014, Mayneris 2014), and few or no benefits for local residents (Green et al. 2001, Mayneris 2014).

We see that in some cases, like in Roubaix, an UEZ creates local jobs, but under very specific circumstances. An UEZ doesn't work as a policy format, nor as a miraculous solution, that can be implemented by governments in any part of their cities to conquer unemployment. Research from a manifold of perspectives shows that an UEZ cannot function as an isolated policy measure, but it needs to be part of a comprehensive approach. Although this call for combining *soft* measures, like training programs, with a spatial policy measure like an UEZ, we can still question the fact whether we have to use policy measures to adjust habitants to specific needs of enterprises in a zone instead of doing it the way around and adjust the space around habitants to fulfill their needs and longings (Berardi 2011).

We would like to end this paper with a reflection on what happens if we look at the UEZ in Brussels from a more Keynesian perspective? Can we understand it as an attempt to soften the inequality, which was strengthened by former and current urban developments in areas such as the North Station or the European Quarters? Investing in the Brussels Canal Zone, which is situated in the west, could be interpreted then, as a way to restore a certain balance of government investment and policy between the richer south-east and the poorer west part of Brussels. The development of a growth pole along the Canal Zone, of which the implementation of an UEZ can be seen as a symptom, can be interpreted as a strategy to deal with inequality. Following this Keynesian perspective, space is indeed seen as a more coherent whole, but the mechanisms of dealing with inequality are fundamentally different from those of thirty years ago. We think that the territorial approach of the UEZ zoning policy stays manifestly fragmented, in the sense that the Brussels region wants to solve problems of inequality *in situ* and doesn't acknowledge that the origin of problems lay partly elsewhere (1) and that the region is not able to change its administrative/fiscal borders (2). Two examples to clarify this: (1) The increasing socio-spatial inequalities of Brussels with a big concentration of poverty and structural unemployment in the Brussels Canal Zone is not only caused in and through the Canal Zone itself. Although this is not the case, this view is implied by the policy instrument of the UEZ used as a way to resolve an unemployment problem within limited borders. The socio-spatial inequalities are the result of historical processes of labor market restructuring, and office and housing market dynamics at the scale of the Brussels region (Van

Criekingen 2012), combined with a discrepancy between the political delimitation of the Brussels Region (a member state of the federal state of Belgium) and the geographical urban region, and the administrative fragmentation of the Brussels Capital Region (Kesteloot et al. 2002). A more even spreading of affordable housing (social housing as well as rental housing on the private market) throughout the region would for example stop to push poorer people towards the Canal Zone. (2) This discrepancy and administrative fragmentation brings us to the second example which shows us that the Brussels region is bound by fiscal restraints. Although the economic flourishing of the Brussels region has positive agglomeration effects which do not respect the regional borders, these benefits are not reflected in a fiscal solidarity between the region and its periphery. The suburbanized municipalities around Brussels receive the agglomeration benefits through the Belgian fiscal system which makes commuters pay taxes in their home towns and not in their working towns. This leaves the Brussels region – and especially the west part – in continuous financial problems that forces the regional and local governments to continue to look for partial (and thus, splintered) solutions.

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# Interconnecting Urban Planning with Multi-Scale Urban Quality: Review of Macro Scale Urban Redevelopment Project on Micro Scale Urban Quality in Shenzhen

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## Abstract:

*The Shenzhen planning system has been effective in promoting economic growth through the prodigious urbanization of land. It has given priority to the macro-level pla growth through physical development. Questions can be raised about the physical and social outcomes from the development process at the micro-level , not least in the l physical environment at the micro scale and the creation of a place identity (Chen, 2010; Hang, 2006; Wu, 2012). This paper examines these questions in the redevelopment of the metropolitan area, drawing a case study of the Sungang-Qingshuihe (SQ) district in Shenzhen. We have established criteria for evaluation of the planning and implementation of redevelopment, with reference to both macro-level economic goals and micro-level urban spatial quality objectives. We exp approach taken and the reasons, outline its strengths and weaknesses in relation to the criteria, and define the apparent limitations.*

*The findings point to critical features of planning and development practice in Shenzhen which make a significant contribution to the creation (or destruction) of micro-level spatial quality and place identity, including the lack of an independent quality control authority and the close processes of decision-making. This paper concludes by examining the problems of transferring practice from elsewhere and challenges the priority given to national economic growth over the local public interest . It recommends strengthening the role of coordinator, to balar and micro-level objectives, to expose the interests of all affected parties.*

Keywords: Urban redevelopment, Local Quality, Planning Tool

## 1. Introduction

Urban development and planning of cities in China has made a fundamental contribution to meeting national economic and social policy goals at the macro-level and with signific urbanization rate in China reached 53.73% in 2013, achieving the fastest urban growth worldwide (UN, 2014; UN Habitat, 2014). More recently, increasing attention has been given to transformation of existing urban areas and urban redevelopment, since peripheral expansion of cities has become more difficult, as well as the ageing of urban development schemes from the 1980s and the need for renewal. The commodification of housing and land, since 1980, helped to initiate large-scale urban redevelopment. Within the interaction between the state and the market, the rationale of urban redevelopment in China has changed from the alleviation of dilapidated housing estates as a means of social welfare provision, to state-sponsored property development as a means of growth promotion (He, 2009).

Questions have been raised about the physical and social outcomes from the redevelopment process at the micro-level , not least in the level of quality of the physical environment and maintenance of a sense of place or place identity (Chen, 2010; Hang, 2006; Wu, 2012). of the performance of urban development have concluded that, whilst standardized planning and

design has enabled rapid urban development and achieved huge economic growth, it has also contributed to poor spatial and environmental quality - meaning for example, the do mono-functional urban neighborhoods and the loss of street vitality, the erosion of cultural heritage, local distinctiveness and place identity, poor accessibility to services and widespread negative externality effects such as noise and pollution.

This paper contributes to the debate of urban redevelopment and evaluates the impact of macro-scale urban redevelopment project and planning policy on the micro-scale urban quality and place identity. It draws the regeneration of the Sungang-Qingshuihe (SQ) district in Shenzhen as a study case, to evaluate its plan and implementation process, and provides recommendations on integration of different scales of urban quality through urban planning.

## 2. Theoretical Framework

Many developed countries have had similar problems. For example, in her seminal text, Jane Jacobs (Jacobs, 1961) criticized urban planning practice in the USA, which she argued was creating characterless, and mono-functional neighborhoods and undermining the livability and attractiveness of cities. She helped to define the essential ingredients for the vitality and viability of cities and called for urban planning to recognize and promote their importance. Charles Landry (Landry, 2008) explains how in Europe, planning has often achieved qualities of mix of functions, diversity of uses and cultural identity of cities. However, these qualities have been under threats from planning approaches that prioritize macro-level objectives with insufficient attention to the local micro-level effects. While there is great variety in planning systems and cultures in Europe (Nadin, 2008), there is a general trend towards 1) more strategic approaches that integrate the objectives of competing policy sectors and levels of government in territorial governance (Nadin, 2007, Zonneveld, 2012); 2) adaptive and locally responsive planning tools that can reconcile both macro- and micro-level objectives in urban planning (Halleux, 2012; Rauws, 2014); and 3) collaborative planning processes that engage with stakeholders in an inclusive way (Healey, 2006).

There is potential for China to learn from the experiences of integrating macro and micro concerns in territorial management and urban planning in other countries. This study brings this knowledge into the Chinese context, and sets up an analytical framework to review the redevelopment case of the SQ district. The study considers urban redevelopment as a dynamic and collaborative process, and thus the social, spatial and political context, the involved actors, and the planning and implementation process of the redevelopment project are given great attention.

## 3. Urban context Shenzhen

### 3.1 Context and trends

Shenzhen is located in the Pearl River Delta (PRD) region adjacent to Hong Kong. Prior to 1979, it was a small fishing village with a population of only 20,000 people (Zacharias, 2010). This all changed in 1978 with the creation of China s first Special Economic Zone (SEZ) l part of the Opening up policy . The SEZ is an area of relaxed financial regula government autonomy (Ng, 1999). The creation of the SEZ led to staggering economic and population growth. From 1980 to 2001, the annual GDP growth rate was 38.9% per capita (Ng, 2003), while the population has grown to 10.47 million as of 2011 (Shenzhen Information Network Center, 2012).

Shenzhen has grown through a land-based economic development model. The planning system of Shenzhen has been very successful in promoting economic growth, where the urbanization of land and

the redevelopment of existing areas has been used by the Municipality as a means to gain capital for regional development (Lin, 2011). In 1987, the paid leasing of land use rights began in Chinese cities with the leasing of land quickly becoming a significant source of income for local governments. This new land policy has changed the form of urban areas leading to land speculation, price increases and a land rent gradient that had previously not existed in Chinese cities (Yeh, 1996). Combined with pressure for economic growth, this system of land leasing encourages development projects that will achieve high economic returns in well located urban areas, often pushing out the existing residents (Yeh, 1996).

Shenzhen now is undergoing a new wave of economic restructuring. Due to the cheaper labor in many inland cities and other countries, Shenzhen has lost the competitive advantage it once had and much of the light manufacturing and industry has now moved away (Zacharias, 2010). To promote the economic growth of the city during its development, urban planning focused on the development of large land parcels (Zacharias, 2010). However, as industry relocates, the previous focus on large urban parcels means large areas of the city are now vacant.

In addition to economic restructuring, Shenzhen is being defined by new urban scales, rising levels of competition and increasing regionalization. The Pearl River Delta Region, encompassing the cities of Guangzhou, Dongguan, Foshan, Huizhou, Hong Kong and Macau, has an estimated population of 27 million people (Woetzel, 2009). The delta cities are becoming increasingly more connected through the development of major new infrastructure projects (Ye, 2012), driven by the National and Municipal governments. At the same time, competition between the cities in the PRD, as well as intra-urban competition between the city districts, intensifies (Zacharias, 2010; Bruton, 2005) as areas seek investment and connection to the international, national and regional networks.

Driven by the departure of industry, rising land price, political and economic pressure to attract foreign direct investment, high-profile redevelopment projects which are often designed through international competitions are becoming a common development response. As a result of the fast urban construction, the city also is outdating extremely fast. However, more attention is given to the new development, instead of regeneration. There are a number of recent examples in Shenzhen of new business districts (Shenzhen bay Super city - 2014), new towns (Guangming Gateway), science (NFU and SZU Advanced Technology Park - 2010) and large new urban areas (Qianhai water city - 2010). The regeneration of SQ is one of the few and the biggest regeneration projects in the city. However, the ambition and planning procedure for this area is not much different than building a new district, as the paid leasing of land use rights encourages development that achieve high economic returns to ensure profitability. The brief for the SQ reflects the international aspirations of the local and municipal government calling for an international consumer center .

## 3.2 Challenges of local scale pressures

The current planning approach has, however, not effectively reached to local scale urban environments and many workers and migrants are left feeling that they are not seeing their share of the economic benefits. While cities have been developing, the provision of adequate public services has not kept up with this economic growth. According to Ye (2012), this lack of public service provision, together with income gaps, social stratification and housing price spikes, leads to widespread social unrest in Chinese cities .

## 4. Regeneration Case Study of SQ District, Shenzhen

### 4.1 Site

SQ district is a 540-hectare outdated logistic center in Shenzhen. It represented the manufacturing history of the city, and witnessed the dramatic urbanization of Shenzhen in the past 30 years. The site is centrally located in the Luohu district, the first city center, and is well connected to the city infrastructure and transportation networks as shown in Figure 1. The former North station in the site connects Hong Kong and Mainland China, making the site a gateway of Shenzhen.

Figure 1: Location of SQ in Shenzhen. Source: A. Reynolds based on Open Streetmap data

Compared to other parts of Shenzhen, where high-rise towers play a dominant role in the city image, SQ presents unique character and quality due to its diverse urban structure and lively social lives. Warehouses, urban villages, modern residential communities and office buildings are mixed in the site. Several major infrastructure runs through the site, including urban highways, large areas of disused railway and railway yards. In addition, a city park, Honghu Park, is situated on the east of the site, and a significant green corridor, Honggang Mountain, is running east west dividing the site into half. Densities, uses, nature and infrastructure are mixed into what could be understood as an unpolished paradigm of the ultimate contemporary urban condition shown in Figure 2.

Now the site sits functionally obsolete, as the warehouses and urban facilities cannot fulfil the contemporary usages, and the pressure of transforming this area increases due to its central location. In addition, the road and traffic system on the site is disorganized, making the site fragmented and segregated from other parts of the city. Therefore, the Luohu District Government (District Government) and the Urban Planning, Land and Resources Commission of Shenzhen Municipality (SZPL, Municipal Government) have initiated the regeneration project for the SQ area in 2010. The plan aims to turn the site into a new international commercial center and creative hub, with housing capacity for 20,000 people (Sasin, 2012).

Figure 2: Three dimensional visualization of the existing urban conditions. Source: sz.chachaba.com

## 4.2 Project Process

The redevelopment of SQ has experienced conceptualization, legalization, and implementation phases since 2010.

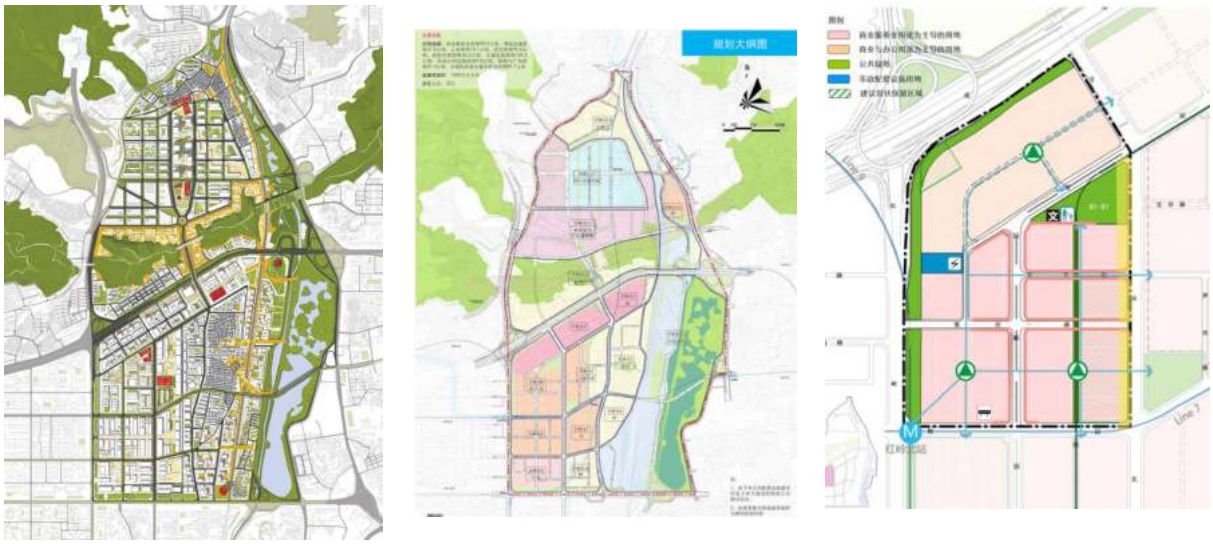
**International masterplan competition**

Luohu government and SZPL organized an international competition for the regeneration masterplan of SQ in 2010. The winning proposal from a Dutch planning company, named KCAP (Kees Christiaanse Architects and Planners), is progressive in terms of urban development in Shenzhen as it seeks to create a framework to facilitate an incremental development process and to upgrade the site by working on the existing urban fabric. The approach of the masterplan derived from European experience is socially and contextually sensitive. The new interventions are based on the acceptance of the current urban condition, in order to continue the urban history of the site, as well as that of Shenzhen. It has defined the primary principles for the regeneration, such as fine-grain and walkable urban fabric, intermodal public transport for seamless transition, connective and multi-scale public space, mixed use program, characteristic urban typology by keeping building footprint, sustainability and low carbon city, as well as collaborative implementation through phasing. It also proposed a series of planning strategies for different topics, following the above principles. Some may criticize the winning masterplan not ambitious enough for a city like Shenzhen, where the spirit is to look forward instead of backward and where magic is made daily to achieve the prosperity of the city. However, this plan has brought tremendous quality for the regeneration of SQ and more importantly, a new mindset to the development of Shenzhen, to value its own physical and social structure, and to turn the seemingly outdated into unique identity.

While the masterplan unfolded great potentials and drew desired perspective of the site, the reality is much more complicated when regenerating this 540 ha area. The site is currently leased to more than a dozen of companies, who can be considered as the temporary landowners of the site. Many of them also become the developers during the regeneration. In order to maximize their profit, they started to approach the local government even before the masterplan was launched, with grand projects of super high density and ambitious commercial program. When mutual benefits are reached, some projects had been approved and signed off by the government before the masterplan was finished. However, the approved proposal for some of the key areas did not fit in the planning vision of incremental development. Consequently, instead of being proactive to guide the site s re masterplanner has to modify their plan in order to integrate those already-designed plots.

**Statutory plan**

In August 2012, based on the refined masterplan, a statutory plan was created by the municipal government and announced to the public. This document abstracted the factorial information of urban planning to control the subsequent urban and architecture developments on the site. It touched different elements of urban planning, including land use, the main road network, public transportation, municipal facilities, as well as the green structure and density. Although the information provided by the statutory plan was highly abstract, it had a dominant impact on the site because it defined the most important factors of the plan, such as property line, municipal road and infrastructure, density for every sub-district, public facility, some big public spaces and so on as shown in Figure 3.



(1) (2) (3)

Figure 3: The three phases of the redevelopment process. (1) Masterplan prepared by KCAP, (2) Statutory Plan and Subunit Division, (3) Detailed subunit control plan.

Following the Shenzhen planning regulation, the draft of statutory plan had to be shown to the public for 30 days. During this period, anyone could deliver a written feedback to it. The planning department in the municipality would review the feedback, and decide if there were any necessary modifications. After that, the final statutory plan would be approval by the city as a legal document, which in principle, must be followed by all the subsequent developments.

Although the statutory plan included a number of elements from the original masterplan, there were essential differences between these two. Instead of regenerating the site based on the existing spatial and social context, the statutory plan put economic benefit and practical feasibility as a priority, making some major modifications on the masterplan due to practical concerns. Consequently, the spatial qualities provided by the original plan were lost in the translation to the legal document.

**Overall urban design guideline and sub-unit design**

As the statutory plan provided new conditions to the plan of SQ, Luohu district government initiated another round of design tenders, in order to develop more comprehensive urban designs for SQ, and to make planning guidelines for the entire site and its sub-units. The project brief stated:

*We hope that a unique and charming city image, and forward-looking, implementable sub-unit planning schemes for SQ and its construction can be plotted with international visions and innovative ideas, so as to drive it to take the first try and become a demonstration area for building Luohu into the international consumer center (People's Government of Luohu District, Shenzhen & Urban Planning, Land and Resource Commission of Shenzhen Municipality 2012).*

The tenders consisted of two packages - one was urban design guidelines for the entire site, and the other was sub-unit planning for the first phase. Both documents were supposed to be developed under the framework of the statutory plan, and used by the district government to control the developments on the sites. The urban design guidelines for the whole site were asked to enrich and improve the statutory plan, producing detailed and feasible planning guidelines and referential spatial results to guide the future plan implementation.

The sub-unit design would be assigned to different design entities. It was expected to serve as an intermediate level between the overall urban design guidelines (upper plan) and development for each plot. It should provide a more detailed urban design following the guidance of the overall masterplan, and more importantly, tackle the practical issues, like land ownership, compensation policy, and to coordinate the ambition between the upper plan and the developers' vision on the

While the original masterplan for Sungang-Qingshuihe district did develop a framework that could allow for incremental growth, the plan was unable to realize its ambition when it was transformed into the statutory planning system. The following overall urban design and sub-unit design guidelines were not given space to improve upon the statutory plan. When comparing the plan of the SQ district between the conceptual competition phase and the overall design guideline phase, although one may still recognize the urban structure from the two dimensional map, it is difficult to find coherence in the three-dimensional bird-eyes view as shown in Figure 4.

(1)

(2)

Figure 4: (1) Birdseye view of conceptual masterplan for SQ. (2) Three dimensional volumes of overall urban design guideline. Source: www.kcap.eu

### 4.3 Challenge for planners and limitations for the current planning practice

During the process from design to implementation in the past four years, several problems regarding the current planning practice emerged, challenging the planners:

**Time pressure and inefficient planning process**

Similar to most of the urban projects in China, the redevelopment of SQ district is planned into a very tight schedule. Both the government and the developers would like to reach a prosperous result overnight. The planning process has been largely condensed, therefore creating a number of problems. For example, the overall urban design guidelines were supposed to guide the sub-unit design. However, in the case of SQ project, the overall guideline and first phase in the sub-unit design are being implemented simultaneously. This means the sub-unit designers started out without an overall picture of the entire site, making the overall design guideline powerless to control the development of the sub-units. Furthermore, this cost extra time and energy in coordination among the designers of the guidelines and sub-units, which in the end slowed down the process of the entire project.

**Striving for economic benefit and sacrificing socio-spatial qualities**

There are complicated partnerships in the project among the different levels of government, developers, local residents and landowners. Each group is seeking to maximize their economic benefit during the process of regeneration while not considering socio-spatial qualities, creating a dilemma for the guideline and sub-unit planners.

**Rigid statutory planning based on technical indices**

The statutory plan for the SQ district is the most powerful document to control the development of the site. However, as discussed previously, it sacrificed a great deal of spatial quality for the so-called economical and technical feasibility. For example, the statutory planning has defined the density for every sub-unit. However, the density was not defined based on the desirable city image or planning rationale; instead, it was defined according to the extent of difficulties of implementing

transformation. As a result, the urban villages are given the highest density, since the village owners are not willing to transform their homes unless the government gives them a very large amount of extra square meters. Furthermore, as the statutory plan has been already approved by the Municipal Government and published to the public, it was nearly impossible for the guideline and sub-unit designers to make any necessary changes.

**No formal system for the local government to enforce the guidelines**

The overall urban design guideline provides detailed, refined and thoughtful rules that should guide the development of the entire site. However, the legal power of the guideline is much less than the statutory plan s legal power. In addition to the items that already appeared in statutory plan, m contents in guideline are indicative and referential. There is not a formal system to ensure the execution of the guideline.

**Unclear or little benefits to socioeconomically weaker groups and local residents and workers**

The redevelopment of the SQ district is focused on international visions: it was to become an international business and retail center for the regionShenzhen Information Network Center, 2012). While the current development approach may achieve such objective of boosting the regional economic competitiveness as the process of development is focused on regional ambitions, it is unclear how it can benefit the existing local actors if the needs of the local residents and the socioeconomically weaker groups are excluded from the process.

## 4.4 Evaluation

To evaluate the effect of the redevelopment on macro- and micro-levels, the study categorizes the development of the site into XL, L, M, S, XS scales. They represent respectively:

XL (eXtra Large) Shenzhen
L (Large) overall site of SQ
M (Medium) sub-units within SQ
S (Small) individual plot
XS (eXtra Small) individuals

The planning and intervention of redeveloping SQ happens at L, M and S scales, while the influence covers from XL to XS scales. From the macro-level, which is at XL, L and M scale, the redevelopment of SQ has largely improved the competitiveness of Luohu district in the city. It turned a brownfield into lively and prosperous urban quarters, with its creative program and atmosphere that complement the whole city s urban landscape.

At the micro-level, however, the redevelopment has not given sufficient consideration to the local environment and residence. For example, the introduction of public space, especially those at the neighborhood scale are lacking; the plot division is also relatively big without having enough local road; the street prioritize automobile use instead of being pedestrian-friendly, so on and so forth. Although the government is supposed to represent and fight for the public s interest on balancing the financial interests of stakeholders, instead of prioritizing social needs.

## 5. Conclusion: How to interconnect urban planning with multi-scale urban quality?

As outlined in the paper, with competing interests and spatial demands, as well as time pressures, it is no easy task to bring together urban planning and multi-scale urban quality. However, some key lessons can be learned from the redevelopment of the Sungang-Qingshuihe district and the method proposed in this paper.

**Creation of an independent quality control authority**

To enable the approach proposed in the case study, the creation of an independent quality control authority by the Municipality is proposed. This authority would coordinate and oversee the negotiation and implementation process. As there are many internal competing interests within the Municipality e.g., the Planning, Infrastructure, Environment and Economic Departments, it is considered that a separate authority could deal with these competing interests better, provide a more transparent process and gain trust from all actors, allowing for the formalization of the negotiation process.

**Early involvement of planners and designers with a proactive coordinating role**

The involvement of designers and planners from the initial stages of the process and brief would allow the designers to contribute to defining the brief, providing a more strategic and broader vision from the beginning of the process. This could also help the planning and organization, allowing for a better understanding between the clients and the designers in terms of planning and coordinating timelines. There is also a need for the planner to move towards a new role as key coordinators to find a better balance between the interests of the various parties. This puts the planner, with their professional knowledge and ability to cross sectors in a unique position which should be recognized and encouraged.

**Change of focus from short term economic and political impact to long term quality**

The development focus of the National, Municipal and Local Governments must shift from seeking short term financial and political gain to promoting long term socio-spatial quality. Therefore, it is important not to start with a quantitative goal, i.e. amount of financial investment, but instead begin with processes that aim to achieve certain agreed qualities and principles that result in qualitative and quantitative improvements.

**Accept a broader range of development possibilities moving from a single render to layered stories**

The process for large-scale planning project is highly dynamic and a fixed masterplan can never be fully implemented. Therefore, it is important to provide a planning framework which can guide the plan and promote key qualities as well as have the flexibility to adapt potential changes in the future. The approach requires the National, Municipal and Local Governments, as well as developers, not to focus on a fixed vision, but on principles, qualities and a broader range of development possibilities. This will require the National, Municipal and Local Governments and individuals to sacrifice some of the current control they have on the final image of the project, and focus on the process. If all the actors, including residents and those directly affected by the development are confident in the process, have the basic trust on one another, then a project can achieve the agreed-upon goals and can be more inclusive of local needs.

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# MASTERPLANNING FOR CHANGE: LESSONS AND DIRECTIONS

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## Abstract

*Unprecedented worldwide urbanisation, financial instability, climate change and emerging new lifestyles are challenging the capacity of cities to attract and retain people and activities. Particularly, as many masterplan-driven developments realised from the second half of last Century have been criticised for their inability to cope with changing needs and uncertainty of future outcomes and for their incongruity with native physical, socio-economic and environmental contexts, the need to reform conventional approaches to masterplanning is now pressing. As cities competitiveness and success depends on their capacity to meet these manifold challenges, a new generation of masterplans has emerged over the recent years to respond more clearly to the sustainability agenda.*

*However as we become increasingly aware that cities are inherently unstable and prone to unpredictable change over time, to complement the concern for sustainability, resilience as applied in the field of system-ecology needs now consideration.*

*The paper argues that re-evaluating masterplanning against the theoretical framework of resilience would help defining a reformed approach, referred to as "*Masterplan for Change", *more openly aimed at giving strategic direction and spatial quality to places, while accommodating modification over time. However the role of resilience in guiding urban design and masterplanning is still marginal. Hence, the fundamental link between sustainability and resilience is clarified and a preliminary list of guiding principles of* "Masterplan for Change"*, emerged from combination between urban design sustainability and socio-ecological resilience principles, suggested.*

## 1. Introduction and Background

Over the last half-century, urban and population growth were largely managed through centralised control in the implementation and coordination of transformations in the built environment. This reflected the need to give rational foundation to urban planning and management and the belief that acquisition of complete and certain knowledge on future outcomes would allow to scientifically pursue the public interest (Alexander, 1984, Thwaites et al., 2007, Batty, 2013b). Masterplans were seen elective tools capable to translate this knowledge into space through detailed and prescriptive spatial visions on the future asset of an area over a long period of time (Firley and Grön, 2014). Once implemented, they would bring about wealth, civic uplift and physical order into society (Hall, 1988). However increasingly from the 1960s these top-down masterplans were systematically accused of physical determinism and short-sightedness as they advocated an ideal final state that was often unrealistic (Jacobs, 1961, Bullivant, 2012) and underestimated the irrational, unpredictable and complex dynamics taking place once the masterplan was realised (Portugali, 2011, Verebes, 2013).

Today, the unprecedented changes the world is facing are uncovering even more the shortcomings of this approach to designing cities (Tachieva, 2010, Verebes, 2013, Mehaffy et al., 2011). In a world inhabited by 7 billion people, 50% now live in cities. By 2050, this number will spike to 70%, and 87% of these new urbanites will live in today's developing countries (UN-HABITAT, 2012). The impact of human activities has, for the first time in history, reached global dimension, ushering a new geologic epoch earth scientists referred to as *"Anthropocene"* (Ellis et al., 2013). The disproportionate detrimental role cities carry on the global ecosystem is most visible in the sharp increase in frequency and severity of natural disasters (Adger et al., 2013). These, far from being merely environmental issues, have major social-economic implications, affecting people's livelihoods and health (UN-HABITAT, 2009).

The 2008 global recession radically reduced financial availability and government effectiveness (Collier et al., 2013), highlighting the frailty of our urban development strategies to economic instability (Tachieva, 2010), with masterplans, acting as inflexible, overly prescriptive and static tool of spatial planning (UN-HABITAT, 2009). On one hand many large-scale state-led projects realized across Europe in the post-war years are endemically affected by economic inactivity, lack of community cohesion and social stigmatization (Rudlin and Falk, 2009). On the other, the neo-liberal urban planning model practised in the height of market-led development of early 1990s and relying on the private sector did not manage to better stand the recent collapse of the property market (Watson, 2009). In both cases repair strategies are economically demanding, as the overly-rigid structure of their form and pattern of ownership make them unable to recover quickly after unexpected shocks (Tachieva, 2010, Dunham-Jones and Williamson, 2011). This apparent inability of recent additions to our cities to cope with changing conditions is particularly worrying considering that over the next 100 years much of the buildings and infrastructure of the developed world will need to be reconfigured, replaced or even rebuilt, while even more will be needed to host and service the rapidly expanding cities of the developing world (Novotny et al., 2010).

Simultaneously, the socio-economic profile of urban population is also changing. Particularly in more developed countries, living, working, socialising and consuming patterns do not longer comply with the traditional models of nuclear family that drove urban planning over the last 100 years (Rudlin and Falk, 2009, Dunham-Jones and Williamson, 2011). Today's ascending generation, the so-called Millennials[1], is drastically reshaping housing trends and requirements of the built environment. Enabled by new forms of communication and powered by technological innovation, they move frequently location and occupation, rent rather than owning, chase opportunities that better respond to career aspiration or to employment instability and engage in flexible and mobile forms of work. At the same time the increasingly ageing population is challenging the services cities are able to offer in terms of accessibility, mobility, housing, facilities and healthcare. Shrinking, diversified and unconventional household types are further diversifying housing demand. This all calls for greater flexibility and quality in living and working environments and fairer access to opportunities within cities (Bernheimer et al., 2014, Litman, 2012). Matching these demands is the key for many cities competiveness and equity and opens up new largely unforeseen scenarios to urban development (Rudlin and Falk, 2009).

Aware of these manifold issues, over the last 20 years many countries are experiencing important reforms in their planning systems to deregulate land development and stimulate economic growth (Davoudi and Madanipour, 2015). This often implies decentralising governance, devolving responsibilities locally, implementing cross-tier collaborations, bottom-up participatory approaches and engaging innovatively with private sector actors (Bentley and Pugalis, 2013). In England, the Localism Act 2011 (House of Commons, 2011) introduced Neighbourhood Development Plans and Neighbourhood Development Orders, granting communities the right to pursue development they deemed desirable. This shift marks, at the very least and despite shortcomings (Davoudi and Madanipour, 2015, Ludwig and Ludwig, 2014) the trend of a retrenching State that envisions a more directly involved civil society and acknowledges the right of citizens to shape their own future. The Netherland, where traditionally municipalities hold a degree of autonomy in creating and implementing policy, is becoming an exemplar case of innovation in small-scale and bottom-up strategies to urban development, particularly in relation to the self-build agenda and the active involvement of municipalities (Lloyd et al., 2015). While the economic recession has slowed down construction everywhere, the legal power of Dutch municipalities in supplying land, providing for basic urban infrastructure and serviced land is playing a major role in ensuring architectural quality, social equity and economic viability in urban development during this transitional period (Tarbatt, 2013).

[1] *individuals aged between18-34 (Bernheimer et al., 2014)*

The need to update approaches also extended to masterplanning, whose role re-emerged in professional practice and academic research (Tarbatt, 2012, Firley and Grön, 2014, Bullivant, 2012). As a matter of fact, despite the growing criticism for conventional masterplanning approaches, masterplans remain central in many parts of the world as "*one of the principal urban design activities engaged in by urban designers and architects alike"* (Tarbatt, 2012: p. 20), both in public and private sectors (Watson, 2009, Bullivant, 2012). They are embedded in legislation and urban design guidance in many countries where they enable local authorities to turn policy, aspirations and objectives in three-dimension through an established range of mechanisms for commissioning, negotiation and delivery (Watson, 2009). Masterplans are by no means modern urban planning. Some of the most loved, successful and sought after parts of our cities, were built centuries ago through the implementation of clear, well-conceived masterplans which achieved character, coherence and flexibility, as in 1760's Edinburgh of James Craig, 1850's Paris of Haussmann and Barcelona of Ildefons Cerdà. Despite their ability to continuously and seamlessly regenerate over time these are generated very much by design, codes and regulations (Kostof, 1991, Hakim, 2014).

Hence, driven by the desire to address changing and new urban needs and rediscover the timeless quality of responsive and flexible urban structures, many experimental urban design projects are underway, particularly across Europe (Bullivant, 2012, Rudlin and Falk, 2009), supported by innovative commissioning, implementation and management methods and by new evidence-base knowledge of urban dynamics (Batty, 2013a, Bettencourt, 2013).

The possibility to assess the different performance and success over time of both recent masterplan and *historical* masterplans provides a real opportunity to systematically re-evaluate the role of masterplanning in dealing with change and uncertainty and in delivering more resilient and sustainable urban environments. This consideration is at the basis of the current research work, carried out at the Urban Design Studies Unit at the University of Strathclyde.

## 1.2 Urban design, sustainability and resilience

Since the issue of the report *"Our Common Future*" (Burton, 1987), the concept of sustainability gained momentum in different disciplinary fields, particularly in architecture and urban design. However, in the last decade, something has changed in how scholars and scientists look at sustainability (Batty, 2013b). Unpredictable disturbances as natural and artificial catastrophes (i.e. flooding, fires, building crises, economic booms and crashes) prevent any attempt to achieve long-term stability (Ahern, 2011), as future outcomes are largely beyond our ability to make predictions and, consequently, to make plans (Schön, 1987). Accordingly, sustainability must embed a transitional dimension and be interpreted as an on-going process rather than an ultimate goal (Novotny et al., 2010, Wu and Wu, 2013).

In the field of system ecology the property of a system to persist in the face of future change is called *resilience* (Holling, 1973). In natural ecosystems, it is described as the capacity of a system to respond to disturbance without changing its basic states and relationships, even when change is sudden and unexpected (Walker and Salt, 2012). Work in complexity theory (Batty, 2013b) and system ecology (Walker and Salt, 2012, Marcus and Colding, 2014) advanced the idea, now largely accepted, that not unlike natural ecosystems, cities are complex adaptive systems (Garcia, 2013), constantly unstable, inherently variable and prone to change over time. Therefore the adoption of the theoretical framework of resilience seems particularly powerful in addressing to uncertainty, variability and change in the urban environment. Indeed, according to Anderies (2014) resilience theory *"can provide some theoretical perspectives for addressing design challenges for built environment* […] *in the extremely challenging design environment of the Anthropocene"* (p. 130).

In particular, two concepts integral to resilience appear important in relation to cities (Novotny et al., 2010, Sharifi and Yamagata, 2014, Godschalk, 2003):

- *Robustness,* or the ability to withstand stress without significant structural or functional change, and

- *Adaptability,* or the ability to adjust to changing external conditions without radically departing from previous conditions

In cities, the ability to persist during periods of turbulence and preserve core identity, character and fundamental morphological structure (i.e. plots, blocks, streets and public spaces) are trademarks of most successful and memorable places (Carmona, 2010). Simultaneously such places also have the ability to change gradually and incrementally (i.e. through land-use conversion, small alteration in layout and arrangement of buildings and spaces, re-organisation of activities) though a self-organising mechanism that prevents them from getting *'locked-in'* in inefficient paths (Novotny et al., 2010) and spares them from the need of more radical interventions (Tachieva, 2010). Applied to masterplanning, resilience theory would stress the importance of conceiving, designing and assessing urban form in terms of its probabilities of maintaining its basic identity while continuously and gradually evolving.

However, the current debate on urban resilience mainly focuses on post-disaster emergency planning and on vulnerability to sudden and catastrophic events at the expense of smaller, progressive and incremental change (Davoudi et al., 2012). Additionally, whilst few system ecologists tried to translate the theoretical framework of resilience into spatial form (Marcus and Colding, 2014), in the vocabulary of urban designers the term is still a buzzword (Stumpp, 2013). Therefore its potential to operatively inform urban design practice remains largely untapped, a rather important gap given that design intervention on the urban environment are always mediated via the spatial form.

Within this broader framework, the current paper takes on the argument that embedding a resilience framework into urban design may help designers and policy makers to create places able to endure culturally, socially and environmentally as well as to dynamically adapt to contextual conditions and evolve. Accordingly, it is advocated the role of a reformed approach to masterplanning, referred to as *"Masterplan for Change"*, in giving strategic direction and spatial quality to places, by building in them enough resilience to accommodate modification over time. Recent masterplanning experiences and models have been driven by sustainability principles in shaping the form of new urban development. At the same time, literature has suggested for a number of years (Wu and Wu, 2013, Marcus and Colding, 2014) how the framework of socio-ecological resilience shares many commonalities with the sustainability agenda. Hence, to set the grounds for the hypothesis here presented, following pages clarify the fundamental link between sustainability and resilience and distil fundamental principles of *"Masterplanning for Change",* achieved by integrating and combining urban design sustainability principles with principles of socio-ecological resilience.

## 2. Method for reviewing and combining principles of urban design sustainability and socio-ecological resilience

As the current paper aims to stress the appropriateness of a resilience framework in guiding the conception and assessment of masterplans, literature on urban design sustainability and socio-ecological resilience are used to generalize principles of *resilient* masterplanning or "*Masterplanning for Change"*. The two-stepped methodology presented in this paper consists in: 1) the identification of key principles of urban design sustainability and socio-ecological resilience and 2) the integration of the principles emerging from the two fields into principles of *"Masterplanning for Change";*

Review of key principles of socio-ecological resilience was conducted using the SCOPUS search engine including all publications in English[2] dating between 1978 and March 2015 referring to principles, characteristics or proprieties of resilient systems. After applying additional thematic restrictions to target the search, including the wider body of publications of the top 10 most active investigators reported and scanning the references section of most relevant publications, a total of 50 publications were selected to distil resilience-related criteria, from an initial of 758 documents.

Regarding urban design sustainability principles, much of the literature is summarized in the work of Carmona (2010) and Luederitz et al. (2013). To ensure the comprehensiveness of the list and a degree

[2] Since English publications accounted for 95.7% of all entries, this was considered acceptable.

of agreement upon it, this was integrated with other academic and non-academic publications as planning guidance (The Scottish Government, 2008, DETR, 2000), consultancy agencies statements (Roger Evans Associates Ltd, 2013), tested on textual statements associated with recent examples of masterplans randomly sampled from journals, books and websites and discussed with selected urban design practitioners, academics and policy makers (i.e. Glasgow Housing Association, Academy of Urbanism, Prince's Foundation). Although the list seemed to adequately reflect academic literature and professional practice, given the open-ended nature of this search, omissions, additions or modification are possible. These principles appear in the majority of cases described as physical properties having social-economic and environmental repercussions, hence their specification across these three aspects in the table below

13 principles were derived from literature on socio-ecological resilience (Table 1) and 10 from literature on urban design sustainability (Table 2).

Table 2. Thirteen principles of socio-ecological resilience

| Principle | Definition |
|---|---|
| Self-organisation | Small-scales interaction and bottom-up rules produce macro-scale patterns at larger scales. |
| Autonomy | Ability of systems and subsystems to maintain some independence from outside control. |
| Coherence | Ability to function as unitary structures while composed by various elements and sub-systems by virtue of connectedness and integration at higher scale. |
| Interdependency | Reliance on mutual support and synergy within systems (components, sub-systems) and across different systems. |
| Flexibility | Ability to enact small, gradual adjustments in component and subsystem to respond to changing conditions and evolve. |
| Responsiveness/ Resourcefulness | Ability to timely identify problems, establish priorities act and re-organize function, structure, and basic order ahead and following disruptive events or failures maintaining key functions fit for purpose or minimising disruptions |
| Feedback | dynamic continuous process of trial and error that relies on experience, knowledge and memory of previous failure or success to effectively respond to context |
| Creativity/ Innovation | Ability to transform change into the opportunity to achieve a more advanced state by gradually tested and eventually mainstreaming innovative strategies |
| Diversity | Coexistence of many functionally different components providing a variety of services combined and distributed within and across scales/time, in a way that is efficient spatially and economically and thus avoiding reliance on a single solution. |
| Redundancy | Coexistence of many functionally similar components fulfilling the same, similar or backup function in several different ways, implying functional replication, internal variation and a degree of buffer capacity, so that failure of one component does not stall the whole system. |
| Modularity | Presence of small-scale, relatively autonomous and poorly-specialised modules. Whilst highly distributed and decentralized, modules can aggregate to form higher-level coherent systems, enabling contextual responses and decreasing spread of failure |
| Scale-free connectivity/ Scale hierarchy | Networks organised via few long-range connections and many tight short-range connections, with focal nodes connecting lower and higher scales together, where every scale is simultaneously connected to the others and all systems are mutually interactive, with no connective scale dominating the others. Hence, failure of a substantial number of links rarely affecting the network as a whole. |
| Balance/ efficiency | Capacity to guarantee performances in resource-limited settings, in the short and in the medium-to-long term by balancing inputs and outputs of resources and energy. |

*Adapted from, among others, Sharifi and Yamagata, 2014; Dovey, 2012; Galderisi, 2014; Novotny et al., 2010; Moench, 2014; Collier et al., 2013; Ahern, 2011; Cloete, 2012; Da Silva et al., 2012; Wu and Wu, 2013.*

Table 2. Ten principles of Urban design Sustainability

| Principle | Definition |
|---|---|
| Diversity | **Urban form:** mix of uses within buildings, blocks, streets; variety of buildings appearance, age and type; provision of a wide choice in mobility;<br>**Socio-economic**: mix household types, age groups, income bases; variety of tenure options and employment and entrepreneurial opportunities.<br>**Biological:** sustenance and enhancement of fertile and self-supporting habitats and a diversity of plants and animals through provision of diverse green spaces. |
| Connectivity | **Urban form:** permeable street and transport networks; fine-grain and accessible street layout and uses; physical and visual integration with their surroundings.<br>**Socio-economic:** support and socialisation networks; face-to-face interaction opportunities.<br>**Landscape:** interconnected ecological network, accessible for both people and wildlife. |
| Concentration | **Urban form:** efficient match between density, building typology, land use distribution, street and transport network and focal nodes and public spaces.<br>**Socio-economic:** support of urban living, economic viability of transport and facilities.<br>**Landscape:** reduction of land intake and ecological footprint; preservation of greenfield. |
| Distinctiveness | **Urban form and environment:** character result of unique geographic, morphologic and cultural circumstances; preservation and valorisation of built and natural heritage against pressures towards homogenisation; integration and response to setting and context.<br>**Socio-economic:** awareness of local assets and economies; sense of pride and ownership; sense of identity and belonging. |
| Human needs | **Urban form:** facilities, services and spaces scaled to the needs of individuals and community and locally accessible; legible and well maintained places and buildings.<br>**Socio-economic:** enhancement of psychological and physical health; sense of safety; comfortable human-scale environment; psychologically restorative connection with nature<br>**Landscape:** Integration of natural resources within the built environment; balance between natural and man-made environment. |
| Efficiency | **Urban form:** efficient and innovative building design; reuse of existing fabric and infrastructure; integration of transport options; efficient land-use and street layout.<br>**Socio-economic:** reduced incidence of cost of fuel; equitable distribution of costs and benefits of development.<br>**Environment:** minimisation of energy deployed in building life-cycle; use of; reduction of waste emissions; use of services provided by ecosystem and renewable natural resources |
| Adaptability and Durability. | **Urban form:** places, buildings and infrastructure capable to upgrade, cater for overlapping functions, overcome obsolescence and adapt to technology, lifestyles, demography, uses.<br>**Socio-economic:** places able to follow and adapt to people's life-cycle; flexible grass-roots management of properties and public spaces; preservation and reuse of community asset to foster sense of belonging and identity;<br>**Environment:** long-term view on energy and environment; focus on non-environmental destructive uses, materials, resources. |
| Self-sufficiency. | **Urban form:** provision of basic needs locally and means local access to mobility options; reduced need for commuting; locally available community infrastructure.<br>**Socio-economic:** self-sustaining and viable local economy; availability of local employment options; strong social capital; locally managed public spaces.<br>**Environment:** local production of food, energy generation and waste disposal. |
| Stewardship | **Urban form and environment:** well-maintained public and green spaces; fine grained and diversified land division to enable different forms of management.<br>**Socio-economic**: long-term commitment of community, stake-holders and local authority in management and governance; |

*Adapted from, among others, Carmona, 2010; Tarbatt, 2012; Barton et al., 2010; Luederitz et al., 2013; Thwaites et al., 22005.013; Farr, 201; Roger Evans Associates Ltd, 2013; Bullen, 2007; DETR, 2000; Rudlin and Falk, 200; Porta and Romice 2013; Thwaites et al. 2005.*

The following section combines the two sets of principles based on evident agreement/analogy in literature into 12 principles of *"Masterplanning for Change"*. Eventually, this list will be functional to the selection of compatible masterplanning case studies and of relevant metrics to analyse them. Analysis of case studies will help verifying whether masterplans responding - or conceived according to - urban design sustainability principles and compatible with principles of resilient systems, display themselves resilience in their resulting urban form and use. This, however, is not the object of the current paper as is currently being investigated.

## 3. Defining principles of Masterplan for Change: linking urban design sustainability and socio-ecological resilience.

During both reviews it was noted that identified principles of urban design sustainability and socio-ecological resilience bear no distinction between structural characteristics and (i.e. modularity, diversity) and behaviours (i.e. self-sufficiency, distinctiveness) of the system/place. This, however, becomes particularly important in urban design and masterplanning, as clearly some of these properties (i.e. modularity) can be embedded from the outset in the physical design of a space (i.e. through fine-grained division of ownership into small plots) while others cannot be produced by design (i.e. self-organisation) and can only be indirectly encouraged or potentially enabled to evolve over time by many factors, forms being one (i.e. through setting looser frameworks and rules and leaving room for institutions to emerge and consolidate). Therefore in combining the two sets of principles these where structured in a) behaviours of resilient cities (i.e. how a resilient urban system operates) and b) structural characteristics (what structure is associated with these behaviours).

The final list includes 12 principles, 5 of which related to the *structural characteristics*, 7 to the *behaviours* of resilient urban systems (fig.1). The division in structural characteristics and behaviours is reflected in the structure of the next section. Each principle starts with a general definition. Structural characteristics focus on geometric and physical properties of the urban fabric and landscape. Behaviours, on the other hand, focus on capabilities and how, whenever possible, these are declined in the physical, socio-economic and environmental dimensions. For these, a link with the underlying urban structure is presented.

### 3.1 Structural characteristics of resilient urban systems

*Diversity.* Diversity has many dimensions - physical socio-economic and biological (Ahern, 2011).
Spatially, density entails presence of a variety of functions simultaneously or hourly/daily/weekly intertwiningly, both horizontally (i.e. in different buildings in close proximity) and vertically (i.e. in one same building) (Ahern 2010; Tarbatt, 2012) in a cost-effective way. Hence it requires intensification of uses, services and densities at focal points of the urban spatial network (i.e. transit hubs, main streets) in order to maximise accessibility and reach. Diversity also refers to modal variety (i.e. use of public transport and other non-motorized commuting such as cycling and walking).
Up to some extent socio-cultural diversity plays a role in establishing building a coherent identity and is related to generation and exchange of knowledge and diffusion of innovation and creativity (Wood and Dovey, 2015). Biological diversity, whilst contributing to sustain and enhance wildlife also caters for a variety of human needs and produces psychological wellbeing (Ahern, 2011)

*Redundancy.* In urban systems redundancy focuses on the multiplicity options to choose from (Folke, 2006) and the multiple paths that can be taken to perform or get access to the same function or to fulfil the same need (Salat and Bourdic, 2012). Redundant transport networks offer the possibility to choose between overlapping modal options to move across a same area or across the city. Similarly in a redundant street network people have plenty of option to choose from in selecting a preferred path. In the built fabric, redundancy complements diversity, by increasing and combining the range of small, medium, sized uses (i.e. houses, business activities, and shops), boosting user's choice. In all cases, local damage or failure can be overcome easily as flow can be re-routed and individual components easily substituted. In biological systems, the presence of a great number of species performing a similar function but responding differently to disturbance (i.e. natural predators, climatic

variation, pollution levels) ensures continuity of the services provided by the ecosystem and preservation of habitat integrity and richness over a wider range of conditions (Ahern, 2011).

*Modularity*. Urban systems possessing a modular structure are spatially and organizationally conceived as progressive assemblages of smaller independent but interacting units aggregating at different scales (Batty, 2013b). In the urban fabric, the plot is the smallest and most basic land-use unit (Panerai et al., 2004). Indeed plots are individually independent (each driven by the development and management strategy of its owner) with roughly similar in size, non-specialised but, within certain limits, able to accommodate a wide range of functions. Plots can aggregate into wholes to form higher-order element (blocks, districts, settlements) or to disaggregate according to needs. Scale is also crucial as the larger are the units at the outset (i.e. blocks, super-blocks), the harder is for them to be modified or downscaled (Panerai et al., 2004). Additionally, in a fine-grained plot-based spatial structure, failure (i.e. demolition) has reduced impact and is more easily amendable. Hence, plot-based parcelling of land works with diversity and redundancy to increase complexity of the urban system, increasing its capacity to adapt to context, to test diverse strategies and to gradually change (Porta and Romice, 2010, Panerai et al., 2004, Tarbatt, 2012). Finally, modularity is a fundamental landscape property, particularly in their integration in the urban structure, where every small coherent unit or *patch*, can create a system of smaller spaces that can aggregate into larger wholes (Novotny et al., 2010). When woven into the fabric of cities to its ecological value is added an important restorative role for people (Thwaites et al., 2013).

*Scale-free connectivity and scale hierarchy*. Resilient urban systems many geometric and functional connections structured in a scale-free manner, following a scale hierarchy (Batty, 2013b, Salat and Bourdic, 2012), that implies the presence of a large pool of ordinary, frequently interspersed uses/elements countered by progressively less frequent, rarer and larger ones. Networks lacking connectivity at a given scale, as for strictly hierarchically organised street layouts, remain poorly connected and vulnerable to component failure despite spatial closeness of their elements, as they require upward and downward mobility to be navigated and only one or few paths (Salat and Bourdic, 2012). Cross-scale connectivity is fundamental for the emergence of focal points where different scales meet (i.e. transport hubs, busy street intersections) and where interaction and activity are most intense. This property is linked together with the three previous ones (diversity, redundancy, modularity), and together they help responding to a more diversified demand at many scales. This property extends to different aspect of the urban structure. In terms of mobility, networks structured so to include few fast links outreaching the wider metropolitan or regional context and many human-scale walkable and dense local streets are better connected both internally and across scales. In the ecological network, the presence of many small-scale frequent green areas (i.e. small private gardens), less frequent medium-scale green areas (i.e. neighbourhood parks) and occasional large portions of green space (i.e. county parks, natural reserves) highly interconnected at different scales via corridors (i.e. linear parks, tree-lined boulevards, rivers basins), cater for multi-habitat species and represent valuable basins of biodiversity, and offer important restorative benefits and services (Thwaites et al., 2013).

*Balance/efficiency*. The concept of efficiency it is rather controversial in resilience. While it is listed as important by many (da Silva et al., 2012), others (Novotny et al., 2010) state that resilience and efficiency are often incompatible. Indeed, when efficiency is framed in a short-term perspective, it tends to focus on optimization or maximization/minimization, at the expenses of redundancy (ibid.). Yet, as in a complex system there is no optimal state (Holling, 1973), efficiency must be framed into a long-term perspective of dynamic balance between energy and resources supplied and delivered (Godschalk, 2003). Hence efficiency describes an urban system, its places and buildings which provide means for human needs satisfaction, in a resource-limited setting, minimising negative impacts on the economy, the people and the environment (Cloete, 2012).

Spatially, according to Salat and Bourdic (2012) efficiency relates to structural properties of the urban system, as scale hierarchy, modularity, redundancy and interconnectedness of uses, networks, in that they fair distribution and access to places, resources and services. Efficiency does not rely only on

energetic performance but refers to the appropriateness of strategies to fulfil people needs (i.e. food, shelter) and provide fundamental services (i.e. public transport), in a way that is environmentally sound, socially equitable and economically viable.

### 3.2 Behaviours of a resilient urban system

*Coherence/Identity.* In the urban form, the concept of coherence refers to the capacity of various individually distinguished urban elements to achieve a sense of large-scale consistency and to behave as a whole (i, streets organise into a street network etc.).
Coherence does not entail a *"general plan"* or any particular form of spatial regularity and cannot be deterministically achieved. However, the spatial configuration of places and landscapes has an important role in supporting the formation of a complex form of order, an own identity and properties. More specifically, it relies, both in the built environment and in the ecological network, on fine-grained diversity, concentration and variability of complementary but not identical elements (i.e. plots, patches) tightly interacting at many different levels of scale both within and outwith the system (i.e. connected through network of streets or landscape corridors), similar in scale and size but progressively aggregating to higher scales (i.e. plots organise on street to shape urban blocks, patches connect to form continuous habitats) (Salingaros, 2000). Hence, coherence is strongly related to diversity, redundancy, scale-free connectivity, modularity and scale hierarchy.
Coherence in urban form is a trademark of the most cherished and successful cities and places (Salingaros, 2000, Barton et al., 2010) as adds distinctiveness and uniqueness (Salat and Bourdic, 2012). In ecological terms, coherence ensures habitat integrity, fundamental for the protection of and enhancement of biodiversity (Thwaites et al., 2005). Finally, coherence intended as identity is also an important social construct essential to create vital, liveable, well-loved human environments able to bring people together (Carmona, 2010).

*Interdependency/Synergy.* In the urban context interdependency involves stimulating synergy between spatial elements, agents and uses so that they are more than simply compatible but mutually enhancing (Sharifi and Yamagata, 2014). In the urban this implies, among other things, matching infrastructure and transport nodes with higher concentration of uses (i.e. increasing mix) and densities (i.e. through more compact building types), to support economic activity and urban living, to extend accessibility across different parts of the city, to reduce overall energy consumption and ecological footprint and to provide more opportunities for social interactions. From an environmental perspective, the synergistic relationship between different elements and functions of the ecosystem helps delivering a series of service within the urban environment to the advantage of urban communities and wildlife (Novotny et al., 2010). From a social perspective, collaboration between individuals, households, community groups, stakeholders and local authorities improves decision-making and governance (Godschalk, 2003), increases the possibility to access resources in a variety of circumstances, gather knowledge and learn.

*Autonomy/Self-sufficiency.* Self-sufficiency is the capacity of urban systems to exercise greater local control over essential assets (Carmona, 2010, Galderisi, 2014) hence reducing vulnerability to economic fluctuations and resource scarcity (Galderisi, 2014). As it requires addressing locally a range of functions associated to urban living (from community infrastructure, shops and businesses to public transport), diversity becomes crucial. From an ecological perspective, achieving self-sufficiency implies managing locally urban processes and resources and decentralising energy systems (Novotny et al., 2010). Socially it stimulates commitment to places, social capital formation, pro-active involvement and empowerment of local communities in urban management, ultimately fostering higher quality of life, and local knowledge (Crabtree, 2006, Roger Evans Associates Ltd, 2013).

*Flexibility/Adaptability.* Flexibility refers to the potential of the urban system and its components to accommodate foreseeable or unforeseeable future environmental, social, economic and technological requirements, through gradual and non-traumatic adjustments. Spatially, a diverse and modular urban structure enables quick, relatively inexpensive and immediate adaptations or replacement (i.e. improvements, upgrades and conversion, plot subdivision/aggregations). Building flexibility requires

a shift from a short-term mind-set that privileges specialised single-use buildings to a long-term strategy focused on durability and adaptability (Carmona, 2010) and allowing for easy re-organisation, conversion and reuse (Moench, 2014). Socially, flexible places and buildings are more inclusive and more likely to accommodate various lifestyles, households types (i.e. families, empty-nesters, cohabiting students), income bases, tenure/ownership models, employment preferences (i.e. live-work units, flexible working). They are less economically demanding are positively perceived by local communities. From an ecological perspective, flexibility prevents wasteful processes and lowers the load of the built environment on the ecosystem. (Carmona, 2010, Bullen, 2007)

*Self-organisation.* Resilient urban systems evolve from countless actions and decisions taken routinely by independent agents (i.e. individuals, households, communities), without awareness on cross-scale consequences (Portugali, 2000, Anderies, 2014) but that, nevertheless, have important cumulative effects on the overall system (Cloete, 2012). Natural ecosystems are prime examples of self-organizing systems, whereas independent elements at local scales interact through generative behaviours. While cities are also shaped by decisions taken by centralised institutions and top-down rules (i.e. building regulations, religious codes) (Kostof, 1991, Davoudi et al., 2012), vibrant and liveable cities have developed in large part through progressive self-organising processes (Anderies, 2012; Hakim, 2014). In fact, the built fabric is a significant enabler or impediment to self-organisation. Porta et al. 2013 reflects on how patterns of use, control and ownership of places affects processes of self-organisation in the built environment. The more people have unified control over these aspects, the higher their freedom to implement flexible and responsive changes (Liao). Hence fine-grained modular urban structures seem better suited to promote self-organisation because they are highly decentralised and autonomous. In turn, places that can be managed locally without need of central control, report higher overall maintenance (Porta). From a social perspective, Ostrom (xx in xx, xx) reported how people, given the possibility, can effectively organise and mobilise to deal with complex issues without any centralised governance structure. Additionally, demanding local management to locals promotes cooperation and stewardship (Sanoff, 2000), favours emergence of local distinctiveness against homogenising trends (Carmona, 2010). With this regard, Folke (2006) stressed how non-prescriptive management and regulation characterised by a degree of openness empowers people, according them greater margin of control and negotiation.

*Resourcefulness/Responsiveness.* Resourcefulness and responsiveness in urban environments are related to the ability of people and institution to mobilise effectively assets (financial, environmental, human, technological) and to meet established priorities (da Silva et al., 2012) to better and faster respond to stress and to achieve durable recovery (Moench, 2014). The availability and accessibility of tangible resources – physical, natural, social, human and cultural - is fundamental as it is the capacity to learn from experience, self-organise and establish networks (i.e. information and support), cooperate and innovate (Galderisi, 2014, da Silva et al., 2012).
Resourcefulness and responsiveness stress the role of the local scale to take action on the basis of a realistic understanding of priories and resources, as opposed to meet imposed requirements and externally set standards (Collier et al., 2013) and addresses local issues of inequality in distribution of resources, access to knowledge and material infrastructure that tend to penalise low-income and marginal groups. As resourcefulness is also an organisational capacity, it also requires establishing and maintaining relational links across space and scales. Therefore, in cities, the capacity of organizations (i.e. community groups) and public authorities (i.e. municipality, the State) are also crucial for coordinating local efforts.

*Learning and innovation capacity.* Resilient cities internalise and operationalize information, memory and experience as fundamental learning mechanism that enables them to avoid repeated failures and to innovate and improve performance (Galderisi, 2014).
Learning capacity is key for improving ability to anticipate, foresee and cope with change (Folke, 2006). Spatial effects of learning processes are generally context specific and tailored to local challenges and resources. Hence they contribute to distinctiveness and character.
Capacity to innovate helps transforming external pressures into opportunities betterment (Galderisi, 2014). Also the urban form learns through adaptation that also depends on the flexibility and

organisational capacity of its physical structure (Porta and Romice, 2010). Innovation implies failure, urban system that have enough autonomy at the smaller scales make it possible to initially test innovation through minor, gradual and fail-safe experiments. Then, in case of success, innovation can be more safely spread across wider urban system (Ahern, 2011). Socially, community learning is a basic ingredient of resourcefulness and responsiveness, and is further enabled synergy at different scales between people with different experiences, skills, and knowledge.

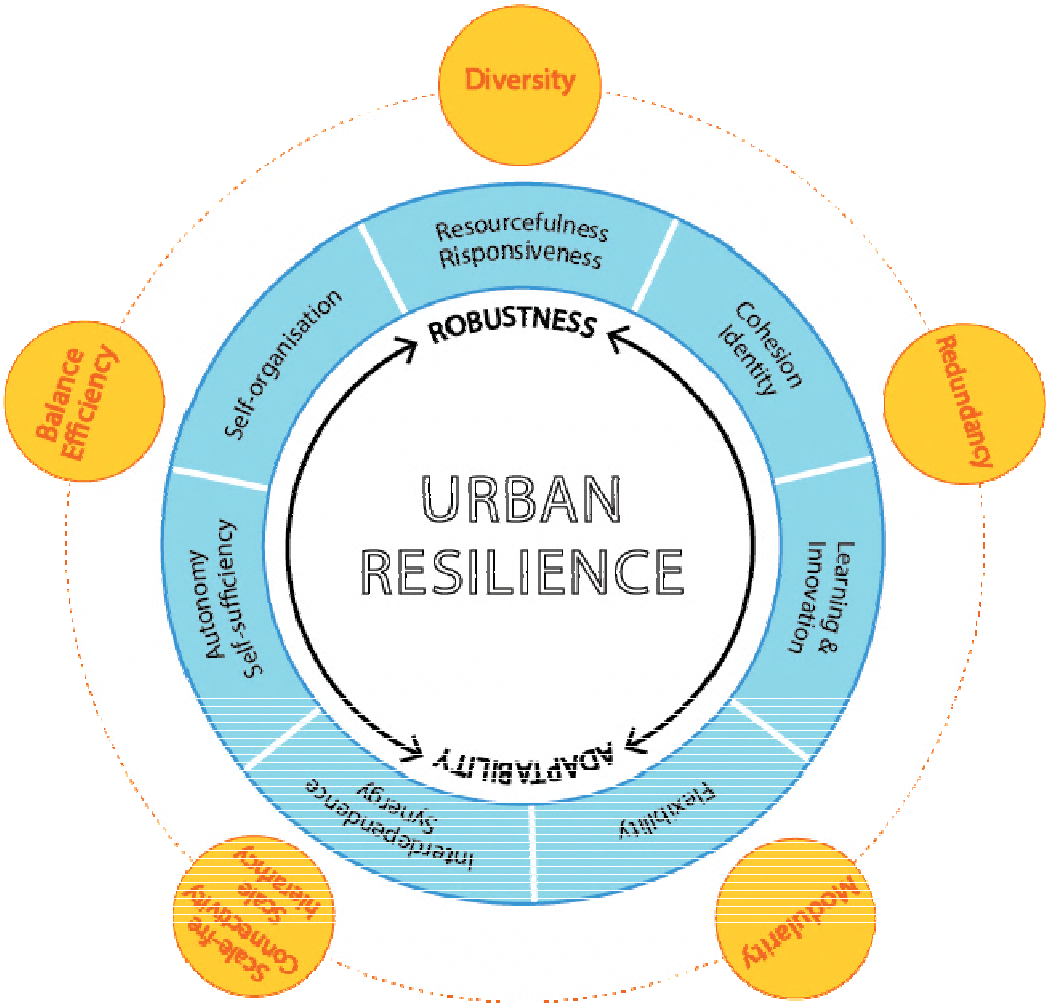


Figure 1. Urban resilience principles for Masterplan for Change, divided in structural properties (the outer circle) and behaviours (the inner circle).

## 5. Conclusions

In the face of future challenges, embedding a resilience framework into urban design and masterplanning can potentially help designers and policy makers create places able to perform culturally, socially and environmentally as well as to adapt to dynamic contextual conditions and evolve over time (Verebes, 2013). The current work preliminarily explored the possibility to reform masterplanning in a way that makes it fit to give strategic direction and spatial quality to places, by building in them enough resilience to accommodate change, even when unforeseen. Over the last 15-20 years, masterplanning experiences have sought to embed, with varied degree of success, sustainability principles in shaping the form of new urban development. The framework of socio-ecological resilience shares many commonalities with the sustainability agenda, as recognised in much literature (Wu and Wu, 2013, Marcus and Colding, 2014). Hence integrating and combining urban design sustainability principles with principles of socio-ecological resilience, made possible to list a series of structural characteristics and behaviours that any resilient urban system should possess

and that urban design and masterplanning should aim to achieve. This work, while still at an early stage, is also meant to give further definition to the very concept of *"Masterplanning for Change*", in parallel carried out by the Urban Design Studies Unit at Strathclyde as an operative and practical approach to masterplanning. The identified principles are intended as complementary and mutually reinforcing. Their aim is to illustrate general properties of resilience as manifested in the urban form across several socio-economic and environmental processes. However they do not provide technical specifications. No claim is made, particularly at this stage, about the possibility exhaustively determine all possible interrelations driving resilient urban systems, as this would mean incurring in the same form of over-simplification and determinism that we seek to overcome.

As the discourse on resilience of complex adaptive systems shows, the practice of urban design is not free from producing unintended and unattended consequences on form, society and the environment, nor should it try to be. Nonetheless, taking on the challenge of uncertainty and designing places capable respond to it and evolve remains crucial. Innovation brings inherent potential of failure. By learning from past and recent failures and successes of masterplans, the chance is to shift more deeply the focus of place-making on durability and adaptability and find again the quality of our most successful cities so deeply cherished.

What will be the final shape of this *"Masterplan for Change"* is still under development by UDSU. It will consist in "*planning without deciding too much"* (Hamdi, 2013, p.117), addressing to physical change integrating long-term goals and short term initiatives, thinking smaller and at smaller scales and linking these to wider and progressive large-scale change in a way which is self-adjusting, harnessing potential of innovation and creativity while remaining place-based and locally relevant, being flexible, open and inclusive and embedding community involvement and political will.

## 6. Next Steps

The list of principles of "Masterplanning for Change" is functional to the selection of masterplan case studies; this is based on compatibility with the principles and on observations on the ground of achieved spatial, environmental and socio-economic performance as suggested in literature. Analysis of case studies seeks to verify if masterplans complying with principles associated with resilient systems display themselves resilience in their resulting urban form.

At the current stage, two sets of masterplan case studies have been considered. The first set includes masterplans dating from the early 1990s, selected as illustrating innovative approaches to commissioning, implementation and governance. The second set, dating back to 1800s, provides some lessons on long-term adaptive quality and identity, visible in their formal spatial outcomes. Jointly they provide a cross-section of different masterplanning approaches and outcomes. Currently 10 case studies from the first and 3 from the second set have been shortlisted for further analysis. The geographic focus of the selection is international, but concentrated, with few exceptions, in Northern Europe and the United Kingdom. A pilot case study, the masterplan for Homeruskwartier in Almere, (Netherland) was selected to perform initial analysis. At the time of writing, analysis on the pilot is not at a stage where results can be presented, but hopefully will be object of discussion in occasion of the forthcoming AESOP Conference in July 2015.

## 7. Outcomes for planning and design

The current research seeks to inform scholars, professionals, users and policy-makers, locally and internationally, with the results of the research. The work presented should be taken as a work in progress and will be constantly revised, tested and refined. As part of a larger PhD research that stems and benefits from on-going work carried out by the Urban Design Studies Unit at the University of Strathclyde, the current work contributes to the creation of a more comprehensive urban design manual that embeds the result of research on *"Masterplanning for Change"*. This manual will be made available to practitioners, students, and community groups to guide design, delivery, management and monitoring of urban developments, as well as to assess proposed or implemented plans.

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# A TALE OF TWO CITIES: COMPARATIVE STUDIES OF URBAN-RURAL COHESION DEVELOPMENT POLICIES BETWEEN CHENGDU AND CHONGQING IN CHINA

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**ABSTRACT**: *Separate developments of Chinese urban and rural areas were caused by urban-rural dualistic system, which seriously impeded urbanization process in China. Chengdu and Chongqing were two pioneer cities of promoting urban-rural cohesion. They have adjacent location and similar background, while their policies were not exactly the same.*

*This article had a review of the urban-rural cohesion policies and their consequences in this two cities and pointed out the main features of them. Comparative analysis of the reasons for the different polices in Chengdu and Chongqing is presented in the end.*

*According to the analysis, Chengdu adopted integrated management which put rural elements like the land, capital and the labor force into market to promote urban-rural cohesion. Market played a more significant role than the government in Chengdu case. However there was an opposite situation in Chongqing where the government relied on the power to dragged rural elements into market circulation. Government dominated the whole process in Chongqing case. The urbanization rate change indicated that polices in Chengdu which rested on market are more efficient and more sustainable than those in Chongqing.*

*The conclusion is that although it will take a longtime to establish the order of the market, it will have a steadier, more reasonable, efficient and sustainable processes and results than a strong government-led transformation which can get instant results. If there is no orderly market, once the pressure of government has been taken away, the transformation will cease. Therefor market should lead the urban-rural cohesion with the support of government s authority. Both of them are indispensable.*

## 1. Introduction

In the third convention of the 18th plenary session in China, the government of China paid high attention to the urbanization of China. The holding of *Central Urbanization Meeting of China* in 2013, marking the arrival of transition session of urbanization in China. Urbanization has become one of the core topics of the whole people of China. Urbanization, is a process in which rural inhabitants transform to urban residents. The appearances of this process are the increasing of urban population, the expansion of the scale of urban land and the formation of urban social life-style. In terms of urban connotation, the vigorous promotion of urbanization means that the free movement of land resources, capital resources

and labor force resources between urban and rural area. However, the urban-rural dualistic system which implemented from the planned economy era has impeded the free movement of the resources. Therefore, the key point to solve Chinese urbanization problem is to break urban-rural barriers by urban-rural cohesion.

*1.1. The urban-rural dualistic system in China*

Since the founding of new China, the heavy industry road heading to industrialization caused the foundation of the urban-rural dualistic system in China which absorbed the fruit of rural agricultural production into the urban to supply industry. Urban grew rapidly while the development of rural was constrained. Since the reform and opening-up, Chinese government have tried to reform this system whilst the urban-rural dualistic system remains and restricts the vigorous development of urbanization in China.

*1.1.1. What is the urban-rural dualistic system?*

The urban-rural dualistic system means that urban and rural developed separately. The key point of this system is the barrier between urban and rural which restrict the free movement of their resource. Because this barrier, the government use better policies on urban to make it develop much faster than the rural area. In this process, the industry of China developed rapidly and the citizen who had urban household registration got rich, while the farmers who had rural household registration endured terrible life.

*1.1.2. Why the government adopted this system*

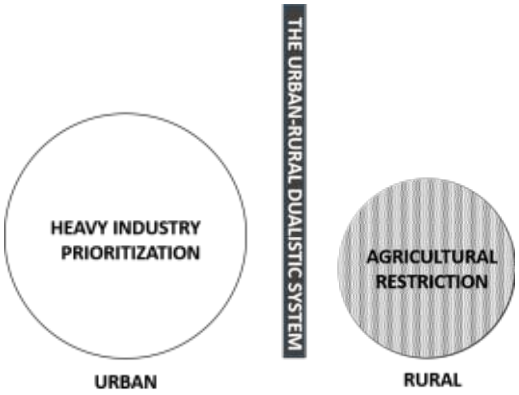


Figure 1. The Urban-rural Dualistic System of China

At the beginning of the new China, the main economic form in China is small-scale agriculture without any heavy industry. The government believe that the urban area of China must start developing industry while they all know this county cannot give up agriculture since they need the money for industrial development. Consequently, the government established this dualistic system between urban and rural. In rural area, the farmer went on with farming work and must hand most of their fruit over to the government. In urban area, the government make use of the benefit get from rural area to develop industry. That is to say, in a certain long time after the foundation of the state, government got most of their income from rural area while invested most of them in urban area. That s why the rural area fell so muc

*1.1.3. The features of urban-rural dualistic system*

The basic feature of this system is the household registration, and it have three appearance.

*Land resource*

Urban and rural area have different land use police. In rural area, lands belong to collectives instead of farmers. Farmers rent the land and just have the right to use so that they cannot sell their land. And if their collective decide to sell the land, the benefit belong to collective. In this system, the farmers have two things they can use. The first one is the contracted land which they use to produce to get food, the second one is homestead which they use to live. However, since neither of their ownership belong to farmers, farmers cannot sell them in the market. In urban area, lands belong to country. Country have quota for city construction. So if the government want promote urbanization, they need to transform rural land to urban land. Therefore they need to buy lands from rural area. At this time, the urban-rural dualistic system restrict the process.

*Capital resource*

Since the government want to use the fruit of rural area to develop urban area, the price of agriculture products were undervalued while the price of industrial products were overestimated in the market. One result is that the income of farmers are extremely low so that they endured a terrible life, and another result is that no one want to invest in agriculture. Consequently, the capital flow just have one direction: rural to urban, just little capital came back.

*Labour force resource*

The government use the capital from rural area to support different kinds of social services and security for the people who have urban household registration so that they have retirement insurance security, medicine security, education security and other securities. However these security will not support to farmers who have rural household registration. As the development of science and technology, rural area don t need that much young person to work on agriculture and meanwhile, the co need more labor. With this back ground, many surplus labor of countryside go to work in cities with their rural household registration. They work for the construction of cities while the city would not support any security for them since they don t have urban household.

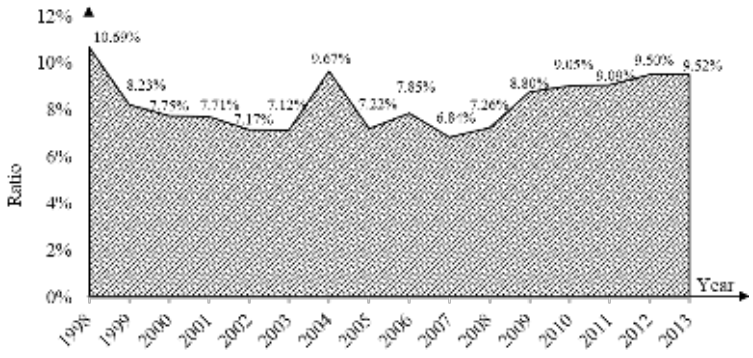


Figure 2. National Agricultural Expenditure Ratio from 1998 to 2013
Source: Chines National Bureau of Statistics, 2006;2007;2008;2009;2010;2011;2012;2013;2014

*1.1.4. The problems created by the urban-rural dualistic system*

There are five main problems caused by the urban-rural dualistic system. Firstly, the collective ownership of land prevented land scale management. Chinese country adopt collective ownership system. Farmers only have the right to use the land instead of own it. However the owner of land including towns, villages, and unincorporated villages and other stakeholders don t have

clear boundaries of the distribution of land revenue share. Which means if a piece of land will be sold to someone in the market, nobody knows that the how to allocate incomes to its owners. Therefore the land cannot be exchanged freely in the market. That s why nobody can own a large scale management agriculture. Secondly, since the income distribution system biased to urban, the agricultural, rural infrastructure and public services cannot get adequate investment. Before 2007, although the number of national rural spending seems increased annually, while total state revenues also increased, so that the proportion of agricultural spending is actually declining (Figure 2). The truly present situations are rural public service facilities are fell behind, agricultural developed slowly and modern agricultural science and technology are also still in its infancy stage. The national government was aware of this problem and began to increase investment in agriculture in recent years. Thirdly, price "scissors difference" underpriced the agricultural products so that the farmers have the lack of expansion capital which increased the gap between urban and rural areas (Xin Yan, Kun Tian and Jie Gao, 2011). During the initial period of founding the state, agriculture must support industry and hence agricultural products have been undervalued while industrial products have been overvalued for a long time. City had surplus funds for its development while countryside is short of expansion capital. Rural-urban gap expanded. This situation still exist today. Fourthly, financial industries suck more capital than lend loans in rural areas caused the significant outflows of rural capital (Xin Yan, Kun Tian and Jie Gao, 2011). Rural enterprises are small with low credit. They are difficult to secure loans from the financial sector so that most of the money flows to big enterprises and big projects in the city, rural enterprise development difficultly. Finally, the household registration system restricted the free movement of labor force. The household registration system created by urban-rural dualistic system caused that the migrant workers with rural accounts cannot enjoy pension, education, health care and other safeguards which are enjoyed only by urban residents who have urban accounts. It seriously impedes the freedom of rural surplus labor flowing into city.

These five aspects seriously hampered urbanization of China. Therefore, solving the urban-rural dualistic problem should focus on these five issues.

*1.2. Analysis of the comparability of the Chengdu and Chongqing urban-rural cohesion*

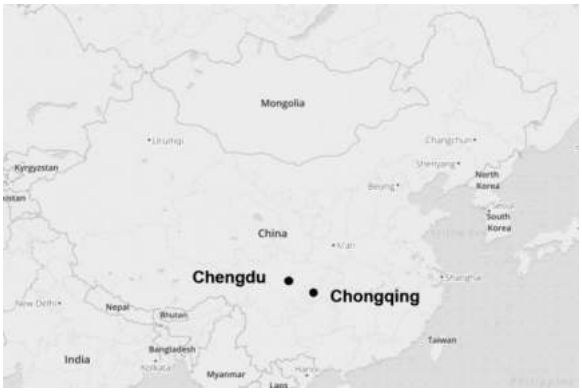


Figure 3. The Location of Chengdu and Chongqing

Chengdu and Chongqing have always been compared by scholars in different aspects since they do have comparability. Both of them are located in the western part of China with just 340km distance between them and are the leader cities of Chengdu-Chongqing economic zone (Figure 3). They also have many things in common on the topic of this article: urban-rural cohesion strategies. Both of them emerged serious rural-urban polarization so that they both have necessary to develop urban-rural cohesion planning. In 2007, both of them are

approved by the National Development and Reform Commission for the national urban-rural cohesion reform testing area, and did a lot of research in urban and rural cohesion planning with some outcomes. However they are totally different with their geographical, social and political environment. Therefore, comparing their measures and achievements in urban and rural cohesion planning can be used as a reference for research on urban-rural cohesion planning in China.

## 2. Methodology

### *2.1. Research strategy*

The mail method of this article is comparative study. Since the main features of the urban-rural dualistic system are mainly on three aspects (land resource, capital resource and labor force resource), this article will analysis the strategies adopted by both cities to see if their strategies is useful to change these features. Then in order to see the general system of their strategies, the article analyzed the strategy structure of both cities. Finally, the article introduced some special strategy in both cities.

### *2.2. Methods of data collection*

The data of this article is mainly come from the *CHINA STATISTICAL YEARBOOK*, *CHONGQING STATISTICAL YEARBOOK*, and *CHENGDU STATISTICAL YEARBOOK* from 2003 to 2012. In order to do the comparative study, the author wants to use the data from the same number of years for both cities. That is to use the data from 2003 to 2008 for Chengdu and 2007 to 2012 for Chongqing which is 6 years since the stating of reformation.

Because of the main purpose for urban-rural cohesion strategy for china is to promote urbanization, the urbanization rate is one of the main indicators adopted in this article. The other indicator is the income gap between urban and rural areas which is used to evaluate the effect of urban-rural cohesion development.

## 3. Research on urban-rural cohesion planning in Chengdu

### *3.1. The review of urban-rural cohesion planning process in Chengdu (using 6 years information since the starting of reformation)*

Chengdu urban-rural cohesion planning began in 2003. During 6 years from 2003 to 2008, this process mainly consists of 2 stages (Jiuli Zeng and Peng Tang, 2013).

The first stage was 2003 to 2006, this was is the exploration phase of urban-rural cohesion planning. During this period, Chengdu has implemented the four-in-one and three concentrations politics, began to explore to bring the rural planning into of whole territory planning system which means transform the planning system from urban planning" to "urban and rural planning".

The second stage started from 2006 until 2008. In this phase, Chengdu have implemented the project , giving back the determined ownership to farmers and other means to integration target. In this process, Chengdu have practiced a comprehensive urban and rural plan system, and formed a more perfect system of urban and rural cohesion planning.

### *3.2. The innovation exploration of Chengdu urban-rural cohesion reformation*

#### *3.2.1. Innovation policies promoting free movement of resources*

*Land resources*

Land use system are the key points of urban-rural cohesion development. As it was described in the previous article, the ambiguity rural land ownership and the ambiguous benefits distribution leaded the problems like it was difficult for land ownership circulation and the loss of arable land after circulation. These are key problems to solving the land circulation issues. Chengdu has three main steps. Firstly, Chengdu have conferred land ownership certificate for all the rural land. In other word all the owners of the land can get a certificate to identify their benefit of the land. From January 2008 the government have conferred 33800 certificates for collective land ownership, 1.66milion certificates for collective land-use right, 1.8milion Rural Land Contract Management Certificate involving 10milio Secondly, found land transaction platforms. Chengdu found the first rural property rights exchange of china to support platform for transaction of land in the market. Thirdly, Chengdu established arable land protection fund firstly in China. The criteria is about: 360 yuan per acre per year for primary farmland and 270 yuan per acre per year for general farmland. This is to say if someone own 3 acres primary farmland and he keeps cultivating on it, he can get 1080 yuan from government. That is an excellent policy to encourage to protect farmland.

*Capital resource*

Chengdu have adopted three policies to overcome the difficulties the rural enterprises and agricultural face when they want to obtain capital from market. Firstly, settings up investment companies. Chengdu have organized *Modern Agricultural Investment Company*, *Small Town Construction Investment Company* and *Agricultural Logistics Investment Company* to investment in rural construction directly. Secondly, perfecting the guarantee mechanism by established financial investment rural guarantee company, and the rural land ownership circulation guarantee corporation to improve the guarantee system. Thirdly, banks pilot plan. Testing on some village banks, microcredit banks, as well as agricultural insurance as pilot program to gradually explore the mechanisms of financial reform.

*Labour force resource*

Household registration system restricts urban-rural cohesion development, affecting the free movement of labor force. Chengdu started from household registration reform to promote free labor flows. Firstly, unified household registration and break barriers of urban and rural. Chengdu introduced a government document in October 2006 to further promote the integration of urban and rural which stipulate that if farmers were domiciled in the cities, they can have urban household registration to enjoy old-age pension,

education and health care secure of city. Secondly, establish integrated urban-rural labor market. Improve situation of farmer workers by job training, employment policy, employment assistance, employment work responsibility system and employment services network. Thirdly, enhance protection system for persons who change from agricultural to non-agricultural status.

*3.2.2. Urban-rural integral policy structure*

Chengdu have carried out a series of reformation and innovation on planning structure of the city, financial structure and management structures which mainly in the three integration.

Figure 4. The Planning Integration of Chengdu

*Planning integration*

Firstly, planning area integration. Chengdu proposed an overall layout concept named whole area Chengdu, looks urban centers, surrounding towns and rural settlements as a whole area to plan (Jiuli Zeng and Peng Tang, 2013). Secondly, the special planning integration. Originally separated national economic and social development planning, urban master planning and land use planning have been unified to ensure that different urban and rural planning department can be highly linked up and regulated.

*Urban-rural service system integration*

Firstly, the integration of urban and rural public finance system. Chengdu reformed the rural financial management systems and implemented a new way which utilize county government to manage the finance of villages under it. Secondly, municipal finance directly invest into county. For the situation that the finance power of some basic layers government are too weak to guarantee equal accessibility to public service, the municipal finance invested directly in standard basic public services such as rural middle and primary schools, county (village) health centers (stations) and multi-use culture station. Thirdly, the reformation of basic layers management system. The economic function of sub-district administrative office have been abolished and its level of public services and social management capacity have been enhanced.

*Management system Integration*

Chengdu streamlined the existing administrative system. During the reform period, 758 political examinations have been reduced, which have been cut 66% compare with original amount. More than 30 departments have been dismantled and restructured, including planning, agriculture, transport, water supply, forestry and gardening for the integrated management of urban and rural departments. Simultaneously, 30% countries and 47% villages have been dismantled and restructured as well as more than 5000 official staffs have been reduced.

*3.2.3. Exploring of intensive development mechanisms* Three Aggregations

Reply to the situation that the serious contradiction between people and land, scarce resources and fragile

ecology, Chengdu has explored intensive development mechanism with Three Aggregations as the core idea (Guangyue Li, Min Wang and Jianzhong Wu, 2010). Firstly, industries assemble to the industry aggregation zone. Chengdu centralized 116 original separated small-scale industrial development zones into 20 industry aggregation zone to achieve the goal which develop industry intensively. Secondly, land use assemble to large scale aggregation. The government try to adopt methods like subcontract, lease, and buy a share to transform the existing dispersed small plots land created by land contract responsibility system into agricultural leading enterprises, rural collective economic organizations, professional farmer cooperative organizations or large planter in order to achieve scale management. Thirdly, farmers assemble to towns. Follow the principles like considering local conditions, respecting the will of farmers, paying according to law, promoting steadily , the government built town and rural new communities and guide farmers to transfer from primary industries to the second and third industries.

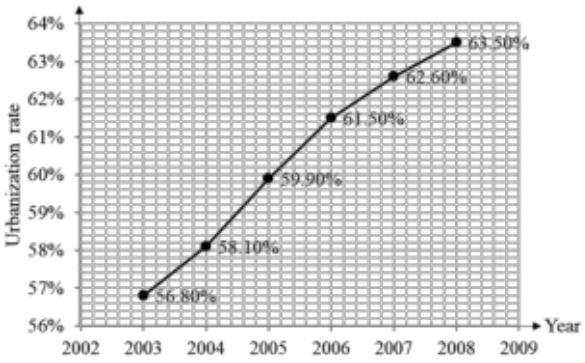


Figure 5. The Urbanization Rate of Chengdu from 2003 to 2008
Source: Chengdu Bureau of Statistics 2009

### *3.3. The outcomes of Chengdu urban-rural cohesion planning. (Using 6 years data since the starting of reformation)*

#### *3.3.1. Outcome 1: urbanization rate raised quickly, reaching the degree higher than standard level of urbanization*

One of the most important indicator used to measure the level of urbanization is urbanization rate count by urban resident population. From 2003 to 2008, the urbanization rate of Chengdu increased 6.7%, with a fast growth rate of 1.34% annual.

Table 1. The Standard Structure of World Development Model About Urbanization Capita Built by Hollis B. Chenery

| GDP per capita dollar in 1964 | <100 | 100 | 200 | 300 | 400 | 500 | 800 | 1000 | >1000 |
|---|---|---|---|---|---|---|---|---|---|
| Urbanization % | 12.8 mid-value | 22 | 36.2 | 43.9 | 49 | 52.7 | 60.1 | 63.4 | 68.5 mid-value |

Source: Zhang Ying and Zhao Min, 2003 cited in Yan Xing, Tian Kun and Gao Jie, 2011

Table 2. The Standard Structure of Urbanization and GDP per Capita According Chinese Situation

| GDP per capita dollar in 1964 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 |
|---|---|---|---|---|---|---|---|---|---|
| GDP per capita dollar in 2001 | 500 | 1000 | 1500 | 2000 | 2499 | 2999 | 3499 | 3999 | 4499 |
| Urbanization % | 22.1 | 36.4 | 44.1 | 49.2 | 53 | 56 | 58.4 | 60.4 | 62.2 |

Source: Zhang Ying and Zhao Min, 2003 cited in Yan Xing, Tian Kun and Gao Jie, 2011

According to the general law of urban development, the higher level of economic development a country have, higher level of urbanization it will have, and vice versa. Urbanization rate and GDP per capita has a correspondence relation (Table 1).

In 2008, GDP per capita of Chengdu has reached $ 4213.4 (according to the dollar convert from 2001), and its corresponding population urbanization rate should exceed 60.4% and actual urbanization rate of Chengdu was 63.15% which is higher than the standard level of urbanization (Table 2).

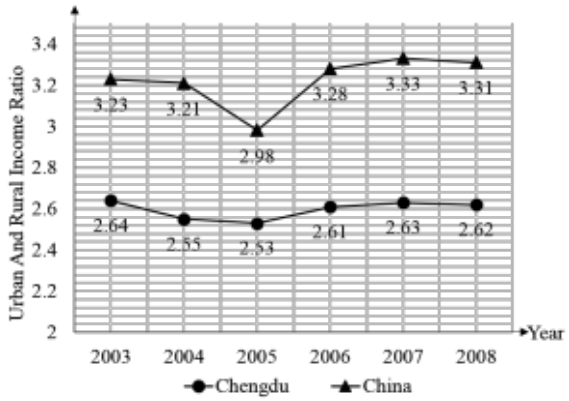


Figure 6. Urban-Rural Income Ratio of Chengdu and China
Source: Chengdu Bureau of Statistics 2009; Chines National Bureau of Statistics 2009

*3.3.2. Outcome 2: the balance urban spatial* `expansion mode create by` *three* `aggregations .`

In 2003 and 2007, non-agricultural population annual growth rate of suburban districts and exurban counties of Chengdu have reached 18.1% and 15.11%, respectively, which is much higher than 7.14% in the Center-City. The non-agricultural population increased fast continuously, especially in suburban areas. This rate in 2007 was 21.15% higher than that in 2003.

*3.3.3. Outcome 3: the income gap between urban and rural areas kept stable and low*

Chengdu urban-rural income gap remained the level below the national average, and maintained stability without widening trend.

Table 3. Urban-Rural Income Gap of Chengdu and China

| Year | | | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|---|---|
| Chengdu | Urban per capita Disposable income | yuan | 9641 | 10394 | 11359 | 12789 | 14849 | 16943 |
| | Rural per capita Disposable income | yuan | 3655 | 4072 | 4485 | 4905 | 5642 | 6481 |
| | Urban-Rural Income Ratio | | 2.64:1 | 2.55:1 | 2.53:1 | 2.61:1 | 2.63:1 | 2.62:1 |
| China | Urban per capita Disposable income | yuan | 8472 | 9422 | 10493 | 11759 | 13786 | 15781 |
| | Rural per capita Disposable income | yuan | 2622 | 2936 | 3525 | 3587 | 4140 | 4761 |
| | Urban-Rural Income Ratio | | 3.23:1 | 3.21:1 | 2.98:1 | 3.28:1 | 3.33:1 | 3.31:1 |

Source: Chengdu Bureau of Statistics 2009; Chines National Bureau of Statistics 2009

## 4. Research on urban-rural cohesion planning in Chongqing

*4.1. The review of urban-rural cohesion planning process in Chongqing (using 6 years information since the starting of reformation)*

Chongqing urban-rural cohesion planning began in June 2007, after been for the national urban-rural cohesion reform testing area which was approved by the National Development and Reform

Commission. In July 2007, Chongqing founded a leadership group and institution for urban-rural cohesion planning. On September 8th, 2007, Chongqing Municipal Government issued an office document on overall urban-rural cohesion reform which created a better legal environment for the reforms and innovations done by government. On April 28th, 2009, the State Council approved urban-rural cohesion reform program of Chongqing. Since then Chongqing entered a period of urban-rural cohesion reform practice (Yingying Lv and Hongxing Lan, 2011).

*4.2. The innovation exploration of Chongqing urban-rural cohesion reformation*

*4.2.1. Innovation policies promoting free movement of resources*

*Land resources*

Facing the similar problems brought by land ownership system as Chengdu, Chongqing adopted two approaches. Firstly, as similar as Chengdu, Chongqing have also conferred land ownership certificate for all the rural land, which including land contract certificate, forest ownership certificate, homestead certificate and collective-owned construction land certificate etc. Second, *Dipiao* system. Get planning quotas by the reclamation of idle rural construction land and then transform these quotas into *Dipiao* for selling. Other traders can by these *Dipiao* to change them to urban construction quotas which can be used to construct in urban area. In the process, urban got legal quotas for construction, farmers got benefits from selling *Dpiao* and the arable land had been protected.

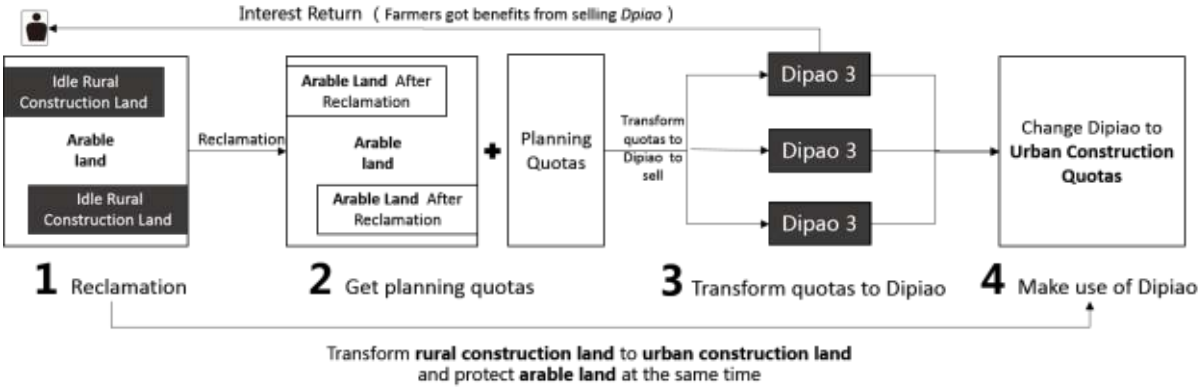


Figure 7. Dipiao system of Chongqing

*Capital resource*

Firstly, promote bank restructuring. Commercial Bank Wanzhou successful reorganized to Chongqing Three Gorges Bank, Municipal Rural Credit Cooperatives reorganized to Chongqing Rural Commercial Bank, and Chongqing Financial Leasing Companies have been approved. Secondly, develop innovative financial products. Mainly introduce unsecured microcredit to promote development of rural enterprises. Thirdly, the financial policy tilted toward agriculture. Use the services network and financial terminals of rural bank to provide loans, payment, withdrawal, settlement, and other financial services to farmers, cooperatives and agricultural leading enterprises. Finally, experiments on agricultural insurance. Mainly promote agricultural insurance pilot project on three kind of agricultural products including pigs, cows

and oranges.

*Labour force resource*

Government provided public services for migrant workers in a variety of ways. Firstly, housing security. Improving the living conditions of migrant workers, which was regarded as an important measure to solve the housing difficulties of urban low-income families, has been mentioned in an official housing document in 2008. Secondly, social security. A system to support retirement insurance and serious disease medical insurance and a series of methods to do 26 necessary things in 7 categories have been established for migrant workers. Thirdly, legal right security. A campaign named defending right in hundred days started for migrant workers. Finally, children education security. An official document which titled the children of migrant workers can have the same educational treatment as their urban peers. These polices have supported security for the migrant workers as well as attracted the surplus labors which are still in countryside to go work in cities so that these policies promoting the free movement of labor force.

Figure 8. One Circle and Two Wings Structure

*4.2.2. Policy structure: One Circle and Two Wings and urban-rural cooperation in pairs*

The main urban area of Chongqing half an hour economic circle regards as the one circ Northeast of Chongqing including Three Gorges area with the center of Wanzhou regards as the north wing. Southeast of Chongqing including the ethnic minorities impoverished mountainous area regards as the south wing. Every district of the main urban area will have a brother country to help with in pairs. The main contents of helping include eight aspects: industry collaborate, employment transfer, educational assistance, scientific and technological cooperation, health resources sharing, personnel exchanges, finance support, poverty alleviation and development etc. Supporting measures include: financial support, building standard rooms, arrange temporary posts for staffs, teacher exchanges, medical training and research consulting etc. Government asked the districts in main urban area must use at least 1% of their financial budget to help their county counterparts, and evaluate their achievement together.

*4.2.3. Pilot experiments to explore a variety of suitable models according to local conditions.*

Because of the complex situation with wide area and high mountains, countries of Chongqing had some pilot project to explore a variety of suitable models according to local conditions. typical projects are Jiulongpo District, Liangping County, Dianjiang County.

Jiulongpo District promoted farmers use contracted land to exchange for social insurance and homestead

for house. The core policies are to transforming farmers to urban residents with their own resources and support excellent migrant workers going into the city. They also focused on comprehensive industrial development on rural collective construction land and the construction of new rural communities which aim to improve the living conditions of migrant workers.

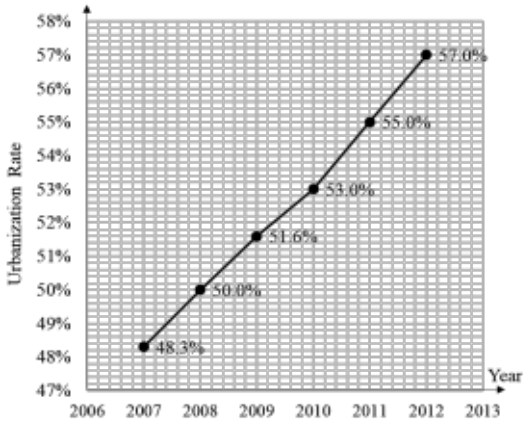


Figure 9. The Urbanization Rate of Chongqing from 2007 to 2012
Source: Chongqing Bureau of Statistics 2013

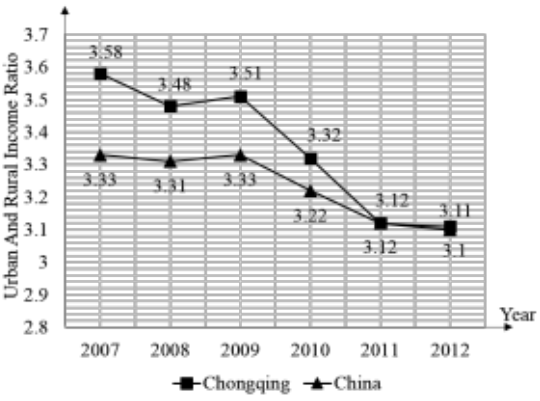


Figure 10. Urban-Rural Income Ratio of Chongqing and China
Source: Chengdu Bureau of Statistics 2013; Chines National Bureau of Statistics

Liangping County developed specialized farmer cooperatives which organized specialized farmers who plant same agriculture products together, so that to solve the contradiction between decentralized planting and the overall market demand.

Dianjiang County chose 50 village to exploring conditional mode to reform step by step with the principles which are smaller units, multiple mo low risks.

### *4.3. The outcomes of Chongqing urban-rural cohesion planning. (Using 6 years data since the starting of reformation)*

#### *4.3.1. Outcome 1: urbanization rate raised quickly, while still have gap with standard level of urbanization*

During 6 years reform period from 2007 to 2012, the urbanization rate of Chongqing increased 8.7%, with a rapid average annual rate of 1.74%. However, according to the standard rates of urbanization level mentioned above, in 2012, GDP per capita of Chongqing has reached $ 6191, which is $ 4472.5 converted from 2001. With this situation the urbanization rate should be above 60% in theory while the fact is just 57% in Chongqing. Therefor the urbanization rate level falls far behind the standard level.

#### *4.3.2. Outcome 2: the income gap between urban and rural areas reduced and reached the national level*

Urban-rural income gap of Chongqing have been larger and far above the national average. After the implementation of urban-rural cohesion reform, the income gap has declined markedly. In 2011 and 2012, it reached the national average level.

Table 4. Urban-Rural Income Gap of Chongqing and China

| | Year | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|
| Chongqing | Urban per capita Disposable income | yuan | 12591 | 14368 | 15749 | 17532 | 20250 | 22968 |
| | Rural per capita Disposable income | yuan | 3509 | 4126 | 4478 | 5277 | 6480 | 7383 |
| | Urban-Rural Income Ratio | | 3.58:1 | 3.48:1 | 3.51:1 | 3.32:1 | 3.12:1 | 3.11:1 |
| China | Urban per capita Disposable income | yuan | 13786 | 15781 | 17175 | 19109 | 21810 | 24565 |
| | Rural per capita Disposable income | yuan | 4140 | 4761 | 5153 | 5919 | 6977 | 7917 |
| | Urban-Rural Income Ratio | | 3.33:1 | 3.31:1 | 3.33:1 | 3.22:1 | 3.12:1 | 3.10:1 |

Source: Chengdu Bureau of Statistics 2013; Chines National Bureau of Statistics

## 5. Comparison Research on urban-rural cohesion planning between Chengdu and Chongqing

*5.1. Politics comparison research.*

Table 5. Politics Comparison Research of Chengdu and Chongqing

| | **Promote Free Movement of Resources** | | | **Policy Structure** | **Special policies** |
|---|---|---|---|---|---|
| | **Land Resource** | **Capital Resource** | **Labour force resource** | | |
| **Chengdu** | **1** Confer land ownership certificate<br>**2** Found land transaction platforms<br>**3** Arable land protection fund | **1** investment company<br>**2** guarantee mechanism | Relax household registration restriction | Urban-rural integral policy structure | Three Aggregations |
| **Chongqing** | **1** Confer land ownership certificate<br>**2** Dipiao system transaction platforms +arable land protection | Innovative financial products | Support security to attract farmers | One circle and wings and urban cooperation in pairs | Pilot experiments |
| **Conclusion** | Same | Similar | Similar | **Totally different** | **Totally different** |

Chengdu and Chongqing adapted similar politics to promote the free movement of resources in urban and rural area. Both of them focused on break the barriers between urban and rural. Because of the similar situation of them, both of them concentrated on three kinds of resources which are land, capital and labor resources. These three kinds of resources problems are caused by the urban-rural dualistic system in China. Therefore the universal methods to the urban-rural dualistic system problem is to try the break the barriers of this three resources between urban and rural.

Nevertheless, Chengdu and Chongqing have absolutely different policy structure for urban-rural cohesion planning. This policy structure of Chengdu is a kind of all-in-one integratio means that organize all the resources and materials of urban and rural together to put them into a same market. The key tool here is market. In other words, Chengdu want to found a market for all these resources to promote urbanization. The situation in Chongqing is completely changed. This policy

structure of Chongqing is try to use urban area to assist rural area in urbanization to reach urban-rural cohesion. The key tool here is government power.

*5.2. Reason analyses*

*5.2.1. Apparent causes: Geography and city scale differences*

Chengdu is located on the plains, with a total area of 12,400 km ², central city and the surrounding countryside contact closely make it is more easily for urban area to radiate the area around the it. The gap between center city and the surrounding countryside was relatively small. Therefore integration planning and the three aggregations can be better implemented. However, Chongqing is located in the mountains, with a total area of 82,000 km ², center city and the surrounding countryside are separated by mountains so that their connections are weak that makes it is more difficult for the center city to radiate the surrounding. Therefore, urban-rural cooperation in pairs is easier to imply. And because the complex situation each district and country should to explore the suitable mode for their local conditions.

Urban and rural areas of Chengdu have equal size. Chengdu had 6 million urban population, the rural population was also 6 million, that means it is big city lead big country which makes it easy to develop integration urban-rural cohesion planning policy structure. However, Chongqing had 7 million urban population, to lead 25 million rural population. Leading power of the center city is obviously insufficient. Therefore the government make use of gathering-diffusion effects of main urban areas to promote urban-rural cohesion planning process.

*5.2.2. Root causes: Political background differences*

The apparent causes seems reasonable, while in the author s opinion political b of this two city should be the root causes. We all know that a health market need a series of long-term policies to establish that means it will take a longtime. The data of Chengdu also proved this idea. Thus facing the problems which were not that much serious, the government chose to give the power to the market even though it will take a longtime. However, the government of Chongqi much patient, they want something faster to solve this tricky problem with serious situation. The leader of Chongqing want to see the outcome in short time (most of them just have 5 years term). In other words, if Chongqing have more patient, they can also try to establish a healthy market while the leader don t have that much time to see the achievement. Therefore they chose to rely instead of market order.

*5.3. Conjecture*

From the current data we may believe that Chongqing have better outcomes, since its income gap between urban and rural fell faster and the margin of decrease are bigger than that in Chengdu. However we can imagine that if the leaders of the government changed and the new comers d power which means the government pressure disappeared and they didn t have an ordered ma this outstanding outcome been maintain? The answer is no. Nevertheless, not all the cities can take up

with the method adopted by Chengdu for not all the cities have condition to wait. So efficiency and durability are both important. Therefore both government and market should be responsible for urban-rural cohesion planning.

## 6. Conclusion

Urban-rural dualistic system is the production of primary stage of social development in China. It is not suitable to remain in the way to urbanization. The aim of urban-rural dualistic system reformation is to break the barriers which restrict the free movement of resources. Chengdu and Chongqing have tried many different policies for urban-rural cohesion while they adopted completely contradict methods according their own situation. Chengdu relied on market and Chengdu relied on government power. The former will takes a long time and the later cannot stable. In author s opinion, the market should lea urban-rural cohesion with the support of government s authority. After all efficiency is jus relying on just government power and ignore the order of market is just like somebody couldn t see beyond the end of his nose. However, both of them are indispensable.

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# The Image Map Survey of High School Students for Tokyo Metrop Area – How They Perceive Their Urban Environment –

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Keywords: Image Map, Tokyo Metropolitan Area, Teenagers

## ABSTRACT:

In order to execute a good urban planning, one should understand how people
However, most of Japanese cities have tendency to neglect how people conceiv
neglect is even stronger toward teenagers, thus making most of Japanese cities

In order to make up for these situations, the research is conducted in order t
school students living in Tokyo perceive their city. The research has applied
Map Study and asked 192 high school students to draw the map of Tokyo.

Findings of the research are as follow.
1) Most of high-school students perceived spatial structure of Tokyo with tra
lines.
2) Most important train line for high school students to image Tokyo is Yamanot
that connects important nodes of Tokyo.
3) 142 students (74%) drew the municipal boundary of Tokyo Metropolitan Gove
maps had the correct shape of Tokyo.
4) Many maps did not have landmarks. Comparing to the number of maps that drew
the number of maps that drew landmarks were much less.

The study result suggests that high-school students have a strong tendency to
spatial structure with train nodes and train paths. In order to make Tokyo mo
higher sense of place for younger generations, it is recommended to improve ac
stations and train paths should be considered more seriously in enhancing its
addition, the lack of landmarks makes Tokyo very dif cult to image spatial st
of landmarks should be enhanced as well as creating new landmarks with a strong

# 1. Introduction

We, urban planners, urban designers, architects, scholars, were all high sch
However, we forget the past and we often ignore how high school students see
their urban environment when making new urban plans or new urban designs. Th
cities that are planned and designed by adult tend to be unfriendly and not
(Hattori, 2013). This seems to be truer in Tokyo, where economic development
of urban planning especially due to the fact that it will hold the 2020 summer

It is important to plan and design city that corresponds to the need of high s
teens, not because they are the clients of public services including urban pla
they will be responsible citizens in a near future. They need to be attached t
them to harness social responsibility. They need to be involved in city policie
fashion.

There has been a lot of image study of Tokyo mainly from real estate standpoin
to ask  which neighborhood do you like to live?  or  which place do you like t
2012; Ministry of Land, Infrastructure, Transport and Tourism, 2006). However,
of the researches regarding image map study of Tokyo. Teramoto (1985) has conc
map study survey of pre-teen elementary students for Tokyo, however, image m
of Tokyo to teenagers has not made public recently.  Following the notion abo
conducted a research in order to understand how high school students living in
city. The research has applied Kevin Lynch s Image Map Study and asked 192 high
to draw the map of Tokyo. This paper summarizes the methodology and  ndings of

# 2. Methodology

The image map study was conducted to 192 students in Tukuba Daigaku Fuzoku
in Bunkyoku-ward in Tokyo. With the help from geography teacher of the schoo
distributed in the geography class in November, 2010. The image map was analy
the methodology developed by Kevin Lynch in 1960. The maps were analyzed from
path, edge, district, node, and landmark.

# 3. Findings

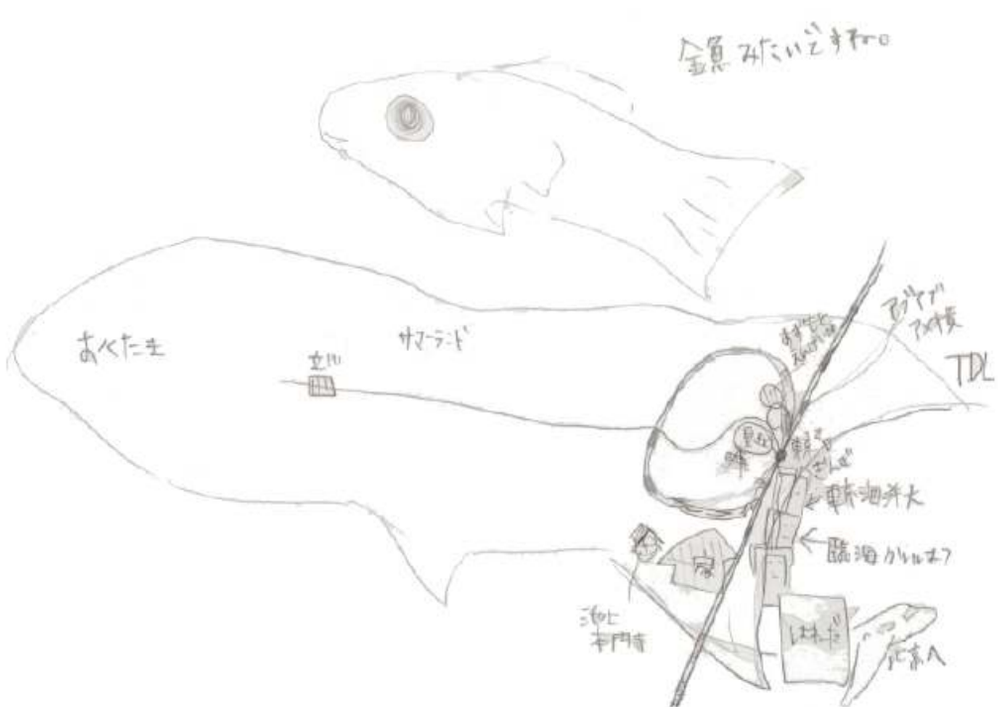
## 1) Recalled Elements

In this paper, recalled elements indicate things depicted in the image
image maps, 190 separate elements were recalled, totaling 789 indicated ele
neighborhood, landmark that were either written in a proper noun or drawn with
considered as recalled elements. Recalled elements were classified into
train station, arti cial elements (other than train station), school rela
(Refer Table 1).

The elements that were most recalled by surveyed high school students were t
different train stations were depicted in the maps, 453 train stations in tota
61.3% of all depicted recalled elements. This result suggests that surveyed

Table 1. Number of Recalled Elements

| | Total Elements | Depicted Elements |
|---|---|---|
| natural elements | 58 | 16 |
| arti cial elements | 157 | 33 |
| school related elements | 59 | 13 |
| train station | 453 | 116 |
| Others | 29 | 11 |
| Total | 756 | 189 |



tend to realize the spatial image of Tokyo through the location of train stat
three respondents depicted the highway in the map. Train stations seem to hav
role for high school students to construct the spatial image of Tokyo than any
This was not a case in other cities that had a similar image map survey (Refer
(1997)). This may be due to a fact that high school students had a good commanc
the city using trains, thus students have perceived the spatial structure of c
network, i.e. stations.

Beside train stations, 47 maps depicted the high school. Since the survey w
high school, some of the surveyed students image the spatial structure of Tok
were at: their high school. Tokyo tower was depicted by 47 maps, followed by s
maps), Sky-tree tower (20 maps), the bay of Tokyo (19 maps), and the Emperor P
Out of 192 maps, 63 maps showed no recalled elements. 9 maps did not depict a
depicted edges despite showing no recalled elements. 5 maps just drew some il
dif cult to consider as landmarks. The average number of recalled elements pe
maximum number of recalled elements in one map was 27.

The above recalled elements were classi ed into Kevin Lynch s ve types: pa
nodes, and landmarks (Table 2). Elements that were most depicted was Nodes w
elements that have been depicted totaled 459. This number is also the highest a
Following text will analyze the ndings by Kevin Lynch s ve types.

## 2) Paths

Kevin Lynch has de ned paths as follows (Lynch, 1960).

Paths are the channels along which the observer customarily, occasionally, or
They maybe streets, walkways, transit lines, canals, railroads. For many pe
predominant elements in their image. People observe the city while moving thr
these paths the other environmental elements are arranged and related.

Table 2. Number of Depicted Elements, and also the Number of Elements Depi

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Out of 192 maps, 79 maps (41.1% of total) has depicted path. There were 48 maps depicted train lines, and only 5 maps depicted roads. The total number of 219. Out of which, 209 were train lines and 10 were roads. In Japan, high sch have driver license. Therefore, it is natural to assume that these students do image of road network or road structure, however, the fact that just only 5 m strikingly different from Lynch s study of Los Angeles. Out of 77 maps that c 65 maps (84%) depicted Yamanote-line. Yamanote-line was most depicted paths. 58 Yamanote-line as circular, however 7 maps indicated only a partial part of Yam comes Chuo-line with 46 maps, followed by Yurakucho-line (12), Sobu-line(11), (9).

From the result of this survey, one can understand that the high school stude spatial structure of Tokyo by two distinguished paths, Yamanote-line and Chuo- it is easier for them to perceive spatial image by train lines that runs over ground. The interesting nding is that despite the huge number of maps depic the shape of Yamanote-line was not represented in a correct shape. Yamanote-lin east-west, 14.8km width in north-south. So, it is much more oval than circle. M maps drew Yamanote-line in circle shape. Yamanote-line supported many students image of Tokyo, however, the actual image they have with Yamanote-line is very reality it is quite oval.

## 3) Edges

Kevin Lynch has de ned Edges as follows (Lynch, 1960).

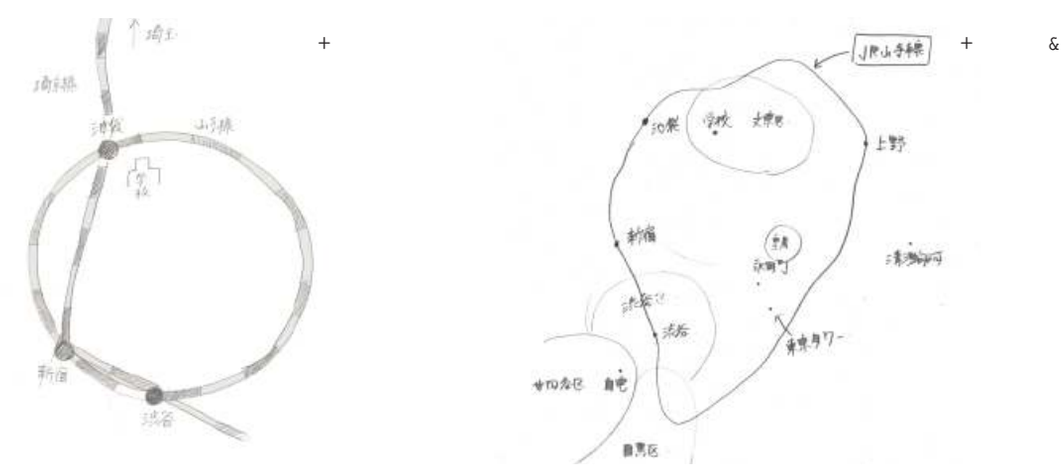


Figure 2. A Map that depicted Yamanote-line in circle (#146) and a map in verti

Edges are the linear elements not used or considered as paths by the obser
boundaries between two phases, linear breaks in continuity: shores, railro
development walls. They are lateral references rather than coordinate axes.
barriers, more or less penetrable, which close one region off from another: or
lines along which two regions are related and joined together. These edge e
probably not as dominant as paths, are for many people important organizing fea
in the role of holding together generalized areas, as in the outline of a city

Of 192 maps, 153 maps depicted Edges. Out of these 153, 142 maps drew the bou
metropolitan municipalities. The boundary consists of both natural edges an
Natural edges such as Arakawa River, Edogawa River, Tamagawa River, and Tokyo
apparent and, thus create strong images. However, only 12 rivers have been in
On the other hand, arti cial boundary is quite dif cult or nearly impossible
is just the demarcation made in the map. Still, the fact that many students we
municipal boundary without that much aw shows that they have been educated o
otherwise) to understand Tokyo s geography.

Some of the maps have depicted the municipality with high precision (#77, #78)
Machida City and rectangular shape of Tokyo Metropolitan municipality that is
and short in north-south are well depicted for most of the maps. 42 maps also d
between 23 wards and others. 10 maps even depicted the boundaries within 23 wa
that were depicted beside municipal boundary are edges between land and water.
the coastline of Tokyo bay. 4 maps showed the edge between mountainous area of
at land.

Many students understand the shape of Tokyo Metropolitan Area, the demarcation
They presumably learned the shape of Tokyo from a map. Thus, it is not what
through the physical or direct experience of the city. It is the image that the

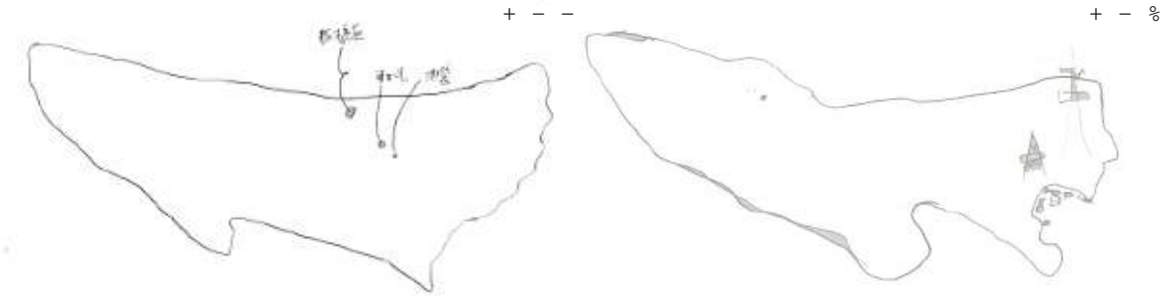

Figure 3. Image Map depicting the correct shape of Tokyo Metropolitan (#77, #7

## 4) Districts

Kevin Lynch has de ned Districts as follows (Lynch, 1960).

Districts are the medium-to-large sections of the city, conceived of as hav
extent, which the observer mentally enters inside of, and which are recogniz
common, identifying character.

This study considered quite large area such as ward, or forest as a Districts
100 maps (52.1% of total) that depicted district. 325 districts were depicted
was depicted most was Bunkyo-ward with 21. The high school was located in Bun
was easy for students to imagine. Next comes Setagaya-ward with 18. Setagaya-w
of wards in terms of population and size. All wards were drawn but Arakawa-ward
wards that are located in so-called Kawanote Area (Flat area as opposed to H
had only a few students (less then ve) depicted. Students seem to have stro
in the western area than eastern area. This may be due to where students live
number of wards that were depicted.

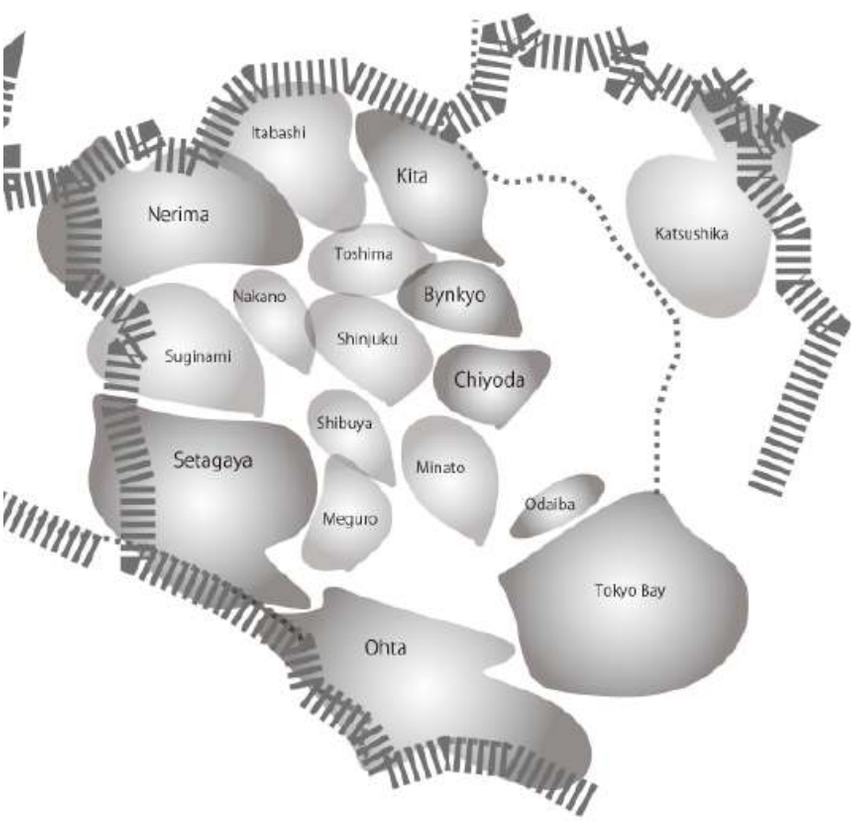


Figure 4. Depicted Districts (Wards)

Beside 23 wards, 10 students depicted Hachiohji City, a large suburban muni
in western part of Tokyo. 10 students drew Chiba Prefecture that is located
7 students drew Saitama Prefecture that is located in the north, and 5 stude
Prefecture that is located in south west. 35 maps depicted the mountain in
Tokyo. Many high school students have image of western side of Tokyo as mounta
or forest. 15 maps depicted Odaiba Area, which lies in the waterfront area
in 1980s. 19 maps indicated Tokyo Bay in the map.

While conducting the survey, students were asked to draw the Image of Tokyo,
of Tokyo Metropolitan Area. However, many students assumed that Tokyo was
Municipal area of Tokyo (i.e. Tokyo Metropolitan Area).

## 5) Nodes

Kevin Lynch has de ned Nodes as follows (Lynch, 1960).

Nodes are points, the strategic spots in a city into which an observer can
the intensive foci to and from which he is traveling. They may be primarily
break in transportation, a crossing or convergence of paths, moments of shift
another.

All the nodes cited were train stations except one map that drew highway inter
stations were indicated in the map, 452 train stations were depicted in total.
classi ed into train lines of the stations as shown in Table 3. From this ta
that the stations of Yamanote-line have been depicted most. There were 21 Yama

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depicted. Since there are only 29 Yamanote-line stations, more than 72% of t
station has been indicated by the students.

The research found out that high school students also perceived Yamanote-line
to image spatial structure of Tokyo as referred in  Path . Table 3 shows tha
that Yamanote-line function as a key image components but also as nodes that
understanding of the spatial con  guration of Tokyo.

The train station indicated most was Ikebukuro with 52, followed by Shinjuku
Tokyo (25), and Ueno (16). These are all terminal stations with a lot of user
line, some stations along Chuo-line were depicted frequently, notably Hach
Ochanomizu Station (11), Kokubunji Station (10) and Kichijoji Station (10). Al
transfer stations indicating that for high school students to image the spat
transferring nodes play an important part. Some subway stations were also de
individual stations were depicted, totaling 74. Gogokuji Station and Myogad
adjacent stations from the high school were often depicted with 9 and 8, respec

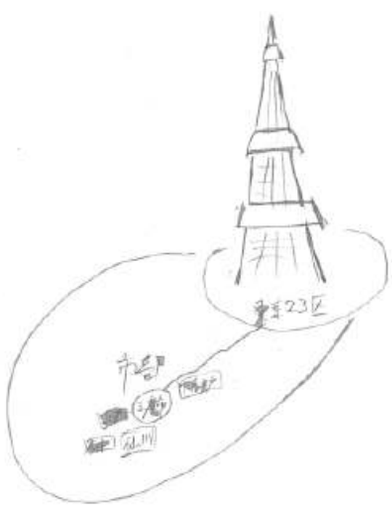
## 6) Landmarks

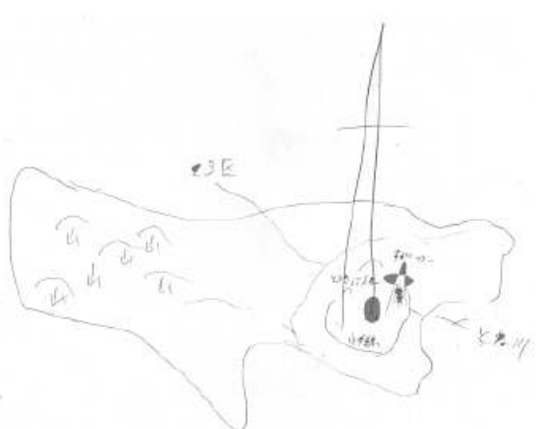
Kevin Lynch has de  ned  Landmarks  as follows (Lynch, 1960).

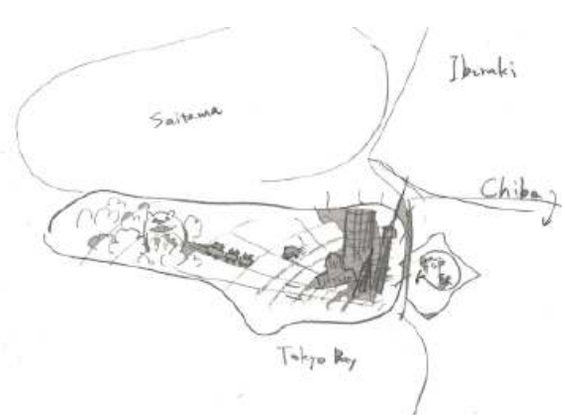
Landmarks are another type of point-reference, but in the case the observer d
them, they are external. They are usually a rather simply de  ned physical ob
store, or mountain. Their use involves the singling out of one element from a
Some landmarks are distant ones, typically seen from many angles and distances
smaller elements, and used as radial references.

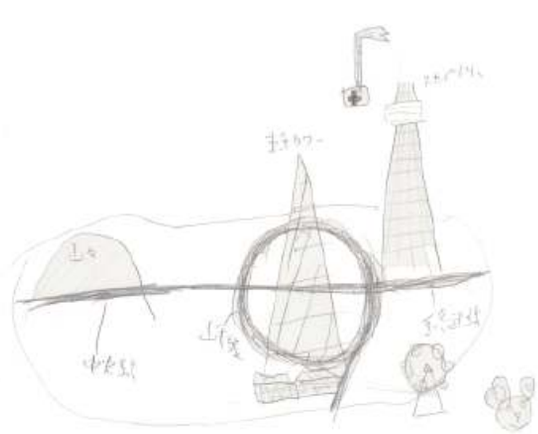
( . * . 2 2 *

Out of 192 maps, 67 maps depicted landmarks. This is equivalent to 34.9%. 44
indicated, and of total, 187 landmarks were depicted. The most depicted landm
school with 47. This result can be assumed for two reasons. First, it is de n
recognize because of the daily uses. Second, since this survey was conducted
it was easy for them to construct the city image from their existing place. Be
Tokyo Tower was depicted most after the high school with 43 maps, followed by
with 21, Emperor palace with 17, Haneda Airport with 13, and Tokyo Dome with 1
maps that depicted Mount Takao. It is the mountain thati is 599 meters tall loc
downtown Tokyo, and is a popular hiking spot for elementary school student s ex
landmarks that has been depicted, Tokyo Tower really standsout as articulated
#172 and #188 . These image maps put Tokyo Tower in the center of the spatial
.







As Lynch noted in his book that landmarks are  frequently used clues of identit
are not much landmarks depicted in the surveyed maps implies that many responde
a familiar image of Tokyo. This may be due to the too large of a size of Tokyo
large for high school teenagers to even have a spatial image of the city. The
experience of Tokyo that helps to appreciate the various landmarks of the cit
landmarks are two towers that can be observed from far away, and the more depic
Emperor Palace and Haneda Airport. Emperor Palace is de  nitely a quite uniqu
city, but you cannot get in. It has become the landmark with the unique inacc
On the other hand, Haneda Airport function as landmark but also as a node. It
place with a lot of people using it daily. Overall, the survey result implies t
identi  able landmarks in Tokyo, at least for teenagers.

## 7) Correctness in Location and Orientation

There are some inaccuracies in terms of locational arrangement of the landmarks
Yamanote-line has played a significant role in terms of constructing a spati
the students, some respondents were confused how some of landmarks and nodes
accordance with Yamanote-line. For example, map #64 placed the high-school outs
line, and map #53 located Tokyo Station not along Yamanote-line, but in the c
line oval. Map #65 placed Emperor Palace in the site of Meiji Shrine. Perhap
have presumed that Meiji Shrine is where Emperor Palace is. This result implies
were confused with con  guration of places and landmarks, Within the inner ova
teenagers move around with subways. Subways will not support you to orient you
easily lost moving underground. This may well be the reason among others.

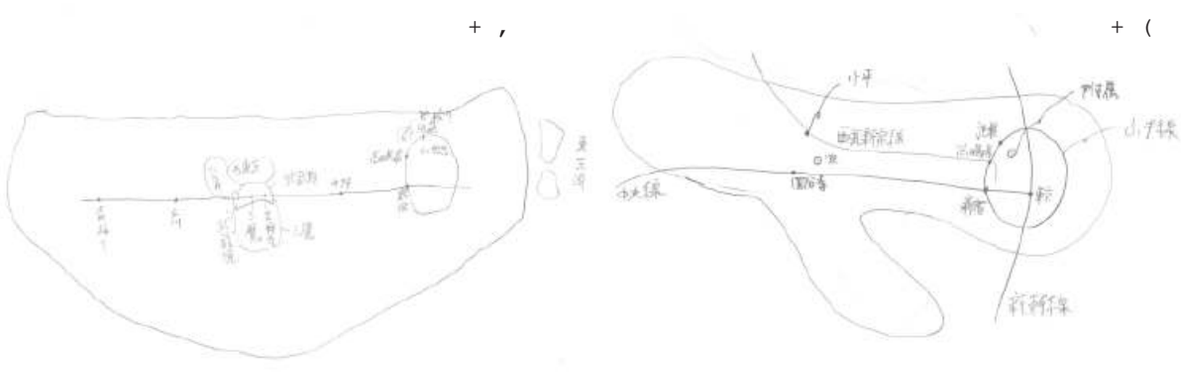


Figure 2. A Map with inaccuracies in terms locational arrangement of the land
(#64, #53)

## 8) Results

Figure 7 is a diagrammatic representation of its major elements excluding d
from the image map study. Yamanote-Line and some major stations along it st
gure articulates that the image of Tokyo is constructed by Yamanote-Line an
stations as a trunk with the support of Chuo Line and other secondary stations
branches. Landmarks have not played an important role to construct the image
school students with the exception of Tokyo Tower, Skytree Tower and Emperor Pa
Airport. This result may indicate that Tokyo lacks landmarks that identify the

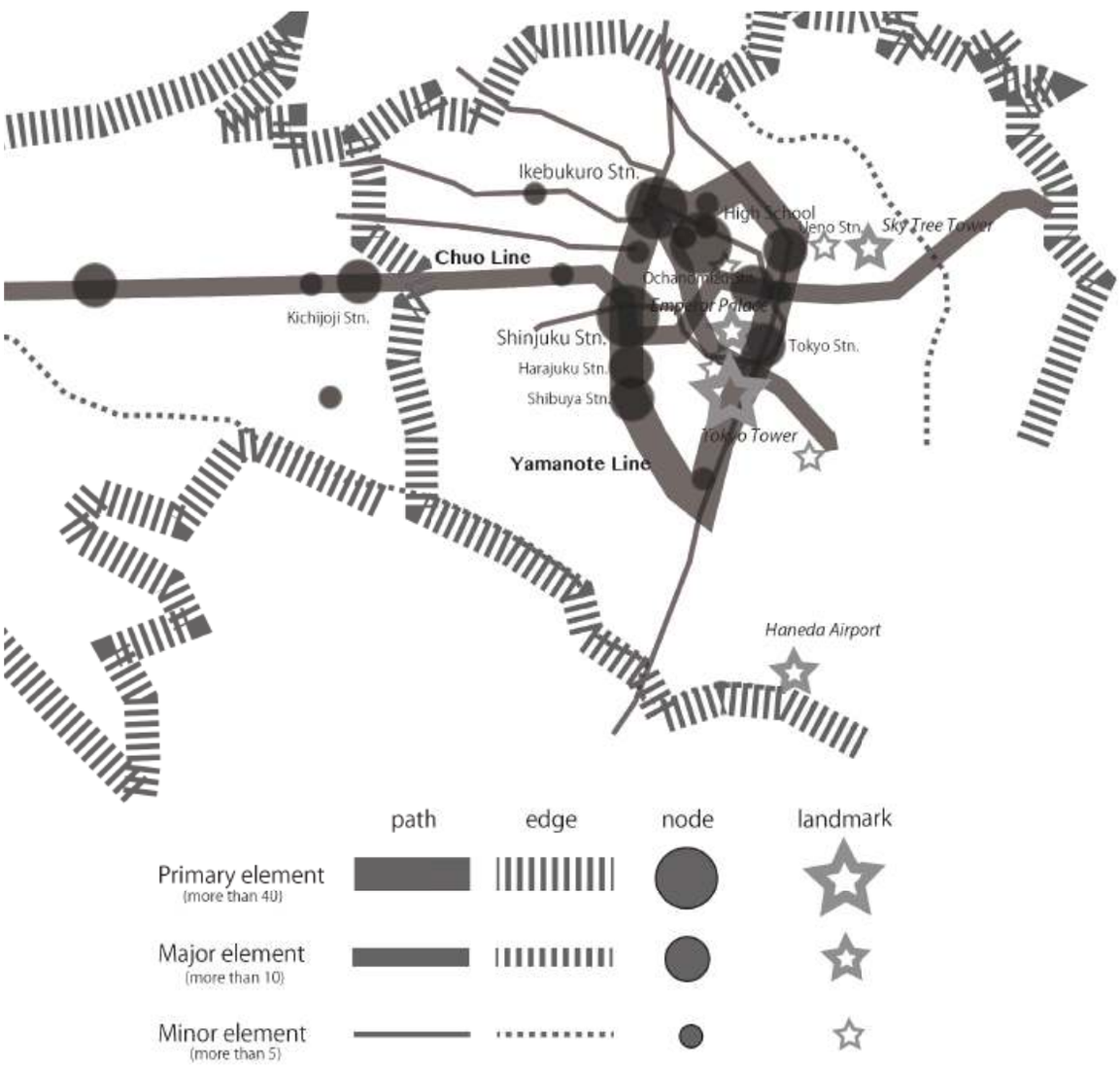



Figure 7. Diagrammatic representation of its major elements excluding district

Findings of the research are as follow.
A) Most of high-school students perceived spatial structure of Tokyo with train lines.
B) Most important train line for high school students to image Tokyo is Yama line that connects important nodes of Tokyo.
C) 142 students (74%) drew the municipal boundary of Tokyo Metropolitan Many maps had the correct shape of Tokyo Metropolitan Area.
D) Many maps did not have landmarks. Comparing to the number of maps tha stations, the number of maps that drew landmarks were much less. One can assum have not supported to comprise the spatial image of Tokyo for high-school stude

## 4. Conclusion

The study result suggests that high-school students have a strong tendency to spatial structure with train nodes and train paths. It has shown that Yamano framework to image the city. Some major stations also contributed in constr notably Ikebukuro, Shinjuku, Shibuya, and Tokyo. These are all terminal station On contrary, road network s role to construct the image of Tokyo is insigni students. In addition, the research found out that there is the lack of landma in Tokyo. Tokyo Tower was the sole landmark that had the lots of indications.

Therefore, in order to make Tokyo more legible, and with higher sense of p generations, it is recommended to improve accessibility to train stations and considered more seriously in enhancing its spatial structure. The landmarks sh and creating post-card city view should be considered. When there is an op some new buildings or parks that have a potential to become new landmarks, e colosseum, their design and vistas for them should be considered from urban des

Kevin Lynch conducted his innovative methodology of image study survey for r area. The application of his image study to the large city like Tokyo may hav for understanding the respondents real image of Tokyo.

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# CRAFTING NEW URBAN ASSEMBLAGES AND STEERING NEIGHBOURHOOD TRANSITION: ACTORS AND ROLES IN ECOURBAN NEIGHBOURHOOD DEVELOPMENT

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***Abstract:*** *New sustainable neighbourhood developments are multiplying worldwide. Embedded in these model neighbourhoods are not only particular ideas about better urban form, but also particular ideas about better organization of urban life and social development. Frameworks, certifications, and labels to organize the practice of sustainable neighbourhood development are proliferating almost as rapidly as the developments themselves, and each holds a different mix of such ideas. Beginning from a typology of seven extreme types of ecourbanism, we consider the implications of pursuing each extreme for the key actors who assume different roles in planning, building, and living in these new neighbourhoods. We then consider two different ecourban neighbourhood frameworks, the Living Community Challenge and EcoDistricts Protocol. We examine these frameworks in terms of our seven extreme types of ecourbanism, as technologies of ecourbanism that have emerged in order to facilitate the mainstreaming and generalization of experimental ecourban development practices.*

*Building upon a conceptual framework of transition theory and urban assemblages, we see the emergence of such new frameworks as mobilizing different assemblages of actors, via the crucial work of intermediary institutions, in order to move ecourban neighbourhood development from a niche practice to the mainstream. Better understanding the mixtures of actors' roles and responsibilities, and expectations and practices promoted in different frameworks, will help us better understand the prospects of ecourban developments under different frameworks, in different urban contexts, at different stages of development, and different scales of experimentation and standardization.*

**Keywords:** eco-urbanism; green building; sustainable neighbourhood development

## 1. Introduction

Ecodistricts, écoquartiers, eco-cities, zero, low-carbon and carbon-positive cities, ecourbanismo, ecopolises (Downton, 2009), ecobarrios, ecovillages, One Planet Communities and solar cities, are on the rise worldwide. More than 100 municipal governments in China are proposing to build eco-cities, many of them on greenfield sites on the urban fringe (Baeumler et al. 2009); 32 projects in France have achieved the French government's écoquartiers label, with an additional 78 projects working towards this label at the end of 2014 (MLETR, 2015). As of 2015, 79 LEED-ND, 4 BREEAM Communities, 3 CASBEE Urban Development and 2 One-Planet Communities, amongst many other neighbourhoods following different local frameworks, demonstrate the rise of neighbourhood and city-scale ecourbanism around the world. Our own ongoing research has revealed 420 ecourban neighbourhood projects which fit our selection criteria (74 in the US; 27 in Canada; 195 in the EU; 95 in Asia and the Middle East; 8 in Australia and New Zealand; and 15 in South America). Roughly 10% of these projects are completed, with the other 90% at various stages of planning or construction. Currently, we estimate that we have located perhaps 80% of these initiatives around the world.

Manuel Ruano claims to have coined the term ecourbanismo or ecourbanism in 1999, defined as "the development of multi-dimensional sustainable human communities within harmonious and balanced

built environments" (1999). The term 'écoquartier' was first defined in a policy context in 2008 by the French Environment Round Table, as "a sustainable neighbourhood which responds to considerations relating to transport, urban density and layout, green building, social diversity, mixed-use development and the involvement of the local population" (MEDDE, 2014). Research by Criterion Planners documented 54 different tools being used in a total of 22 countries to assess the sustainability of sustainable built environment projects (Criterion Planners, 2014). The first such tool appeared in 2004 (e.g. CEEQUAL, China's EcoCity) and the latest one (AARP Livability Index) was launched in April 2015.

As a set of planning, design, and technological arrangements for living in particular newly-developed and revitalized neighbourhoods, and as a new ideal for urbane, green and healthy living, ecourban developments are at present demonstrating rapid growth in popularity. Their development has also launched a veritable race to establish development frameworks that will successfully guide the experiments into the mainstream. At this time of flux, it is a useful moment to examine what goals are being pursued, in different ecourban experiments and different frameworks, and what the implications are for the roles played by the different actors involved. In so doing, we will be able to better assess the prospects for the standardization as well as fragmentation of new ecourban development practices and approaches.

## 2. Research Questions and Methods

Within the rapidly expanding area of ecourban neighbourhood development, this paper aims to establish a classification typology for the principles that drive them, and to assess the intentions of ecourban frameworks based on these criteria. We do this using an original seven-part typology of extreme types of ecourban neighbourhood development. Recognizing that an integrative urge underlies ecourbanism, we created a framework that identifies the extremes to which any expressed ecourban principle can lead, and that recognizes the need for an integrative approach that combines principles. This approach is used to identify the mix of roles entailed for different actors under different principled priorities. While there are many different ways to categorize and sub-categorize actor types within a model sustainable neighbourhood development project, and there will often be overlap between the groups, we will use three simplified actor categories as follows:

> Public: those employed by or working in partnership with the government, to envision, design, craft policy and governance for, and plan the neighbourhood.
>
> Private: the builders and financiers of the development and implementers of plans.
>
> Civic: the local non-expert populace that makes use of the neighbourhood's built form because they live in, work in, or visit the neighbourhood.

Following this, using the same typology, we consider the implications of applying one of two new sustainable neighbourhood development frameworks, the EcoDistricts Protocol and the Living Community Challenge, for the relative emphasis likely placed on each extreme type, and for the mix of roles and responsibilities likely in bringing ecourban neighbourhood developments from experimentation toward the mainstream.

To create our typology, we engaged in an abductive process of theoretical engagement with literatures of urban sustainable development, community planning, and neighbourhood development dynamics, alongside consideration of published materials about cases of ecourban neighbourhoods. As a set, the seven principles in our typology constitute an integrative framing of ecourban neighbourhoods, including their built form, transportation and other engineered systems, land uses, public spaces, local

institutions, social make-up and governance. Individually, these extreme types are expressed in different combinations in ecourban neighbourhood development practices. In practice, each principle is tempered by reference to others; and numerous principles are related to one another. Each of our extreme types, by nature of being an extreme criterion within a multi-criteria framework, delineates a boundary of practice in one dimension that can help clarify the limits of ecourbanism globally. Considering each principle in the extreme case in which it would be implemented to the exclusion of other principles permits a clear delineation of the conceptual space within which integrated ecourban neighbourhood development is bounded. Our typology appears in Table 1 and can be expressed graphically in Figure 1 (Holden et al., in revisions).

Table 1. Seven Extreme Types of Ecourban Neighbourhood Developments, with Key Principles

| Extreme Type | Key Principle |
|---|---|
| Econ-urban | Shifts economic growth in cities toward greener products and forms; pursuit of green capitalism. |
| Ecol-urban | Lighter footprint living with energy and materials efficiency built into design and technology, as well as the ability to directly experience wild nature. |
| Living-urban | Complete community development with a view toward wellbeing, liveability, and resilience to shocks from outside the neighbourhood. |
| Local-urban | Offers a sense of self-determination and active participation in all aspects of local life within the circumscribed neighbourhood; orients daily life toward proximity. |
| Democ-urban | Reformulates citizenship at the local scale, and offers deliberative, community-based decision-making, with a suggestion about how this will assist in changing values and behaviours. |
| Diverse-urban | Accentuates and generates value from the mixing of diverse social, economic, and cultural offerings of urban life. |
| Equi-urban | Prioritizes redressing inequalities and injustices via attention to targeted needs. |

## 3. Literature Review

Ecourban neighbourhood projects represent a growing diversity of practices, underlain by different motivations, understandings, expertise, and relationships. Ecourban plans and results are often presented as "packaged examples that are ready for export" without considering the politics of urban transformation, and the range of agendas that these projects serve (Bradley et al, 2013 p.190). A growing number of case studies point to the existence of competing agendas, and in particular to the existence of an underlying capitalist development agenda, which stands in contrast to certain ecourban goals. Masdar Eco-City in Abu Dhabi and Tianjin Eco-City in China are examples of a larger trend that has eco-cities reproducing "often neoliberal and potentially inequitable visions of socio-technical transition" (Caprotti, 2014 p.1290). Indeed, a primary battle line emerges in ecourban practice between the modernist urge within the econ-urban camp and the ecological preservationist urge among the ecol-urbanists. These battle lines can sometimes be seen as conflicts between different actors on the same project. Writ large, few policy and planning efforts toward realizing urban sustainable development explicitly question the need for continued economic growth (Hajer, 1995). Also rarely addressed are the continuing community development demands within neighbourhoods where people live, work and play. However, ecourbanism is a political movement, and it has potentially exclusionary, inequitable, over-consuming, stultifying, and unsustainable outcomes. On the more optimistic side, a small number of case studies in cities such as Civano, Arizona (Nichols & Laros, 2010), Orestad, Denmark (Book et al. 2010) and Stockholm (Metzger & Olsson, 2013), Freiburg and Graz (Rohracher & Spath, 2014), suggest the conflict between the econ- and ecol-urban models may

not be insurmountable. These cases are not immune to the forces of ecological modernization, by which efforts to create ecourban districts in the name of environmental and social goals become merged with attempts to use a sustainability edge to attract new growth capital. At the same time, they evidence deeper institutional change, an ecological restructuring of cities to a political agenda that seeks to move 'beyond growth' along the way (Daly, 1997).

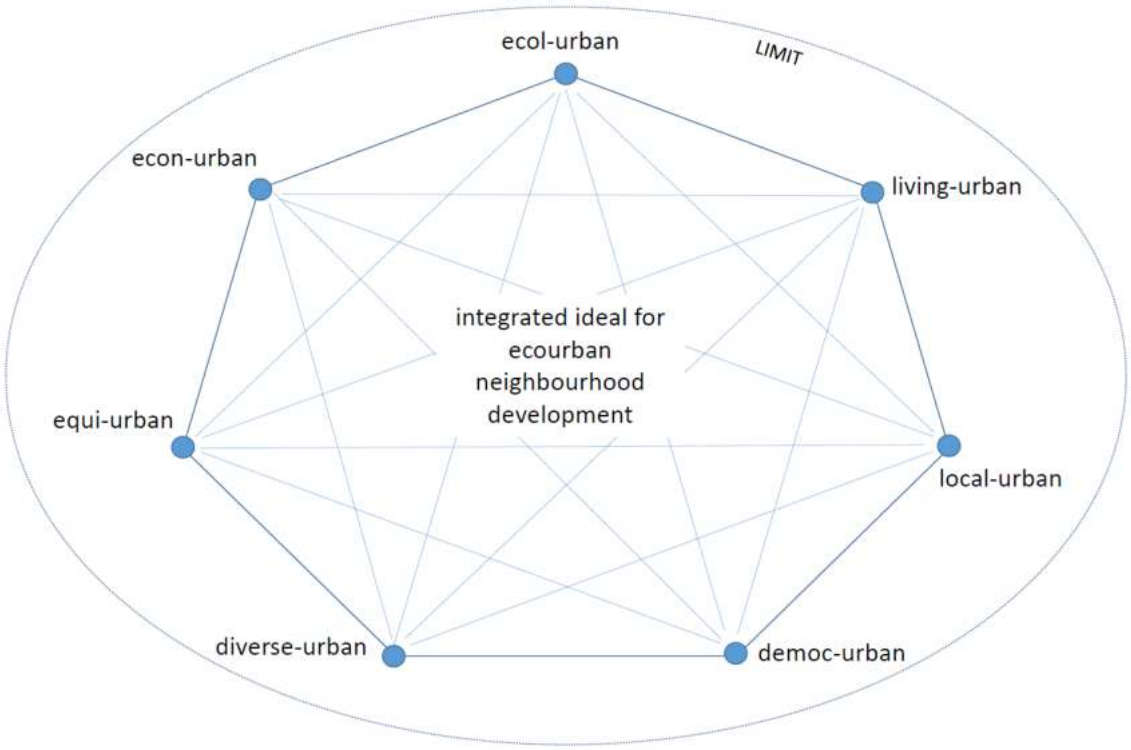


Figure 1: Ecourban neighbourhood development within integrated conceptual space, as circumscribed by seven extreme types.

From a social and political perspective, the prospect for change within ecourbanism comes from an idea about this new form and lifestyle context making space for a sustainability transition in society and governance. The field of research and policy known as transition management has emerged from this idea. Beginning from a socio-technical understanding of past societal transitions, the transition management approach aims to translate ecourbanism into the active management of a widescale transition toward sustainability (Smith & Kern, 2009). Smith et al. (2005) articulate the preconditions for such a transition in terms of societal pressure for change and adaptive capacity. Transitions can be generated from within or from external structures and resources, although they will happen in a different way and at a different rate depending upon their motivation. Hodson and Marvin (2009, p.477) in their research in some of the world's most powerful cities, found "strong evidence of expectations, aspirations and plans to undertake purposive socio-technical transitions," in line with sustainability and climate change adaptation and mitigation goals.

Transition theorists identify a number of factors that increase the potential for a system of governance to undergo an effective transition, in line with their adaptive capacity (Smith et al., 2005). Importantly for our purposes, they identify the volume and actions of 'intermediaries,' actors who are not formal

members of government but who work in partnership with others to bridge the gap between policies and practices, as a crucial leverage point. It is these intermediaries, equipped with a wide range of necessary knowledge types, effective presence in local networks, and communication skills and credibility, that do the key work of developing and coordinating capacities for regime change at the urban level.

In a separate but related literature on enabling social innovation in the non-profit sector, Kania and Kramer refer to "collective impact" as "the commitment of a group of important actors from different sectors to a common agenda for solving a specific social problem" (2011, p36). Collective impact is understood to be a more effective means to achieve large-scale systemic changes than uncoordinated action by organizations across different sectors, with similar goals, competing for the same pool of available financial, political or talent resources. Kania and Kramer highlight the importance of 'backbone organizations' in collective impact actions. These organizations are responsible for providing support to create a shared vision, coordinating initiatives, establishing shared assessment practices as well as advancing policy (Turner et al., 2012).

By examining the frameworks being created to guide ecourban neighbourhood development across cities, we are assessing the degree to which these frameworks, and the nonprofit organizations that create and promote them, are playing or could play such an intermediary or 'backbone' role, in building towards collective impact in the realm of ecourbanism. The forces of standardization, codification, and regularization apply to the practices of ecourbanism and part of the race to develop these neighbourhoods is a race to establish new standard processes and outcomes. Within a process of sociotechnical transition toward sustainable development, we can expect these forces to apply when niche-level experiments deliver on some of their expected values and demonstrate potential for scaling up. In the context of furthering and mainstreaming practices of ecourban neighbourhood development, the technological innovation that has emerged is the neighbourhood development framework. Over 50 such frameworks currently exist around the world. In this paper, we will examine two such frameworks – the EcoDistricts Protocol and the Living Community Challenge.

Our focus here on the mix of actors and intermediaries involved in a range of different roles within ecourban practice also is conceptualized by our understanding of assemblage theory in urban studies. Assemblage urbanism, as presented by McFarlane (2010) and adapted into the urban studies literature by Blok (2014), entails careful thinking about the range of actors engaged in particular experiments in given local contexts. It is these particular urban spaces, inhabited at given political moments by particular constellations of actors, that define the meaningful aspects of efforts to intervene in existing urban dynamics and achieve change. Blok (2014, p.260) explains: "I understand world-conjuring projects as situated experiments of engagement with 'the global', whereby a range of urban actors – policymakers, professionals, activists and others – take the problem … as a site for exploring new questions, initiatives and critical procedures." Collective experimentation, social learning, and the testing and forging of new relationships between people, organizations, the built environment, technologies, and natures, are activities and outcomes of assemblage urbanism as an approach to urban change in the service of sustainability. In the particular instance of building new sustainable neighbourhoods, a crucial role may be played by intermediaries in framing new practices and establishing new expectations of planning and development actors, and even end-users.

Intermediaries are necessary to advance practice because none of the key actor groups, while they are necessary and instrumental to bringing particular ecourban neighbourhoods into being, are invested with any particular role, responsibility or power to spread the practice of ecourbanism more broadly. A new kind of key actor is required to orchestrate this transition. The key actors designing, crafting, and promoting these frameworks may be leaders of government, industry, or non-government organizations, but the role they play is shared: we can generally refer to them here as visionaries. In

crafting particular certification systems, standards, frameworks, protocols, membership groups and challenges, these visionaries are all attempting to promote and advance the practice of a new technology of urban development. Not all visions, nor all visionaries, are created equal. Differences exist in the way in which these visionaries see ecourbanism as being best pursued; the priorities and roles for different actors vary. In order to better understand the difference that these differences can make, we will consider two technologies created by ecourban visionaries, the Living Community Challenge, and the EcoDistrict Protocol. After a brief description of each, we will consider the degree to which each of these model frameworks prioritizes our seven different extreme types, and what each model implies for the role to be played by different actors.

## 4. Case Studies

### *4.1 The Living Community Challenge (LCC)*

The International Living Future Institute (ILFI) grew from the Cascadia Green Building Council, the branch of the green building industry association that spans the western US states and British Columbia in Canada. Its intention is to accelerate the ambitions of the green building industry. It is the home of what it calls the world's most ambitious green building certification system, the Living Building Challenge (LBC), and now a comparably ambitious Living Community Challenge. The ILFI describes its 'challenge approach' as "a philosophy of design masquerading as a certification system."

The LCC is described as "a cohesive standard, pulling together the most progressive thinking from the worlds of architecture, engineering, planning, landscape design and policy" (ILFI, 2014, p.7). The question posed to all these groups is: "How do we create communities that are good for all people through time?" The move to create the LCC out of the LBC is recognition of a need for much more sweeping change to the relationship between people and natural systems than what can be achieved by individual green buildings alone: "we must remake our cities, towns, neighbourhooods, homes and offices, and all the spaces and infrastructure in between" (ILFI, 2014, p.9).

The Living Community Challenge is currently being pursued by four development projects. Their diversity demonstrates the intent for the tool to be applicable across a range of neighbourhood types and densities: a project in Uptown Normal, Illinois, adjacent to an existing LEED-ND development; a resort hotel project in Belize on a mangrove island; a housing development on the outskirts of Mexico City; and a mixed-use redevelopment project in New Orleans. The ILFI is currently "in conversation" with 15-20 other potential LCC projects. The LCC pursues transformation of development practice in seven topical themes known as 'petals,' 20 imperatives and pursuant to 12 'patterns' that cross the various petal themes, as seen in Table 2 below.

Table 2. The Living Community Challenge: Petals and Imperatives (ILFI, 2014)

| **Petal** | **Imperatives** |
|---|---|
| Place | 1) Limits to Growth<br>2) Urban Agriculture<br>3) Habitat Exchange<br>4) Human Powered Living |
| Water | 5) Net Positive Water |
| Energy | 6) Net Positive Energy |
| Health & Happiness | 7) Civilized Environment<br>8) Healthy Neighbourhood Design<br>9) Biophilic Environment |

| | |
|---|---|
| | 10) Resilient Community Connections |
| Materials | 11) Living Materials Plan<br>12) Embodied Carbon Footprint<br>13) Net Positive Waste |
| Equity | 14) Human Scale and Humane Places<br>15) Universal Access to Nature & Place<br>16) Universal Access to Community Services<br>17) Equitable Investment<br>18) Just Organizations |
| Beauty | 19) Beauty & Spirit<br>20) Inspiration & Education |

### *4.2 EcoDistricts Protocol*

EcoDistricts, or its precursor, the Portland Sustainability Institute (PoSI), was founded in 2009 in Portland, Oregon, to support the City of Portland's urban sustainability efforts. PoSI worked in collaboration with the City of Portland Mayor's Office, Portland Development Commission and the Bureau of Planning and Sustainability to pursue their first initiative, based on then-mayor Sam Adam's request to explore integrated neighbourhood-level solutions for sustainability that combined community development benefits and local economic returns (PDC, 2010; EcoDistricts, 2015). Throughout 2009-2012, five pilot districts within Portland implemented the newly-developed EcoDistricts Framework via collaboration on neighbourhood-level projects (EcoDistricts, 2014).

The EcoDistricts Framework took a different approach from other neighbourhood scale sustainability tools such as LEED for Neighborhood Development or BREEAM Communities, by focusing on the processes and actors around local action for sustainability. The EcoDistricts Framework contains no prescriptive strategies or metrics that must be demonstrated through the certification process. Rob Bennett, CEO of EcoDistricts, describes the framework as "loose-fitting", and states that "EcoDistricts isn't a place – it's a movement" towards collaborative governance (Schuler, 2014). An 'EcoDistrict' does have geographical boundaries at the neighbourhood level, but the outcomes attributed to applying the framework are more related to neighbourhood identity and collaborative decision-making, rather than any particular built-environment features. In justifying the focus on neighbourhood-scale processes, Bennett calls EcoDistricts "a model [that is] about sharing power and sharing decision making…these are things that cities don't do particularly well" (Schuler, 2014).

EcoDistricts launched a draft Ecodistricts Global Protocol in 2014, in partnership with the Target Cities pilot program of the Clinton Global Initiative. This program invites city leaders, urban planners and designers, community members, policy makers, community developers and other stakeholders to set new agendas and visions for district-scale sustainability work in 8 cities in the US and Canada (CGI, 2014). The formal EcoDistricts Global Protocol is slated for release mid-2015. Our discussion is based on the draft version released in Fall 2014. Whereas the LCC organizes its topical themes as seven 'petals', the EcoDistricts Protocol points to eight performance areas, shown in Table 3 below. EcoDistricts additionally articulates four phases at which different actions are taken toward these goals, and a set of six organizational values that encompass ecourban as well as accountability and transparency principles.

Table 3. The EcoDistricts Protocol: 8 performance areas and goals (EcoDistricts, 2014)

| **Performance Area** | **Goal** |
|---|---|
| Equitable Development | Promote equity and opportunity and ensure fair distribution of benefits and burdens of investment and development. |

| | |
|---|---|
| Health & Wellbeing | Promote human health and community wellbeing. |
| Community Identity | Create cohesive neighborhood identity through the built environment and a culture of community. |
| Access & Mobility | Provide access to clean and affordable transportation options |
| Energy | Achieve net zero energy usage annually |
| Water | Meet both human and natural needs through reliable and affordable water management. |
| Habitat & Ecosystem Function | Achieve healthy urban ecosystems that protect and regenerate habitat and ecosystem function. |
| Materials Management | Zero waste and optimized materials management. |

## 5. Discussion: How the LCC and EcoDistricts advance Ecourbanism

At face value, both LCC and EcoDistricts address the gamut of ecourban principles in our typology – with the notable absence of explicit reference to the *econ-urban* principle. The breadth and principle-based nature of both EcoDistricts and the LCC suggests the aspiration of both frameworks to act as catalysts of transformation that runs the gamut of integrated sustainable urban development practice. The Living Community Challenge, in being presented as a "challenge" rather than a "standard," captures this intention to challenge and propel the evolution of thinking in the development sector toward greater sustainability. EcoDistricts, in advancing a process "protocol" rather than a set of specific standards, articulates the notion of process as product, when it comes to transforming neighbourhoods toward sustainability. Both organizations, and both technologies of ecourban neighbourhood development, are positioned as agents of transformation at the institutional level as well as the level of urban design and infrastructure, recognizing the need for an active and visionary intermediary in order to move pragmatically toward a sustainable neighbourhood transformation "end game." Both are signaling, through their products and organizational development strategies, the intent to act in an advocacy role to promote learning and experimentation amongst development and planning actors as well as the public at large, toward this transformation of practice.

### *5.1 How do the LCC and EcoDistricts models value different ecourban principles?*

The *ecol-urban* principle is privileged in the LCC framework because of the intent to expand the notion of community beyond the human monoculture, to include biophilic design principles that rely more on natural than engineered systems, more on natural than manufactured products, and that work toward eliminating toxins and carbon combustion in development. An *ecol-urban* principle of "living off the flow," or no net extraction of natural resource or energy stocks, is expressed in terms of the ban on any combustion-derived fuel as energy source, limiting water use to within the recharge rate of local aquifers, and requiring local waste water and sewage treatment and energy storage. In EcoDistricts, the *ecol-urban* principle is served by the Energy, Water, Habitat & Ecosystem Function, and Materials Management performance areas. The objectives within these performance areas relate to the conservation of energy, water and materials, and optimizing their associated infrastructure systems to reduce negative environmental impacts through the implementation of technologies such as renewable energy, stormwater management, and recycling of water, waste and other materials. Furthermore, the objectives of the Habitat and Ecosystem Function performance are to enhance and regenerate urban natural environments.

The *living-urban* principle within the LCC is expressed in Imperative 7, Civilized Environment, which emphasizes the creation of opportunities for social interaction in public space, and Imperative 8 Healthy Neighbourhood Design. More basically, the living principle is expressed in the LCC as a new

norm of community extending beyond the human community to include other forms of life. The human community and the urban infrastructure and design which typically have supported it are considered a 'monoculture' approach; whereas the effort within the LCC is to design for biophilic ecological urbanism. The metaphor used to describe the "living community" is a forest, with a complex ecosystem structure able to support many different functions and species and multiple evolutionary paths, as opposed to a monoculture of single purpose structures and infrastructures, built for modern, adult, able-bodied humans alone. The question of transforming practice toward revaluing life and living for people in more human-centric community development terms is less clear. Limits to density in the form of strict limits to buildings that create shade for neighbours, and through the first principle, Limits to Growth, suggest an implicit position on limiting population growth to within local ecological capacity. This has negative implications for human development and equity, which go unacknowledged. In EcoDistricts, the *living-urban* principle is highlighted by the Health & Wellbeing, Access & Mobility, and to a lesser extent the Community Identity performance areas. Livability and wellbeing in the EcoDistricts framework is about providing access to recreational and natural areas, healthy and affordable foods, good air quality, and beautiful and safe places that promote interaction. This framework, however, places the onus on local stakeholders to determine, collaboratively, how much and what qualities of livability can be achieved.

The *local-urban* principle is devalued in LCC because it conflicts with the ILFI's stance to "drive work and thinking toward universal solutions to the extent possible." The *local-urban* principle enters into ILFI framework development through the back door to the degree that local developers and local planners (and potentially, although not obviously, the local public) are invited to work directly with the ILFI in order to craft locally-specific solutions to problems that occur when the "universal" principles come in conflict with local conditions and priorities. This puts the onus of responsibility on proactive local actors, whether developers or planners, to argue persuasively for an effective local solution against the baseline scenario of a universal standard. By contrast, the *local-urban* principle is highly privileged by the local process-oriented nature of EcoDistricts, which implies significant onus on all three of the local actor groups involved to adapt to new roles and responsibilities relating to goal-setting at the local scale. More specifically, the Community Identity performance area, with its goal of creating a neighbourhood community identity, reinforces the EcoDistricts approach as a core community identity formation tool.

The *democ-urban* principle is valued by EcoDistricts for similar process-oriented reasons. The EcoDistrict approach in and of itself favours a local democratic structure, as it moves all actor groups through an engaged, participatory process of determining visions, priorities and actions to reinvent the district in question. Value placed upon the *democ-urban* principle within the LCC is evidenced by the use of the charrette as a key means of generating progress in determining the approach to the imperatives, particularly the more subjective ones such as Equity and Beauty. Locating key decision making stages within a democratic forum like a charrette is a marker of the value the LCC places on democratic interaction among actor types, although certainly with a higher degree of emphasis on directly engaging expert actor types compared to non-expert civic ones. At the same time, the LCC recognizes that the charrette process is suited for integration of the different actor types needed to implement better buildings, but that a charrette that engages and allows effective communication across the greater spread of diverse actors involved in neighbourhood development is a bigger challenge. Current practices situate problem-solving and decision-making on crucial points in segmented realms of expertise and authority. This situation poses barriers to integrative thinking, capable of tackling challenges of infrastructure, interactive effects, adapting to change and changing use over time at the neighbourhood. Developing a level of comfort with charrette-style thinking, and incorporating decision-making elements into this process, is no golden key to improved democratic process per se, but may still improve the chances that better processes will emerge.

The *diverse-urban* principle comes through in several EcoDistrict performance areas with objectives such as fostering inclusive, flexible and cohesive networks; expanding economic opportunities to a socially and economically diverse population; and ensuring diverse stakeholder involvement in EcoDistrict activities and decision making. Some recognition of the value of the *diverse-urban* principle is offered in the Beauty petal of the LCC, and components 19 Beauty + Spirit and 20 Inspiration + Education. However, the path to implementation of these objectives is unclear in both frameworks. In the case of the LCC in particular, the recognition of the value of diversity is tempered by the notion of urgency in addressing ecological limits driven, to the ILFI, by an excess of humanity – "a world with seven billion people and counting" (2014, p.9).

The *equi-urban* principle makes an appearance in EcoDistricts under Equitable Development, where objectives aim for equitable distribution of benefits and burdens of development, and for reducing forced displacement of existing residents. In the LCC, recognition of the value of the *equi-urban* principle is found in the Equity component and Imperatives 14-18, namely: Human Scale + Humane Places, Universal Access to Nature and Place, Universal Access to Community Services, Equitable Investment and Just Organizations. The Equity petal strives for more and better public spaces that are accessible regardless of economic wealth, as well as physical ability and age. The value of equity is expressed in specifically ecocentric terms: "A society that embraces all sectors of humanity and allows the dignity of equal access is a civilization that is in the best position to make decisions that protect and restore the natural environment." (ILFI, 2014, p.45)

Regarding the one remaining extreme type in the typology, despite the lack of explicit reference to an *econ-urban* principle, we cannot conclude that this principle is not embraced. Instead, what we see is a silent consent of both the LCC and EcoDistricts to the *econ-urban* principle. Examples of building transformative living spaces into neighbourhoods, such as Manhattan's High Line Park, are heralded by LCC for their success not only on *ecol-urban* and *living-urban* principles but also because this relatively low-cost intervention in the neighbourhood has brought about a tripling of property values surrounding the linear park. With market transformation envisaged, the ILFI sees no conflict in its desire to attract a maximum of capital to zones of living community transformation, in the pursuit of better, greener capitalism. Similarly, none of the eight EcoDistricts performance areas have a strong *econ-urban* emphasis that pinpoints the pursuit of green capitalism, but the early goals of the EcoDistricts initiative highlight local economic development as a driver for district-scale sustainability projects. According to EcoDistricts, these early goals were to: 1) create an integrated sustainability innovation strategy that linked local neighbourhood economic and community development with the region's clean technology and green development cluster; 2) launch catalytic district-scale projects that maximized community benefits and local green job creation; and 3) build robust neighbourhood governance to guide implementation and monitor progress over time to advance community and city objectives (EcoDistricts, 2015a). While 'community and city objectives' likely incorporate other concepts of ecourbanism, the focus of the first two goals clearly articulate an *econ-urban* bias for leveraging existing economic development practices for sustainability outcomes.

### *5.2 How do the LCC and EcoDistricts engage multiple actor groups?*

The LCC is a set of three challenges issued explicitly by the ILFI to a comparable set of actors to those we identified in Section 2 of this paper, namely:

1. All developers, urban planners, architects, landscape architects and contractors to create the foundation for a sustainable future in the fabric of our communities
2. Local, state and federal politicians and government officials to remove barriers to systemic change, and to realign incentives and market signals that truly protect the health, safety and welfare of people and all beings; and

3. All of humanity to reconcile the built environment with the natural environment, into a global civilization comprised of individual communities that create greater biodiversity, resilience and opportunities for life with each adaptation and development. (ILFI, 2014, 5)

As stated above, LCC promotes a cycle of charrette processes as the project moves through addressing the different imperatives of community creation, engaging in common space in order to come to agreement about how to proceed and then actually proceeding in teams that work more independently of one another. However, beyond promoting a charrette process and advancing a negotiated approach to finding context-specific solutions to meeting its various imperatives, the LCC does not address explicitly how each actor type is to contribute to meeting the challenge together. It should also be noted that while both LCC and EcoDistricts are designed for implementation in a range of different neighbourhood types, the 'base case' LCC is a new master-planned neighbourhood, whereas the 'base case' for an EcoDistrict is an existing neighbourhood. This creates very different starting points for the assumption of direct involvement of local actors. The EcoDistrict Protocol, by contrast, attacks the question of shared and differentiated roles for different actors in a much more structured and sequential manner.

The four sequential phases of the EcoDistricts Framework are: district organization, assessment, development and management. At the district organization stage, local stakeholders create a shared sustainability vision and a governance structure to implement that vision, through community engagement and citizen participation. A governance structure is defined, often with a new or existing governance entity being endowed with the explicit goal of leading the district's sustainability projects. In pilot EcoDistricts projects, lead governance organizations have ranged from newly-formed neighbourhood entities, to a university's existing planning department, to new working groups led by planning students, to an existing transportation demand management association, and in one case, PoSI staff assigned to the initiative (EcoDistricts, 2015b). This stage requires significant negotiation and collaboration efforts among all three groups – the public sector, private sector, and civic actors.

At the assessment stage, a performance-based neighborhood sustainability roadmap is constructed to address the eight performance areas. This stage includes identifying and assessing district-level priorities, and establishing baselines and target metrics for these priorities. At the project development stage, stakeholders work together on new district-scale projects that pursue their performance goals. The types of projects can range from the built to the conceptual to the educational and include: green buildings, social housing, urban agricultural space (EcoDistricts, 2015a), community solar programs, arts-focused homes, and community-based energy awareness programs (Capitol Hill EcoDistricts, n.d.). Finally, at the management stage, implemented projects are monitored to gain a long-term understanding of their social, economic and environmental impacts, in order to understand the value of the intervention made. When reflecting on the experience of the five Portland pilot projects, EcoDistricts noted that the engaged actors suffered from a lack of direction in how to create a sustainability roadmap at the assessment stage, and challenges in collecting data for baseline reporting and monitoring at the management stage (EcoDistricts, 2015b). This suggests a lack of knowledge and governance capacity within at least these assembled actor groups.

## 6. Discussion

While both the LCC and EcoDistrict models embrace a multi-actor, collaborative approach, and are committed to the difference that creating these new configurations of actors will make to the results in ecourban neighbourhoods, neither has fully worked out a means to address the different constraints and interests that each actor group brings into the process. Table 4, below, illustrates the different hierarchies of actor groups and intended roles in each of the seven extreme types of ecourbanism in our typology. Depending not just on the stage of development, nor just the specific design issue at

hand, but also upon the principle being pursued by the neighbourhood development, each actor group will be faced with a particular landscape of positions, recognized expertise, and power. These dynamics have bearings on the outcomes of their interplay in ecourban neighbourhood development.

Table 4. Interplay of key actors and their roles in each extreme type of ecourbanism

| **Extreme Type** | **Key actors and roles** |
|---|---|
| Econ-urban | Private sector actors play a key role as the owners of capital, attracted to new investment opportunities. Other actors work within the private sector's understanding of limits to profitability. |
| Ecol-urban | Public sector actors lead by integrating new science, technology, and concepts into the conventional patterns and built form, through regulations and incentives. Private and civic sectors are expected to take up new responsibilities to learn, build and engage in these naturalized landscapes. |
| Living-urban | Public sector actors play a key role in negotiating between the private sector's notions of sound development and those of the civic sector, typically as represented in theories and practices of community development. |
| Local-urban | The civic sector, residents in particular, expresses competency and sustained effort in self-determination and grassroots control and organization. The public and private sectors share responsibility to relinquish control over local affairs that they would typically run. |
| Democ-urban | Public and civic sectors share the responsibility here to reorient activities of citizenship and governance toward community-based decision making. Private sector is invited to the table. |
| Diverse-urban | The public sector, and sometimes the civic sector, assumes a primary role here in offering concepts, mechanisms, and supports for the emergence of a sense of community and belonging within a context of new interactions and diversity. The civic sector must assume a responsibility to take on the risk of these new interactions and connections. |
| Equi-urban | The public sector assumes a primary role in orienting the development process toward specific forms of equity. The private sector must be willing to take up the adjustments to practice in order to implement these equity measures. |

Recognizing that the primary rift in ecourbanism practice worldwide is that between the modernist drive for profit and capital growth, on the one hand, and the humanist need for socially- and ecologically-authentic lifestyles and places to live, on the other, we nonetheless find this more multifaceted, seven-point typology to have significant utility in understanding the full gamut of efforts in ecourban practice as these gather speed. Moreover, Table 4 demonstrates that the mix of extreme type principles that are adhered to in different developments and the frameworks that are advancing practice has implications not only for the project priorities that are pursued, but also for the roles played by the different key actor groups.

Overlaid on this mix of actor groups and their shifting hierarchies is the superstructure of the new actor group in ecourban neighbourhood development represented by the toolmakers themselves, such as ILFI and EcoDistricts. As these organizations create and advance the emergent technologies of ecourban neighbourhood formation, they advance a particular solution set for designing, developing, and inhabiting ecourban neighbourhoods. There are a number of concepts and components that these technologies and their intermediary organizations share. Both are making important and distinctive efforts toward more integrative practice, in terms of the components of development considered within a district-scale planning and development approach and the perspectives needed at the table to advance them. They share a common, understated yet pervasive, agreement with the *econ-urban* principle. This is paired with a common, foregrounded and more explicit, *ecol-urban* commitment, and specification of the key and necessary components of improving ecological outcomes in our neighbourhoods. The frameworks have an equal and expansive focus on the *living-urban* principle, with ambitious goals to expand people's sense of community and their own well-being beyond those elements that conventionally figure into such sensations and calculations: health through design, biodiversity as health. Both frameworks, however, neglect the work needed to integrate this new understanding of liveability with the contemporary sense of the determinants of liveability: opportunity for household improvement in a capital sense; safety and improvement in a social sense; jobs, health care and education in a human development sense. In this oversight, they sideline subsets of public, civic, and private actors committed to these more traditional neighbourhood goals rather than bringing them into the collaborative fold.

In terms of other extreme types of ecourbanism, LCC and the EcoDistrict Protocol conflict. Whereas the EcoDistrict Protocol leverages the *local-urban* principle as its key contribution as an intermediary organization, the LCC has set its sights on universal aspirations toward which all localities ought to be morally compelled to agree. Aligned with this difference, the EcoDistrict Protocol is more forthright in embodying the *democ-urban* principle, which runs through all four phases of collaborative district creation. LCC embraces the *democ-urban* principle to a lesser degree, recognizing the value of a charrette process as key to determining approaches to the most subjective imperatives in the framework, but stopping short of articulating a governance framework overall, and staying more focused on urban design. Moreover, neither framework is explicit in putting upper or lower limits on inclusion, as this affects *democ-urban*, *diverse-urban*, and *equi-urban* principles. Language exists about the importance of a number of dimensions of diversity, but how this importance stacks up against other demands remains unclear, and perhaps untested. Nor, by the same token, is the EcoDistrict Protocol strong on articulating how to move toward attainment of the *equi-urban* principle. LCC is even more hesitant here, citing the limits of what it can undertake within the context of a primarily built-environment approach.

## 7. Conclusion

A neighbourhood development is more than a built environment, and any offering of a fully-integrated framework for ecourban neighbourhood development needs a manner to address the human, social, and community development requirements of effective and successful neighbourhoods. A great deal of wisdom exists in these requirements, but this wisdom is typically found in different books, areas of research and practice than where the keys to sustainable design can be found. More integration within the visionary actor category is thus needed, in order to settle such important questions about what integrative ecourban neighbourhood development practice looks like, who it involves, and how. Our ongoing Ecourbanism Worldwide research project seeks to uncover some of this critical questions, through investigating the overall global landscape of model sustainable neighbourhood developments as well as individual case studies, from the basis of a multipronged typology of ecourban principles.

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# Can Smart Technologies Revitalize the Ruhr?

Paper submitted to the AESOP Conference in Prague 2015
Draft: Not to be quoted without permission of the author.

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Key words: Smart city, Ruhr, innovation city Bottrop

Abstract((
!
Recent enthusiasm about smart technologies, heavily promoted by cities such a
Vienna, may nurture hope in the Ruhr that the smart city paradigm could revit
The new smart technologies could certainly address some of the complex spat
challenges of the polycentric urban agglomeration, such as declining public s
people, energy conservation or more convenient regional mobility. Though all
accomplishments will undoubtedly contribute to maintain or even raise the qua
residents and households, there are not nay signs that smart technologies can
and attract new innovative industries and create new employment in the old in

The paper will explore whether and where smart technologies can revitalize th
discuss what kind of smart technologies may have a chance to impact the regio
polycentric old industrial region, and it will identify the constraints, obst
region-wide introduction of smart technologies. The ongoing project Innovati
serve as one exemplary case study.

!

## 1. Introduction

Despite 50 years of continuous state support and the impressive efforts of th
to re-imagine the declining industrial region, economic development in the Ru
behind more prosperous regions in Germany. Unemployment is high and strategie
structural change and revitalize the regional economy do not show striking res

Recent enthusiasm about smart technologies, heavily promoted by cities such a
Vienna, may also nurture hope in the Ruhr that the Smart City paradigm could s
and accelerate efforts to revitalize the region. There is no doubt that new
could address some of the complex spatial and economic challenges of the poly
agglomeration, such as declining public services, aging of the people, energy
more convenient regional mobility. Although all such accomplishments will und
contribute to maintain or even raise the quality of life of residents and hou
indicators that smart technologies can and will generate and attract new inno
remains to be explored whether they will new employment in the old industrial
bring about new challenges.

The paper will explore whether and where smart technologies can contribute to
region, to turn-around the old industrial structure of the Ruhr. It will dis
technologies may have a chance to impact the regional economy in a polycentri
region, it will identify potentials as well as constraints and obstacles of t
wide introduction of smart technologies- It will also likely spatial implicat
technologies in the Ruhr and the consequences for urban and regional develop

In 2015, the Ruhr, once the industrial powerhouse of Germany is not in a good
with the city regions in Southern Germany (Munich, Stuttgart RheinNecker and Frank
region with its 5 million inhabitants, when measured by traditional economic
lagging behind, as much as the former industrial regions of Eastern Germany.
high, the budgets of many local governments in the region are under state sup
unnecessary expenditures for local development, be it for infrastructure, cul
legally not defined measures to support structural change.

Since coal mining and steal production and related forward and backward linka
decline in the 1960s not long after the second world war, structural change h
concern of state and local governments. Since, many strategies of the state h
address the numerous challenges of the region. The transport infrastructure h
Universities and technology parks have been built. The globally acclaimed IBA
initiative has successfully improved the notoriously bad image of the region
mediocre cultural profile. During the last decade of the 20th century regional marketing welcomed
the metropolitan fever of German city regions. Though branding the polycent
metropolis, it seems, did not impress investors young entrepreneurs to locate
Ruhr and talents to stay in or to move to the region.

Though economic indicators tell another story, the quality of life in the regi
once much polluted air is clean. Salaries and wages are high. Housing is comp
Excellent educational and health facilities are available. High quality and i
events are offered all over the year. Leisure infrastructure is abundant, ubi
Access to green corridors and nature is easy. The accessibility to other city
Europe (Amsterdam. Brussels, Cologne/D sseldorf, Frankfurt and Paris) is exce
2012).

However, all this could not impress investors from abroad to invest in the Ru
former image of an industrial region, or the fact that the region has no real
Or is it the fact that the Ruhr does not have an internationally read newspap
readers outside the regions about regional innovations, achievements and succ

!

rather the unbroken dominance of decades of social democratic politics and th
local governments and five counties represent a complex political environment
long established regional authority, the Regionalverband Ruhr could not turn
regional economic development agency. Or is rather the influence of a few lar
corporations, which, supported by political networks they have not much inter
dominance. There are many other reasons, why the Ruhr has lost out in the fie
competition among city regions. One reason is that that it has been a working
strong unions for more than a century, where, in contrast to other German cit
Hamburg, Cologne of Munich, the bourgeois middle class has never evolved from
status. Hence involvement in regional political arenas was left to vey conser
working class union and party leaders. This also explains the fact that the r
developed an open, outward looking international mind-set. There has never be
to sell coal, steel and energy. Public subsidies made it easy for the energy
from the demand of 5 million people in the region and from the export of stee
water. And the fact that the state of North Rhine Westphalia lost its privile
Germany s capital city and the shift of public interest and funds to regions
did also hit the Ruhr.

In the end it may be the lack of urbanity, the lack of entrepreneurial spirit
lifestyle narratives, praising the immense potential of the region in interna
(Kunzmann 2014). It seems the polycentric region has to accept its diminishi
competitive urban region, very much like similar traditional industrial regio
(Detroit or Buffalo) Britain (Newcastle or Liverpool) or France (Metz and Lil

A very brief look into the economic structure of the Ruhr reveals its structu
region, which is lagging behind more modern metropolitan city regions in Euro
economy in the Ruhr is still dominated by energy production and related industries
influential agenda setting large energy giants are under strong economic pres
losing their power. In 2012 roughly 20 percent of the labour (around 1.5 mill
employed in industries, 20 percent in trade and commerce and another 20 perce
services and public administration (RVR 2012). Only recently, the last automo
Ruhr, Opel in Bochum, has been closed. Besides coal exploitation and energy
logistics and health are key competences in the region (RVR 2014, 43.) Both s
a long history of regional railway and water based-transport corporations and
evolving from health care services for miners and steelworkers. Unemployment
traditionally high. In 2015, the unemployment rate in the Ruhr was 10.6 perce
force, while Germany had 6.3 percent and North Rhine-Westphalia (without the
percent. Dortmund, the biggest city in the Ruhr (population 2012: 612.000) i
burdened by an unemployment rate of 12, 5percent.

According to official statistics, IT employment in the state of North Rhine-W
(self employed jobs only) was around 220.000 in 2013 (Germany as a whole 1, c
around 20 percent of the IT jobs were in the Ruhr (45.000), with Dortmund (11
(9.600) as the two most IT oriented locations (IAT 2015). Nevertheless the s
Westphalia is optimistic to becoming a hub for innovative, high-tech companie
home to some 23,000 ICT (IT and Communications) companies which generated a t
of EUR 92 billion in 2010, accounting for about 47% of Germany s total ICT-re
that year (ICT-NRW Cluster 2015).

On more fact has to be noted: The Ruhr is not an important Internet communica
Germany or Europe. Besides London, Paris, Amsterdam, it is Frankfurt, where
capacity is concentrated. Only Darmstadt shows a relative high score of inter
German NUTS 2 regions in 2009 (ESPON 2013, 14) -

Recently a new hope has risen on the economic horizon: Smart technologies (Ba
influence vested interests and with the support of larger corporations such a

!

Siemens, many cities around the world are promoting smart technologies and bra
as smart cities. The Ruhr, so far, has not followed the new mainstream, at le
region and not under label  smart Ruhr . The region, known for its pragmatism
Smart City paradigm to accelerate structural change, not even as marketing we
The paper aims to give some first answers to this question.

## 2. Smart cities: A new paradigm of urban development?

Since the beginning of the 21st century the Smart City concept is receiving c
and attention among media and local governments, searching for popular vision
development However, research on the importance and on the implications of sm
on city planning and development is still scarce (Kunzmann 2014) .

The convergence of information and communication technologies and the applicat
technologies by industries and citizens is changing cities and regions quite
anything experienced in the past. It is second wave of industrial revolution.

Cities are becoming smart not only in terms of the way we can automate routin
individual persons, buildings, traffic systems but in ways that enable us to
analyse and plan the city to improve the efficiency, equity and quality of li
time. This is changing the way we are able to plan across multiple time scale
prospect that cities can be made smarter in the long term by continuous refle
term (Batty et. al 2012 , 482)

Very much promoted by industries, like IBM, Cisco or Siemens, that are eager
sell their high tech and ICT products and services, the new paradigm of the S
emerged, based on GPS, I-phone, I-pad and similar technologies. Being smart i
agenda, on the agenda of city mayors, city planners, and city builders, in ci
Vienna or Berlin, and in China, were more than 80 cities have recently been s
cities for Smart City development.

The interest in Smart City development tells that in the beginning of the 21st century, the
infrastructure development is evolving and a new group of professionals made
communication specialists is entering the stage of urban development, similar
developments a century ago. They are the new urban engineers, designing and i
urban communication networks, without which the cities would not any longer b
organize e-shopping and mobility for young citizens, and public services for
rural areas. The technology driven products and services will certainly chang
will force local governments to act. So far, it seems, only very few cities h
hardly prepared to deal with the new challenge and to provide the expertise t
with the economic drivers of the new technology.

The emerging Smart City paradigm will add another dimension to urban developm
this paradigm a new type of urban planner will enter the stage, the Smart Cit
planner. While traditional planners are discussing with citizens about how fu
should look like, the new planners, together with powerful global ICT corpora
working behind the stage to develop a totally new urban infrastructure for sm
the future city.  The brains behind all that reside in Silicon Valley; and, i
Zhongguancun in China.

The Smart City paradigm is in a process to conquer the minds of architects, a
policy advisors, politicians and CEOs of large international corporations, as
young urbanites, trapped in the hassle and information overload of daily urba
is gradually entering public and academic discourses on future directions of
The temptations of new mobility, information and communication technologies c

!

software and communication industries are too strong to resist. The technolog
of a few global corporations and their regional subsidiaries and partners, wh
influenced locally and regulated by single national governments. The Smart Ci
promise and a temptation. Whether they are young or old, citizens can expect
accessible technologies can increase their individual quality of life, make th
enjoyable. The Smart City paradigm, clearly, has both a good and a dark side.

Smart City promoters argue that they aim to make life more convenient for all
they are rich or poor, old or young, privileged or underprivileged. Over long
Smart City s paradigm claim, all citizens will be equipped with i-Phones and
will have ubiquitous access to a plethora of related public and private servic
improving application software. Such software will allow them to get, whereve
hours a day, all the information they require to use public transport, to fin
or a car-sharing location; to find a doctor or a nurse, to make business, to
old and new partners, to find reasonably prized or designer hotels, to get ac
apartments, to sell whatever they wish to sell or buy consumer products they
cheaper price or in another quality, now or later. The new technologies offer
applications. The promoters of the Smart City promise that using smart techno
life in the city better and more enjoyable. They can easily convince mayors a
that (only) smart technologies guarantee human survival in a complex world, i
cities.

The term smart technologies covers a wide field of applications, from big dat
broad range of  i-phone applications., from intelligent energy production  an
mobility Smart technologies offer an endless range of applications, which eas
whether they are young or old to go for it. In everyday life there are manifo
improve quality of life, to solve problems, to overcome constraints, to save t
for information and locations, for partners and help, to save money, to econo
The community of Smart City developers argues that smart technologies can

- Improve individual mobility and orientation in cities and regions
- Create access to any kind of information
- Make consumers independent from opening times and locations (e-shopping)
- Raise personal security at home and safety on the road
- Save energy by numerous systems of controlling consumption
- Facilitate education and training ( e-learning)
- Improve access to public services
- Make it easier for tourists and visitors to enjoy cities and city life
- Assist elderly and physically handicapped to get all kind of personal medi
- Help people to find a partner

Obviously, saving time in finding information and facilitating communication
motive for applying smart technologies, though even smart technologies can ra
stress at work and at home.

The areas of smart technologies vary from interest group to interest group. Ge
following fields are addressed: Smart mobility , smart energy, smart communic
governance, e-health, public safety, e-learning and public information.

The fascination, the smart technologies receive from customers a, clients, fr
professionals in many disciplines, is easy to understand and there is no reas
technologies should not be applied. Arguments that the individual application
technologies will eliminate privacy are mostly accepted or just pushed aside.

!

that smart technologies in the end depend upon a few global corporations only
impress citizens and to alarm cities.

So far, however, not much research is done on the spatial impacts of smart te
development and on planning for city development (Streich 2014, Exner 2014) C
media do hardly report about negative implications and users are not alarmed.

## 3. Smart City Development Drivers

The Smart City excitement is driven by many, who consider the movement to be
instrument to address present and future urban challenges, to improve quality
just to benefit from developing and selling smart technologies to cities. Giv
no common understanding of the fuzzy Smart City paradigm, the approaches to t
considerably.

> Large and globally active corporations (such as Apple, Google, Siemens,
> or, Cisco have realized that smart technologies are the drivers of innov
> economic development in the 21st century, and that applying smart techno
> development is meeting global demand and support from a broad spectrum

> Governments at all tiers of decision-making and planning in Europe have
> Smart City development as a much valued policy field of public policies
> economic environments. The European Community stands not aside, when it
> smarting cities in Europe. Under the Horizon 2020 programme, it has laun
> initiative 'Fostering Smart Cities and Communities' This initative is pa
> Societal Challenge 3 'Secure, Clean and Efficient Energy', it aims at
>
> finding innovative energy solutions (e.g. energy efficiency, electric
> cooling supply systems, and integration of renewables in built environme
> with transport systems, smart construction and urban planning solutions,
> water treatment as well as ICT solutions for urban environment with the
> transform cities and urban areas towards a low-carbon society.
>
> Under the initiative 'Fostering Smart Cities and Communities', targeted
> funded
>
> . that support the convergence of industrial value chains of en
> and ICT sector for smart urban applications. At the same time, new techn
> organisational, planning and business models need to be developed and te
> scale according to the needs of cities and communities and their citizen
> needed to understand social, environmental, economic and cultural issues
> involved with this transformation. (CEC 2015)

!

To speed up the deployment of these solutions, the Commission initiated European Innovation Partnership (EIP) on Smart Cities and Communities that European cities, industry leaders, and representatives of civil society to urban areas.

.So far, the EIP on Smart Cities and Communities has received some 370 commitments to fund and develop Smart City solutions in the areas of en transport. These commitments involve more than 3,000 partners from acro create a huge potential for making our cities more attractive, and create opportunities. (Laurila 2015)

Research institutions and researchers in a broad spectrum knowledge inc supported by industries, governments and research foundations are offeri competence to carry out basic and applied research in the field.

Encouraged by global success stories, and often supported by speculativ funds university graduates, young entrepreneurs and start-ups have reali cities are a fascinating field to start a business and make a fortune.

The community of architects and urbanists, continuously seeking innovat to make cities more liveable, and more beautiful, has discovered the Sma as an action field, which receives positive response from both politici

City governments, forced by globalisation and experiencing budgetary li addressing urban challenges, providing security and for the provision o to all citizens, expect that using the Smart City label will raise their i competitiveness , and allow them to offer better services to citizens.

Smart cities have become a favourite theme of the media. They are fasci images, Smart City promoters and smart technology developers can provid is easy to communicate and to sell to producing industries for placing advertisements.

The seemingly insatiable interest of consumers in smart technologies dr and encourages industries. Start-ups and public institutions to develop support smart products and services Young consumers, not just young fre cosmopolitan techno-affine generation, have welcomed the I-phone dominat which has changed information and communication modes of the 21st century.

It is a large group of people, enterprises and institutions, driving Smart Ci train is moving on, accelerated by software developers, hard ware producers a Two drivers deserve special attention: The internationally active German Frau and IBM, the influential US corporation.

Worldwide, the Fraunhofer-Gesellschaft employs a staff of nearly 24,000 scien and support staff, who work with an annual research budget totaling more than this sum, around 1.7 billion euros is generated through contract research fro and publicly financed research projects.
On their website the instituion is introduced as follows:

Europe s largest application-oriented research organization. Our resea geared entirely to people s needs: health, security, communication, energy and As a result, the work undertaken by our researchers and developers has a sign people s lives. We are creative. We shape technology. We design products. We

!

and techniques. We open up new vistas. In short, we forge the future . (www.
retrieved 26.05.2015)

Four of the 66 institutes and research units of the Fraunhofergesellschaft, a
Ruhr.( https://www.fraunhofer.de/en/fields-of-research/science-year- 2015-cit
) .Already in 1994 the Fraunhofer Institute for Applied Photovoltaic had been
Gelsenkirchen, in the centre of the Ruhr,. Since 2007 the city hosts the Frau
Solar Energy. The other three focus on material flows and logistics, on micro
software and systems technology (RVR 2012, 53).

The German Fraunhofer Institute for Open Communication Systems in Berlin, spe
movement to turn cities smart, is selling the message as follows

> WE MAKE CITIES SMART : Smart cities have a lot to pull off.
> to be able to get from A to B at all hours, by car or public
> and telecommunications 24 / 7. They should even be able to ge
> at midnight, not to mention apply for a new driver s license
> arrival. Emergency rooms and hospitals can never sleep, and r
> Life in the city no longer comes to a halt when the sun goes
> isn t enough for nocturnal city-dwellers. The city should be
> adapt to the needs of everyone, offering the right thing at t
> efficiently, sustainably and ecologically. And yet, the city
> What s private should stay private, and it should be protecte
> want a digital garden fence so they can feel safe and secure.
> and the ability to lose oneself in the city s undergrowth are
> jungle. Ultimately, the success of the Smart City will be det
> reliability of critical infrastructures and the efficient use
> between freedom and control.

(Focus 2014,11)

The job of the Smart City is to help its inhabitants use scarce resources as
sustainably as possible. It should also enable its citizens to lead a good, s
them the freedom for creativity and innovation. The researchers at Fraunhofer
working on projects which aim to continually improve the everyday lives of re
of the future despite rising population numbers, more traffic, growing envi
many other challenges.

The Centre in Berlin presents their mission as follows:

Urbanization, globalization, demographic and climate changes are putti
demands on our cities. At the same time, however, greater opportunities to ma
material and human resources efficiently are also being created. It is the go
to seize these opportunities. An important basis for this process is the inte
and communication systems into the various technical systems and infrastructu
enables the flexible control of supply and disposal networks, especially for
gas as well as goods, and makes novel solutions for mobility, administration
the city possible. Citizens, businesses, institutions and government are in c
increase the quality of life and work of all parties through efficient and in
flows. The city becomes more of a service provider for its citizens and busin

!

things keep running smoothly through seamless and transparent administration
optimally networked city not only makes everyday life easier in all aspects o
provides environmentally sustainable solutions. The Smart City is an informed
mobile, safe and sustainable city.
(Fokus 2014).

The IBM message is not much different. They sell the application of smartness
fields: Planning and Management, People, and Infrastructure. ( IBM 2015):

Source: IBM

4. Smart City Development in the Ruhr

With the exception of Dortmund, neither the region as a whole nor any other c
visible promoting the Smart City paradigm. However, numerous activities take
region, which can be linked to the concept. These activities such as ICT. NR
Information and Communication Technology) , are mainly driven by government p
state of North Rhine-Westphalia. These activities (such as Innovationcity Ruh
by projects supported by the Initiativkreis Ruhrgebiet (an Association of 70
from across the Ruhr), by the Mercator Stiftung, an influential private found
Fraunhofer Gesellschaft., the traditionally strong logistic cluster in the Ru
SMEs developing and selling smart technology applications, such as the Matern
private IT company headquartered in Dortmund with more than 1500 employees on
in Europe, Qinscape, another IT Company located in Dortmund, developing softw
offering e-learning courses under the label Jaspersoft University., or CCS Ch
Systems , developing and producing magnet and chip card sysdtems in the city
addition there is a broad community of researchers at regional universities a
working in the field, benefitting from European or Federal German research pr
North Rhine- Westphalian policies and state subsidies.

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A few corridors to Smart City development in a broader sense will be briefly
smart city development in the Ruhr are presented thereafter, the ICT-NRW prog
state government, the logistics cluster initiative, the energy turn projects
research institutes, supported by the Mercator foundation, the Innovation cit
the ambitions of the city of Dortmund to brand the former industrial city as

ICT

ICT.NRW is a business cluster connecting companies, associations and individu
and Communication) sector in state of North Rhine-Westphalia. They describe t
follows (IKT 2015) (www.ikt.nrw.de , retrieved 125.05.2015)

The objective of ICT.NRW is the sustained promotion of the region as an impo
productive hub for IT and communication technology. Inspired by the motto In
Integrated. Innovative , the organisation focuses on using intelligent ICT to
generation of solutions for North Rhine-Westphalia s strong and long-establis
industries. Intelligent energy systems and government project Industrie 4.0,
key role in two of the biggest challenges facing Germany: the fourth industr
the country s wide-scale transition to renewable energy.

Drawn from the world of economics, academia and politics, its members are w
transform the ICT market in the state. ICT.NRW focuses on the early identific
strengths, its synergy potential and its forward-looking ideas, and on provid
the ongoing process of innovation. Raising awareness of North Rhine- Westphal
for the ICT sector is another important objective at ICT.NRW. As part of its
activities, ICT.NRW hosts cooperative and networking events, assists companie
fair exhibits and business trips, and also publishes sector and trend analyse
(IKT 2015)..

Efficient and Green Logistics

In 2010 the Fraunhofer Institute for Material Flows and Logistics in Dortmund
NRW EffizienzCluster Logistics upon initiative of the German Federal Ministry
Research, and supported by the Initiativkreis Ruhr, the agiplan GmbH, the Fra
Gesellschaft, PwC, Stute Logistics, the Business Development Agency of the Ci
as well as the Last Mile Logistics Network Herne. Around 170 companies and 28
facilities participate in the unique network, including the port authority of
biggest inland port. The Effizienz Cluster is well established as the leadin
innovation cluster for logistics in Europe! Now, the companies are invited to
potential of the Cluster and to transfer the ideas and concepts into innovati
The much praised research project Green Logistcs of the Cluster has receive
in the Ruhr.

In the EffizienzCluster LogistikRuhr, more than 180 partners from research an
working together on logistic challenges in about 40 research and associated p
requirement and target

The cluster aims to facilitate tomorrow s individuality - in terms of the
goods, mobility and production with just 75 per cent of today s resources.
And to develop concepts and solutions for bundling logistic and non-logistic
CEPs, nursing care) with regard to demographic changes and for bundling varic
goods flows in order to reduce logistics traffic in urban areas, partcularly

Taking solutions for navigation systems, access restrictions or require
innovative transport systems into consideration.

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Concepts that allow the integration of electro-mobility in urban supply

Innovative goods transfer systems for the last mile to round off the conc
supply.

In order to ensure urban distribution is upheld, the logistics services provi
partners will be bundled in a Smart Grid for Urban Supply a kind of an inte
power grid. The Smart Grid is considered to be a comprehensive supply networ

More than 160 companies and twelve scientific institutes work on joint and
in Europe s largest research and innovation cluster for logistics. The spectr
ranges from SMEs to international corporations. Furthermore, the efficiency c
collaboration with partners the development of a European technology platform
scientific establishment and think tanks, the Fraunhofer Institute for Materi
(IML), the Technical University Dortmund and the University of Duisburg-Essen
initi- ators of most of the research projects.

.(Effizienz Cluster Logistik file:///Users/Desktop/ index.php.webarchive

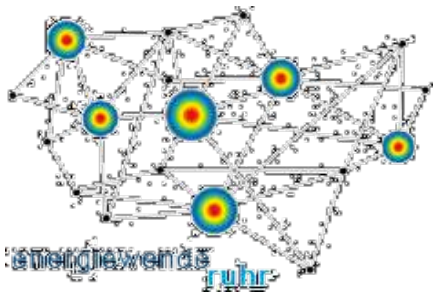
Energy Turn Ruhr

Smart technologies in Germany are mainly promoted to save energy. This coinci
German Government s decision to shift to renewable energy (wind, sun, water)
all coal and nuclear power plants. Knowing that most energy can be saved by b
focus is on measures to reduce energy consumption by better building technolo
isolation and intelligent heating systems.)

Another initiative to promote the reduction conservation of energy consumpti
the innovation city pilot project, in Bottrop, a traditional coal mining city
80.000? of is aiming to prove that innovations in

In recent years, like many other regions, supported by EU programmes and the
the Ruhr and the city of Dortmund have promoted cultural and creative industr
IHK 2013), Following mainstream hype the region has impressively contribution
industries to the regional economy is marginal. The region

A related comprehensive and interdisciplinary initiative supported by the reg
foundation is the ambitious energy turn research programme (Energiewende Ruhr
promote the energy turn in the region by developing elemnts of a regional imp
strategy (Schule et al, 2015) .




Innovation City Bottrop

In 2010, upon initiative of the "Initiativkreis Ruhr", an ambitious competiti
development project had been launched in the region. The city of Bottrop, a c

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population of around 80.000  won the fierce competition. The aim of the proje
complete urban district into an example for energy efficiency. The concrete a
emissions of a city district by half and thus to increase the quality of life

The pilot area of the InnovationCity Ruhr covers the inner city of Bottrop an
urban districts. 67,000 people live and 22.000 work in the pilot area in more
The area represents all well-known facets of the Ruhr region. The pilot area
function mix of uses (housing, shopping, offices, industries), grown over dec
incremental, semi-planned mode. The urban fabric is not spectacular. It refle
tradition of the region. Like most other urban districts in the Ruhr area is
pressure.

To carry out the project the Innovation City Management GmbH has been establi
private partnership. The City Management GmbH is a company borne by five shar
supporting the company as well as the project with staff and know how. The co
coordinates and controls an coordinates the InnovationCity Ruhr project. The
innovation process and offers expertise in climate-optimised urban redevelopm
energy transition to other cities and companies as a consulting service. In c
several partners, InnovationCity Ruhr | Model City Bottrop is run by an inter
engineers, urban planners, scientists and further experts in order to realise
redevelopment of the pilot area.

The project is developed along five integrated action areas: Housing, Industr
and urban development.

Housing:  Reducing energy consumption of about 60 percent of the more t
privately owned single family houses.
Industry: Optimizing industrial production processes under energy reduc
perspective, and improving energy efficiency in about 2000 private
public buildings.
Mobility: A mix of actions to promote energy saving mobility in the pil
Energy: Decentralizing and optimizing and energy production and intelli
of energy production and energy consumption.
Urban development: Additional action to integrate the sectoral action f
supporting measures (lightning, greening, action research etc.), and
urban design.

To guide the work in the five action fields and to transfer the experience of
implementation to other cities. disseminate the experience of the project, a
handbook has been produced by a consortium of private consultants, who had al
the master plan (Innovation City Ruhr, 2015).

The project is still ongoing. So far no assessment has been made which could
achievements and transferability. No figures are available how much the proje

!

the public sector (The state of North Rhine-Westphalia and the city governmen
much regional energy stakeholders in the Ruhr contribute to the pilot project
private house owners are subsidized, when renovating their homes to meet the
standards

Tough the ambitious project does deliberately not use the Smart City label an
smart technologies, smart technologies will be essential ingredients of all t
selected five action fields. If successful and financially feasible, the proj
impressive model for smart energy efficient urban redevelopment, in the Ruh
beyond (Bittrich 2014) . It could bring back the Ruhr into the league of Euro
are considered to be forerunners in sustainable development

Smart City Dortmund

In 2011 the city of Dortmund had successfully applied to IBM to partici
Smarter Cities Challenge Programme, launched by IBM in 2008 as a follow-up to
Smarter Planet initiative. Benefitting from its global network, IBM is commun
which aims to promote a more efficient use of Information in urban regions. I
City established the Dortmund Talent Initiative (IDT ) to develop the talent
all Dortmund s citizens regardless of gender, nationality, religion or educat
their parents, and to enable them to live on a self-determined, socially inde
city (IBM 2012) .

Dortmund has been one of 100 cities worldwide that are participating in
Following Richard Floridas findings that cities have to attract talents to be
the Smart City initiative in Dortmund has been .to develop talent to prepa
the IT industry , to promote social collaboration in the city ( . encourage
organizational boundaries to foster creativity and achieve better results) ,
new information and communication technologies can be used to improve the rel
between different actors in the city and to attract innovative talents to the
has been considered as an essential milestone for a road map to structural ch
becoming a Smart City (Dortmund 2015)

The Smart City imitative of Dortmund was linked to Smart NRW, a programme, wh
launched by the state government in cooperation with IBM to develop visions f
regions. The programme was interlinked as well with the Cluster IKT.NRW initi
state supported initiative to promote cluster development. The Ruhr has been
innovative in various forms.

However, as it happens quite often in the Ruhr, trendy new concepts are loud
started with much enthusiasm. Though, over time , when the financial contribu
government fade away innovative programmes are watered down and disappear fro
agenda. Not surprisingly, this also happened with the IBM supported Smart Cit
Dortmund. Loosing political and corporate interest, the project has been disc
really been a Smart City development project, rather a policy support project
management and raise the image of the city . The smart label was just used to
support, as well as to attract state subsidies and media interest.

Nevertheless, the city of Dortmund is very active, when it comes to promote i
activities and the Smart City concept. Under the roof of the very active loca
Development Agency It operates a special IT Bureau, which provides informatic
encourages networking among the 840 medium and small scale local IT firms an
mainly in the field of mobile applications, e-logistics and e-shopping.http:/

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Moreover, the city of Dortmund hosts an annual Smart City Forum, where the st
Smart City development is discussed. In line with such activities is the city
plan (Masterplan Energiewende) which aims to gradually replace traditional en
by regenerative energies and reduce energy consumption by measures to improve
efficiency, www. dortmund.de retrieved 25.05. 2015) The master plan which has
in cooperation with public and private partners, local unions and action gro
unanimously approved in 2014 by the local parliament. Masterplan Energiewende
Dortmund (http://www.dortmund.d

5. Can smart technologies contribute to a turn-around the Ruhr and what are
spatial impacts of smart technologies

Whether and where can smart technologies contribute to revitalize the region,
old industrial structure of the Ruhr. What kind of smart technologies may ha
impact the regional economy in a polycentric old industrial region? Which fac
which obstacles and limits will constrain the region-wide introduction of sma
What will be the spatial implications of the worldwide smart technology hype
will be the likely consequences for urban and regional development in the reg
bunch of questions can only be scratched on the surface.

The brief explorations above into the potential of the Ruhr in the field of s
shown that the region does not lag behind, when it comes to participate in th
and economic revolution. Obviously given the path dependency of its industria
are that are leading the smart innovation movement. Energy is the one of the
region is demonstrating its strength. Despite the traditional power of the tr
stakeholders, who were always hesitant to act on the forefront of innovation
traditional competence, and heavily supported by policies of the state govern
other drivers smart energy smart energy has become the most promising action
development in Ruhr. Numerous projects are undertaken in this field to demons
energy production and application, together wit smart building technologies c
efficiency and , together with intelligent transport systems, can contribute
reduction of CO2 emissions.

The number of projects in a second field of competence is evolving is smart m
absence of large automobile corporations in the Ruhr, who are an influential
mobility in Germany, smart mobility has become received more regional attenti
however, is rather on smart logistics, another endogenous field of competence
prominent Fraunhofer Institute this field or smart action has a regional focu
political status in the Ruhr. To certain extent smart logistics are also gree
long run are an indispensable action field in city regions, where optimizing
developments will challenge the existing transport system and physical urban
design.

Other areas, such as smart communication and information, e-medicine , e-gov
learning, smart safety or smart water management are not neglected, though in
these fields is less visible in the Ruhr and receives less political and publ
region is not in the forefront, when it comes to develop smart products, proc
applications This does not mean that the five million consumers in the Ruhr,
critical mass, would not welcome and not use smart technologies to earn their
their quality of life and enjoy convenient access to information.

Regional challenges constraining development in the arena of Smart City are t
always constrained innovation in the region, such as the power and the influe
industrial corporations and the related worker and public sector unions, a lo

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spirit, regional complacency, the tradition of state subsidies, a weak intern
but not least, the limited attractiveness of the region for inward investment
working on strategies to overcome such constraints, it will take a few more d
a change.

The Ruhr is known for its political pragmatism, but also for its lack of regi
second rate local media, a comparatively low profile of the universities, exce
disciplines. The region is always floating between, pragmatism, scepticism an
new media driven development hype. Moreover, the Ruhr is not the German Silic
offering an attractive job market for creative talents. When comparing with B
Cologne the region cannot offer trendy life style environments. Offering chea
not a key-attracting facet for talents and entrepreneurs. So far, such factor
caused the regional stakeholders, to abstain from marketing the region as a S

## 6. Spatial impacts of smart technologies in the Ruhr

Not much empirical research has been done so far to study the spatial implica
technologies in the Ruhr, the change of life spaces in neighbourhoods, urban
of urban production in the region. This is similarly true for other city regi
for Berlin, the city region, which claims to be the hub of smart technology d
Germany.

When exploring the possible impacts of smart technologies on the future spati
the Ruhr, it becomes soon evident that not much will change in the region. Sm
can neither influence the spatial system nor the transportation network, whic
more than 100 years.

The Ruhr is in a process to design a new regional master plan (RVR 2013). Wit
efforts to involve citizens and regional enterprises as well as a great numbe
and semi-public authorities, the Regionalverband Ruhr aims to develop a new s
the polycentric region. Given partial demographic decline in the region, econ
the weak tax base of all local governments in the Ruhr, the new regional plan
become a concept for turning around the region, a road map for change. Despit
its aim is not to develop a new vision for the Ruhr economy, it is rather an
citizen participation., aiming to legitimize the new regional planning author
Smart City dimension, neither its positive nor its negative feature is not a
planners.

There are only few dimensions of the regional urban system on which smart tec
have a positive as well as a negative spatial impact:

> Despite the significant theoretical decentralization potentials of sma
> a further concentration of economic activities in a few places in the R
> unavoidably happen. City centres of the four big cities (Dortmund, Duis
> Bochum) will certainly benefit, places around universities, established
> and other easy accessible locations with a certain urban quality, will
> appealing to IKT firms and businesses, as well as for real estate devel
> smart citizens, smart enterprises and creative talents working in the f
> segment of the regional economy. The much-favoured regional polycentris
> remain a planners dream. The North of the Ruhr will certainly remain an
> laggard.
>
> With smart technologies the chronically congested transit system in th
> optimized without building new roads and tracks. Such measures, which w
> be accepted by citizens and environmental watchdogs, nor financed by th

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government. To which extent the existing transport network, by applying technologies for both roads and metro-tracks, could absorb more and how traffic, has to be investigated.

Smart energy technologies contributing to energy efficiency will hardl impact, apart from revitalizing or stabilizing declining urban district projects as the Innovation Ruhr Project, would serve as models for othe in the region, they would just raise the quality and value for housing, modest gentrification processes. Undoubtedly the region-wide use of sma can reduce CO2 emissions and improve the ecological footprint of the Ru contribute to reduce some dependency on a few regional energy corporati the expected success of energy efficient urban design could raise the i and make the new competence a more innovative regional export product.

Growing e-shopping in the region will certainly have an impact on exis shopping landscape. Spatial concentration of shopping will further grow city centres will cope with the likely impacts by turning shopping stre fair grounds of international brands, combining visual excitements and access to e-shopping, the number of second and third tier shopping cent will further decline. Niche enterprises in the e-shopping field will fi locations all over the region to operate in and from the region .

Smart technologies will continue to change information and communicati habits of residents, businesses and visitors. The smarter access to inf locations, on attractions, on events, or on regionally available produc make it easier to look beyond local boundaries and discover the Ruhr as living space. This in turn can support building-up a new regional ident contribute to new regional communication networks, beyond and independe traditional political or corporate connections.

There is still another dimension: The Ruhr is not a place, like Paris Vienna, Milan or Florence, where business is always linked with some fo tourism and cultural entertainment. The new information technology allo communication without travelling to the Ruhr. This may facilitate busin support the regional economy in the Ruhr. Tourists, visitors and footba by the much-praised industrial heritage flagship projects and cultural Emscher Park, or by top football matches, will certainly have it much e dispersed locations in the Ruhr. This in turn could raise the profile o

The gradually changing regional economy is supported by a new generati labour. The demand for housing of this new labour force differs from th corporate or affordable (social) housing of the labour force employed i steel production. To avoid long commuting and to enjoy urban life, this labour force, the much sought after creative talents is searching for housing. Their demand could trigger off new developments at more appeal locations in the larger cities of the Ruhr.

With an emerging new middle class working in smart IKT segments of the economy, social polarisation in the Ruhr will further increase. Social will unavoidably bring about spatial polarisation, where the districts spine of the Ruhr and around the universities and technology parks will while the districts in the North, with the exception of a few gentrifyin former mining cities and ethnic communities with their own IKT milieus, or even marginalize

These were just a few assumptions, which positive and negative impacts smart have on cities in the Ruhr. More explorative and empirical research would cer better identify and assess the likely spatial implications.

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## 7. Conclusion

There is not doubt. Smart technologies cannot save the Ruhr. They cannot turn
economy of a region, certainly not one that has been dominated for more than
vested interests of a few large corporations and heavy industries. The reason
above: The dominance of powerful and politically influential coal and energy
together with the conservative social-democratic political milieus lacked mor
visionary perspectives, the lack of entrepreneurial spirit, the dearth of int
personalities, inward looking media and the difficult love-hate relationship
state of North Rhine-Westphalia.

Apart from technological innovations in the remaining industries and despite
the existence of numerous universities in the Ruhr, and five million consumer
technologies will not become a  new export-oriented territorial capital of th
regions. Hence the Ruhr is not furnished to become a smart city region, a reg
producing smart technologies, not just using products and applying services,
produced and developed elsewhere in Germany and beyond. There are a few hidde
the region, such as Materna, though there are not enough innovative enterpris

Only in two areas of smart applications and benefitting from experience in th
the innovation city project in Bottrop, the Ruhr can excel and compete, and d
leadership, in energy efficiency and logistics. In these two fields, the Ruhr
certain renommØe. In all other fields the region as whole will rather apply w
developed in other regions have developed.

Nevertheless smart technologies will create sufficient jobs for the sons and daught
grandchildren of coal miners and steelworkers, graduating from the regional u
wish to remain in the Ruhr.

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# The Gap of Climate Adaptation Development of the Spatial Planning System in Taiwa
# Multilevel Planning Agencies Respond to Climate Risk

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Keywords: climate change adaptation, spatial planning, risk

Abstract

Recognizing that climate risk is a real threat to the environment and society, spa
role in developing adaptation policy responses as well as in integrating the terri
governmental sectoral policies. Planning for adaptation through policy interventio
implementation of climate risk management. Taiwan is situated in a region in
population living in more than three natural disaster impact zones. How to cope
more locally and increase national adaptive capacity becomes an important issue
sectors and actors to incorporate the concept of risk management into the supportive
making, and procedures at different spatial levels across a range of time scales i
in spatial planning. This paper uses a framework to elaborate how and what types of
in planning institution has been adopted or adjusted with case study in Taiwan. Tw
of planned adaptation are multilevel governance and land use management. These ba
existed problems in spatial planning system and affect the effectiveness, efficiency, e
embedded in adaptation decision-making.

## 1 Introduction

IPCC s Fifth Assessment Report (WGII AR5) indicates impacts from climate-relate
significant vulnerabilities and exposures of many human systems to current clima
impacts induce risk to our society, economy and environment due to the interaction
hazardous climate events occurring and the vulnerability of an expose system. Cli
disasters, as in larger and/or more frequent floods, or more intense and/or freque
or less direct, as climate change negatively affects food supplies, or access to w
It results from the interaction of vulnerability, exposure, and hazard (see Figure

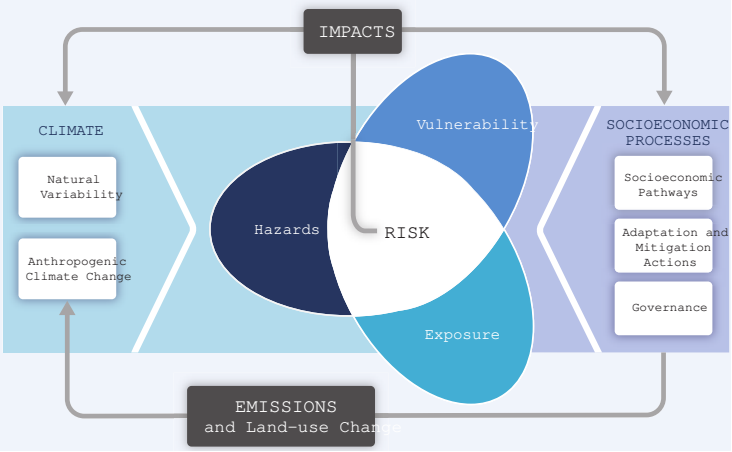


Figure 1 Illustration of the risk of climate-related impacts results from the interac

vulnerability and exposure of human and natural systems. (Source: IPCC WGII AR5 Technical S

## 2 Background about climate adaptation policy context

### 2.1 Research background

Spatial planning has been identified as a critical mechanism through which climate
be facilitated (Hurlimann & March 2012; Serrao-Neumann et al. 2015; Davoudi et al
argues that planning provides a critical approach to climate adaptation by four di
spatial plan making, which are spatial, temporal, coordinative, and multilevel dime

The research question is how has the process and tools of spatial planning system
needs in the governance structure in Taiwan s case. The framework that are based
plans is developed on the article of Simin Davoudi (2013) and Moser & Ekstrom (20
analysis including the interaction of planning actors and the policy documents
involvement, interviewing governmental officials and focus group discussion from 20

By the empirical analysis by the framework, the intervention, tools and resource
adjusted in planning system are assessed and the barriers of planning toward the
planning are identified.

### 2.2 The important aspects of planning for climate adaptation

There is an complex interaction between changing climate and spatial development c
process drivers and impacts, i.e. spatial strategies and its effect (human activi
from urbanisation, land use and planning policies on the climate; and the impact of the
hazards on different levels of space scale. All of these are complicated and req
spatial planning in the light of climate risk management as essential components f
Although it is one of the key messages in the adaptation chapters of IPCC Assessme
planning policies and strategies can trigger adaptation action across all sectors a

#### 2.2.1 Defining adaptation

IPCC Assessment defines adaptation as "Adjustment in natural or human systems in r
expected climatic stimuli or their effects, which moderates harm or exploits beneficial
involves reducing risk and vulnerability; seeking opportunities; and building th
regions, cities, the private sector, communities, individuals, and natural syste
impacts, as well as mobilizing that capacity by implementing decisions and actions
Adaptation requires adequate information on risks and vulnerabilities in order
appropriate adaptation options to reduce risks and build capacity. In this paper
need/and or gaps focuses on the adverse effects that natural hazards and other clim
a given location(F ssel & Klein 2006).

To achieve adaptation objectives and respond to climate risk at different spatial
necessary to clarify that the purpose and outcome of adaptation is a continuous str
decisions and awareness that reflect existing social norms and processes. Linking
adaptation is a series of actions to reduce the vulnerability of a system (e.g. a
population group (e.g. a vulnerable population in some areas) or an individual or
climate risk. It can take the form of autonomous, reactive or anticipatory ad
adaptation is essentially an unconscious process of system-wide coping, e.g. e
Reactive adaptation involves a deliberate response to a climatic shock or impact, r

prevent similar damage in the future. Anticipatory adaptation involves planned
prepare for adverse impacts and attempt to minimize those risks.

2.2.2 Risk-hazard oriented adaptation and adaptation options

The risk-hazard framework, drawn primarily from risk and disaster management, foc
effects that natural hazards and other climate impacts can have on a given locatio
Klein 2006). Although adaptation needs are specific to particular groups and place
more general categories as summarized as five perspectives that are biophysical an
social needs, institutional needs, need for engagement of the private sector, and
resources needs(Noble et al. 2014).

There are many different ways that the range of adaptation options available could
et al. 2005). Three categories of adaptation options are summarized in IPCC AR5
structural and physical, social, and institutional options. Among them, two main meas
options are most related with planning. One is laws, regulations, and planning mea
areas, building codes, and re-zoning are institutional measures that can improve th
communities by designating land use to support resilience.

2.2.3 Characteristics linking planning with climate change adaptation

The general/fundamental principles/characters/capacity underpin spatial planning
climate change adaption strategies. Stead et al. (2008) identify six key principle
spatial planning as democratic, subsidiarity, participation, integration, proportion
principles. Many literatures have noted the role of planning in climate change ad
March (2012) build five common planning tool types associated with planning for
content analysis and the emerging concepts of betterment and post-disaster planni
phase, Serrao-Neumann et al. (2015) propose a typology of enablers to maximise
disaster risk reduction and climate change adaptation by planning systems.

As mentioned above, planning intervene climate risk management by the way to (1)
interests of different stakeholders in different spatial scale in policymaking proc
Crawford 2009; Bulkeley et al. 2009) , (2)reduce vulnerability and by building t
to climate by mainstreaming adaptation into spatial plans(Wilson 2006; Leary et al
2009; Brown 2011; Kumar & Geneletti 2015). Being possessed of these character
important aspects for climate change adaptation. Through surveying the terms used
and adaptation, common characteristics link spatial planning with climate change adaptation (see Table 1).

Table 1 Key terms show the common characteristics linking spatial planning with climate chang

| Terms used in Concerned | Spatial planning | Climate change adaptation |
|---|---|---|
| Time scale | Present to 20 years normally | Present to future (20 years) |
| Spatial concern | Building site to inter-national | Building site to international |
| Disaster preparedness | Precautionary principle | Hazard-risk approach |
| Coordinative governance | Horizontal and vertical coordination | Multilevel governance |
| Benefitted system | Society, economics, environment | Society, economics, environment |
| Institutional problem | High-related | High-related |

2.3 Operational definition

### 2.3.1 Clarifying adaptation planning and planning for adaptation

Aadaptation planning and planning for adaptation are defined as with diffe procedures, and objectives. Adaptation planning comprises a whole process to unde manage for climate change impact (see Figure 2). Planning for adaptation is like puzzle of adaptation planning . However, planning for adaptation shares comm adaptation planning , but also exerts its own instruments, tools, methods, and provided depending on the different planning system and practicing purpose.

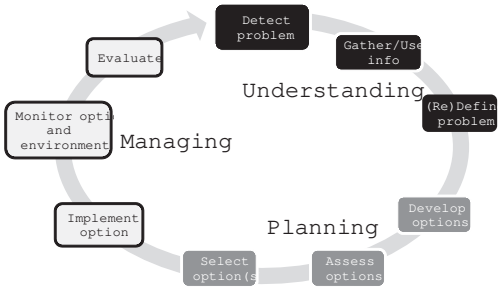


Figure 2 Phase throughout the process of climate adaptation planning (source: Moser &

This study focused on planned adaptation with the approach of risk management. Adaptation strategy is meant shared strategic vision and established priority outcomes through unambiguo with the overarching objective of reducing the vulnerability across sectors or f sectors or locality(qtd. in Biesbroek et al. 2010: 441). Planning for adaptation r risk at all spatial scale by spatial development and increasing the flexibility o system with multilevel governance. Spatial planning system in this paper denotes the actors in multi-level governance and the action related spatial development other. It is involved in the scope and scale of adaptation to climate change (see F

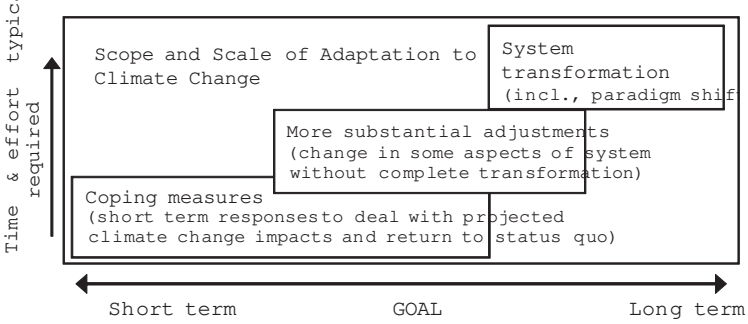


Figure 3 Scope and scale of adaptation to climate change (source: Moser & Ekstrom

### 2.4 Study context

Taiwan is very sensitive to the changing climate and is a high-risk natural di followed by severe floods and slope disasters is one of the major natural hazard death and economic losses, which might be up to US$ 2 billion for a single typh research on the simulation of the impact of future climate change on Taiwan (Lu e concerns of climate change include sea-level rise, extreme weather events, prec temperature. The magnitude and frequency of disasters associated with extreme events have increased in recent years.

About 70% of the population lives in areas that occupy less than 20% of the total The interaction between its natural-social condition and climate changes exacerb

water soil compound disasters caused by extreme weather and land development, water resulting from uneven rainfall and increasing water demands, coastal changes cause sea level rise, and increasing storm surges (see Table 2). The spatial distributi includes river basins (water-soil-bridge-road compound disasters), urban areas vulnerable and environmentally sensitive), and coastal and land subsidence areas disasters).

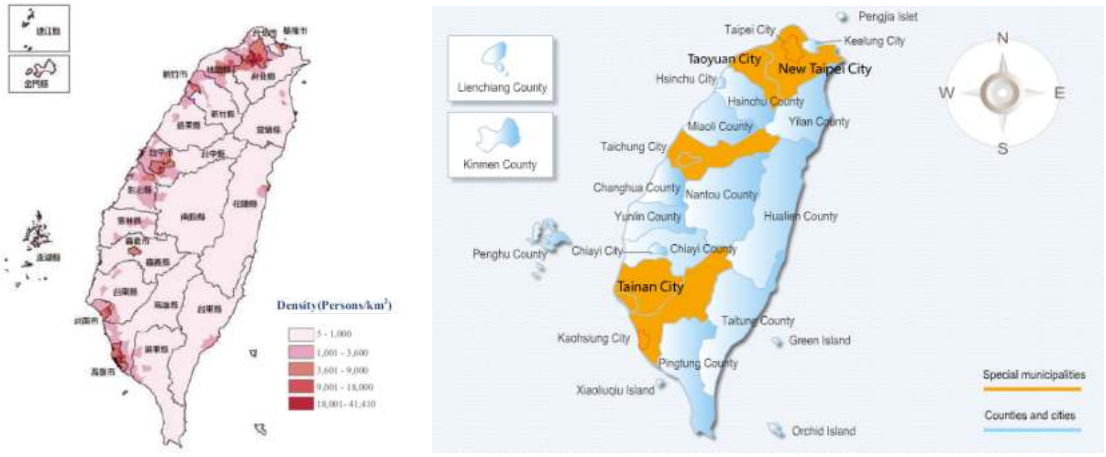


Figure 4 Population density and local jurisdictional territories

Table 2 Main disasters caused by climate and environmental change

| Factors of climate and environmental change | Impacts on floods | Impacts on slopeland disasters | Impacts on compound disasters |
|---|---|---|---|
| Increase in extreme precipitation intensity | Intense precipitation exceeding the carrying capacity of regional drainage systems or dike protection standards will increase flood risk. | Increasing precipitation intensity will raise the risk of slope disasters, which affects the safety of mountainous routes, communities, tourism industries, and minorities without resources to manage disasters. | The effects of compound sediment and flood disasters will increase, affecting government emergency response planning and long-term disaster prevention or reduction policies.<br>Aspects affected include the following:<br>Disaster prevention and emergency response capabilities in high-risk disaster areas;<br>Safety of infrastructure (such as reservoirs, bridges, dikes, and electricity towers);<br>Stability of water quality, reservoir operations, and droughts;<br>River channel erosion, sediment transport, riverbed deposition, and repeated disasters; and<br>Driftwood and landslide dam problems. |
| Increase in frequency of intense typhoons | Successive large-scale disasters will affect the emergency response and recovery capabilities of disaster prevention systems. | The increase in typhoons will cause more recovery and reconstruction problems for slopeland disasters than flood disasters. Successive disasters will increase the risk of repeated disasters and threaten the emergency response and recovery capabilities of disaster prevention systems. | |
| Uneven distribution of precipitation in wet and dry seasons | Uneven precipitation will affect reservoir storage capacity, water quality stability, reservoir operation safety, and downstream flood risks. | Uneven distribution of precipitation will affect soil water retention capacity, which threatens the sustainability and safety of the soil and water environment. | |
| Sea level rise and land subsidence | Sea level rise will make flood discharge more difficult when heavy precipitation events occur, increasing flood risk in low-lying coastal and land subsidence areas. | | |
| Environmental impacts of frequent earthquakes and devastating disasters (such as Morakot) | Increased environmental vulnerability after disasters and the recovery and reconstruction of public construction will increase the probability and risk of subsequent disasters occurring. | | |

(source: Lu et al. 2011)

## 2.5 The transition of Taiwan s planning system in climate policy context

Following the international trend of responding to climate change, the national started by setting up a cross-sectoral task force namely Working Group of Global E in 1992. This group then has been promoted as National Council for Sustainable Executive Yuan in 1997, which are composed of academics, governmental dec representative of NPOs and NGOs. Most of the policies and strategies associated change for the country were integrated and reviewed by the council. By the 199 environmentally sensitive areas and the delineation of protected areas triggered a spatial planning via a perceived need to incorporate resource conservation(Kuo & planning has been expected to play an important role in resource conservation by th of natural disasters at the beginning of the twenty-first century also led the governme emphasis on national land conservation and restoration.

After the 921 Earthquake in 1999, the already vulnerability of much of central T more fragile. Every typhoon or extreme precipitation event would cause large-scale disasters. Besides being beset by natural constraints, illegal logging and land sensitive areas generally worsened the already bleak state of the natural environm of flood prevention works had increased steadily and the safety of many of the communities was under threat. The central government therefore drafted bills and p existing national land conservation policies. The core principle is the hazards were overdevelopment. Attention therefore shifted from using engineering methods to pre limiting human activity and development in mountain areas, especially in those vu Huang 2010).

The first governmental policy action related with the term climate change adaptati plan of river basin management initiated by water management sector in 2006 for s as well as subsidence in south-western coastal area. Structural and institutiona firstly integrated into flood prevention work by central governmental as an integ climate variability issue.

In 2009, Typhoon Morakot brought high flood discharge, long duration rainfall that hours with max 1623 mm daily rainfall and caused 623 deaths. It triggered the natio develop national climate adaptation policy guidelines as a form of intervention in agency, the Council of Economic Planning and Development (CEPD), is responsible f plans for national economic development, carrying out its advisory functions by w integrate the views of different government agencies, and facilitating decisi government. Following policy guidelines, adaptation action plans and programm management thinking across ministries were fragmentally integrated in 2011. The lo a clear and explicit guidance with the form of national statements from the centra of climate adaptation (Wilson and Piper, 2010). For promoting climate adaptation p top-down approach, the central planning authority assists two local governments of planning for local climate adaptation strategy (LCCAS) by commissioning the acade the representatives from the municipalities as well as to build up the standard op of initiating LCCAS (see Table 4).

Referring to the categorization of Biesbroek et al. (2010) article, key drivers national adaptation strategies in Taiwan have extreme weather events, examples fro

scientific research. Key facilitating factors are political will and active people
Over the past decade, the role of planning in national and local level has expande
mitigation to ensuring climate adaptation policy delivery.

## 3 Planning intervention for climate adaptation needs in Taiwan

This paper proposes a framework to evaluating how has Taiwan s planning system re
change adaption needs? Here, this study adopts the approach of disaster risk redu
through spatial plans initiated by multilevel governments. Through the framewor
existed planning and successful planning toward climate adaptation is identified.

### 3.1 Relationship between planning and adaptation needs

The academic literature using framework to analyze adaptation can be divided into
to analyzing purposes: the first is to provide a systematic analysis of what is and how
itself, the second is to explain adaptation policy or strategies, and the third
capacity of a system. For example, Moser & Luers (2008) propose a framework fo
adaptive capacity of specific resource managers prepare for climate risk with thr
awareness of climate-related risks, analytic capacity to translate such climate
specific planning and management activities, and the extent of actions taken to
illustrate the application of this framework in their work through preliminary
coastal managers where we identify limited awareness of climate-change related r
capacity, and significant constraints on the abilities of institutions and indi
actions. The other literature providing frameworks to elaborate adaptation planning are
et al. (1999), Gallop n (2006), Moser & Ekstrom (2010), and Kumar & Geneletti (2015

Venton & Trobe Sarah La (2008), Hurlimann & March (2012), and Serrao-Neumann et a
demonstrated that planning is widely acknowledged to have a potentially significa
climate change or namely disaster risk reduction. Davoudi (2013) addresses the ext
has influence in tackling climate change depends largely on how broadly it is defi
types of interventions, tools and resources are available to it.

For analysing the response of planning for climate adaptation, in line with the
multilevel planning agencies in Taiwan s case. Here, planning approaches to climate
with disaster risk reduction through two dimension/tools: strategic planning and
management as the following and Figure 5:

> Strategic planning and integration is a rational process to formulate fro
> strategy; to coordinate cross sector policies horizontally as well as to i
> of jurisdiction vertically. Adaptation measures are increasing and becomi
> within wider policy frameworks. Integration streamlines the adaptation
> decision-making process and embeds climate-sensitive thinking in existing a
> and organizations.
>
> Land use management is regarded as an effective tool for decreasing disast
> to climate varieties by the implementation in various laws, acts, regulatio
> can be categorized into four groups land use planning and zoning, buildi
> management and natural resource management (Lin & Chen 2010). In land u
> process, public participation will be involved to let stakeholders aware of

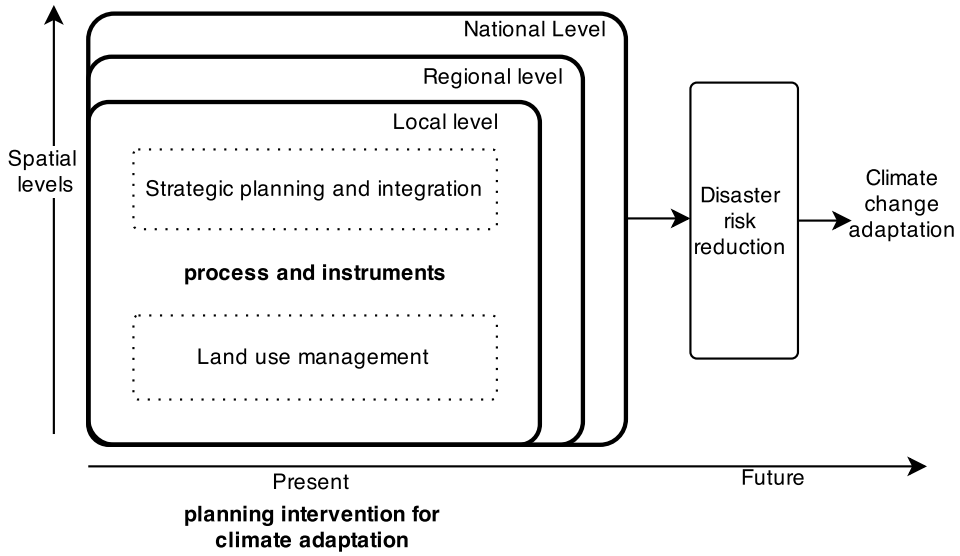


Figure 5 Planning intervention for climate adaptation in Taiwan

3.2 Explaining Taiwan s planning response and its relationship with other policy s

3.2.1 Briefing planning system composition and its transition characteristics

The administration of planning in Taiwan is in two tiers, central and local. The re
government is limited formally to the provision of legislation and the final app
urban and non-urban areas, which are all formulated by the Construction and Plan
Ministry of Interior (CPA). The special municipalities, counties and cities (w
authorities, also see the right map in Figure) are regarded as local government
drafting regional plans, urban plans of municipalities and special district plans

However, the territory of planning hierarchy is divided into three levels: nationa
the top is the National Land Comprehensive Development Plan that is a goal-orient
national spatial development and will be replaced by the future legislation of t
Planning Law. At the middle is the Regional Planning Law enacted in 1974 to contro
regulating the use of non-urban area (occupying more than two third of whole area of the
paralleled planning jurisdiction is National Park Law that is followed to the conse
Four regional plans designated by CPA are the reference of responsible for, but
function has not come into effect for some important weakness. At the bottom le
formulated in accordance with the Urban Planning Law (see Table 3.

In the 1960s, along with the urbanization brought on by rapid industrialization, s
its efforts to planning in urban areas. In the 1970s, to protect agricultural la
from skyrocketing in non-urban areas, separate laws were promulgated for urban
planning. A National Land Comprehensive Development Plan for the Taiwan Area in 1979 l
planning agency, CEPD (Council for Economic Planning and Development), was appro
1970s to establish a national land use plan designed to cope with the increasing s
problems. By the 1990s, with the then prevailing trends of sustainable development
analysis of environmentally sensitive areas and the delineation of protected area
approach to spatial planning via a perceived need to incorporate resource conser
frequency of natural disasters at the beginning of the twenty-first century also l
more emphasis on national land conservation and restoration(Kuo & Huang 2010).

Table 3 Two tiers of planning authorities taking charge of three levels of planning

| Planning territory | Policy plans & Laws | Statutory responsibility |
|---|---|---|
| National | National Comprehensive Development Plan (policy)<br>Regional Planning Law<br>National Park Law<br>Rules of Non-urban Area Land Use Control | National Development Council[1], the Executive Yuan<br>CPA (Ministry of the Interior) |
| Regional | Regional Planning Law<br>National Regional Plan (draft), Regional plans of Special Municipalities, counties and cities | Special Municipality, County and City governments |
| Local | Urban Planning Law (Master Plan and Detail Plan)<br>Rules of Non-urban Area Land Use Control | Special Municipality, County and City governments |

[1] NDC is the main policy-planning agency of the Executive Yuan, charged with the tasks of planning coordinating, reviewing and evaluating the nation s overall development. It coordinates the implementation policies for economic, social, industrial, manpower, land and political governance. CEPD merged other the NDC after organization restructuring of the Executive Yuan in 2014.

### 3.2.2 Strategic planning and coordination in multilevel governance as the planning climate adaptation

Multi-level governance is a conceptual framework, which is needed to capture the v tiers of actors. It originated from the effect of the formulation after EU polity c initiating spatial development policies. The development of planned climate ada government in Taiwan starts from the policy initiative in 2010 and trickling down and the control of development at the national and local levels across spatial sc funding is the way central government exert to trigger local response. In 2011, a Local Climate Change Adaptation Strategy (LCCAS) and two LCCAS pilot projects have by NDC to assist other local governments to promulgate LCCAS. In the planning projects, local and central officials, experts, and NGOs jointly organized a p adaptation options for one year. Till now, eighteen cities or counties completed t funding of NDC (see Table 4).

There are four official regional plans respectively covering the northern, middle parts of the island. Each plans is thick in description of past trends and the current si responsible for the regional plans and empowered to act as a regional planning au formal implementation mechanism to make these plan effect. Decisions regarding majo public projects have seldom referred to any of the four regional plans. Driven by the planning hierarchy and threat of climate impact, in 2010, CPA propose a policy dr Regional Plan which integrates the principle of climate risk management with the land use planning vulnerable coastal, mountain, and hot spot areas across administrative boundar regulation in non-urban to direct local governments to incorporate climate investment in their regional pl regional planning in particular. CPA commissioned a planning guidebook, emphasizin anticipatory adaptation, and subsidized those cities/counties with territory of non-urban lan their regional plan so as to bridge the future enforcing of the National Land Pla the objectives of adaptation strategies in the draft plan, planning intervention c categories: to reduce the sensitivity of the effected system occurs, to alter the c increase the resilience of social and ecological system, urban green management, river basin governance, reservation of agricultural land, etc.

The planned adaptation action in local level is trigger by national level, NDC, thr
in formulating the LCCAS for two pilot areas, Taipei City and in PingDong County
accumulated mitigation effort, the cooperating willingness of municipality, and the
Taipei City are the reasons to be selected as demonstration. In the process of dis
intervening local administration, Taipei city government reacted to the central c
cross-sector platform that integrates seven departments, research team, CEPD, NGO
Taipei City, and experts. Those adaptation options associated with planning instru
the regular responsibilities in various sectors and concerned mostly the climate
classified as institutional or non-structural adjustment e.g. land zoning and r
mainstreaming climate adaptation, water and watershed management, awareness, a
change.

Table 4 Climate adaptation planning process

| Year | Policy/ Governmental action (initiator) | Who are involved |
|---|---|---|
| 2010 | Set up a task force for formulating the Climate Change Adaptation Policy Framework (CEPD) | National government actors, academics, NGO/NPO representatives |
| 2011 | Publication of Taiwan Climate Change Scientific Report 2011 (National Science Council) | National government actors, academics, |
| 2011 | Development of two Local Climate Change Adaptation Strategies pilot projects (CEPD, Taipei City and PingDong County) | National government actors, academics, research teams |
| 2011 | Developing Planning Guideline of Local Climate Change Adaptation Strategies (CEPD) | National government actors, academics |
| 2012 | Promulgation of National Adaptation Strategy to Climate Change in Taiwan (NDC) | National government actors |
| 2012–2014 | Conducting subsidizing project to promoting local governments to establish their Climate Change Adaptation Action Plans (NDC) | National government actors, academics |
| 2013–2017 | Development and implementation of National Climate Change Adaptation Action Plan (in progress, NDC) | National and local government actors |

3.2.3 Land use management as the planning intervention for climate adaptation

Taiwan is and cannot avoid of experiencing frequent disastrous weather event e
rainfall, drought, and heat weaves. Frequent typhoons or heavy rains in one year,
in the mountains and floods on the plains, may be followed by drought the next yea
climate risk are river basins (water-soil-bridge-road compound disasters), urban a
(highly vulnerable to debris flow and environmentally sensitive), and southwe
subsidence and coastal erosion).

Adapting to part of these inevitable climate impacts with planning tools as adapta
implemented in various laws, acts, regulations and decrees, which can be categoriz
land use planning and zoning, disaster management and natural resource managemen
Urban Planning Law explicitly states that safety is one of the major concerns wh
central government announced a Disaster Response and Prevention Plan that calle
evacuation routs, open spaces for defensive purpose and refugee sites during th
process, These considerations were further incorporated into amended articles of
for the Periodic Comprehensive Review of Urban Plans, 2002, a subsidiary set of
Urban Planning Law(Lin & Chen 2010).

As for the regional spatial level, Regional Planning Law and Rules of Non-urban Ar
regulate Taiwan s non-urban areas. Although the boundaries of urban planning are
approved according to the Regional Planning Law, the compatibility of land uses be
and non-urban areas is seldom checked. The drafting of National Land Planning Law

for improving such compatibility. The current or proposed land use planning and already considered new requirements for hazard reduction. In addition, land use co in many natural resource management laws, such as the Tap Water Act, drinking w statutes, the Soil and Water Conservation Act, the Slope Land Conservation and Forest Law and the Environmental Impact Assessment Act. The administrative organ natural resource management laws belongs to different ministries with requesting r reduce hazard risk jointly. Land use management/panning for disaster risk reduc governance to make it. For achieving this, development projects smaller than ten reviewed and determined by local governments. Projects with larger areas must be Committee of Regional Planning of the Ministry of Interior. The review work will f project site but also its surrounding area, which may have intense environmenta project site. In practice, however, It takes time to check the completeness and acc developers provide. For a fast growing area many projects may be sent in for re becomes a pressure for the local governments to finish all the review process in a

## 4 Discussion

Assessing planning for climate adaptation has tended to lag behind mitigation effo in the climate negotiations. In part this is because adaptation and development s NGOs, and international agencies have found it difficult to clearly define and constitutes adaptation, how to track its implementation and effectiveness, and how effective development (Burton et al., 2002; Arnell, 2009; Doria et al., 2009). regarded as important approach to climate adaptation, in Taiwan s case it faces son adaptation. Adger et al. (2005) argue an action that is successful for one organizati governmental agency level may not be classed as successful by another. Success t scale of implementation and the criteria used to evaluate it at each scale. They e evaluative criteria for judging the success of adaptations at different scales in t development pathways into an uncertain future. These elements: effectiveness, ef legitimacy, reflect these principles embedded in adaptation decision-making, s trade-offs, and win-win strategy, are used to examine adaptation actions of Taiw planning institution, this paper discusses the barriers of the planning interven dimensions: governance dimension and land-use regulation dimension.

### 4.1 Governance barrier to planning for adaptation

The term governance refers to the sum of the many ways individuals and institutions manage their common affairs. It is a continuing process through which conflicting c be accommodated and co-operative action may be taken and includes formal (e.g. lega well as informal arrangements (e.g. social norms). A key role that institutions and facilitating adaptation is through legal and regulatory responsibilities and author

Bulkeley and Kern (2006) discern four governing modes for local authorities climat self-governing, governing through enabling, governing by provision, and governing b matter through which governing mode, as city governments devise to initiate LCCAS, formalize and institutionalize their work in order to facilitate implementation and legitimacy, coordination, and support for such policies across departments. One asp the establishment of dedicated climate units, either within a relevant department o crosscutting office. In Taiwan s case, the environmental department of Taipei city charge of the coordination of the Panel on LCCAS, since linking the adaptation with

In Taiwan, the way of the planning authorities at national level influence other land use control and coordination at the same level and intervene in the governa top-down mode. The mechanism reflects the tradition of centralized planning syste of the instruments of spatial planning in policymaking. The central government dominate the spatial development by framing national policy and direct public inve of institutions, the actors in national and local governments are borrowing what th domain or experimenting with different approaches to planning for identifying the climate governance. The interaction of actors at multilevel pushes the climate appeared in the planning process of LCCAS driven by the national government. Th private sectors or stakeholders follows the procedures of traditional land use involvement is still on the stage of information awareness. But some local goverr join international alliance to learn best practice from other cities.

There is no regional planning authority between national and local level to integ The task of developing the National Land Planning Law handed down from the Executiv drafting a new NLPL implies the merger of urban and rural planning, but it has a considering that national land use planning must call for coordination and negotiat is far beyond the capacity of the CPA alone(Hua 2010). Besides, the CPA, which is planning at national level, it only has the land regulation and reviewing power. and organizational level, it is regarded as regulating land use but doesn t have t coordinate department plans or without the capacity to affect the policy of other struggle between the expectation of its role and real public administration.

### 4.2 Land-use regulation & other barriers to planning for adaptation

Laws, regulations, and planning measures such as protected areas, building code adaptation measures that can improve the safety of hazard-prone communities by des support resilience. While zoning can be used to procure sites for low-income pop 2014). However, the framework for spatial development in Taiwan has already been d applying rigidly earlier zoning plans. This lack of flexibility and incentive f difficult to adjust when current comprehensive reviews of resource conservation ar growing emphasis on mainstreaming adaptation strategies, spatial planning measures domain to reduce climate impacts are often not linked to the impacts of these mea policy domain(Biesbroek et al. 2009). The phenomenon is also observed in t implementation of policy formulation in national government. In adaptation poli consistent in strategies and actions while it is divided into different sectors, ir point of view to integrate policies of different sectors for concerning the conv distribution.

According to the empirical case in Taiwan, the national policy planning and spatia adaptation action by the way of policy guiding and funding for initiating adapta governments aware the climate risk and the importance to adapt, but has often n process of implementation of adaptation options. The reason for the gap between can be summarized as: (1) adaptation is not viewed as the mainstream of responsibi (2) adaptation is regarded as high importance, but low priority in local and natio for thinking it as an isolated task.

## 5 Conclusion

Adapting to the climate impacts is a significant challenge at all relevant admi spatial scales (Adger et al. 2005; Urwin & Jordan 2008). Flexibility and integratio

characteristics of climate adaptation that emerge from the process of institution
respective political system where planning can contribute as well as is embedded wi

The adaptation literature and this case study provide evidence that institutional
the process of planning for climate risk. Planning institution can also either ena
scale of adaptation to climate change. These barriers or enablers of planning for
countries addressed in IPCC AR5 as well as in this case study are: (1) multilevel
between different political and administrative levels; (2) key actors, advocates,
mainstreaming, and sustaining momentum for climate adaptation; (3) horizontal inter
actors, and policies operating at similar administrative levels; (4) political d
implementation; and (5) coordination between formal governmental, administrative a
sectors and stakeholders to increase efficiency, representation, and support
measures ((Noble et al. 2014). In Taiwan s case, institutional challenges as prepa
from the existed planning jurisdiction and governing modes.

This paper concludes with the barriers facing the planning system and with how to t
of spatial planning to respond with institutional complexity and uncertainty in
adaptation trend. Faced with the gap of planning instruments/process toward climat
different spatial levels, institutional, or jurisdictional dimensions based on this
research about planning for adaptation in short term as well as for long term
multilevel governments increase adaptive capacity to respond to the trend of
challenging the planner to rethink his role in the policy making process. (2)
principles can be mainstreamed into local government plan as well as daily res
cost-benefit, no-regret, low-regret, win-win strategy, learning by doing, and keeping
planning for adaptation, considering to offer development benefits in the relative
reductions of vulnerabilities in the longer term, that can strengthen the role of p
tool.

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# SEARCHING FOR SPATIAL SUSTAINABILITY: ONE GOAL, MULTIPLE PATHS

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## Abstract

Sustainability has been a prominent goal in environmental planning over t
*especially in rural regions. Planning scholars and practitioners have contributed to this trend by proposing, developing and implementing frameworks for spatial development that aim to facilitate human economic and social development, while mitigating or even reversing the environmental damage associated to development. A broad diversity of frameworks has been developed, and they have both unique and overlapping features.*

*This work explores the myriad ways in which planners understand sustainability and how they implement it at various spatial scales. Drawing from the theoretical and professional literature and from case studies around the world, we develop a classification system for spatial sustainability frameworks based on three scales of aggregation: typologies (the most general category), models and individual case studies. We develop five axes that define the prominent differences in* characteristics of spatial sustainability framework typologies. These are: *bottom-*up axis, defining who initiates and maintains the initiative; 2) the economic axis, defining the disciplinary approach that *determines relative importan* various priorities; 3) the subject-*specific* holistic axis, defining the fo *initiative;* 4) the local regional axis, defining the spatial scale of the initi *open space orientation.*

*We suggest that the axes of comparison can assist communities to define and implement their spatial planning goals, while addressing diverse and sometimes competing interests, and conclude by discussing implications for planners. In particular, sustainability planning can be tailored according to the particularities of the socio-ecological system.*

## 1. Introduction

For the past half century, one of the prominent trends in global environmental planning and policy has been the quest for sustainability at the local, regional and global scales. It has been widely posited that exponentially growing populations, rapid loss of open spaces, habitat fragmentation and destruction, sprawling human settlement and associated infrastructures all pose growing social, economic and ecological challenges that threaten the long-term wellbeing of human society. Growing recognition of these challenges culminated in such events in the 1980s and 1990s as the publication of the Bruntdland Report and the Stockholm Earth Summit (Conca and Dabelko, 1998). Simultaneously, local communities began experimenting with policy and planning to realize

comprehensive sustainability principles and goals. Planning scholars and practitioners joined the global effort to address these societal challenges proposing, developing and implementing frameworks for spatial development that strive to achieve sustainability development can continue, while the environmental damage is mitigated and even reversed (Jabareen, 2006). Multiple and diverse frameworks have been developed with both unique and overlapping features.

In this paper, we explore the diverse ways in which communities, policy makers and land use managers understand sustainability and how they implement sustainability at the regional sca With such a broad diversity of understanding, interpretation and implementation, we are also interested in finding commonalities between sundry approaches. We review, characterize and categorize a broad range of frameworks for sustainable regional spatial planning. We begin with a literature review of documents pertaining to regional sustainable development from the past decade. We characterize sustainability frameworks using common themes across planning frameworks. Next, we identify the critical differences between the frameworks, and define the underlying values and disciplinary biases that influence each model and define their differences. We conclude by offering lessons for planners and communities embarking on sustainability initiatives at the regional scale.

***What is sustainability in the regional development literature?***

Sustainable development has been a common, though oft maligned, development catchphrase since popularized by the Bruntland Report ( Our Common Future ; World Commission on Environment and Development, 1987), which defined the term as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Inherent in the definition is the assumption that the earth s capac resources and to absorb waste is limited (Meadows et al., 1972). The combined pressures of increased human population growth and material consumption are considered unsustainable in that they lower the resilience of the planet and its ability to provide resources and absorb waste, thus threatening future generations. Rising from these assumptions, the first definitions and applications of sustainable development were focused on environmental issues, such as sustainable resource use.

While the report and the definition itself have been criticized from multiple perspectives (Wall, 1997; Miller, 2014), the term and the idea it represents have not only endured, but they have promulgated into every discipline and profession that deals with environment, resources and land use. The concept definition has been refined and various frameworks for assessing and monitoring sustainability have been proposed, most focusing on three aspects (or pillars) of human development: social, economic and environmental. The underlying assumption is that only if all three realms of human wellbeing are addressed can true sustainability be achieved. So, while sustainable resource use was and remains a common starting point for sustainability initiatives, the emphasis has shifted from purely environmental reasons to communities that rely on the resource for their social, cultural and economic well-being (Kearney et al., 2007). Weaver (2005) recounts that early definitions of sustainability (with regard to ecotourism) were particularly environment-focused, but this was superseded by the inclusion of social, cultural and economic sustainability considerations.

The literature on sustainable regional development analyzes and advocates the application of the concept via land use planning at the regional scale. Most of this work recognizes the three pillars of sustainability (Wiber et al., 2004; Weaver, 2005; Kearney et al., 2007; Donald, 2008; Wheeler,

2009; Schädler et al., 2011; Reyer et al., 2012), which have also been canonized in government policy documents such as Agenda 21 (United Nations, 1992; Council of the European Union, 2006; Organization for Economic Cooperation and Development, 2006). This three pillars definition has been challenged by some, such as Miller (2014), who suggests that such categorization locks the users into a limited discourse of compromise between the three components. He suggests replacing the paradigmatic definition with a pursuit of quality of life and sustainable livelihoods suggested by others, e.g. Stoll-Kleemann and O'Riordan, 2002; Horlings and Padt, 2013). Wall (1997) simultaneously touts the potentially beneficial definitions and goals of sustainable development while dismissing it alternatively as a political slogan or an imprecise catch phrase (which may also act as a catalyst for community discussion).

Table 1 summarizes the definitions of sustainable development applied in various works on the topic over the past decade.

| Source | Research focus | Definition of sustainable development |
|---|---|---|
| Wiber et al., 2004 | Community-based fishery management | Referred to in **ecological and economic** terms; **sustainable livelihoods** . |
| Weaver, 2005 | Ecotourism | Contentious term, impossibility of knowing that a partic course of action is indeed sustainable This owes to the **subjectivity and malleability** of this [concept], wherein there is no consensus as to what exactly should be sustained. Sug a continuum of criteria for sustainability from status qu enhancement of the local environment. |
| Donald, 2008 | Food systems | reducing a region s **ecological footprint**, addressing issues of **hunger**, and providing **more local jobs**; thus ultimately moving toward a more sustainable region in keeping with the **three classic pillars** of sustainabilit |
| Fitzsimons and Wescott, 2008 | Multi-tenure reserve networks | Noted primarily in terms of **natural resource use** and **ecological** sustainability |
| Kearney et al., 2008 | Participatory governance | Reference to the **three components**, but which cannot exist without **community wellbeing**; Emphasis should thus lie in maintaining or enhancing the **economic and sociocultural well-being, overall cohesiveness, and long-term health of the relevant human systems** |
| Wheeler, 2009 | Sustainability challenges posed by megaregions | **long-term** time horizon **holistic** approaches between goals (**environment, economy and equity**) the concept of **limits** the importance of local and r **sense** of place |
| Hirschi, 2010 | Network governance | integrating rural **economic development** objectives and **environmental and landscape protection** goals |
| Loible and Walz, 2010 | Participatory processes in planning | strategies should promote **economic and social progress** while **preserving the environment** that should not be seen just as a resource and service provider but rather as a treasure of biodiversity and beaut |
| Schädler et al., 2011 | Brownfield development | **reduction of land consumption and urban sprawl** |
| Reyer et al., 2012 | Regional adaptation strategies in the face of global climate change | **ecological and (dependent) social systems** shift to new operating points without dramatically and abruptly changing functionality and characteristics |
| Horlings and Padt, 2013 | Rural Areas | a **normative concept** referring to the responsibility to make short term decisions from a lon term perspective takin the |

| | | |
|---|---|---|
| | | effects on **future generations and a range of geographical scales** into account, and applies no longer only to **pollution control, the availability of natural resources and protecting species and their ecosystems**, but also to **human and social development, including human rights, good governance and solidarity. Qualities of life .** |
| Miller, 2014 | Reframing the term sustainable development | **a conflicted encounter between economy, society and environment.** Suggests an alternative framework, quality of life |

Table 1: Definitions of sustainability and sustainable development

In this work, we review the research on and application of sustainable regional development . Our research goal was triggered by a local non-governmental land-holding organization (NGO), whose staff desired to initiate a comprehensive regional sustainability initiative with local communities. The organization s interest was prompted by an ecological study of their conclusions that long-term survival of multiple species on the site could not be assured through management of the site alone. Rather, species survival was dependent on connectivity between the site and other habitats in the region and therefore, dependent on regional development. While the concept of biospheres has been adopted in Israel as one prominent model of regional sustainable development, the organization wanted to answer the following questions: 1) What models exist for regional sustainability initiatives? 2) What is the most suitable model for the NGO to adopt for the region, and 3) What would be the most productive role the NGO can play vis-à-vis setting the agenda and facilitating the process of a sustainability initiative? Our effort to answer these questions expanded into the current research, which consists of a comprehensive review, categorization and analysis of regional sustainable development initiatives.

## 2. Research Methods

The first stage of research relied on a literature and internet search for generalized concepts such as sustainable regional development and sustainable spatial planning. We reviewed the available literature (primary and grey) and analyzed the data in order to identify prominent themes that ran throughout the work. We then supplemented the initial with additional information on recurring themes from the literature, including terms such as ecotourism, sustainable agricultural landscapes, sustainable urbanism and landscape urbanism and others.

After reviewing the collected work, we developed a classification system based on four typologies of sustainability initiatives based on focal object of management, philosophical approach, disciplinary approach or other commonalities (Jabareen, 2006). Our typologies are 1) natural resource and ecology based initiatives, 2) urbanism initiatives, 3) issue-based initiatives, and 4) governance, participation and science-based approaches to sustainability. Particular models exemplify how the typologies are implemented on the ground. Models have specific managerial, planning or policy guidelines. For each typology and their associated models and case studies, we analyzed the following characteristics:

- Scope: At what spatial scale does the approach apply? National, regional and/or local? Who is involved?
- Fields of action and activities: Is the approach holistic or does it focus on a particular topic, resource or environmental characteristic? What specific actions characterize the approach?

- Successes and challenges: What has been the experience of implementation of the approach and what have been the challenges in meeting stated goals?

Finally, we present a set of thematic axes by which to understand each typology and associated models. We emphasize that no single sustainability initiative falls neatly into a single typology. To the contrary, we found common themes running through most of the reviewed papers. The typological classifications are meant to highlight themes and their relative dominance within particular initiatives. Along with the thematic axes, they are meant to assist the reader in defining the strengths and weaknesses of their own initiative and to tailor initiative in their own region.

## 3. Case studies of sustainability: Typologies and models

We identified four typologies for regional sustainability initiatives. We present each of the typologies with models that fall within each typology. For each model, we summarize salient details regarding scope, field(s) of action and activities, and successes and challenges.

***Typology one: Natural resource and ecology based initiatives***

The underlying primary foci of typology one initiatives are the natural resources and ecological integrity of a region and their core motivating goal is to protect biodiversity or prevent ecological degradation. Some are holistic on their approach, adopting region-wide sustainable land use planning that considers natural resources, biodiversity and ecosystem services (Fürst et al., 2013), and others focus on sustainable use of a focal resource. A prominent objective is landscape connectivity to assure viable habitats for a particular species or set of species (Fitzsimons and Wescott, 2008; Fitzsimons et al., 2013). Due to growing evidence that ecological conservation cannot succeed in the absence of human wellbeing (Dietz et al., 2003; Adams and Hutton, 2007), local community/stakeholder integration plays an increasingly prominent role in natural resource and ecology based initiatives. Nonetheless, sustainability is primarily indicated by ecological factors.

The typology is divided into two sub-categories, including multi-tenure reserve networks and community-based natural systems management. Multi-tenure reserve networks are areas of land owned and/or managed by diverse stakeholders that, for reasons of ecological integrity and desire to connect habitats, are integrated into a coordinated management regime (Fitzsimons and Wescott, 2008; Fitzsimons et al., 2013). A primary goal of multi-tenure reserve networks are protection of biodiversity. Models include biosphere reserves, biolink zones, wildlife corridors, conservation management networks, and ecoregions (Fitzsimons et al., 2013). Most of the models classified as multi-tenure reserve networks also have evolved to incorporate community-based management, as with biosphere reserves (Stoll-Kleemann and Welp, 2008).

Community-based management, a popular form of participatory governance for natural resource management (Kearney et al., 2007), is designed to address both ecological and socioeconomic goals by balancing exploitation of a natural resource with its long-term conservation. While it is generally focused on a particular natural resource, it internalizes the axiom that sustainable resource use should be determined by the communities that are dependent on the resources. The mechanism for initiating sustainability is through participatory governance. It addresses issues related to the access and control over commons resources by local and nonlocal actors based on the assumption that communities connected to natural resources are most likely to foster sustainable use. As such, it advocates devolution of decision-making power and authority to communities and community-

based organizations (Kellert et al., 2000; Wiber et al., 2004). Models for community-based management include social and community forestry, community wildlife management, buffer zone management and others (Kellert et al., 2000).

*Scope:* Multi-tenure reserve approaches are large scale, coinciding with habitats and their connectivity over the range of a species (Fitzsimons et al., 2013). Community-based management operates at scales according to the resource or biodiversity in question.

*Fields of action and activities:* Implementation of the approaches involves definition of the target species, resource or habitat, scientific research to define conservation needs, and then an identification of stakeholders. These can be forests, marine and wetland resources, grazing lands and fisheries, nature reserves and cultivated areas. Planning and management objectives include the devolution of authority, implementation of adaptive leadership, and encouragement of participatory governance. Initiatives encourage development of a scientific knowledge-base, strengthened communication and information dissemination, ecological/environmental monitoring, formation of learning communities, and clearly defining land rights. Partners include local communities, governmental agencies, non-governmental organizations, and experts in variety of disciplines.

*Successes and Challenges*: Success can be measured by the conservation status of the habitat, species or resource in question, or in terms of process (e.g. creation of multi-level community dialogues or engaged communities). Concrete objectives include revenues from resources, effective long term resource management and restoration of degraded ecosystems. Governance, leadership, and social and economic networks are all cited as elements of successful implementation.

Some challenges in implementing this approach are directly related to the size of the area and the wide variety of stakeholders within. This demands a high degree of coordination between stakeholders and governance structures (Fitzsimons et al., 2013), and initiators cite lack of trust between local communities, scientists and policy makers. Pre-existing conflicts between stakeholders that are left unresolved may demand attention and arbitration. Other challenges include failure to stimulate interest within local communities, failure to adopt truly participatory approach, lack of harmonization and coordination in actions of various partners and lack of enforcement of policies (Kellert et al., 2000; Stoll-Kleemann and O'Riordan, 2002). Lack of funding is also a common impediment to successful implementation and maintenance of the initiative (Kearney et al., 2007; Stoll-Kleemann and Welp, 2008; Fitzsimons et al., 2013). While the devolution of decision-making authority is encouraged, it also should be implemented with caution, as local communities may not have the social networks and governance structures needed to make, implement and enforce decisions (Wiber et al., 2004). This emphasizes the need and responsibility of government authorities to develop and foster the capacity of local communities to take an active role in decision making (Stoll-Kleemann and Welp, 2008).

***Typology two: Urbanism***

While urban areas are often touted as both inevitable and the prototype for settlement patterns in an increasingly populated world, they are also viewed as particularly challenging for sustainability (Wheeler, 2009). Many sustainability frameworks for urban regions have been developed to address environmental and socio-economic challenges (Jabareen, 2006). In contrast to the previous typology, urbanism typologies focus on the environmental and social aspects of urban development, with ecology taking a relatively minor role until recently.

The typology is divided into three sub-categories: new urbanism, landscape urbanism, and eco-urbanism. New Urbanists advocate design-based strategies based on traditional urban form goals of addressing suburban sprawl and inner-city decline (Bohl, 2000). Objectives, according to the Charter of the New Urbanism, include restoration of urban centers and town within coherent metropolitan regions, the reconfiguration of sprawling suburbs into communities of real neighborhoods and diverse districts, conservation of natural environments and the preservation of our built legacy (Congress for the New Urbanism, 2001). Within the New Urbanism sub-category there are several models that include neo-traditional town planning, the pedestrian pocket, transit-oriented development, Quartiers approach, and smart growth.

The second sub-category is Landscape Urbanism. Its main focus is organizing cities through the design of their landscape, rather than organizing them through their buildings. The concept offers a framework in which to consider complex urban conditions and the reciprocal implications of the city in the landscape (Mostafavi and Najle, 2003) and a sense that landscape can be used as a model and basis for urban initiatives, and a lens through which to examine cities (Grey, 2011). Models for landscape urbanism include the Machinic Landscape (Mostafavi and Najle, 2003), the field operations (Corner, 1999), infrastructural urbanism, Mat urbanism, and the Foreign Office Architect s phylogenesis.

The third subcategory is Ecological Urbanism, which is a successor and critique of landscape urbanism. It argues for a more holistic approach to design and management of cities, drawing lessons from ecology. Curiously, just as ecological typologies were becoming increasing human-centered, urbanism as witnessed by the development of ecological urbanism was becoming more ecologically centered. Ecological urbanism calls for city planning that is both multi-scalar and multi-disciplinary and proscribes that design exploit ecological knowledge to produce environmentally sustainable urbanism (Mostafavi and Doherty, 2010). Influenced by new ecological paradigms of dynamic and unpredictable nature and ecosystems theory (Pulliam and Johnson, 2002), Ecological Urbanists suggest that the modern challenge of landscape planning is leading the sciences, humanities, and design culture toward a more rigorous, robust and relevant engagement across the domains of ecology and design (Reed and Lister, 2014).

*Scope:* New urbanism is applied at various scales from the individual building to entire cities and regions. In the regional context, new urbanism considers a diversity of urban settings, from village, town, districts, and neighborhoods to cities and regions, and include their surrounding landscape (Bohl, 2000), which can range from local to regional scale. Since ecological urbanism aims to wed the theory and practice of city design and planning with the insights of ecology, it focuses on multiple scales from local to regional, often corresponding to ecological scales. The implementation of new urbanist, landscape urbanist and ecological urbanist initiatives depend on collaboration with and between government agencies at multiple levels, designers, urban planners, architects, private clients and local residents representatives. Ecological urbanism also incorporates the expertise ecologists and other natural scientists and land use managers.

*Fields of action and activities:* New urbanism acts mainly in the field of architecture and planning at multiple scales. Some of its activities include crafting flexible zoning standards, developing public parks and gathering spaces, promoting historic preservation, designing pedestrian and bicycle friendly neighborhoods, retrofitting of public housing projects, brownfield redevelopment and urban infill projects, transit-oriented development, and advocacy. Landscape urbanism incorporates expansive green space with urban areas, and designs spaces for infrastructure, water management, biodiversity, and human social and economic activities. Ecological urbanism acts in

the field of urban design and planning emphasizing reduction of urban footprints, design and planning for urban and local food production, developing productive urban environments and local energy sources, regulation of climate, disease, flood and drought and support for nutrient cycles and habitat for native plant and animal species.

*Successes and Challenges*: Advocates suggest success for these initiatives in influencing urban development. New urbanism-influenced initiatives have resulted in denser neighborhoods with improved internal connectivity and increased walkability. Landscape urbanism notes success due to its influence on raising environmental awareness and changing planning paradigms, with increased consideration of landscape integration. However, these approaches also face diverse challenges and criticism. New urbanism is often perceived as riskier than typical urban planning, due to its multiple-use goals and its strategies are sometimes viewed as exclusionary (e.g. a product of NIMBY). Both landscape and ecological urbanism raise issues regarding the question of the human presence in nature. In addition, urbanist initiatives are criticized as being based on loosely defined concepts and relying on ostentatious projects to promote the concept. Other critics challenge whether the typologies represent an honest integration of landscape architecture with principles of urban ecology.

***Typology three: Issue-based initiatives***

The general assumption of issue-based approaches is that by realizing sustainability in a given economic or social sphere, the impact will have impact on sustainability in all spheres. Donald (2008) emphasizes the potential, for example, of sustainability changes within food systems to have much wider ramifications of social, economic and ecological sustainability. Other initiatives focus on an economic or cultural mainstay of the region, for example salmon in the case of the Salmon River Watershed Roundtable in British Columbia (Day and Cantwell, 1998). The sub-categories of issue-based initiatives include ecotourism, eco-agriculture, and food-systems approach.

Agriculture and tourism are two prominent foci for issue-based sustainability initiatives at the regional scale. For many rural regions, agriculture and nature and landscape-based tourism are cornerstones of the local economy (Loibl and Walz, 2010). Both are considered to be ineluctably tied to environmental quality. Ecotourism is tourism that focuses on a component of nature and which should satisfy ecological, economic and socio-cultural sustainability (Wall, 1997; Weaver and Lawton, 2007) and encourage active learning provide transformative experiences (Weaver, 2005; Weaver and Lawton, 2007). Community empowerment has become a prominent feature in ecotourism initiatives (Weaver, 2005).

Donald (2008) advocates placing food systems at the center of regional sustainability issues: "Sustainable food production aims to involve nature's goods and services bet process, while at the same time minimizing the use of non-renewable inputs. In recent years, th focus has shifted from sustainable food production to a sustainable food syste beyond the farm to include the rest of the food chain, from organic fertilizers, fuel, food processors, food markets, eaters and waste management, as well as all the associated regulatory institutions and activities" (Donald, 2008, p.1253). He justifies the focus on food systems as a catalyst towards broader sustainability due to its impact and dependence on ecological, social and political systems.

*Scope:* As noted above, the scope of issue-based initiatives is consistent with the selected issue and can be local or regional depending on the issue and the goals of the initiator. For instance, an

agricultural initiative can occur at the site scale or can be part of a comprehensive regional (or national) policy. Salmon-based initiatives are by definition, conducted at the scale of the watershed.

*Fields of action and activities:* Fields of action are determined by the scope of the initiate and the particular issue in question.

*Successes and Challenges*: Donald (2008) suggests that success is measured by community collaboration. According to Weaver and Lawton (2007), ecotourism research suggests that it was unclear as to whether ecotourism in general was meeting ecological or economic goals. Wall (1997) is significantly more critical, drawing a sharp distinction between sustainable tourism (implying a holistic improvement in both human and environmental conditions) and ecotourism (an instigator of often unwanted change at the tourism destination). Rather, he prefers to consider tourism within the broader rubric of sustainable development.

***Typology four: Governance, participation and science-based approaches***

Agenda 21 states forthright that public participation in decision making is a prerequisite for realizing sustainable development (UNCD, 1992). The common feature of typology four is the underlying assumption that political and planning processes are the most crucial ingredient in the production of sustainable outcome. Various forms of community engagement have become cornerstones of sustainable planning and management in diverse fields of planning, landscape design, natural resource management, and environmental policy, and recent research suggests that new and innovative forms of community-based leadership are developing to meet sustainability challenges at the regional scale (Wiber et al., 2004; Horlings and Padt, 2013). Thus, much of the literature focuses either on systems of governance to maximize participation of relevant stakeholders or on the process of stakeholder integration into planning processes (Kearney et al., 2007; Loibl and Walz, 2010; Fitzsimons et al., 2013). This component of sustainability is considered so central that much of the literature treats participatory processes and governance as an indicator of sustainability in and of itself.

The literature on governance and participation in sustainability initiatives is diverse, but some examples can serve to illustrate the diversity. Loibl and Walz (2010) recount a science-informed stakeholder deliberation process in the Austrian Alps, where stakeholders were prompted to discussion with lectures about climate change and local socio-economic trends. Stakeholders provided their reactions, perceptions and knowledge of development dynamics in their region, and this information was used to generate scenarios and visual data to help the same stakeholders suggest sustainable development priorities and policies for the region s colleagues (2007) emphasize the need to build cross-scale horizontal and vertical interactions between various agencies and stakeholders to catalyze cooperation and avoid fragmentation of decision making. National parks in Switzerland combine bottom-up and top-down approaches to policy making, where local actors formulate policy that is then sent up the government hierarchy for approval. If approved, the federal government then supports the policy initiative financially and logistically (Hirschi, 2010).

Leadership is a recurring theme as an ingredient for success on initiatives. At the local level, leadership plays a central role in sustainability initiatives according to Horlings and Padt (2013). They explore regional development initiatives in rural Netherlands and conclude that leadership is crucial in the transition from the old economic path to more sustainable regio Others concur in noting that leadership is crucial for successful implementation and coordination of

multi-tenure reserves (Stoll-Kleemann and O'Riordan, 2002; Fitzsimons et al., 2013). Fitzsimons and colleagues (2013) warn that too much dependence on individuals is not sustainable over the long-term.

*Scope:* Diverse and a function of the target area and population. Primary emphasis is on including all of the relevant stakeholders.

*Fields of action and activities:* Diverse and a function of the selected target area and population.

*Successes and Challenges*: The case studies are generally portrayed by their authors as successful examples of governance and participation. But there are also examples of insufficient community participation (Kellert et al., 2000; Kearney et al., 2007). The primary challenge is to create a process that truly integrates community input, raising the community from an advisory capacity to one with a bona fide role in decision making (Kearney et al., 2007). Kearney and colleagues (2007) note three crucial shifts in thinking that must take place to create ideal community-based management, including 1) integrating the broad range of diverse stakeholders; 2) holding regulators and governments accountable and transparent to their public, and 3) allowing communities to take the lead in governance. Further, these empowering shifts must be officially recognized and codified (legally and politically). Kellert and colleagues (2000) report that according to their social and environmental indicators, community-based management in developing countries failed to result in equitable distribution of power and benefits, reduced conflict, or increased appreciation of local knowledge, biodiversity protection or sustainable resource use. The role of stakeholder engagement and participatory planning in regional sustainability is particularly challenging in megaregions, which are suggested to be inherently difficult to govern sustainably (Wheeler, 2009).

Also included in this typology is the science-based approach, which posits that research for sustainability must be local and, in part, stake-holder driven. An exemplary science-based sustainability initiative is the Long-term Socio-Ecological Research (LTSER) platform. LTSER platforms were conceived and implemented by the International Long-Term Ecological Research (ILTER) network over the past decade (Singh et al., 2013). The LTSER platform is a spatially-defined foundation for place-based, sustainability research, whose agenda is determined in collaboration between scientists and local stakeholders. The scope of LTSER is regional, although the size of LTSER platforms varies from several square kilometers to one-third of the area of Finland. Its focus is policy-relevant research, defining the scientific agenda in a way that suits the goals of regional sustainability. Collaborative meetings between policy makers, local residents and other stakeholders afford the opportunity to exchange scientific and local knowledge and to facilitate community-level planning. Partners include scientists, local/regional decision makers, land owners, local residents and other stakeholders. The LTSER network cites among their interim successes 1) a reorientation of scientific research agendas to be better aligned with regional socio-ecological challenges, 2) creation of collaboration between researchers, policy and management agencies and the general public, and 3) establishing an infrastructure for the collection of long-term socio-ecological data. Its challenges include lack of reliable funding mechanisms, a narrow scientific research agenda, and a socio-ecological focus that detracts from important pure-science research.

## 4. Thematic axes and discussion

This survey of spatial sustainability initiatives is a hopeful testament to the multiple ways which local communities, the scientific community, and policy makers are addressing contemporary

sustainability challenges. Sustainability the effort to secure socio-economic wellbeing while preserving ecological integrity, thereby assuring human wellbeing is a goal in regional management in thousands of projects across the globe. While this drive to address global development issues is encouraging, the efforts have often had limited success, measured at the regional scale (Wheeler, 2009) and at the aggregate global scale .

There is broad diversity in sustainability approaches, foci, management structures, implementation tools, and leadership. We derive from this analysis five axes with which to analyze both nascent initiatives and the overall conditions facing potential initiators of regional sustainability projects and to help clarify the potential strengths and weaknesses of an initiative based on sustainability planning theory and aggregate international experience. The axes are to be thought of as a continuum, and since initiatives are dynamic, their places on the axes are not static.

*Axis one: top-down versus bottom-up initiative* (Who initiated the effort, national government or international organizations or was the effort a local initiative by local residents?). Some initiatives are top-down, meaning that a specific tier within the governance structure, or other relatively influential groups (like academics, NGOs, or land owners), initiate, set goals and implement the project. While these initiatives may have well-defined and clear goals, they often neglect the aspect of community participation, even when explicitly part of the initiative. Biosphere reserves, when initiated by government agencies rather than by the communities themselves, can be hindered by neglect of community participation. But top-down initiatives benefit from institutional guidance and support. Bottom-up initiatives, catalyzed by community members themselves, can suffer from lack of focus, organization, and stability. They depend on the stamina, charisma and commitment of community members to implement projects. However, theoretical and practical data suggest that bottom-up initiatives are the most durable in terms of community support.

There are very clear roles for both governmental and community-based participation in sustainability projects. Without commitment of both participant groups, there is less potential for success. While stakeholder participation and empowerment should be self-evident, the role of government agencies, which includes financial support, capacity-building and facilitation, provision of information and expertise, guidance and connection to broader-scale (e.g. national and continental) policies should not be underestimated.

*Axis two: ecological versus socio-economic focus* (Did the effort focus on ecological priorities or did it begin with an emphasis on social or economic concerns?). While all sustainability definitions integrate and pre-suppose a balance between ecological and socio-economic considerations, in practice projects often reflect the priorities of their initiators. Biosphere reserves, for example, often reflect an inherent bias towards biodiversity conservation at the expense of socio-economic wellbeing. Stoll-Kleeman and O Riordan (2002) found that although they observed a paradigmatic change in the way biodiversity protection (e.g. in biosphere reserves) was discussed, towards an integrative socio-ecological approach with community participation, in practice the shift had yet to be actualized. Stoll-Kleeman and Welp (2008) suggest that, in order to fulfill biosphere goals, greater effort must be made to engage in interdisciplinary (rather than solely ecological) research as a path towards greater integration of communities and greater understanding of the socio-cultural and economic challenges. The evolution of the biosphere idea shows a growing attention to human well-being than early implementations of the model.

In contrast, while urban-based sustainability initiatives often place emphasis on open spaces, clean air and water, and clean transportation systems, they do not always reflect an understanding of

habitat conservation, ecological integrity and biodiversity. But overall, there seems to be a general convergence on full consideration of concerns on both ends of this spectrum.

*Axis three: subject-specific versus holistic systems approach* (Does the initiative focus on a single topic or target or does it take a holistic approach?). Both approaches on this axis have unique advantages for sustainability planning. The subject-specific approach (e.g. the Salmon River Watershed Roundtable) capitalizes on a culturally and/or economically meaningful component of the natural environment. Yet, even from the individual species or resource perspective, sustainable management will demand a more holistic approach to regional planning to assure long-term viability of the resource. Holistic approaches, such as multi-tenure connectivity initiatives, take the broad (ecological) view of a region and work to secure habitat protection for all biodiversity within.

The case studies show that both approaches can be effective, though they both face challenges. Some approaches may be too narrow to allow for a broader look at the ecological or societal impacts of a project (for instance, in ecotourism). On the other hand, holistic approaches, while inherently more appropriate for sustainability, can be too broad or vague to be effective. Further, holistic approaches are more revolutionary in their approach and may demand too much of various stakeholders, thus engendering opposition.

*Axis four: geographic scale of approach* (regional or local scale of resolution). Deciding on a spatial scale for the initiative is always a logical first step in a sustainability initiative. Scale will vary according to natural and political boundaries, social networks, specific sustainability approach (e.g. ecological or socio-economic; subject-specific or holistic), and administrative-political-economic considerations. The success of a project is contingent on proper definition of initiative boundaries (physical and social). The improper definition of boundaries will have an negative impact on a range of issues from ecological integrity to stakeholder engagement. All regions, regardless of size, are also subject to external factors beyond the boundaries of the initiative, and so exogenous change must also be considered within the sustainability initiative.

*Axis five: Urban or open space orientation*. This axis is closely tied to the ecological / socio-economic axis, as projects focusing on urban areas tend to also focus on human systems, while projects focusing on open space tend to more heavily emphasize ecological issues.

In conclusion, while specific characteristics of sustainability initiatives must be tailored for local conditions and priorities, we note a nearly universal convergence regarding key components of a successful sustainability initiative, including the importance of participatory governance and full collaboration and trust between agencies and stakeholders, a focus on local communities and their quality of life , and increasing linking of ecological and socio-economic wellbeing. Mechanisms and structures must be put in place to accommodate small-scale, community-oriented initiatives that receive crucial support from government agencies. Information systems must be reliable, timely and accessible. The target communities must be interested and willing to participate and initiative goals must be determined through a sensitive, though crucial, alignment of interests among stakeholders, who must formulate a common, dynamic vision for sustainable development (Kearney et al., 2007; Fitzsimons et al., 2013).

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# MEDITERRANEAN METABOLISM. A GLOBAL NOTION ADAPTED TO LOCAL CONDITIONS OF SOUTHERN EUROPEAN CITY

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## Abstract

The development of the contemporary city produces deep changes in the organ
settlements and causes dramatic consequences on the natural environment. The re
the concept of Urban Metabolism as a model which considers cities as open syste
flows of material and energy as inputs and waste as outputs. A more efficient u
study with more effectiveness the relationship between urbanization phenomena
environmental contexts. The research approach is finalized to understand the c
European cities and extend the basic metabolism concept to specific mo
anthropological peculiarities of territories such as alteration of landscape, l
and their socio-economic behaviours, in a multi-layered framework, embracin
palimpsest and historical pre-existences. The research project focuses on per
Naples and Caserta in South Italy that was investigated through the lens of UM
in which flows go through this territory modifying its spatial configuration an
alteration of land use. The aim of this paper is to propose a multidisciplinary
the construction of an interpretative analysis of the local conditions, throu
design solutions that should support a more aware and appropriate urban plan
Mediterranean cities. This approach is based on the idea that metabolism is
transferable notion, rather it is an interpretation of specific relationshi
ecological context, which should be applied at a local scale.

## 1. The notion of Urban Metabolism

The development of the contemporary city produces deep changes in the organiz
settlements and causes dramatic consequences for the natural environment. The
adopts the concept of Urban Metabolism (UM) as a model which considers cities a
characterised by input flows of material and energy and waste outputs, and th
development of management systems that increase resource use efficiencies an
wastes. This allows to study with more effectiveness the relationship betw
phenomena and environmental contexts.
The paper is organized into two parts: the first one outlines a frame of
characteristics and potentialities, the second one analyses a case study, inte
the notion of UM.
Cities are characterized by huge flows of materials and energy in constant evol
constituted through dense networks of interwoven socio-ecological proces
simultaneously human, physical, discursive, cultural, material, and organic. Ci
water, foodstuffs, cars, fumes, money, labour, etc., move in and out of the cit
and produce the urban as a continuously changing socio-ecological landscape.
2006, pp. 20). These flows interact with one another producing spatial
transformations of morphological patterns at multiple scales. The UM proposes a
and characterize the quality and intensity of these flows starting from the an
processes of biological organisms. Indeed, the analogy assumes a powerful e
because both systems are organized on a livingnetwork.

The analysis of flows and the relationship between anthropogenic activity and urban areas aims to define the city s behaviour and its process of production flows. In particular, Kennedy and colleagues define UM as the sum total of socio-economic processes that occur in cities, resulting in growth, producti elimination of waste (Kennedy et al., 2007, pp.44).
This analogy has deep historical roots and emerged during the middle of the nir relation to the quantification of material exchanges between natural and human explicit application of the concept of UM to the city (Broto et al., 2011) was the engineer and geographer Abel Wolman wrote an innovative article "The Metabo in which he proposed for the first time the application of the concept of hypothetical U.S. city of one million people and calculated the inputs of mate waste using UM as a quantitative instrument to measure them. He defined the met as all materials and commodities needed to sustain the city s inhabitants at play . It is useful to underline that this consideration emerged in an era in problems were arising connected to the pressures of expanding urban populat natural environment and the question of the limit of resources essential for urb
Most recent reflections on the ecological aspect of UM suggest a more holi considers the analogy of the city as an ecosystem (Golubiewski, 2012; Pataki, by a sum of more metabolisms (not merely as an individual biological organism). emphasis on the exchange process and on the relationship among different parts better understanding of the complex and dynamic functioning of the city.
One of the criticisms to the basic original notion of UM is that the data snapshot of the resources and energy used by the city, that appears insuffic complexity of urban processes related to socio-economic activities, policie geographical data, historical palimpsest. The sustainable vision of the urba interdisciplinary and multi-level approach to understand the behaviour of a c urban metabolism method into a more comprehensive framework that both an biophysical material and energy parameters of cities as well as the human, economic, and related systems that both structure and govern specific urban m (Pinctel et al., 2012, pp. 200). For this reason, the biggest challenge to expe planning tool became the integration in this issue of a set of variables re considering together biophysical, energy, social and political parameters. colleagues described: The metabolism approach to cities is a purely biological much more than a mechanism for processing resources and producing wastes, th creating human opportunity (...) basic metabolism concept has been extended to in these settlements so that the economic and social aspects of sustainability environmental. (Newmann, 1999, pp. 222)

## 1.1 The UM: a sustainable approach to urban development processes

UM is a notion that inspires a new models to describe the city and that we urbanization process as a useful sustainable planning tool. Indeed, it is a tr involves very different disciplines (both environmental and sociological fie ecology, political ecology, industrial ecology, ecological economy) using it therefore noting the need of an interdisciplinary approach to understand the c phenomena. Each disciplinary approach adds and contributes to the understanding and interactions between social and natural processes in shaping urban phenom 2011). Nevertheless, different disciplines, spacing from social aspects to natu the concept in a different way, revealing the complexity and multiplicity of di urban system and underlining the need for interdisciplinary dialogue to devel practical approaches to urban metabolism with the aim of making progresses in u planning and research.
According to ecological economists and political ecologists, one of the contem that is useful to highlight here and that emerges from an enlargement of the socio-economic system, is that it can be considered as an useful tool for a

economic growth, urbanization and the environmental resources depletion. introduced here as an integrative concept for identifying areas of potenti decoupling at a city level, and the need for investment and capacity to reshape function (Hodson et al., 2012, pp. 796).
As a matter of fact, the study of stocks and flows entering the city, cross exchanged with the environment in which the city is embedded, is a necessary wa sustainable management and equitable distribution of resources without a growth consumption.
In an era of limited resources and of reduction due to the extractions, of lar production such as landfill, of climate change and uneven rapid urban growth, global impact and therefore they play a fundamental role in the challenge to growth. In this matter, the UM can be a useful tool to recognize the crisis p exchanges (transformation of resources and production of waste), to manag interrelations inside/outside of the borders and to understand how to interven promoting more effective urban planning policies. Beyond apocalyptic visions, i future will be played in urban areas, it means that the solutions lies in the c to assume an active role (Van Timmeren, Henriquez, Reynolds, 2015).
The review of the planning paradigms, no longer in terms of growth but of th monitoring of the resources use, and the redefinition of the interactions am and economic systems, means to intervene on the potentiality of existing resourc
In a sustainable approach, one of the recurring issues is to simulate the e behaviour of natural ecosystems to switch from the city s linear metabolism which wastes are recycled and return into the system as input (Girardet, 200 induce more efficient cities metabolic behaviours and to make cities less de resources and more self-sufficient.

## 2. Focusing on the local scale: land use as a metabolic indicator

This approach is based on the idea that metabolism is not a global and transfer is an interpretation of specific relationships between city and its ecological be applied at a local scale.
UM proposes a multiscale approach that puts in tension the global scale of me their pragmatic effects at the local scale, underlining the importance of the g in which these flows are embedded (Ibaæez, Katsikis 2014).
In this matter, the metabolism is a tool to understand the site s peculiaritie which are involved in a complex process of uneven growth that generate urban stimulate to study them with a new accurate methodology including all the contradictions of these settlements.
Emphasizing the importance, both theoretical and practical, of the geographic metabolism, the research aims to analyse the relationship between dynamic flow of geographical features at local scale in a relationship of mutual causality.

### 2.1 The periurban area of Casaluce

The research project focuses on periurban area of Casaluce[1], a town in the province of Caserta, with a population of 10,000 inhabitants. The municipal territory is mainly flat circa 9 square km. It is an area with homogeneous characteristics as part of between Naples and Caserta and it is composed of residual rural elements and m systems, often distinguished by low quality and a low level of infrastructures
The urban system of Casaluce is engraved by two important phenomena: on on abandonment and transformation of agricultural area and on the other the s

[1] The case study refers to the elaboration of preliminary studies for the new urban plan the Department of Architecture (DiArc) of University of Naples on behalf of the local ad

settlements and the depletion of the ancient urban centre, due to the underdev
areas.
The modern settlement has arisen in the last 40 years surrounding the historic
is possible to highlight three main morphological construction models based on
processes: a first growth led to a settlement of courtyard and multi-storey
related to the productive agricultural cycle. Isolated middle size buildings cl
phase of the urban growth. In the last 20 30 years, there was an urban sprawl t
building, especially houses, with low percentage of shops and offices, losing
with the ancient settlement related to the rural partition of the territory.
The complex structure of Casaluce was investigated through the lens of UM to un
in which flows going through territory, modified its spatial configuration pr
(Berger, 2006) and urban blight.
Periurban zones are fringe areas of consolidated settlements which includ
agricultural fields, trailer parks, landfills and few productive areas (some il
landscape of denied areas (De Lucia et all, 2012) is the result of a sick
generate a dramatic scenario of natural elements and anthropic activities at
cycle.
The analysed territory exceeds administrative boundaries pursuing a broad stra
connection of historic polarities and ecosystem networks between them. The a
North-South road that links the Reggia di Carditello in the North side and t
Aversa in the South area. In the middle there is the compact settlement of
Norman Castle and the archaeological site of Castle of Popone located in the pe
historic and cultural emergencies combined with the Regi Lagni water system and
fields represent the land use layers of this Mediterranean area that have to re
stimulating a sustainable UM.
The historic palimpsest of the case study s area includes several significant
abandon. The Reggia di Carditello is a royal palace, built in the XVIII centu
big park that was the ancient hunting area but that is now a wild green land.
space, there is also the ruin of the Castle of Popone, an archaeological site
manor farm which is accessible by a neglected path through the country. Other
Norman Castle and the San Lorenzo burg are instead located in the historic cent
the border with Aversa) and represent the cultural points of an interrupted
contemporary settlements.
The water cycle is the Regi Lagni system: a network of water channels built in
the architect Domenico Fontana to reclaim marshes of Campania felix . The mai
North boundary of Casaluce and the water network serves the surrounding agricu
urbanization phenomena and the intensification of agricultural activities com
habitat because of the overbuilding of concrete riverbanks and the increasingly
water, due to the deterioration of groundwater.
The effect of the urban sprawl is land consumption and the fragmentation of r
process has modified the historic structure of the XVIII century system of co
outside the urban settlement. Nowadays the periurban area is a patchwork of ag
that are threaten by the urban and industrial activities, risen around them. T
decrease of agricultural economy due to the poor productivity of lands and the
of rurban landscape, not completely rural but not yet urban.
In this compromised landscape, productive and industrial areas emerge as spatia
relations with the context, but they rather damage the environmental ecosystem
the productive cycle era, lead to phenomena of partial disposal that generate di
that could be useful for the reuse.
The reading of the landscape through the land use geography tries to interla
metabolic process with the potentiality of the historic palimpsest of Casaluce
to highlight underdeveloped areas as a resource in reactivating processes of
whole town through a circular metabolic framework, according to the common wish
main elements which made this area a rich and attractive territory such as agr
infrastructures and historic and architectural heritage (Figure 2).

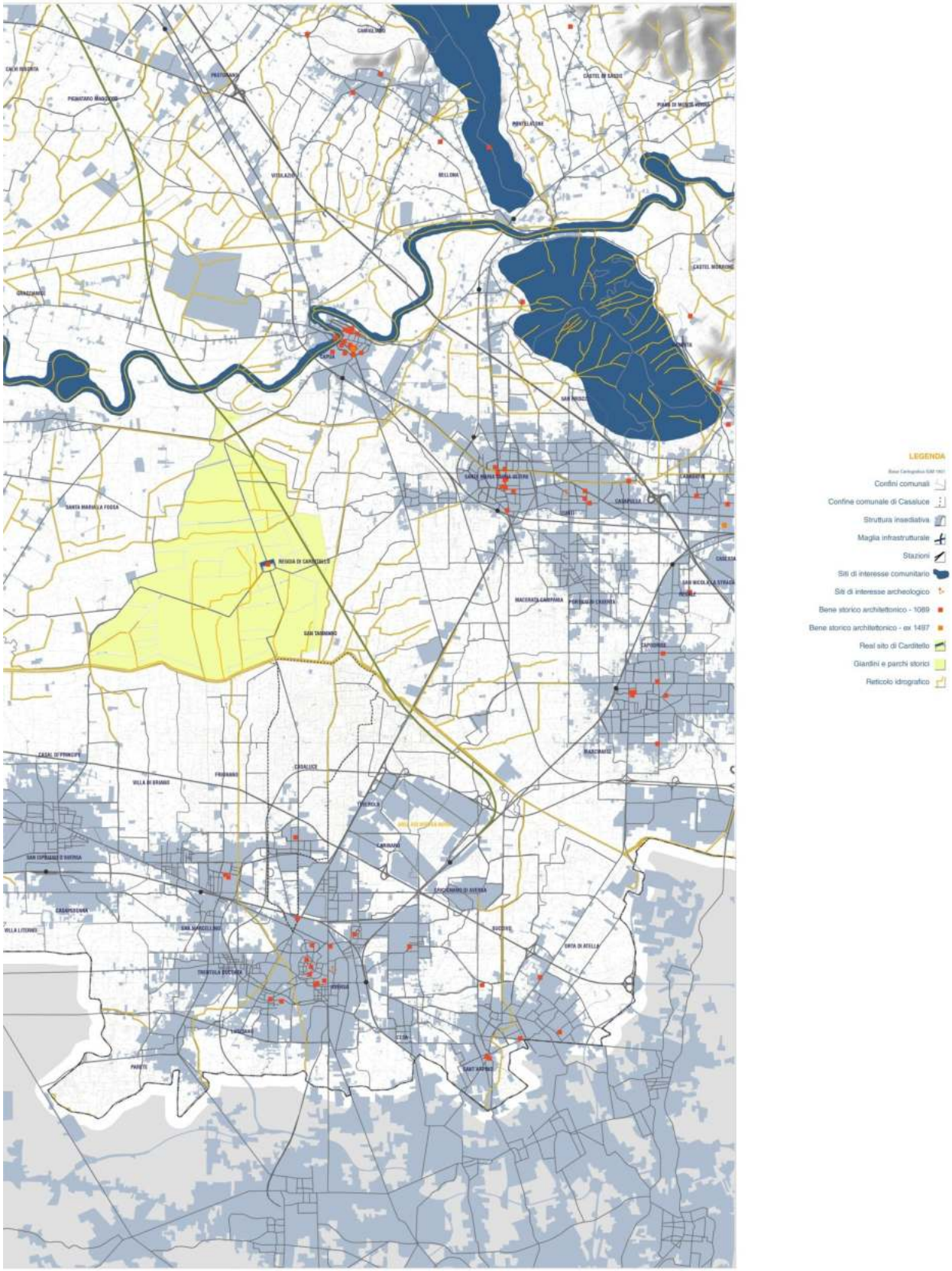


Figure 1. Territorial Framework
Elaboration: Libera Amenta, PhD in Urban Design and Planning, DiARC, Universit

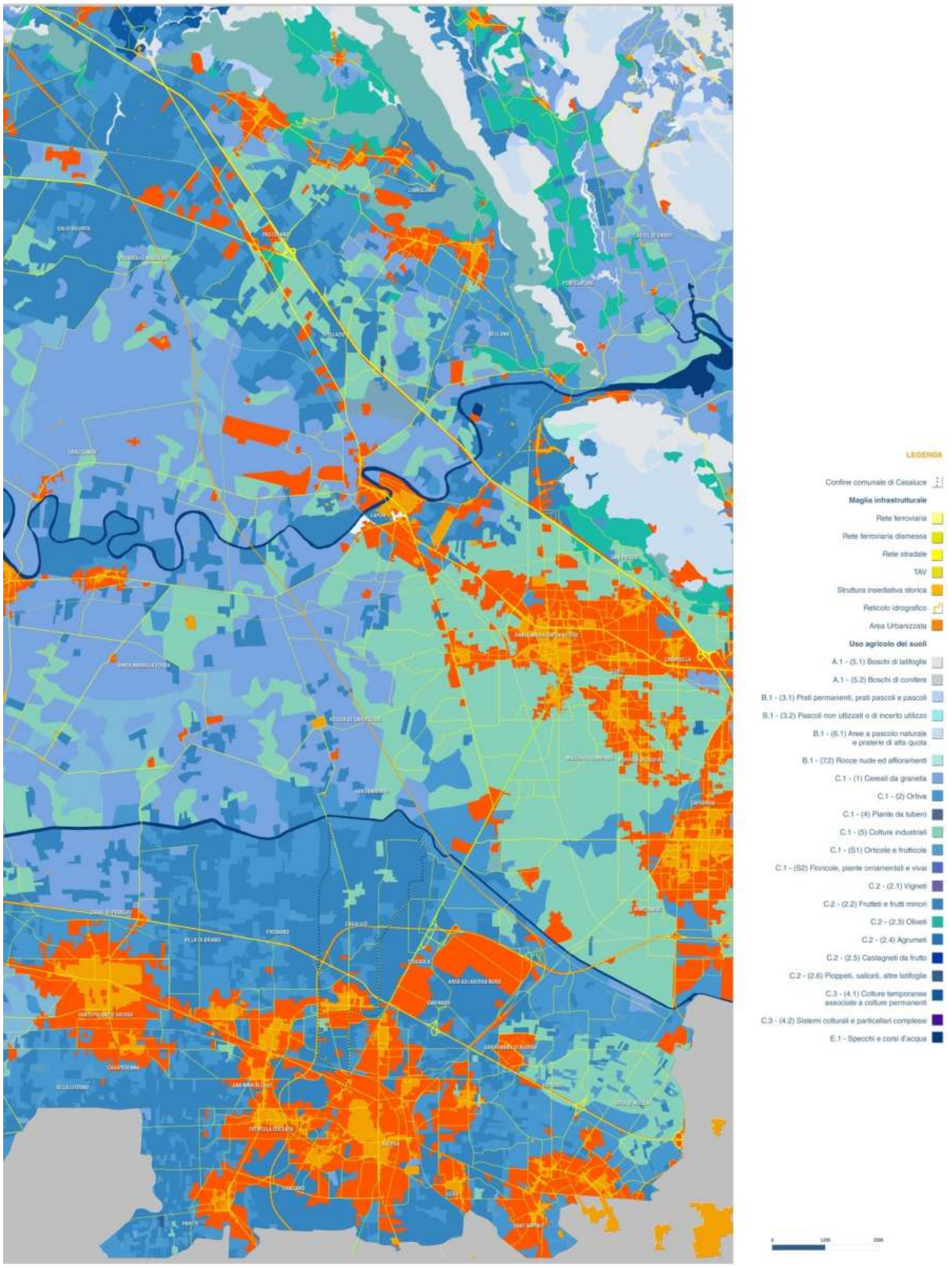


Figure 2. Land use

Elaboration: Libera Amenta, , PhD in Urban Design and Planning, DiARC, Univers

## 2.2 Applied UM to Urban Planning

The proposed multi-layered framework aims to link the notion of metabolis
morphological and anthropological peculiarities of territories.
The layers of historic pre-existences, water system and rural fields have bee
their condition concerning the time variable that is their state in the life cy
that their effects in the environment comes from socio-economic behaviours of
organizes the land use features as metabolic flow constantly evolving an
morphologies. In this matter the land use has to be considered as one of the me
anthropogenic activities on the ecosystem. Thereby the notion of UM is related t
uses the data flows to understand how they shape the territory and influence its
If the territory is conceived in terms of metabolic flows, it is possible to in
and the reactivation of declined, interrupted or ended land use cycles through
strategic renewal and regenerative chain mechanisms of specific actions.
It requires a systemic view and a new conception of the time variable. The time
for planning since it generates adaptive design scenarios and mechanisms of
which the outcome is not assumed in advance and appears flexibles to external
conditions. This point of view considers the project as a process that comes
influences among all the urban features in a dynamic way constituted by succ
phases.
Another concept related to the city as a product of metabolic processes, is th
physical and biological processes of resources conversion in goods and waste
time, the transformation of waste into useful products to be re-inserted into t
based on the laws of thermodynamics. It is similar to what happens in the human
process. These explain that the metabolic process requires energy for its
everything that comes out of the system depends on the amount of incoming m
physical and biological processes of converting resources into useful products
the human body's metabolic processes or that of an ecosystem. They are based
thermodynamics (...) (Newmann, 99, pp. 221).This means that it is necessary to
of resources putted into the system, by proposing a balance of input and output
it poses an important issue related to the power of the territory to activate m
in triggering changes: so the focus becomes the individuation of regenerative ac
to the reactivation of abandoned or declining life cycles (Formato, 2014).
Through this framework, the plan proposal is to intervene on the life cycle of
water, agriculture and historic-artistic heritage (Figure 3).

The restoration of water channels system s continuity needs a set of actio
riverbank vegetation and canals naturalization, the planning of wetlands
groundwater aquifer and to reduce contamination of water, the building
phytopurification. These interventions, based on the local impact of water chan
wide effect in the whole ecological network of Regi Lagni embracing the periur
Naples and Caserta. The water cycle is an adaptive system that changes due to ou
conditions so it is a potential device to produce new morphologies such as equi
to both agricultural and urban frameworks. Intervening on the process of ecolog
reduce the environmental contamination and catalyse public activities and tempor

The reactivation of the agricultural cycle results from a strategy based
developed from the system of denied areas which represent a wide strategic po
to reconnect different land s fragments. The proposal encourages the inte
activities promoting agricultural economy such as farms, farmhouses and other a
of agricultural production activities. The park aims to restore ecological cont
fragmented periurban areas and at the same time assumes a strong evocative powe
of this land. Denied areas follow the configuration of rural traces, creating
pedestrians and bicycles, emphasizing the use of typical natural essences
eucalyptus, vine, etc.). Therefore the network of denied areas constitutes a ke
high environmental value and increasing the liveability of places.

The historic emergencies life cycle induces to reuse spaces with new con activities. The cultural network links historic town centres and decentraliz periurban area generating a double cultural path: the archaeological path that architectural heritage as Reggia di Carditello , Castles and San Lorenzo burg mainly rural and generates a new relation among the manor farms of the ancient This planned approach enables to preserve historic buildings and to promote spaces, enhancing the establishment of new compatible functions.

Figure 3. Reactivation of life cycles.
Elaboration: Libera Amenta, , PhD in Urban Design and Planning, DiARC, Univers

## 3. Towards a Mediterranean metabolism

The research output is the application of a project device that use the UM as changing of the contemporary city and to understand which system layers are dir urban decay and represent the main elements for a future urban design project.
The applied methodology started to observe the territory in its material compon them in their dynamic organization gathering from the assumption that the UM r the city as a network of ecosystems.
The case study of Casaluce was analysed through site visits and public shared data were georeferenced using GIS technologies to elaborate thematic maps. Thi areas characterized by environmental decline, pollution, illegal buildings a settlements.
The purpose was to interpret places conditions and to construct planning s concept of metabolism as a key to identify the environmental decline and the co degradation and social marginalization, extending the notion of UM to urban and perspective, environmental remediation appears an important strategy to transfo and to encourage new actions for the economic and social development.
The emerging issues could represent an emblematic framework generally diffused areas of Mediterranean cities. Therefore, it is possible to propose a broade Mediterranean metabolism as a lens trough which studing periurban areas of M territories. The research approach, indeed, tried to apply the global notion dimension characterised by settlements morphologies, socio-economic beh emergencies and compromised ecosystems. The local scale induces to search a problems that could be solved by a strategic urban plan.
The preliminary plan proposal of Casaluce, which is the pragmatic output of thi result of a wider research aimed to perceive a different model of growth for different design solutions relating to rural-urban linkage with the usual featur The metaphor of UM is useful to increase the understanding of the cities wor find a balance between input and output. Rehabilitated environments, ecologi permeable lands for agriculture, are signs of a regeneration of commons, of coincides with the whole territory and its nature, promoting smart and ambitio city s spaces. The paper highlights that the aim of the urban planning is the t UM from a metaphoric means to a pragmatic vision of city s flows as sets of could generate new way to shape the city.

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# SUBURBS AND BOUNDARIES: THE CONTINUED PUSH FOR PERIPHERAL EXPANSION IN THE LATIN AMERICAN CONTEXT

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## Abstract

Latin America s spatial policies have neither *regulated nor planned the urban growth. Not on growth can be desirable, it is also a recurrent situation. Therefore, it should be planned when it is necessary to avoid urban, environmental and social problems. These issues can be averted by distributing both the costs and the benefits of the urbanization process in a equalitarian way and preventing speculative processes that usually underlie rural-urban transformations. Urban growth* isn t always undesirable and also it s a recurrent situation that, when necessa *avoid urban-environmental and social problems, by fairly distributing urbanization costs and benefits and preventing speculative processes that are usual in rural-urban changes.*

*In Brazil, urban sprawl has been strategic for the* country s industrial *development and economic growth since 1930s. In the late 1960s, the federal government enacted regulations for land parcelling, however, as consequence, these rules left the control of urban expansion under municipal government, not requiring urban planning for doing so. At the same time, a huge program of housing financing transformed this expansion in an incomplete urbanization, known as periphery.*

*The democratization period in the late 1980s was accompanied by emerging new forms of urbanization gatted communities, theme parks etc. that can be explained by (i) little resistance to transformations from rural to urban uses, which were influenced by rural production and price variations; (ii) market-driven urban innovations, like new kinds of developments gatted communities, ranches etc.; and (iii) high investments in road systems and private transport. Nowadays, the federal Program My House, My Life (from 2009 and onwards) repeats history, reproducing the peripheral pattern on a large scale.*

*Will we ever admit urban growth is a recurrent process that requires planning? An analysis of land legislation from 100 municipalities points at two conditions: first, that these new types of urban development require more flexible urbanization permits in order to be implemented, and, second, that there is a need to plan the countryside as well.*

# SUBURBS AND BOUNDARIES: THE CONTINUED PUSH FOR PERIPHERAL EXPANSION IN THE LATIN AMERICAN CONTEXT

## 1. Introduction

The urban debate in Brazil has long faced the challenge of overcoming the paradigm that divides the space in either rural or urban areas (Graziano da Silva, 1997; Sposito et a etc.) and focuses on the potential of new territorial arrangements where urban-rural integration appears as a central element (Monte-Mór, 1994). This debate has also challenged the dual and homogenizing concept that divides cities in centre or periphery (Marques & Torres, 20 periphery by comprising its new dynamics (Costa, 2006). Additionally, it has sought to overcome the urban research historically focused on the metropolis and has sought to create another terminology for more diverse objects of investigation medium-size cities (Sposito et al., 2006; Andrade & Serra, 2001), non-metropolitan cities (Feldman, 2003), non-metropolitan agglomerations (IPEA / Unicamp-IE-Nesur / IBGE, 1999 apud Grostein, 2001), city region or polarized cities or commuting citties (Moura , 2005) and others.

In this sense, Brazilian urban research has devoted itself to new morphologies and typologies of urban sprawl (Reis, 2006; Abramo, 2009), a phenomenon that Monte-Mór (1994) calls extensive urbanization , focusing specially on gated communities (Freitas, 2008; sever 2006), a new typology that arrived in Brazil in the 1980s, later than in the US. These works have also dedicated themselves to urban-rural relations. However, these theoretical approaches have not investigated the relations between these forms of urban expansion and the norms that restrict or regulate the urban sprawl, which, in theory, would limit urban fragmentation and guarantee qualified urban growth.

Generally, most of the approaches on urban sprawl refer to two major forms of urbanization: (a) the "periphery", with dwellings occupied by poor families, with no infrastructure and precarious living conditions, possibly near industrial areas (also peripheral and dispersed) and important road transport; and (b) the "gated communities that offer housing for wealthier families, have distinction, exclusivity, near big urban facilities, such as shopping malls and theme parks, where the quality of road transport is a sine qua non condition for their implementation. The first form is a consequence of the industrial character of Brazil s urbanization and the second can be rela tertiary urban period.

These have been the basis of the occupation in areas of rural-urban transition. This paper seeks to demonstrate there are other urban typologies emerging, however the results reinforce unequal models and extensive and precarious new urban areas. How can one reverse this logic? This work began under the premise that ordering urban growth should be an important object for urban planning and city management. It seeks to overcome the idea that expanding the urban area is never desirable and to admit that this is a recurrent process, therefore, when necessary, it should be planned to avoid urban, environmental and social damages, distributing the benefits and costs of urbanization in a fair way and avoiding speculative processes, which often happen in rural-urban transformation processes.

Brazilian history shows that centralized governments were responsible for conceiving and approving the main laws that plan and control the urban sprawl, however, these rules have been traded and modified and their application has been accompanied by periods of amnesties and flexible policies that did not require any compliance with them, hindering their implementation. This negotiated city management, which considers growth and development synonyms, is structural in Brazilian history.

These periods of more centralized government are also marked by moments of urban sprawl, sometimes accompanied by population growth; such was the case of the São Paulo metropolis during the military government (1964-1986). This was also a feature during the Vargas era (1937-1945), the military dictatorship (1964-1986) and even nowadays with the economic policy being the driving force of urban expansion, based on its connection with urban and housing policies.

In order to understand the current period, this paper analyses 100 u municipal territory translated into master plans, zoning and land of Sªo Paulo to assess whether they have interfered in the urbanizat urban transition in order to regulate horizontal and urban growth, urban quality. Some hypothesis on this issue should be highlighted, regulations aiming to regulate and plan urban sprawl, however it happe policies for financing housing, urban infrastructure and facilities. urban sprawl regulation and planning , more broadly, concerning what look to urban space growth, specially stressing the need to investig be translated into territorial policies (Santoro, 2012).

## 2. Background: the origin of urban concentration in the Colonial Period

The origin of the Brazilian polarized and concentrated urbanization can be explained by the relationship between the colonial power and the colony in the international division of labour, where cities were the locus of movements of goods and where state institutions are settled. Therefore, only a few places concentrated the economic and institutional activities and functioned as ports for trading goods. In addition, the Brazilian monoculture agriculture aimed at exportation aborted an urbanization process that appeared in the surrounding of rural regions, which themselves produced primary goods essentially for exports, differently from what happened in Europe, where that process enabled the creation of more cities, smaller and less concentrated than the Brazilian ones (Oliveira, 1982).

## 3. The Vargas Era: economic policy as urban sprawl driving force

The strategy undertaken for metropolitan urban sprawl was relevant to the development when Brazil underwent the transition from an agricultural to an industrial economy. The housing policy was the great engine behind the urban expansion, and also worked as an structuring element for the economic development. In the context of restricted industrialization, between 1930 and 1955, the country experienced a strong land regulation, as well as labour and housing regulation, policy that resulted in a metropolitan urban sprawl. Territory regulation was the element behind the demands for industrial urban occupation, characterized by population growth, opening avenues and expanding the city to accommodate the first industries.

This expansion was done through peripheral areas, result of the context of crisis of the social rent housing model. The Tenancy Act (1942) froze rent prices, discouraging housing production for rent (especially in central areas where it was possible to rent for other uses), thus collaborating with the purchase of lots in the city s outlying areas. However, that required investment create accessible territories in peripheral areas. The response to this problem was opening avenues and roads and creating bus companies, while, simultaneously, peripheral subdivisions were being

deployed, mostly as illegal settlements (Bonduki, 2004). The creation of bus lines connecting periphery and downtowns allowed a rapid urban sprawl.

It was necessary to decrease housing costs, because it would be financed by the workers' salary in a process to guarantee to the reproduction of the labour power (Oliveira, 1982). In this sense, the suburbs contributed to lower housing prices in two ways: it offered cheap land and areas not completely urbanized, under almost rural conditions. The debates on the lack of urban infrastructure show that, to enable them as urban areas, only a few infrastructures were required, decreasing, then, the criteria of what is considered an urban area. For example, this process allowed parameters typical of rural areas like using water wells instead of piped water, cesspits instead of sewer pipes, lamplights and coal use instead of gas. Following this logic, if the laws requiring certain standards for urban expansion were translated into a complete urbanization, it would result in increasing land and housing prices, thus invalidating the project of home ownership and indirectly affecting the industrialization process. Since the industrialization was an ongoing process, these regulations could also increase the situation of irregularity, by making the infrastructure needs more flexible.

In 1937, Federal Decree n. 58/1937 was approved, the first addressing the land parcelling issue. However, its rules were idealized to guarantee the housing acquisition by stimulating homeowners to buy houses in instalments, in order to overcome the crisis of lack of buyers, therefore, it did not intend to neither regulate nor plan the urban sprawl.

On the federal level, the Vargas administration announced the first federal housing policy, under the premise that it would be provided by the State. However, the Federal Decree n. 58/37 transferred the mission to plan and regulate the urban growth to the municipalities and they were not sure about their own role in this process: Should they support the urban sprawl by providing infrastructure? Should they collaborate with landlors and charge for the valuation obtained in urbanization processes? Or should they let private developers do their job parcelling land and selling these parcels while the government would create and supervise the occupation based on regulations with good parameters on infrastructure, land occupation and land donations for public facilities?

In the 1930s and 1940s, municipalities begun to feel the need to regulate and plan the urban growth. But they tried to do so by recognizing opened roads through amnesty laws that, instead of preventing the expansion, ended up stimulating it. Another measure used by municipalities was creating some exceptions to the main urban rules, like smaller dimensions for working class houses, giving permits to land parcels with incomplete urban infrastructures, giving permission to build houses on unofficial streets, or not requiring construction permits for working class housing in rural developments. Clearly, these measures were not made for stopping the growth; these rules were established to support the occupation of slums and illegal settlements.

In addition, between the 1930s and 1950s, of the territory planning was conduced in another direction: zoning to set some lands apart and to maintain upper classes shareholders in the city s c (Rolnik, 1997), which also collaborated for urban expansion.

## 4. The military government: peripheral expansion to receive the population growth resulting from the heavy industrialization

Changes in the Brazilian agricultural production - crisis in rural productivity, in the Northeast region - and the agriculture expansion in the State of São Paulo, between 1945 and 1964, generated a process of conservative modernization (Graziano da Silva, 1982), which would result in a considerable rural-urban migration, that formed what is called the "reserve army" to serve

industrialization (1955-1970). In this period, urban expansion seemed a very appropriate response for the population growth experienced between 1940 and 1970, and it would be if it had been planned.

The ambiguous strategies focusing on the urban sprawl alternating between limiting and allowing the expansion appear to be a consented option to enable the city s physical growth. If and structured, it would not have been done so quickly. The metropolitan peri concept widely theorized by the Brazilian literature, which has mostly focused on the main metropolis, since non-metropolitan cities have not intensely lived this process until then.

Amid the attempts to formulate a national policy for urban development, this period of military government (1964-1985) was strongly marked by the development of laws that directly or indirectly address the urban sprawl issue, like the Federal Law on Urban Parcels (1979), the Law of Condominiums (1964) and the Forest Code (1965). Despite all these laws (most of them still exist today), the greatest impact of the military government in urban areas was a structured urban development policy, with the creation of the National Housing Bank - NHB, the Housing Finance System - HFS and the Federal Office of Housing and Urbanism - FOHU.

The planning followed the market-driven logic: investments were concentrated in (regional and urban) central areas, selected resources and social benefits, and the process of structuring the economic activity. In addition to this, the real estate activity was also structured, as part of a new phase of the industry, coupled with the policy of home ownership.

The NBH period was representative of a State intervention ensuring lines of credit for the housing demand (only for purchase, not for rent), expanding the real estate production by boosting the production through the market. This policy was translated as houses without a city , b consisted in a housing policy without the support of an urban land policy that should be done by the municipalities. That meant that the federal housing policy was, in fact, further limiting the access to the right to housing and the right to the city.

The type of financing policy and how it occurred explain the results:

a) the mismatch between housing interventions and urban interventions that should provide infrastructure, translated, for example, into houses built in places where there was no sewage or drainage systems;

b) local governments were often irregular in paying or had debts with its employees, among other local problems that make it more difficult to establish counterparts;

c) the behaviour of public and financial institutions was resistant to developing integrated policies through sectorial projects they focused on housing but not on making complete urban infrastructures , and, as a result, there were no commercial and service areas in housing projects;

d) the lack of funds for social facilities like sports equipments, for example, the fund was only available for amateur sports and prohibited covered gyms, swimming pools, among others;

e) the financial dependence of municipalities on the federal government and their consequent lack of autonomy to manage the urban space by themselves, using only their few resources;

f) the dependence on private initiatives, stimulating private developers who followed the logic of profit according to which public areas or facilities are seen as urbanization "costs", therefore are considered unattractive by the entrepreneurs;

g) the 'misplacement' of those who could not afford or obtain financing, relegating them to the spaces left on the sidelines for the private market, which immediately translated into slums, tenements and illegal subdivisions, under increasing urban precariousness.

Although this was the context during the NHB period, in its last years (extinguished in 1986) the Bank revised this programs in two important ways: firstly, a fund for urbanization credit lines was created in order to correct the course of housing interventions, trying infrastructure them a posteriori and facing the historical mismatch between housing and urban productions; secondly, there was an attempt to produce a land stock for social housing which could, in the long run, help regulate the market and land prices. This land stock initiative signalled an awareness that, concerning land, the policies collaborated with the speculation. However, the bad result of housing policies tripped the evaluation of the land stock results, which does not necessarily mean that the strategy was out.

On the municipal level, municipal plans were made but they were essentially developed by technicians with no participatory processes and while the actual interventions were under way. These, in turn, were very sectorial and unconnected: there was housing, yet the was not necessarily urban infrastructure.

Concerning the legislation, the laws created did not ensured the implementation of a complete urbanization as well. In a populist response, the military government (1964-1985) enacted the Federal Law on Urban Parcels (1979). With the end of the so-called economic miracle (1967-73) a fast-paced economic process of industrialization , Brazil faced a severe reduction of resources for the development of housing policies, consequently, there was a reduction in the urban production. Therefore, the new Federal Law changed the developer: although urbanization was a State mission, the law stimulated it to be implemented by private developers that should provide urban infrastructure and donate areas, as land reserve, for the government to complete their development with equipment and facilities. This equation was possible before the crisis, since the State no longer could finance the urban sprawl through the housing fund (NHB).

The Federal Law on Urban Parcels reserved public lands in each settlement, so that, later, when there were funds, the government would construct social equipments. It worked as to allow the urban sprawl happen in an accelerated speed, giving the time the public sphere needed to develop urban public spaces, in a slower process, recognizing the pace of the government performance. The rule based on reserving part of the land for public areas (between 30% and 35% of the settlement) seemed much easier to apply than if it were strict and careful regarding urban quality and complete urbanization. The government opted for simplicity so the rule could be followed, which does not always happen. The Federal Law was not critical towards the completeness of a "primary urbanization" (infrastructure) and it left the task to implement a "secondary urbanization" (equipment and services) to the municipalities, usually done in a very slow process, therefore, it ended up ensuring an "incomplete urbanization".

This law provided the language that threats the issue of land parcelling in Brazil. It left to the municipalities the task to regulate the urban expansion through limits and permits; for instance, whether the municipality requires urbanization contiguity or allows continuous flexible changes of urban areas over rural areas. This law did not provide the instruments to control the urban sprawl, not even required the municipalities to make a diagnosis quantifying the housing needs in order to justify the expansion desired.

There were two results not expected when this law was conceived. It served to determine minimum parameters for regularizing irregular urban occupation, at least regarding a minimum lot size. Although it has not achieved the percentages of reserves for public areas, and it did not guarantee success in the building of infrastructure by private developers. Among the causes for these incomplete infrastructures built by private developers, it is noteworthy the fact that the guarantees given by private developers to the government as a compromise to complete the infrastructure generally determined

by the amount of parcels reserved for the government to be donated if the developer does not complete the urbanization were not enough for the government to sell and finish the settlement infrastructures. Furthermore, the lack of penalty to developers that do not complete infrastructure, or that did irregular settlements, turned to stimulate irregularity, which does not require initial investments[1].

The strategy of transferring the infrastructure and parcels construction to private developers was not successful: it resulted in land valuation, usually appropriated by landowners in this process of rural-urban transformation, and in significant public costs in order to complete the infrastructure in unfinished plots, to provide equipment and services under a urban growth model based on physical extent, opposite to the idea of urban concentration and efficiency (Santoro & Bonduki, 2010).

Incomplete urbanization, perhaps not consciously at the beginning, was set as a strategy to progressively urbanize areas of urban expansion, maintaining urban needs that had to be gradually achieved through a relationship consisting of trading favours between groups of residents and the local government. The strategy to develop the infrastructure piece by piece, slowly and gradually, is interesting in terms of political gains and urban patronage maintenance. However, it still is possible to observe the important role held by technicians in this process, whose knowledge guided sectorial proposals, and, as Bichir & Marques (2001) affirm, it is possible to relativize the automatic association between support objecting votes on political elections (a term known as clientelism) and targeting infrastructure investments in the periphery.

Peter Hall (1996) argues that, in the 1970s, urban planning was falling into disbelief because, instead of controlling the urban sprawl, it encouraged it in every imaginative way possible.

## 5. The democratization period: municipalisation with no financial autonomy and the halt of the urban sprawl planning by the City Statute

Implementing democracy and municipalisation, two issues that emerge during the constituent process in the 1980s, did not promote deep changes in the urban expansion processes, since some elements were maintained, such as the incomplete urbanization logic, the dependence on federal resources and the lack of municipal autonomy, which were reinforced by frail local clientelist relations and the continuing land speculation processes.

Municipalities depended (and still do) on federal resources and, with both no funds and the crisis that culminated in the end of the military dictatorship, the government drastically reduced federal resources for urban development by the late 1980s and began dismantling the institutional structure built during the HNB period as well. The State of São Paulo, in a way, was an exception to this, because the resources obtained through the tax on the circulation of goods and services (ICMS) would keep the investments in social housing throughout the 1990s.

However, in the 1980s, the issue of regulating the urban expansion emerges in the bill that will create the City Statute. Carefully describing the features of the municipal Master Plan and providing an urban sprawl program, the initial proposal did not last long and was quickly substituted by another bill containing just the definition the minimal content that should be in the master plan, a definition in force in the City Statute, which does not address the sprawl issue.

[1] The crime of establishing irregular settlements begins when the developer sells the first parcel, but it is only discovered when it is open to public, or anyone starts to construct, many years later. So their sentence is often expired by lapse of time, enough to let them free from prison.

This initial proposal contains some elements that draw attention, like very detailed programs and their relation with the process of building information and decisions that allow assessing whether or not an urban expansion project is being proposed in accordance with the global planning of the municipality and whether or not it should be analysed ex-ante, that is, before the spontaneous process of expansion, so intensively lived in many metropolises during previous decades. These details were excluded in 1992, after an evaluation conducted by the Ministry of Social Affairs. According to Bassul (2005, p. 113), the technical sectors of the federal government criticized the exces mechanisms concerning the master plan that were not followed by explicitly instituting the ob content of the law. This critique, that Bassul (2005) calls an institutiona idea of a compulsory minimum content of the Master Plan that did not contemplate any of the proposals in the initial bill. At the same time, the obligation for plans to have rules for land parcelling and zoning was instituted, which would inevitably lead to the rhetoric-plans , since the r how (quantitatively and qualitatively) one can occupy a lot are what actually determines an urban project for the area.

Another significant loss was the exclusion of articles that sought to control real estate speculation, demanding that properties not inhabited by their owners (i.e., that essentially had exchange value) would be offered for renting, and that a single owner would have a maximum limit for landholding urban areas. These suggestions would not only collaborate with the urban sprawl would also have the opposite effect of the 1940s tenancy policy: by increasing the supply of properties for renting, they would probably discourage the purchase of houses.

Removing these clauses ended up making the master plan responsible for defining whether or not an estate is being underused, one of the few clauses that was kept in the law. An opportunity was lost: the State could introduce, in a democratic way, planning issues for areas under urban expansion, transforming these plans in instruments that would effectively fall upon the urban sprawl, not having the traditional rhetoric-plans .

## 6. The rules established by the City Statute

The City Statute (Federal Law 10.257/10) brought new expectations regarding the possibility that the new rules could help avoid the need to expand. However, the Statute has few instruments concerning the ex-ante and quality production of new urbanization processes. It does not require, for instance, establishing or revising the urban perimeter connected to the planning for the development of the municipality based on diagnosis and democratic decision-making processes; it does not connect the master plan s content and the rules for land parcelling, the municipality does it, in an arbitrary way; it does not contain instruments for regulating rural areas, showing even some ignorance over what can be planned for them (SANTORO; COBRA; BONDUKI, 2010). Since it is not compulsory it is very discretionary, municipalities can establish their own urban limits in laws other than the master plan, not connected to its planning. The main expectation concerned the democratic process of decision-making, which also proved to be mainly absent.

### 6.1. The experience of using the Onerous Concession for Changing Uses (OCCU)

Several instruments in the Statute can indirectly collaborate to avoid they were not conceived for exclusively doing so, like the ones that

demand for urbanized land in central areas, erasing urban vacuums an
for horizontal stretching, which increases with real estate speculation.

An instrument that the City Statute[2] brings and that can be used over areas of rural-urban transition is the Onerous Concession for Changing Uses (OCCU), aiming to recover land valuation in changing its use from rural to urban, by taxing the permit to urbanize or changing from a less rentable use to another (SANTORO, 2009). Santoro, Cobra and Bonduki (2010) provide an overview of this instrument in the State of São Paulo and show that it is not very applicable; few municipalities use it for sprawl areas, with goals that often differ from its planning, corresponding to an onerous form of land regularization[3]. Other municipalities that apply this instrument in discontiguous regions of the urban area, in order to either discourage the market to produce urbanization to stimulate the contiguous urbanization in the urban area (or would it be to benefit the owners of lands contiguous to the urban area?).

Despite being in an early stage, there already is a small dissemination of its possible use in master plans (SANTORO, 2012). São Carlos is one of the few municipalities that used this instrument in two experiences studied by Santoro (2010; 2012). The cases show that the urban project was not done, the amount collected had no connection to the valuation and very little was recovered; however, the value obtained was equivalent to the expenses of the undergoing city s urbanization pr

The challenge of implementing OCCU shows that legal interpretations are required to prevail over its oppositions: it is necessary to establish the basis or basic reference over which the Concession for Changing Use would be rated, analogous to the coefficient for minimal use Concession of the Right to Build (OCRB). Another requirement for delving the issue concerns establishing relations between the urbanization costs and benefits and to also address who is financing each cost, because the expenses with infrastructure, new facilities and services resulting from the urban sprawl demanded to the State are frequently not tallied in these costs. The stretching is interesting for the market-driven logic, that seeks smaller prices to diminish the costs; but the State has little interest in it, since the government needs to make considerable investments to build good connections between different regions of the city even though it may not account for these expenses, since they can be postponed to the next administration.

Regarding the definition of areas where the OCCU will be permitted (Federal Law 10.257/01, article 29), it is possible to observe that municipalities have delimited it in different ways: they delimited areas for taxing while leaving areas where land valuation can be incorporated by the owners outside this taxation. This is a threat for the equal taxation, pointed by Rabello (2006) as a guarantee of the equalitarian distribution of urbanization benefits.

### 6.2. Avoiding the occupation of areas of risk: the changes in the City Statute

In 2012, two articles were included in the City Statute: 42-A and 42-B (Federal Law 12.608/12), both aiming to address the landslide problems that happened in the Rio de Janeiro highland region, among other problems. The first article clearly aims to avoid disasters by including the requirement of planning areas that pose life risk, defined as susceptible to great-impact landslides, sudden floods and related geological or hydrological processes.

[2] Or instruments like the Consortium for Urban Operations that, theoretically, can work as an instrument for developing the urban expansion project, which would regulate the marked and recover the land valuation in the rural-urban transition.

[3] Among them: Araçatuba, Assis, Boituva, Botucatu, Marília, Mogi das Cruzes, Mogi Guaçu, Ourinhos, Poá, Porto Feliz, Santa Cruz do Rio Pardo, São Carlos and Tatuí.

The second article, 42-B, addresses the requirement of developing a specific project so the municipality can enlarge its urban perimeter, containing parameters for land parcelling, road system infrastructure, public facilities, as well as delimiting special zones of social interest or zones for the protection of historical, cultural and environmental heritage. This article embodies principles of ex-ante urban projects and should be established by a municipal law, therefore, it needs to go through democratic processes similar to the ones required for approving master plans or zoning legislation. Although its nature is revolutionary and positive, there still is no information on the effects of this legal alteration in the municipalities.

## 7. Urban sprawl norms in the municipalities of the State of São Paulo

Therefore, the lack of norms requiring the sprawl regulation or planning, during both the democratization period and the previous ones, coexists with the continuing urban expansion as a real estate strategy. Considering this has been maintained, the work sought to empirically assess how the urban sprawl planning happens in the municipalities of the State of São Paulo nowadays.

In the 1980s, the State of São Paulo underwent through processes of demographic transformations and reversion of big cities concentration associated with, on one hand, the deconcentration and changes in the industrial production process and, on the other, new condominial forms of urbanization. In the 1990s, some processes summarize the explanations for urban sprawl in these cities: (a) the fluctuation in rural land valuation which generated little opposition to the change from rural to urban use; (b) the dissemination of typologies, like the horizontal development of houses, ranches and small farms used for recreation purposes, among other diffuse forms of occupation; and (c) the investments in the road system and the stimulus to using private vehicles.

Little by little, the justification of the urban sprawl, by becoming more complex, has disengaged itself from the urban population growth or the peripheral growth pattern, which will culminate in a revision of the concept (SANTORO, 2012).

The analysis on the recent cycle of master plans, developed after the City Statute, offers examples from many cities in the State of São Paulo that are stimulating the urban sprawl, including some places where the population has decreased. For this analysis, it was created a tabulation with the quantitative and qualitative data collected in 100 municipalities in the State of São Paulo, whose master plans and complementary territorial laws were approved after the enactment of the City Statute (Federal Law 10.257/01), between 2003 and 2010. With no statistical intentions, this approach allows a more panoramic regard, pointing to recurring situations, some even surprising or that lack in this academic field. This analysis allowed making some considerations in two main senses, from the urban and the rural arenas.

From the urban sphere, the data shows that the real estate market employed a strategy aimed at the growth in physical extension, which gained new typologies and collaborated even more for a diffuse city structure, whose implementation seems to face no opposition from its planning, which keeps a high tolerance concerning urban sprawl, with perimeters rendered flexible on d logic of the real estate market.

Gated developments have appeared in this analysis as the main element of this new urban typology, especially in the State of São Paulo. However, even though the research has not properly identified it, this work raises a hypothesis (after a revision that should be made concerning the recent changes in the urban field) that creating new rules also modifies the parameters of land use, parcelling and occupation in force, in order to allow social housing production oriented by the federal housing finance program My House, My Life . Although it is not possible to frame these cases under a specific typolo

possible to observe changes in the parameters of housing quality, the quantity of implemented infrastructures and, in addition, the absence of land parcelling with donation of public areas, reinforcing condominial typologies inspired by gated developments. There are also cases where the parameters used for the occupations under urbanization and land regularization processes expand to other vacant areas where social housing will be implemented, commonly reproducing the peripheral growth pattern in new urbanization processes. That is the case, for instance, of identical parameters attributed to the Special Zones of Social Interest (SZSI) in occupied areas and in areas considered underused or vacant.

The analysis on the urban growth regulation in the macro-metropolitan paulista territory, where urban dispersion is easily perceived, points to the flexibilization of norms in two possible ways: to allow the expansion over rural areas, according to the market demand, by revising the perimeter and creating specific urbanization processes in these cases; and to regularize typologies like gated lots, at least in the municipal sphere.

The analysed norms are based on the urban and on the possibility to urbanize, with almost no constraints, except if there is any environmental restriction. Regarding the urban perimeter flexibilization on demand, it is known that:

- The laws that define the urban perimeter are changed on a case-by-case basis (either for building social housing or for other typologies), without requiring previous diagnosis that shows to where one wants to expand;
- In rare occasions, it is required a Study on Neighbourhood Impact, with a technical report from a Municipal Council or Office or with public hearings specifically held to permit the perimeter change;
- The urban borderline is generically defined through a width from the current perimeter, with no rigour or study, and there are even cases that demand growth by contiguity to the already urbanized area;
- There are norms created specifically to recognize the urbanization as soon as it happens. In these cases, it is sufficient to develop an infrastructure in the lot to be parcelled, that the change in the land classification happens automatically. This occurrence has been nicknamed if urbanized, it is urban ;
- Finally, in some municipalities, there is a rapid increase in zones with specific urbanization in the rural areas, in accordance with Federal Law 9.785/99, as a way to regularize urban parcels in rural areas, therefore introducing a process of regularizing urban dispers time that that it renders the urban expansion over rural areas flexible .

By observing these possibilities, one can conclude that, even if there is a defined urban perimeter, this does not mean that it is not possible to urbanize over the rural areas. These are the so-called hybrid norms, under which one cannot say there is no control over urban sprawl, since the limit is defined. However, the possibility of urbanizing is also rendered flexible, with norms that vary from too liberal to norms that establish changes by negotiations between the Executive and Legislative branches and the owners. This allows to argue that the analyses observing the effects of urbanization control policies in the land market in the State of São Paulo without qualifying them make a mistake, because the division is not based on whether they control or don t control the urbani and vary greatly over time.

The frequently identified flexibilizations and amnesties are examples of a behaviour that does not follow the restrictions, unless they are aligned with the stakeholders strat

growth and real estate development, in an alliance based on the idea that growth equals development (MOLOTCH; LOGAN, 1987).

In order to make some developments viable, it is required to annul the conflicts over urban legislation, usually resolved through an agreement between developers, public authorities and financing institutions, that alters the municipal laws. Royer (2002) and Silva et al. (2011) mention this kind of flexibilization in order to largely implement social housing through public funding, and the results from these researches will be corroborated by what is shown here. Nowadays, the federal program My House, My Life (from 2009 onwards) repeats history since it reproduces th on a large scale.

Concerning the rural sphere, the work points to the recent changes in the agricultural production that seem to be related with other current forms of urban expansion. For instance, essentially rural municipalities that lost their cultures go through diffuse processes of urban occupation, where the occupation by ranches, country houses and small farms is the keynote. The contrary can also be observed: when there is intensive agriculture, the urban occupation is refrained and more clearly delimited.

These disperse typologies, to be implemented, need to render flexible not only the urban norms but also the rural ones, drawing attention to the pressing need of planning what is wanted for the rural sphere, in terms of both zoning and structuring a policy for the rural area that involves funding other kinds of rural activities and controlling its occupation.

Although this historical recovery of the issue has met attempts to create laws requiring the expansion planning, like in the bill that created the City Statute, the Federal Law on Land Parcelling, from 1979, still is the norm that regulates urban expansion in Brazilian municipalities. This law holds the municipality responsible for controlling and planning where the city will grow to, while the municipal administration keeps meeting the market demands, in a reactive instead of proactive position, showing the role of the State concerning urbanization processes. The organized civil society sees the urban sprawl process as a strategy to maintain speculative processes and social segregation and it does not consider this planning necessary. Even though this issue is being constantly debated in the Brazilian urban field, it is rarely approached as a matter of social justice.

This scenario of municipal plans that render the urban sprawl flexible and that increase real estate activity, currently underway in paulista cities, will empower the dispute for land and land values, demanding a reaction from the State to orientate, control and plan the areas of urban expansion. The current federal norm that requires the development of urban expansion plans brings challenges in a range going from its construction to its implementation, proving the issue is relevant, present and deserves delving. Moreover, the alliance equating growth and development in non-metropolitan cities is a constant that faces little opposition.

Therefore, this work sought to demonstrate that, admitting the necessity and the recurrence of the urban sprawl process, it is necessary to plan it in order to avoid urban, environmental and social damages, fairly distributing both the burden and the benefits coming from the urbanization, avoiding speculative processes that are a common feature in the changes from rural to urban use and building *ex-ante* urban projects that are parts of a city, with a complete urbanization.

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# HYDROLOGICAL CONNECTIVITY IN THE CITY-REGION LANDSCAPE: HAS PLANNING MISSED THE BOAT?

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Abstract: Urbanisation processes significantly impacted and continue to impac systems in the city-region scale. The current fabric of urban areas is largel land development and planning decisions in which there was relatively little impact upon hydrological systems within and outside urban areas. Typically, close relationship, urban and regional planning and water resources manageme carried out separately and guided by different institutional arrangements. impacts of urbanisation on hydrological systems extend beyond urban stream h include urban residents liveability. Further, climate change and ongoing po are set to add additional pressures on how both our cities are planned and are managed. Hence, there is increased need for better integration between th

Drawing on a conceptual framework based on urban metabolism, this paper whether an integrated greenspace framework could provide the missing link fo (re) thread hydrological connectivity in its decision-making process. The paper basis for this exploration the current state of greenspace planning in three city-regions: South East Queensland, Melbourne and Perth. The analysis foc documents, including plans, strategies and policies used to guide water reso planning and management in the three regions. Findings are discussed around themes related to hydrological and environmental connections, and whole c planning.

Keywords: water sensitive cities, urban metabolism, Australia

## 1. Introduction

Following a worldwide trend, since the late 1940 s, the Australian urbanisa favoured the use of engineering solutions to manage water flows in urbanised al., 2009). Accordingly, many urban streams were piped and located undergrou systems were channelized to enable urban expansion into floodplain areas. As continued to be buried, paved, and directed into culverts, pipes and concre greater became the habitat degradation, pollution and fragmentation of urban associated greenspaces such as riparian vegetation (Elmore and Kaushal, 200 Australian cities expanded to accommodate ongoing population growth, area greenspaces have become increasingly fragmented and replaced by impervious (Donofrio et al., 2009).

Additionally, at a catchment and regional scale, abovementioned urban water approaches have disrupted natural flooding processes by removing vegetation impervious paved surfaces, eliminating natural water storage capacity in th disrupting surface water flow paths (O Neill cited in Lennon et al., 2014). in severe weather events due climate change is likely to exacerbate water ma and thus compromise the liveability of urban areas (JimØnez Cisneros et al., urban areas are deeply connected to, and dependent on, the natural features they are located in and water comprises a critical linking element whose conn be better understood by and considered in decision-making processes concernin

The impacts of urbanisation on natural processes could be reduced if decisi
urban and regional planning and water resource management were better
However, typically, water resources management in Australia has been carried
government and non-government agencies without being coordinated and/ or in
address the total water cycle (National Water Commission, 2013). This pa
contribute to informing improved water governance in Australia by explorin
joined urban and water management approach could be facilitated through a
greenspace framework[1] (incorporating natural ecosystem and green infrastructur
favours the restoration of hydrological connectivity across the city-regio
paper draws on the urban metabolism concept as the basis for this exploration
the current state of greenspace planning in three Australian capital city-r
Queensland (SEQ), Melbourne and Perth.

## 2. Research Approach

Three case study areas have been selected as the subject for this paper: th
Melbourne Metropolitan Region and the Perth Metropolitan Region. Water mana
these regions is performed under distinct jurisdictional and institution
therefore providing scope for comparing water planning and governance ac
statutory and non-statutory planning systems.

Data was collected through a documentary search targeting online document
through state and local governments websites, including planning policie
strategies and secondary reports related to water resource management in the
in-depth content analysis was subsequently performed through a coding system
software. Coding reported by this paper refers to two themes: hydrological an
connections, and whole of landscape planning (see Table 1).

In total 106 documents were analysed, 37 for the SEQ region, 39 for the Mel
and 30 for the Perth region. However, it is important to highlight that thi
cover the review of all available plans and strategies but a selection of d
provide insights to water management at the city-region scale. Table 2 pro
analysed documents along with coding results across the three regions.

Table 1. Themes used to guide documentary content analysis

| Themes | Sub-themes |
|---|---|
| Hydrological and environmental connections | Ecosystem services |
| | Water quality |
| Planning | Whole of landscape planning |

## 3. Results

Themes discussed in this section are listed in Table 1. Results for each them
the following sequence: SEQ region, Melbourne Metropolitan region and Perth
region.

[1] The terms greenspace and open space are often used interchangeably by scholars, consultants and gove
around the world (Swanwick, C., Dunnett, N. & Woolley, H. 2003. Nature, role and value of green space in
overview. Built Environment, 29, 94-106). Generally speaking greenspace can be defined as areas within th
that may or may not be publically accessible. They may be part of a functional infrastructure or ame
churches, cemeteries, parks and gardens) or be a natural and semi-natural area (forests, wetland, etc.).

## 3.1 Hydrological and Environmental Connections

References to hydrological and environmental connections were registered in documents for the SEQ region. These include connections associated with wate well as large infrastructure projects. For example, the QLD Urban Drainage reference to the impact of land use types on hydrological regimes. Reference of ecosystem services were found in five of the documents. In particular, the outlines a clear framework to apply the concept of ecosystem services to na management in the region. The State Planning Policy recognises the need to co of ecosystem services in planning decisions.

Less than a third of the analysed documents for the Melbourne metropolitan references to hydrological and environmental connections. These referenc connections between stormwater and water quality, alteration of hydrological urban development, linking water quality of Port Phillip Bay with landuses a and traditional stormwater system designs focused on transporting water only.

References to hydrological and environmental connections were registered in l of the documents for the Perth Metropolitan region. Observed references ack relationship between landuses and hydrological balance; existence of groundwa systems; impact of hydrological changes on the region s wetlands; and role water management practices in reducing water balance problems by taking into the region s hydrological regimes, including groundwater and surface water Given the hydrogeological characteristics of the region, references to the ro systems in supporting the region s ecosystems and human population are frequ documents, particularly the Gnangara groundwater system. Specifically, th Regional Water Plan Discussion Paper outlines the need to protect this syste quality due to its high water supply value for the region:

> Drinking water source protection has had a dramatic impact on land-use the region. The urban corridor concept, in large part, reflects a desir high water-supply values of the Gnangara and Jandakot mounds from inco land uses. (p. 48)

Documents also make references to the need to improve stormwater management t impact on the water quality of the region s waterways and wetlands. Decline across the region has

been attributed to large modifications to surface water hydrology due to urban development as well as inadequate stormwater management practices t consider interactions between surface flows, groundwater hydrology and l characteristics of waterways. Only two documents make references to the ecosystem services. These include references to the ecosystem services pr region s wetlands, including flood control and improving water quality.

## 3.2 Whole of landscape planning

The analysis of 37 documents from SEQ reveals that only six of these docume consideration a whole-of-catchment approach to planning. These consideratio related to the water cycle and how management should take an integrated appr impacts on other parts of the regional landscape. For example, the Water by outlines that management practices need to consider the landscape scale:

Table 2. List of analysed documents along with coding results across the three regions

| SEQ region | Hydrologic and environmenta connectior | Whole of landscape planning | Melbourne Metropolitan reg | Hydrologica and environmenta connection | Whole of landscap planning | Perth Metropolitan region | Hydrologica and environmenta connection | Whole of landscape planning |
|---|---|---|---|---|---|---|---|---|
| 1. DEHP 2010 Urban Stormwater Plann Guidelines | * | * | 1. BMT WBM 2013 Integrated Water Management Opportunities Fo Growth Areas | * | | 1. DEC 2009 GS Threatening Processes Groundwater System | * | * |
| 2. DEHP 2013 Healt Water Management Plans Guideline | * | * | 2. Catchment and Protection Act 1 Version 040 | | | 2. DH 2010 Greywater Reu Code of Prac | | |
| 3. DERM 2009 SEQ NRM Plan 2009-31 | * | * | 3. Citywest Water Permanent Water Saving Plan | | | 3. DoW 2004 Stormwater Management Manual | * | |
| 4. DERM Understanding Wa Resource Plannin | | | 4. Design Flow 20 Quiet Lakes Wate Quality Manageme Plan | | | 4. DoW 2008 Lo Water Management Strategy | * | |
| 5. DEWS 2010 Wate Sewerage Plannin Guidelines. (ame 2014 | | | 5. DSE 2011 Draft Victorian Waterw Management Strat | * | | 5. DoW 2009 Decision Proc Stormwater Management | | |
| 6. DEWS 2013 Bulk water supply cod | | | 6. DSE 2011 Governance Guide VIC Water Indust | * | * | 6. DoW 2009 Dr Perth Peel Regional Wate Plan 2010-30 | | |
| 7. DEWS 2013 Discussion Paper Water Sector 30yr Strategy | | | 7. DSE 2011 Living Melbourne, Livin Victoria Roadmap | | | 7. DoW 2009 Gnangara Groundwater Allocation P | * | |
| 8. DEWS 2013 Qld Urban Drainage Manual | * | | 8. DSE 2012 Livin Victoria Implementation P | * | | 8. DoW 2009 GS Regional Aqui Modelling | | |
| 9. DEWS 2013 Water And Sewerage Code | | | 9. DTPLI 2013 Oper Space Strategies PN70 | | * | 9. DoW 2009 Jandakot Drainage and Water Management Pla | * | |
| 10. DEWS 2014 WaterQ 30 Year Strategy | | | 10. DTPLI 2013 Pl Melbourne 2050 | | | 10. DoW 2009 Land and Water Planning | | * |

| SEQ region | Hydrologic and environmenta connectior | Whole of landscape planning | Melbourne Metropolitan reg | Hydrologica and environmenta connection | Whole of landscap planning | Perth Metropolitan region | Hydrologica and environmenta connection | Whole of landscape planning |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Background Paper | | |
| 11. DSDIP 2013 Coastal Protecti Regulatory Provi | | | 11. DTPLI 2013 Pl Melbourne Direct Initiatives and Actions | | | 11. DoW 2009 Perth Peel Regional Wate Plan Backgrou 2010-30 | * | |
| 12. Healthy Water Strategic Plan 2 22 | | | 12. DTPLI 2014 Pl Melbourne | | | 12. DoW 2009 Perth Peel Regional Wate Plan Discussi Paper 2010-30 | * | |
| 13. Qld Environm Protection Water Poliy 2009 | | | 13. EPA VIC Bette Bays Waterway | * | | 13. DoW 2009 Toward a Wate Sensitivey Ci | | |
| 14. Qld Gov 2011 Greenspace Strat 2011-20 | | | 14. GAA PSP Guidelines Notes Integrated Water Management | * | | 14. DoW 2009 Urban Drainag Initiative Ph | | |
| 15. Qld Gov 2013 Queensland Plan | | | 15. Melbourne Docklands 2008 E Guide | | | 15. DoW 2010 Predicting Fu Demand For Water | | |
| 16. Qld urban uti Recycled Water Policy | | | 16. Melbourne Docklands waterw strategic plan 2 18 | | | 16. DoW 2012 Water Monitor Guidelines | * | |
| 17. Qld Urban Uti Water Netserv Pl Part A | | | 17. Melbourne Wat 101 | | | 17. DoW 2013 Better Urban Water Management Guidance | * | |
| 18. Qld Water Act 2000 | | * | 18. Melbourne Wat 2007 Flood Management and Drainage Strateg | | | 18. DoW 2013 Controlling Groundwater Urban Development | | |
| 19. Qld Water Efficiency Label Standards Act | | | 19. Melbourne Wat 2007 Port Phill Westerport Regional | * | | 19. DP 2010 Directions 20 | | |

| SEQ region | Hydrologic and environmenta connectior | Whole of landscape planning | Melbourne Metropolitan reg | Hydrologica and environmenta connection | Whole of landscap planning | Perth Metropolitan region | Hydrologica and environmenta connection | Whole of landscape planning |
|---|---|---|---|---|---|---|---|---|
| | | | River Health gy | | | | | |
| 20. Qld Water Regulation 2002 | | | 20. Melbourne Wa 2007 Principles Waterway and Drainge | * | * | 20. DP 2010 Ou Metro Perth a Peel Sub-regi Strategy | | |
| 21. Qld Water Su Regulator 2013 Guidelines Water Supply And Sewge | | | 21. Melbourne Wat 2008 Flood Prone Areas Guidelines | | | 21. DP 2011 Central Metro Perth Sub-regional Stgyat | | |
| 22. QWC 2010 SEQ Water Strategy | | | 22. Melbourne Wa 2011 Understandi the Western Port Environment | | | 22. GHD 2008 Potential Use Stormwater in Perth gion Re | | |
| 23. QWC 2012 SEQ Water Strategy Annual Report | | | 23. Melbourne Wat 2012 Draft Healt Waterways Strate | | | 23. Government WA 2009 GSS Analysis of Public Submissions | | |
| 24. SEQ Healthy Waterways Strate 2007-2012 | * | | 24. Melbourne Wat 2012 Draft Stormwater Strat | * | * | 24. Government WA 2009 GSS Draft Sustainabilit Strategy | | |
| 25. SEQ Regional 2009 - 2031 | * | * | 25. Melbourne Wa 2012 Draft Waterways Operat Charter | * | * | 25. WA 2006 SPI Water Resourc | | |
| 26. SEQHWS 2007-2012 Coastal Alg Blooms Action Pl | * | | 26. Melbourne Wat 2012 Planning fo SLR Guidelines | | | 26. WAPC 2008 Better Urban Water Management | * | * |
| 27. SEQWater 201 Land and Water Development Guidelines | | | 27. Melbourne Wat 2012 Strategic Direction | | | 27. WAPC 2008 Planning Bull 92 | * | |
| 28. SEQWater Strategic Plan 2 to 2016 | | | 28. Melbourne Wat 2013 Annual Repor | | | 28. WAPC 2009 Liveable Neighbourhoods | * | * |
| 29. Southern SEQ Distributor Ret | | | 29. Melbourne Wa Integrated Water | | * | 29. Water Corporation 20 | * | |

| SEQ region | Hydrologic and environmenta connectior | Whole of landscape planning | Melbourne Metropolitan reg | Hydrologica and environmenta connection | Whole of landscap planning | Perth Metropolitan region | Hydrologica and environmenta connection | Whole of landscape planning |
|---|---|---|---|---|---|---|---|---|
| Authority Agree 2011 | | | Future Melbourn North | | | Water Foreve: Toward Climat Resilience | | |
| 30. State Plannin Policy 2013 | * | | 30. Office of Liv VIC 2012 Water Cycle Management Business Strateg | | | 30. Water Corporation 2 Water Forever Whatever the Weather | | |
| 31. Sustainabilit Planning Act 200 | | | 31. Office of Liv VIC 2013 Melbourne's Wate Future consultat paper | * | * | | | |
| 32. Sustainable Planning Regulat 2009 | * | | 32. Office of Liv VIC Melbourne's Water Future | * | | | | |
| 33.Water by Desi 2010 Deemed to Comply Solutions SEQ V1.0 | | | 33. South East Wa 2011 Permanent Water Saving Pla | * | * | | | |
| 34.Water by Desi 2010 TWCM Planning Guidelir SEQ | * | * | 34. South East Wa 2013 Draft Water Plan | * | | | | |
| 35.Water Resource Moreton Plan 200 | | | 35. South East Wa Corporate Plan 2 2016 | | | | | |
| 36.Water Supply S Reliability Act 2008 | | | 36. Water Act 198 | | | | | |
| 37.Water Transiti Regulation 2012 | | | 37. Water Supply Demand Strategy Melbourne 2006- | | | | | |
| | | | 38. BMT WBM 2013 Integrated Water Management Opportunities Fo Growth Areas | | | | | |
| | | | 39. Catchment an Land Protection 1994 - Version | | | | | |

> Landscape intent – When considering a stormwater treatment measure, its co
> overall development form and landscape intent is important. In many situati
> used in the landscape to maximise visual and recreational amenity and to pr
> urban environment. (p. 8)

The analysis of 39 documents from Melbourne also shows that the concept of wh
planning is not widely discussed. In fact only eight of the documents had some re
an integrated and more holistic approach to water resource management and plannir
call for better integration between water and urban planning to maximise the p
planning in aiding the management of water resources, particularly drinking
stormwater. An example of this reference is provided by the Draft Waterway Manageme

> Actions to protect or improve waterway condition can have impacts on other
> urban water cycle, highlighting the need for urban planning, water planning
> management to be integrated to achieve multiple benefits. For example, inc
> harvesting can provide water to urban water users while at the same time p
> stormwater runoff to waterways. This interconnectedness requires planners fr
> urban water cycle to work together to deliver the best outcomes for the commu

Additionally, documents also outline the need for a water planning framework that
stakeholders interests as well as is aligned with a total water cycle management appro
the Living Victoria Implementation Plan refers to a new water planning framework
not only provide better integration between urban planning and water planning bu
multiple interests in water planning, including community s need:

> Reform Element 1: Overhaul Melbourne s water planning framework
> The first element in the Council s reform package is designed to match th
> framework with the evolving needs of the broader community. Currently water p
> predominantly by water businesses, with the broader community having a li
> proposed reform introduces a water planning framework enabling co-produced
> plans that meet community needs and integrate with urban planning. Importa
> changes to urban planning and building oversight that better reflect the wa
> necessary to ensure Melbourne s liveability. (p. 10).

Only four of the documents analysed for Perth make reference to the planning at
Specifically, the Gnangara Sustainability Strategy Threatening Processes to Ground
there is a gap in knowledge related to understanding ecosystem processes associate
the Gnangara system from regional perspective.

## 4. Concluding Discussion

Under a more holistic approach, water resources management and planning need to
hydrological and environmental connections as there is a direct interdependent rel
resources supporting cities and their surrounding region. With the exception
hydrological and environmental connections were often identified amongst analysed
included connections involving both surface and groundwater (particularly in the

relationship between stormwater management practices and water quality objectives need for water planning to consider broader regional and landscape scales were rar all levels.

Greenspaces play a critical role in the water sensitive cities. Trees and other support a range of hydrological functions, including water purification and wa mitigation and erosion control (Millennium Ecosystem Assessment, 2005). Unfortu regional planning approaches in the three case study areas have not considered hy through greenspace planning in their main policy and decision-making processes. pressures from climate change and population growth demand a rethink in the way manage water resources in our urban areas to ensure they continue to be viable in t

Investing urban planning and management efforts towards establishing an integr greenspaces at the city-region scale could result in significant improvements to b streams. For example, Sander and Zhao (2015) list a range of benefits associated w spaces, including ecological, social and economic benefits. Additionally, they a contribute to the stability, adaptability and resilience of urban socio-ecologi Zhao, 2015, pp. 194). For Sch ffler and Swilling (2013), there is advantage in cor green infrastructure to enable them to be designed and planned to function a supporting the re-establishment of hydrological connectivity in the city-region sca re-establishing greenspace connectivity can support multiple functions, including t enhancement of natural heritage and cultural relics, providing opportunities for r 2003); as well as guidance for urban growth and preservation of access to the co 2006). Furthermore, greenspaces connectivity can also be complemented by urban s integrate ecosystem services in the built environment. In particular, urban desig structures, such as green roofs and rain gardens, contribute to ecosystem re strengthening ecosystem functions (Andersson et al., 2014, pp. 450).

Integrated greenspace networks require spatial planning to allocate areas for gre with the natural hydro-geographic features of a city-region before other landuses and Shamir, 2010). Further, such planning needs to occur at the regional or ca ecosystem services provided by a certain parcel of land or land management action existing landuses throughout the catchment (Guswa et al., 2014). Planning for gree scale also facilitates the incorporation of ecological and catchment corridors (G Shamir, 2010). Additionally, planning that is based on the recognition of hydrolog landscape would caution away from developing settlements in floodplains, instead d for recreation and/or agriculture, which can be temporarily suspended during acceptable losses (Carmon and Shamir, 2010, pp. 187). It would also involve pres vegetated surfaces and restricting infill development in lower density areas on s soils may assist efforts to adapt to increased flooding risks in some catchments (C

However, retrofitting existing built areas to establish greenspace networks may p challenges stem from complex urban and water resource planning systems, inclu administrative responsibilities and high implementation costs through to variabili (Nickel et al., 2014). Although there is no one-size-fits-all solution to overco greenspace planning and water management in metropolitan regions (Nickel et al.

greenspace networks may be enabled under the concept of multifunctionality (Selman, 2011), thereby contributing to support water-related ecosystem services and hydro the landscape.

Currently, different government agencies and water businesses manage different s cycle in Australia, including water supply, drainage, water pollution, groundwate conservation and land use planning. Hence, greater coordination is needed to ensur to water management taking into consideration an integrated water resource manage key endeavour of such improved integration between the urban planning and water m could be the restoration of hydrological connectivity across the city-region integrated greenspace framework (incorporating natural ecosystem and green infrastr

The literature provides many definitions and interpretations as to what constitut end, an integrated greenspace framework comprises natural and human-made ecosyste not limited to, riparian vegetation, wetlands, urban parks, national parks, commu water sensitive urban designs such as green roofs, bioswales, rain gardens and fl fundamental aim of integrated greenspace framework is the restoration and mainten connectivity at the city-region scale that has been altered by urbanisation process

An integrated greenspace framework can fulfil multiple objectives relating to bio water resources, land protection, recreation, cultural uses, development control, a mitigation and adaptation. In fact, many scholars have argued that interconnec planned and delivered greenspaces at the city-region scale can provide multipl populations whilst supporting ecological and social processes (Kenway et al., 20 2013; Demuzere et al., 2014; Low Choy, 2009; Benedict and McMahon, 2002; Bengsto Mounting pressures related to managing urban growth, climate change, water secu degradation in metropolitan regions provide an impelling case for a system of mul greenspaces that contributes to such objectives. Specifically, there is incre enhancing multifunctional greenspaces in metropolitan regions as a means to make sustainable, equitable and liveable (Pincetl and Gearin, 2005). However, urban unevenly distributed across urban areas and often rare in socially disadvantaged and Haase, 2014). Thus, the achievement of a connected multifunctional system o integrated greenspace framework, is reliant on the integration and mainstreaming hydrological, biogeochemical and ecological water-related ecosystem services of urban and regional planning processes, and needs to be supported by appropriate r (Ashley et al., 2011; Benedict and McMahon, 2002).

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# Process Management of Low-carbon Urban Development in China: The case study of Shanghai Lingang New Town

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**Abstract:**
*For the time being, China is at its primary stage of low-carbon city development and nearly all the work are done with the design of macroscopical framework while the low-carbon processes within urban expansion in the long run is ignored. Therefore, we should turn this pure low-carbon theory into specific practices and implement them to the urban spatial organization. Besides, it is more and more important to deal with the uncertainties and confusions in the decision-making process using tools of process management.*

*This study focuses on a totally new low-carbon city built from zero--Shanghai Lingang new town which has already become one of the best practice areas and demonstration areas in Shanghai for the discovery of effective ways to improve the planning management. Based on investigation analysis and case studies, we bring forward a new practical model about the process management of Lingang new town which is well organized in four phases, decision-making, planning, implementation, and maintenance. In this way, this new model correlates the urban development policy with the low-carbon practices and helps the seek of the* real management method of low-carbon growth .

*This paper includes:(1) make a plan of action by integrating low-carbon policy, future development features and implementation measures, and integrate the plan into the management framework; (2) adjust development measurements, divide the developing process into baby step (3)organize every* participant, make full use of up-bottom regulatory system and bottom-up *public get evaluation and feedback.*

**Key word:** low-carbon urban development, process management, Lingang New Town

## 1. Introduction

### 1.1 Research background

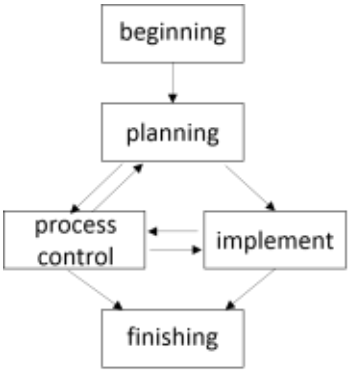
Low-carbon was a totally new concept born in the United Kingdom. Since the ye
government first proposed the idea of Low-carbon economy , the connotation of l

already extend from simply environmental research to a more comprehensive field including social, cultural, economic and environmental issues.

For the time being, China is at its primary stage of low-carbon city development and nearly all the work are done with the design of macroscopical framework while the low-carbon processes within urban expansion in the long run is ignored. There is a famous saying: three planning seven management. The implement of low-carbon strategies, complicated social conditions, multi-roles intervention, all of these growing issues imposed pressures on the process management of low-carbon urban development. Therefore, we should turn this pure low-carbon theory into specific practices and implement them to the urban spatial organization. Besides, it is more and more important to deal with the uncertainties and confusions in the decision-making process using tools of process management.

### 1.2 Definition of Research Object

Process Management first appeared in business administration, which is different from management, it emphasizes more on the sequence of time and how to put theory into practice step by step through overall supervision. The whole process consists five management phases,see in Firgure1-2, our research applied this concept to urban development and found out there existed one-to-one relationship, see in Figure1-2, and this bcomes our main research object.



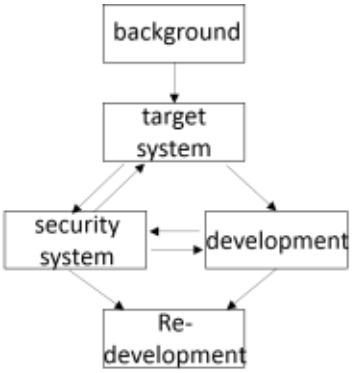




Figure1-1(left). Process management in business administration
Source: http://baike.so.com/doc/5381726.html
Figure1-2(right). Process management in urban planning
Source: drawn by author

### 1.3 Research structure

Firstly, we sorted out the related theories and latest trends by making a general literature review; Secondly, we did case studies to summarize different patterns of low-carbon development; In the third part, we studied every phases of Chinese low-carbon urban planning by using the idea of pr management ; In the fourth part, we focused on a specific case-Shanghai Lingang new combine theory with practices. Last but not the least, tried to summarize the features of process management during the whole phases and seek a real management method of low-carbon growth according to realities of our country.

## 2. Literature review

### 2.1 Connotation of Low-carbon city

Low-carbon city originates in the research and development of low-carbon economy and low-carbon society. As for its definition, different experts have different explanations. Low-carbon city can be defined as the city that is characterized by a low-carbon development pattern, citizens low carbon living and behaviors and urban management based on blueprint of low carbon society (Chinese Society for Urban Studies, 2009). Chinese scholar Xia Kunbao thinks that low-carbon city is to pursue the sustainable production mode and consumption mode (Xia, 2008). After summarizing different definitions Luo Qiaolin gives the connotation of low-carbon city from three aspects: low-carbon urban planning, low-carbon living style and low-carbon urban operation system (Luo, et al., 2011).

### 2.2 Related theories and research trend in Low-carbon urban planning

**(1) Low-carbon urban planning**

Low-carbon urban planning combines low-carbon idea and urban spatial planning, arranges time schedule to achieve the goal of sustainable development (Lei, et al., 2011). In 2007, ChinSiong H. and Wee Kean F. studied the relationship between energy consumption, carbon reduction and urban planning. They pointed out that urban carbon emission could be reduced in the next years by correct policy guidelines in the area of urban land use planning, transportation planning and architecture design (Ho & Fong, 2007). Glaeser E L and Kahn M found out that there was an obvious negative correlation between land development density and carbon emission, which proved the more restriction of land use conducted by urban planning the lower the carbon emission (Glaeser & Kahn, 2008).Professor Pan proposed planning strategies for low-carbon urban planning and distributed them into three levels of regional plan, master plan and regulatory plan (Pan, et al., 2008).

**(2) Low-carbon urban management**

Jenny Crawford and Will French thought the key to realizing low-carbon target is that planning system should be well prepared for new technology, then implement the advantages of nat management and regional power devolution, it was the urban managers and planners who could promote the development of low-carbon city. (Crawford & Will, 2008). Lu used the Delphi method and ISM to analyze the inherent links among 19 factors which affect the low-carbon development in China. The result showed there were 5 levels, government and low-carbon Index were in the highest level and they were the demands right from the area of management (Lu, et al., 2012).

### 2.3 The practices and development of Low-carbon cities in the world

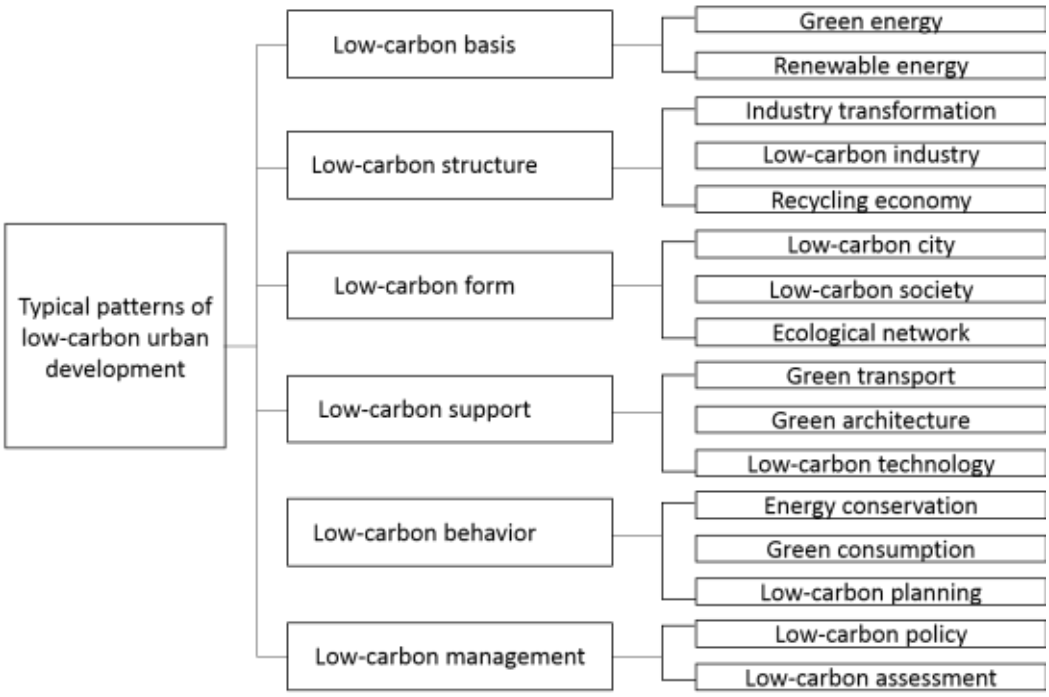
In recent years, more and more countries in the world have carried out practice activities for low-carbon

ISM, interpretative structural modeling

urban development. Some world cities have already made action plans successively, such as London s The Mayor s Climate Change Action Plan (Greater London Authority, 2007)and New Yor PlaNYC2030: A Greener, Greater New York (City of New York, 2007). At the same time, there emerged some international platforms which combined many cities on a global scale to explore the best way of developing low-carbon city, such as the famous C40[1], ICLEI[2], Covenant of mayors and so on.

In nowadays, the majority of successful cases are coming from C40 members, including London, New York, Copenhagen, Toronto, Chicago etc. most of them are in high level of economic development and have quantitative targets together with specific action plan (Large Cities Climate Leadership Group, 2005). Chinese scholar Lu studied all the members of C40 and then summarized five typical patterns of low-carbon development and we completed it to six patterns, see in Figure2-1.

Figure2-1 Pattern and structure of low-carbon city construction in C40




Source: Lu, C. J. et al., 2012. Analysis of Influencing Factors of Low- carbon City Development in China. *China Population, Resources and Environment*, Volume 22, pp. 58

### 2.4 Summary

After doing the literature review we found some common characteristics, first one is that all low-carbon cities share one development background which originated from climate changes; Secondly, low-carbon development should be supported by professional data processing technology; lastly, international

C40, Large Cities Climate Leadership Group
ICLEI, Local Governments for Sustainability

platforms played an important role in sharing experiences, technology and funds.

## 3. Case studies

In the 21st century, the notion of low-carbon development has been sinking deep into the hearts of people, some countries in and around the world develop practical constructions one after another. However, because of the different levels of urbanization and economic development, there would be diversity in choosing the constructive path and developing pattern. After doing the case studies of different patterns of Low-carbon urban development, we summarized three main patterns.

a) Comprehensive developing of low-carbon society . Representative city: London, Tokyo
This kind of pattern nearly concentrates on every part of urban development, range from energy supply to energy consuming, such as new energy development, green architecture, environmental transportation, and low-carbon consumption. These cities are usually in the late industrialization stage and have better foundation on transformation.

b) **Depend on low-carbon industry pulling power.** Representative city: Boston, Birmingham
Low-carbon industry is a new idea opposite to energy intensive industry, it can reach relatively high output by means of low emission of greenhouse gases. Such as Birmingham chose creative and cultural industry (knowledge-intensive) as its core strategy, Boston chose technology-intensive industry to promote low-carbon development.

c) **Build low-carbon community and demonstration area.** Representative city/country: Denmark, Masdar, most Chinese cities
This is a transitional pattern used at the beginning of low-carbon transformation, lots of cities firstly will build demonstration area or small-scale community to gain wider experience. Such as Freiburg in Germany developed two famous low-carbon communities in suburb areas and Masdar eco-city in United Arab Emirates tried to build a zero-emission park.

## 4. Analysis of process management of low-carbon urban development in China

In this section, we will analyze every phase of process management in detail, as the Figure 1-2 shows at the very beginning, which includes background, target system, domestic exploring of low-carbon cities and security system.

### 4.1 The background of Low-carbon urban development

The development of Chinese low-carbon city are influenced and promoted by international practices in the early time. In 2008, World Wide Fund for Nature (WWF) launched the low-carbon city development program in China (LCCI) with Baoding and Shanghai being the first pilot cities (Zhang, 2008), trying to explore new patterns of development for the other cities. Climat

low carbon leadership program in 2008, aimed at constructing city low-carbon leadership in China with the collaboration among relevant local governments, commercial enterprises, research institutions, news media and other shareholders. In 2009, many cities started to make low-carbon plan. It is estimated that there are at least 259 cities put forward slogans of low-carbon city in China by 2011 (Chinese S for Urban Studies, 2011), see in Figure 4-1, and this number is still growing. At the meantime, there has already been a specific framework of four large clusters among those low-carbon cities, they are Bohai costal region, Yangtze River Delta, Pearl River Delta and Southwest region (CCID Consulting, 2011) , among which all the cities shared advanced economic level and developed together as a whole unity.

Figure 4-1. Distribution map of Chinese cities with low-carbon targets
Source: CCID Consulting. (2011). *Strategic Study of Chinese Low-carbon Urban Development.* CCID Consulting.pp.2
Chinese Society for Urban Studies. (2011). *China's Low Carbon Eco-city Development Strategy.* Beijing: China Building Industry Press.

From this chronicle of events, we can see low-carbon pilot cities are the attempts of new urbanization in China. Because urbanization is always the most important driver about energy consumption and carbon emission and whether it can become greener and greener is still unsuspected and full of uncertainties.

## 4.2 The target system of low-carbon urban development

### (1) Low-carbon policies

CCID Consulting, China's largest research, consulting and IT outsourcing service company

In order to achieve the goal of energy-saving and environmental-friendly society and carry low-carbon planning smoothly, both Chinese central government and relevant departments have introduced a combination of policies, see in Table 4-. All these policies worked together to create a better condition for low-carbon development.

Table 4-1 China s main policy framework for low carbon city development

| | | |
|---|---|---|
| National law | | Circular Economy Promotion Law(2005)<br>Renewable Energy Law(2007) |
| National policy | The State Council | Comprehensive program of energy conservation work(annual)<br>Public sector energy efficiency regulations(2008) |
| Ministry policy | Development and Reform Commission | Acting as energy conservation authorities |
| | Ministry of Finance | Financial support for 10 key tasks on new energy and energy conservation(2008) |
| | Ministry of Science and Technology | National assessment report on climate change(2006)<br>Special technology and program for energy saving(2007) |
| | Ministry of Housing and Urban-Rural Development | Advice on the implementation of energy conservation in the field of construction(2008) |
| | Ministry of Transport | Advice on strengthening energy conservation in transport service(2008) |
| | China Development Bank | Implementation of the State council s advice on energy conservation(2008)<br>Program of loans for pollution emission reduction(2009) |

Source: website of NPC, http://www.npc.gov.cn/; NDRC, http://en.ndrc.gov.cn/; Ministry of Finance, http://www.mof.gov.cn/index.htm; Ministry of Science and Technology, http://www.most.gov.cn/; Ministry of Transport, http://www.moc.gov.cn/; China Development Bank, http://www.cdb.com.cn/ etc.

**(2) Low-carbon urban planning system**

After several years of low carbon practicing, some pilot cities summarized a 1+4+X plann based on the demand of central government and local characteristics (Qi, 2013), see in Figure4-2. Every pilot city should integrate low-carbon development into local economy and social development planning. At the meantime, provincial pilots made climate change project and Greenhouse ga every pilot city made low-carbon pilot implementation plan and low-carbon dev some of the local pilot cities had also made special planning projects according to their own features

and development conditions, such as energy saving, clean energy, circular economy, architecture, transport and so on. Those special planning projects played a vital role in supporting, completing and coordinating with low-carbon development

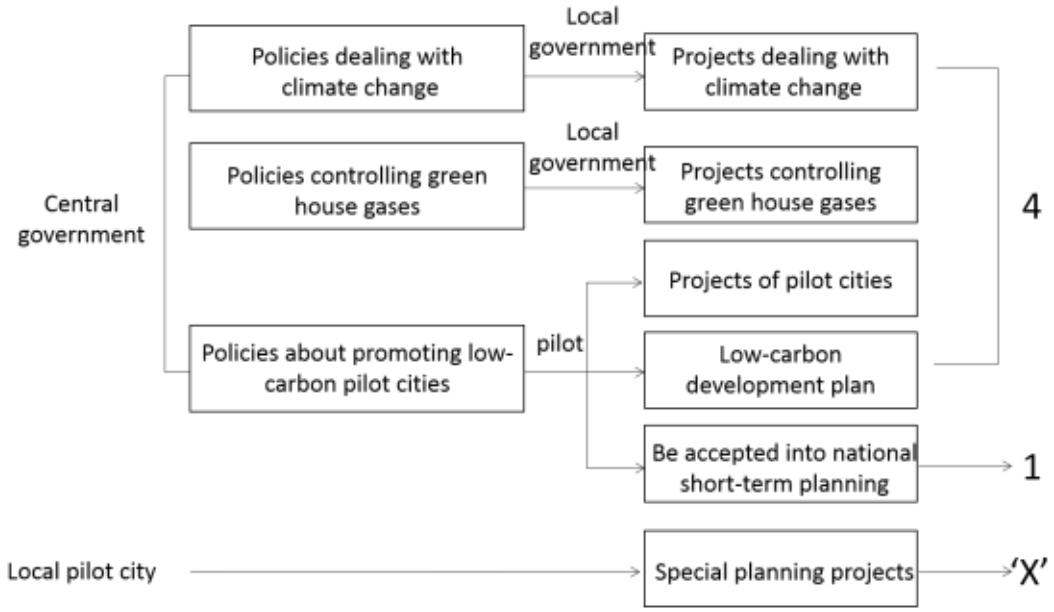



Figure4-2. Low-carbon urban planning system of pilot cities
Source: Qi, Y. (2013). *Annual Review of Low-carbon Development in China.* Beijing: Social Science Academic Press.pp.34

### 4.3 Domestic exploring of low-carbon urban development

Since China is a large country with complicated natural conditions and unbalanced regional economies, all these characteristics finally determine the diversity of low-carbon development. In order to achieve the goal of corresponding target system, different cities choose different constructive paths and time schedules, as Table4-2 shows.

Table 4-2. Low-carbon development patterns for different types of cities

| Classification criteria | Features of cities | Patterns of low-carbon development | Representative cities |
|---|---|---|---|
| Population scale | Small and medium-sized cities | Based on single industry or project | Kunshan, Yiwu, |
| | Large cities and metropolis | Comprehensive development of Mulita-industry or projects | Beijing, Guangzhou |
| Resource endowment | Abundant fossil energy | Combine urban development with industry transformation | Fushun, Daqing |
| | Renewable resources | Explore renewable resources | Baoding, Nanchang |
| Geographical | Coastal cities | Based on marine industry and marine | Tianjin, Qindao |

| | | | |
|---|---|---|---|
| location | | energy resources | |
| | Inland cities | Focus on structure adjustment | Wuhan, Chengdu |
| Industrialization stage | Industrial cities | Improve energy efficiency, change high-carbon industry into low-carbon | Zhengzhou, Taiyuan |
| | Post-industrial cities | Combine low-carbon energy system, industry system and technology system | Beijing, Shanghai |

Source: summarized and made by author

As we have already mentioned in literature review, there are six patterns of low-carbon urban development in the practices of C40 (Figure2-1.) However, most of the low-carbon cities in China are following the patterns of low-carbon basis and low-carbon structure , trying to explore new e and renewable resources, optimizing the industrial structure and striving to develop tertiary industry. By summarizing the majority of Chinese low-carbon practices, we find out two typical representative cities.

a) Baoding style. This type mainly depends on new energy as a breakthrough point, such as the construction of China Power Valley and Solar City in Baoding which contr development of low-carbon society.
b) Shanghai style. This type is mainly driven by some major projects or demonstration areas, such as Shanghai took the chance of World Expo to carry out low-carbon architecture and carbon-offset projects, promote green commuting and low-carbon living, chose Chongming Island and Lingang New Town as low-carbon best practices areas.

### 4.4 The security system of Low-carbon urban development

#### (1) Financial and technical supporting system

The financial supporting system for low carbon city construction mainly consists two parts: policy finance and commercial finance. Policy Finance is based on state credit and needs to get support from the government. And the commercial finance is the most important financial power for the construction of the low-carbon city (Ma, et al., 2012). In recent years, with the introduction of the concept low-carbon city, Chinese financial institutions gradually realized their role in promoting a sustainable society.

In addition to the financial support, there exist some scientific research institutions providing technical support for low-carbon development, such as CSUS and CRSUD , they are non-profit social organization including relevant departments, enterprises, communities, universities and volunteers. The scope of their work covers the research of carbon footprint, advanced developing patterns, low-carbon technology and products, they also hold academic exchanges activities regularly.

#### (2) Indexes system

As a complex giant system, urban construction involves many aspects of social and economic

CSUS, Chinese Society For Urban Studies
CRSUD, China Research Society of Urban Development

development, so we have to establish the macro-urban planning to make all low-carbon economic projects a system and build the evaluation indexes system to assess city development level.

In the view of different development phases of low-carbon cities, Chinese researchers built some corresponding evaluation indexes system from different directions. Such as CASC Index (The Chinese Academy of Social Science) which has 12 specific relative indicators and now widely used in China; Cao Feidian Eco-city Index (Katarina & Tan, 2009)and Tian Jin Zongxing Index (Singapore Government, n.d.)are designed especially for these two cities, which are quite suitable and convenient for local developments; Besides, there is a composite indexes method corresponds to the comprehensive evaluation index of low-carbon economy in urban areas, involving economy, technology, energy and pollution emission, society, environment.

**(3) Monitor and Assessment system**

The index system mainly works as a restriction at the early stage of low-carbon urban development, as to the whole process, there will be monitor and assessment system to guide and guarantee a successful procedure. For the part of monitor system, there are various management mechanism like land use plan, cap-and-trade system, urban scale control etc. For the part of assessment system, China has tried times recent years. In 2011, CSUS created Urban Ecological & Livable Development Index (UELDI) to assess the development situation. In 2013, Chinese Academy of Social Sciences together with Environmental Research Institute and Universities ranked 110 cities by using low-carbon development index, gave a general view of low-carbon cities in China and also provided a basic criteria for the other cities. Besides, Chinese government will publish research report every year to summarize the construction situation.

**(4) Public participation**

Low-carbon development is neither simple market behavior nor total government behavior, it is a process influenced by three main body, government-market-public . In China, ther of public participation in low-carbon development, like the widespread of low-carbon production in daily life, donation to low-carbon projects, and participation in environmental protection activities. Although the degree of participation and low-carbon sense had been improved, there still needs effective ways to guide people to take actions and combine up-bottom regulatory system and oversight system.

**4.5 Summary**

After doing the rounded analysis of the process management of low-carbon urban development in China, we improved the main structure into more detailed one. It turned out that every phase should be well connected, interact with each other and make full use of bottom-up public oversight system to get evaluation and feedback. In the following section, we will take a specific example to analysis the whole process in detail.

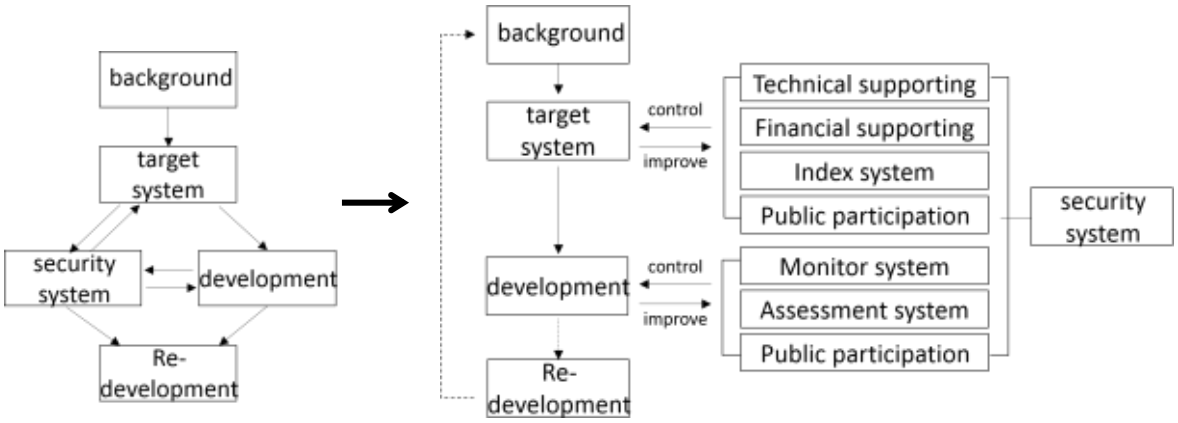



Figure4-3(right). Process management of low-carbon urban planning
Source: drawn by author

## 5. The case study of Shanghai Lingang New Town

### 5.1 Introduction

Lingang New Town is a totally new low-carbon city built from zero, and it has already become one of the best practice areas and demonstration areas in Shanghai for the discovery of effective ways to improve the planning management. Lingang New Town is located in southeast Shanghai, near the East China Sea, the central planning area is 70km$^2$, of which 4.5 km$^2$ is a big lake called Dishui Lake as Figure5-1 shows. The general layout is arranged radially, and it is estimated that all the construction will be finished in 2020. In the next research, we followed the pattern of process management in section 4.5, tried to analyze the low-carbon development of Lingang New Town and gave marks on each part.

Figure5-1. The master plan of Lingang New Town
Source: http://sh.house.163.com/14/0724/07/A1TEU2KK00074JAS_all.html

### 5.2 Background of low-carbon development of Lingang New Town

Lingang New Town was first called Haigang New Town in 2003, after Shanghai gove the research of its development scale, general layout, industry condition and municipal facilities, the name Lingang New Town was finally settled. Next year in 2004, the planning of was officially approved by Shanghai government. It was until 2008 that WWF chose Shanghai as one of the low-carbon pilot cities in China, Lingang New Town had become an important project to promote low-carbon development (Chinese Society for Urban Studies, 2009). In 2011, it was authorized as one of the eight practices area to build resource-efficient and environmentally-friendly society.

All in all, Lingang New Town has a potential to become a low-carbon city.

### 5.3 The building of Low-carbon target system

#### (1) Low-carbon urban planning system and strategies.

Depending on the national low-carbon urban planning system mentioned in the section 4.2(2), Lingang New Town gradually formed its specific one, which concludes four parts. Master planning, Special planning, Zoning and Regulatory plan (Figure 5-2). The establishment of Master Plan took two years, and emphasized more on top-bottom macro-allocation and general layout; Zoning bottom planning with bottom-up implementing needs, put Master plan into mor Special planning was mainly about the area of new industry; and Regulatory plan was the right linkage between theory and reality.

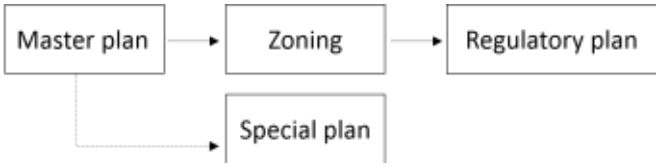



Figure 5-2 low-carbon urban planning system of Lingang New Town
Source: drawn by author

By collection information in all kinds of medium, we have summarized d low-carbon targets and strategies in corresponding planning phases, see in Table 5-1.

Table 5-1. Low-carbon target system of Lingang New Town

| Planning phase | Low-carbon target | Low-carbon strategy |
|---|---|---|
| Master planning, , | Theory of Garden City | Ring and radiate layout of space |
| | Intensive land-use | TOD mode |
| | Green transport | Green corridor |
| Zoning | Efficient urban spaces | Refine Master Plan |
| | | Reasonable urban block scale |

TOD, Transit Oriented Development

| | | |
|---|---|---|
| Regulatory plan | Mixed land development | Suitable development intensity and building density |
| Special planning | Job-housing balance | Low-carbon energy and industry<br>Technology supporting system |

Source: made by author

### (2) Security system and management

a) Technology support
Along with the huge amount of constructive programs, there are abundant researches as well, such as, questionnaires, marine industry investigation, technical standards of industrial parks and landscape research. Besides, the cooperation with foreign design companies also brought lots of new ideas.

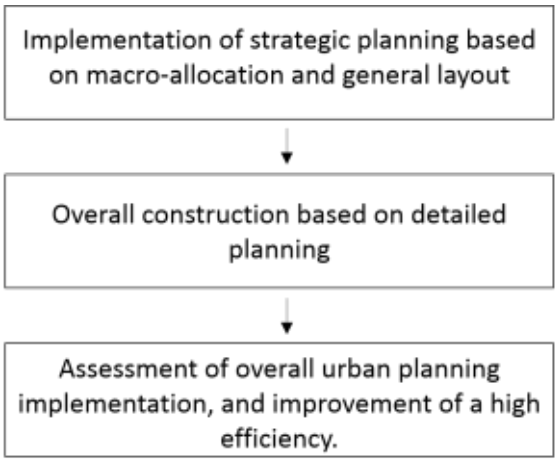
b) Multi-phase organization
The whole planning system is divided into three main phases and each phase is divided again to a smaller step. This kind of system meets the basic requirement of process management and lower the risks in each phase.

c) Trans-department cooperation
Different departments and organizations will take part in every different phase. Such as, before making urban planning, environmental department gives advices on sites selection; in the designing part, municipal department, transport department and other related departments will work together to reach an agreement, this will help to make special planning in turn.

## 5.3 low-carbon urban development and management

### (1) The process of development

Since the Master Plan of Lingang New Town was officially approved, the construction activities showed three phases clearly (Luo, 2009, p. 57), see in Firgure5-3.



Firgure5-3. Three phases of the process of development
Source: Luo, Q. L., Hu, Y. D. & Qiu, Y. D., 2011. The Theory, Practice and Prospect of the Low Carbon City Planning. *Planners*, Volume 5(27), pp. 57

a) First Phase: from 2004 to 2005
2004, 2005 are the first two years to start the overall construction of Lingang New Town, everything needed to build from zero, so the implementation of strategic planning became a main feature.

b) Second Phase : from 2006 to 2007
The revise of urban planning provided a great challenge for overall construction. At the same time, More detailed community planning has been finished and put into actions.

c) Third Phase : from 2008 to now
In 2008, the publication of new Urban and Rural Planning Law pointed out that assessment of urban planning implementation was compulsory in the process of development. And this just fitted in the time schedule of Lingang New Town. We picked out the major outcomes from the detail assessment materials (Sun, 2011) and put them into the table we made before to see the differences between targets and realities (Table 5-2).

Table 5-2. The assessment of low-carbon implement of Lingang New Town

| Planning phase | Low-carbon target | Assessment |
|---|---|---|
| Master planning, , | Theory of Garden City<br>Intensive land-use<br>Green transport | Land function is relatively the same, simplex and isolated.<br>Over-reliance on cars |
| Zoning | Efficient urban spaces | Large scale of green space caused extensive land use |
| Regulatory plan | Mixed land development | Living area is too big to form sense of community<br>Lack of entertainments and service industry |
| Special planning | Job-housing balance | Excessive municipal facilities<br>The development speed of industry areas is faster than residential areas |

Source: Sun, Q., 2011. Low Carbon City Planning Exploration and Practice of Lingang New City. *Shanghai Urban Planning Review*, 5, pp. 24-29.

## (2) Security system and management

a) The assessment of low-carbon implement

Lingang New Town is the first area to carry out the assessment of low-carbon implement in Shanghai. It has ten aspects: land use, industry development, index system, job opportunities, public facilities, comprehensive transport, road system, municipal system, planning management and technical standard, almost covered the major contents of five different departments and formed a relatively complete system at last. The assessment is not confined to the planning itself, but also includes the general situation of the whole society.

b) Public participation

The development of Lingang New Town was originally driven by government, and followed path of upscale strategy, which means the participation part mainly consist relative departments, design organizations and green groups, so it has a higher standard to choose its residents and developers. This kind of development pattern made it difficult to include ordinary citizens and also had negative influence on the implementation of plans.

### 5.4 Evaluation and Solution

Taking Case studies (section3.) as a reference, the development pattern of Lingang New Town is more like the first one, nearly concentrates on every part of urban development, range from general layout to energy consuming, however the result seemed to be unsatisfactory (Table 5-2). The reason lies in two aspects: firstly, the target is too ambitious and abstract to put into practice without a specific index system and flexible spaces, thus making all the perfect ideas just blueprints; secondly, there lacks enough public participation during the phases of building low-carbon target system and low-carbon urban development.

As a result, Lingang New Town should try to divide all the work into baby steps, make sure every part is done and then move forward, in addition to this, the feedback and interaction of each part are also of great importance. Another solution is to build a cooperation model of governmen role of government is guiding other participants to engage into the process of low-carbon development. For those reasons and solutions we improved the process management of low-carbon urban development for Lingang New Town and make full use of up-bottom regulatory system and b oversight system to get evaluation and feedback, see in Figure 5-4. We hope this new model will correlate the urban development policy with the low-carbon practices and help the seek of the real management method of low-carbon growth .

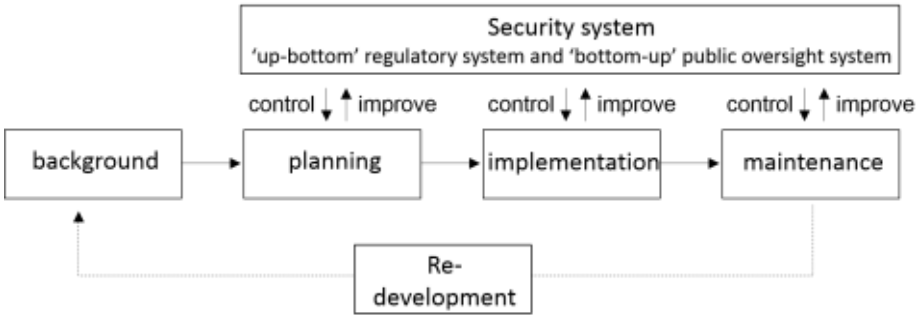



Figure 5-4 process management of Lingang low-carbon urban development
Source: drawn by author

### 6. Research conclusion and outlook

Chinese low-carbon development started relatively compared to other western countries. The original

motivation concentrated more on economic growth, and the major content of low-carbon urban planning is huge and complex. As to the implement phase, western planning usually take use of the market power, however, Chinese planning depends on the guidance of government in most cases. Since more and more cities are in a common background of climate changes, high-risk natural disasters, excessive high-carbon emission and serious urban pollution, changing our traditional way of planning into a more resilient system becomes an urgent issue nowadays.

The planning of Lingang New Town provided us an international view and a new platform to improve our planning theories and technical levels, we still have a lot to learn about low-carbon urban development.

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# AN OPEN GAME FOR DISSENT: TOWARDS CRITICAL TOOLS FOR COLLABORATIVE PROCESSES OF PRODUCTION OF SPACE

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Keywords: Social participation, dissent, open game

Abstract:

This paper presents the conception and application of a game designed for and p
teenagers living in a slum area in Brazil that is currently under structural inte
large spatial transformation project. The conception of this game is based on th
segregation of the city. Players have been invited to deconstruct such a propo
encouraged to imagine other forms of occupation and enjoyment of their environme

Ranci Łre's account of dissent will be discussed as a counterpoint to the cons
current participatory policies in an attempt to reveal their limitations rega
potential. Flusser s concept of open game will also be discussed as an alternati
of critical tools for collaborative processes of production of space. The outco
presented in order to discuss the capacity of games to overcome social obstacle

beyond the current models used to analyse and produce the city. It concludes games as a conceptual framework towards an emancipatory participation.

## 1. Introduction

The Game of Dissent was an experiment held in May 2013 with a group of teenager situation in the Aglomerado[1] Santa Lœcia. This favela[2] is currently under a spatial restruc process promoted by the city of Belo Horizonte with funds from the federal g process, the implementation of interventions as well as the definition of th participatory process is delegated to outsourced companies contracted by the mun

In the current context of decentralization of State s responsibility for the pro we propose thinking of fuzzy responsibilities beyond public–private partnershi model undermines state s strategic responsibility for the balance between marke Architecture, when subordinated to the logic of business, becomes a commodity. space as a mere opportunity to produce surplus value excludes the possibility o from its process and the formation of autonomous citizens able to appropriate th This model tends to homogenize the sensitivities, under consensual arrangemen production, the use and the appropriation of space.

Using as reference the process of the Aglomerado Santa Lœcia s restructuring pro approach the responsibility sharing in the context of production of space thro This process will be taken as the basis for a critical review that will be deve evaluating the results presented by the Game of Dissent. Then the elements and will be presented. Before proceeding with the evaluation of results from the en application of the game, the current institutional framework of social pa problematized in face of both the meaning of dissent by RanciŁre (1996a; 1996b) open game according to Flusser (n.d.). The game results will be presented as a questioning of the process for spatial restructuring of Aglomerado Santa Lucia. The overcome social obstacles will be presented as a possibility for an agonistic between stakeholders. Creative spatial imagination, shown throughout the game by dwellers, will enable to question the participation model used in the spatial re Aglomerado, since the current model does not allow openings to include the verna the dwellers. The virtual nature of the game will be accessed as a possibility o of the participatory process, suggesting an open source participation. As a concept of meta-game is presented, by which we intend to emphasize the ability expand the current thinking towards an emancipatory practice of architecture and

## 2. The Game of Dissent

The game was designed in the beginning of the formulations that motivated the re study is part. It was applied as part of the activities of a university exte elaborated in response to an invitation from one of the educators of the ProJove Reference Center for Social Assistance (CRAS), held by the city government. The the proposal was to introduce the debate about the city among the teenagers of t

[1] Aglomerado is the term used to refer to the set of slums in the Santa Lucia area. In translate the term, considering it the name of the place.

[2] The term favela will also not be translated, since we understand that the favelas in image brought by the terms ’slum’ or ’shantytown’. A better distinction between the Baltazar & Kapp (2007).

of Dissent was designed to be played by the ProJovem teenagers and by a grou students attending to the extension project.

## 2.1 The context: Aglomerado Santa Lucia and the Vila Viva program

The Aglomerado Santa Lucia[3] is an area consisting of four favelas, located in the South of the city of Belo Horizonte[4]. The area is currently going through the urbanization proce of the Vila Viva program, held by the city government. The program includes era geological risk, sanitation, restructuring of the most important streets, ho implementation of parks and green areas. An intervention on this scale inevitab bonds established between the community and its everyday space. Despite the imp conditions provided by the program, it is known that the impact of such interver the removals and the resettlements required for implementation these improvement

The game application did not intend to solve any direct conflict, since the tar teenagers, did not participate in the assemblies and negotiations between the and the community. However, they did experience, along with their families a violence of the removals and the resulting laceration of the social-spatial re the imposition of a new spatial order.

One of the interventions with the highest impact in the program is the enlarg Main Street and the creation of a new street, called Bicªo, which will connec avenues. The main purpose behind the creation of this street, although not annou to relieve the already overloaded vehicle traffic of the upper and middle class around the Aglomerado. This reformulation of the main street in order to adapt standards of the formal city disregards the aggregating role played by the fav alleys in favelas are usually the place where people meet and exchange experien a wide range of events and represent the plurality of spatial means of appropr favelas.

Many families of the Aglomerado have already been removed from their homes to construction site of the Vila Viva. Others still live in the area with the immin uncertainties about their very near future. Some teenagers of the group reporte been "sealed" (the technical term used to indicate the houses that are to be construction work) and that a number of friends and neighbors had been removed a different destinations. Some families were relocated to housing units built by t the site. These units, which are built by a consortium of private companies, fo of minimal cost and therefore of minimal area. In addition to that, as part of deadlines for their design and implementation tend to be reduced in order to suit goal set by the companies.

## 2.2 Elements of the game

The game has in its essence the Le Corbusier (1993) propositions published in Charter, which separates the city functions in residential, leisure, work and c all the criticism made over the century that followed its publication, this mo practical repertoire of technicians and city planners. Therefore, the argument o

[3] The Aglomerado Santa Lucia is the group formed by the villages Estrela Santa Rita, Sª Santa Lucia. It currently has about 20,000 residents and 3,848 household. Its hashas a
[4] Belo Horizonte is the capital of Minas Gerais State. The metropolitan region of Belo largest in Brazil with nearly 5.7 million inhabitants.

players were not familiar with this theoretical background, was the deconstru
separation of functions, blurring the boundaries between them and freely prop
spaces.

Each of the functions (housing, circulating, working and leisure) was associa
represented by a team of players. Before the game begins, each team has to dra
spaces and infrastructure that usually correspond to the functions assigned t
circulation team indicated streets, bus stops, stations and bike lanes. The
houses and apartment buildings. The working team indicated factories, supermarke
schools, hospitals and offices, and the leisure team indicated parks, courts, mo
as well as bars and restaurants.

Figure 1: Application of the Game of Dissent. (Source: Author's Archive,

For each color/function a group of cards was prepared associating everyday situa
the four functions. For instance, the set of green cards from the circulating g
modalities such as bicycle, car, bus, roller skates, etc. The set of orange card
group suggested actions that take place inside a home, like resting, eating,
working, etc. The set of purple cards suggested actions related to work, like s
surveilling, manufacturing, building, managing etc. Finally, the pink card set
as playing soccer, flying a kite, going to the movies, walking, dating etc. For
there were also other cards that had question mark, indicating that if the play
freely propose any action related to the corresponding function of the card colo

## 2.3 Game Dynamics

The game was developed over a large white cardboard, the game board. On it,
supposed to represent, through drawings, solutions for the combination between
randomly selected from the cards and one of the spaces previously listed by the
only used to set the order of the groups in each round. The group that won in th
by choosing an action card in a different color from that of their own group. Th
action picked in the cards, which by the very structure of the game was never
usually correspond to the prescribed use of the place.

Thus some possible combinations were a space to play ball in a circulating st
where you can play football or a basketball hoop at a bus stop); a place for c

one of the housing structures (such as houses with bars and shops at the fr
manicure/pedicure signs); a place to study in a park; a space to rest in the sup

As the game progressed a city was designed over the white cardboard. Cha
combinations of cards, the players imagined other possible spatial assemblage
solutions were a clear reference to the everyday spaces of the favela, others we
the formal city repertoire, presented in creative combinations. Along the two ho
was played, the white cardboard was filled by the spatial imagination of the pla
city which they called Bem Vinda (Welcome).

## 3. Participation, dissent and the open game

In an attempt to relate games to the production of city space, a look back to th
enables us to observe the effects of the consolidation of the process of pro
spaces. The regulation of free time, understood as a condition for the reproduct
its spatial equivalent in the production of specific spaces for recreational
consequence, there is the abandonment of the street as a territory of play, of e
The counterculture and the contestatory movements of the second half of the twe
the political importance of games as a means of resistance. The Situationist Int
city a territory open to playful imagination, an expanded playground that calls
of the streets, a strategy for what Arendt (2005) calls the resumption of the pu

The very argument of the resumption of the public sphere is one of many that s
discourse and public policies that attempt to promote social engagement. From an
view, participation is called upon to balance social inequalities, as it presup
of decision-making power. However, the institutionalisation of participatory pr
the responsibility for social mobilization. Therefore, tends to eliminate the a
and civil society, creating an illusion of consensus that instrumentalizes the p
legitimizing decisions that have actually already been made.

Participatory policies follow bureaucratic models that tend to undermine its e
The fragmentary questions posed when society is called to make decisions elimina
a broader critical debate. On the other hand, the model of deliberative democ
guides politics, bases its central idea on the assumption that, in a full demo
should be reached through a process of deliberation among free and equal cit
strongly influenced by Habermas  idea of communicative rationality, presuppose
symmetrical conditions for argumentation and knowledge. However, such symmetry
and this fact is neglected in the structure of participation.

RanciŁre's account on dissent (1996a; 1996b) points to the structural incompatib
communicative rationality and democracy. Accepting the dissensual nature of de
implies reinventing forms of communication between State and civil society. If
presented as the main communication channel between these two instances, it is
to rethink the parameters for an effective communication, beyond institutional b

In Brazil, although popular participation is recognized as a key component in
processes that present themselves as policies for social transformation, one mi
balance between the available legislation and the actual production of space. F
of the City, the Federal Law that regulates urban policy in Brazil, has in its
citizen participation and democratization of urban management. These instruments
participation in various stages of the urban planning process, such as urban
consultations and public hearings, plebiscite, neighborhood impact studies
budgeting. Although the City Statute has meant a great legal democratic achieve

number of instruments to enable social participation and a more democratic use
comes to its impact on the city s space, the emancipatory promise that dominated
it is clearly lost. Looking at participatory policies, it is possible to point o
have contributed to this failure.

The first concerns the institutional context. Because they relegate the pedag
critical debate, participatory processes become fragile and are easily capture
power. They become mere instruments to legitimize decisions made by technicians
State, reproducing the same top down model they are trying to fight off. The s
the informal production of space. Although they represent a significant portion
cities it is estimated that an average of 25% of the population of large Br
informal settlements the illegal condition excludes them from institutional poli
in both private and public space.

After this first analysis we propose to take on dissent as a counterpoint to
orientation of participatory policies. The game is brought to the debate on par
ability to transcend the communicative rationality and because of its openness t
The communicative properties of games are closer to learning through experie
through speech. Thus we will take the concept of open game proposed by Flusser (
for thinking about participatory processes that are capable of accepting the dis

Flusser considers an open game the one in which the repertoire of the thought
whose structure can be modified. In the open game the totality of possible con
structure of the game can never be used up. The game can always expand its repe
enable increase or decrease of repertoire, and structural change [...] reper
processing noise into game elements" (Flusser, n.d, p.3). This research argue
participatory processes in order to recover the emancipatory aspects of social
context, games may represent a key in shifiting the enphasis from learning by
experience. Open games could help stakeholders interfere in the structure of pa
thinking social participation through the lens of games may represent a st
emancipatory role of participatory processes, towards overcoming the mere repr
models for the production of space.

## 4. Results, observations and considerations

The main occurrences perceived during the application of the Game of Dissent wi
support for a broader discussion that goes beyond the game itself. We will take
a reference for a critical review of the spatial restructuring process in the
This review is directed to the instances of social participation and to the lack of tho

### 4.1 Overcoming social obstacles

Among the many features common to games, we emphasize their ability to overcom
foster antagonisms and strengthen social structures. In the application of the G
see how the game facilitates the relationship between the ProJovem group and t
The application of the game happened at the second meeting between the two
meeting had happened two weeks before, during the course of a workshop held at
In this first approach, the group of college students had been received wit
suspicion by the ProJovem teenagers, which made it very difficult to hold the w
hand, at the second meeting, as soon as it was announced that the activity of th
no more sign of resistance was seen. The teams were quickly formed with parti

groups, and within minutes they were calling themselves by their names and supp
the game preparation task.

The Game of Dissent features some of the elements described by Caillois (1990)
games[5]. The Mimicri and Ag n elements are the ones of relevance to this argument
game (Mimicri), the Game of Dissent differs from traditional role-playing ga
context of Serious Games, the RPG s basic structure usually puts players in the
is quite different from their reality. When one analyses other role-playing ga
these characters are usually stereotypes, which tend to become caricatural
simulation chances in the structure of each game. In the Game of Dissent the sir
if the player is not supposed to be anyone but himself. However, in the game, h
freethinker of the urban issues. This role that has been denied to him by th
program of the Aglomerado is thus restored by the game.

## 4.2 Transforming antagonism into agonism

Considering the Ag n element, that represents competition, it is verified that
this element plays a merely symbolic role. In close observation we realize tha
competition in the dynamic of the game, and its structure doesn t include any
measurement, such as accumulation of points, or any breakthrough system that wou
achieve a certain goal, which could mean a victory over the other teams. The gr
against the board or against their own luck either, which would characteriz
described by Caillois. It is precisely the lack of such structures, however, tha
dimension to the analysis of the game. How can one explain the competitive a
during the game, if the competition was not even one of the game s premise
interpretation is that, in the game, the players competed with themselves, as t
overcome their own imagination. Another answer would refer to the symbolic ro
dynamics and the playful elements of the game. Dice, game board, cards and tear
references to competitive games.

In attempt to introduce the game into a political debate, we propose to establ
the principles of Ag n, formulated by Caillois (1990) and the agonistic model of
by Chantal Mouffe (2000). For this author, the political[6] is the dimension of the antagonism
inherent to human relations, which can be expressed in many ways. She crit
deliberative model, as it seeks to eliminate the antagonism through the const
consensus. Mouffe alerts us to the hegemonic nature of every form of consensus.
a given moment considered as the natural order – jointly with the comm
accompanies it – is the result of sedimented hegemonic practices (Mouffe, 2007, p
understanding that power is not an external relation of two already constitu
constitutive part of them, the consensual orientation of the current politics
depoliticisation of society. Mouffe therefore proposes to transform the antagoni
relations into agonism. That means not facing a contrary position as an enemy
Recognizing the opponent and knowing their point of view enables a space for neg
establishment of mutual commitments, even if the potential conflict has not ceas

[5] Roger Caillois identifies four elements in games, due to their essential nature. The
game at least one of the four elements can be found: Ag n (competition games), Alea
Mimicry (simulation games) and Ilinx (vertigo games)

[6] Mouffe distinguishes between "politics" and "political". The first concerns the set o
institutions that seek to organize human coexistence in scenarios often conflicting. "Po
of the antagonism inherent in human relationships, which eventually is expressed violent

In the Game of Dissent the agonistic model of negotiation can be translated into about identifying the antagonism between the players involved in the symbolic co the game. The actual agonism behind the Game of Dissent involves, on one hand spatial model based on rational consensus about the means of production and use other hand, the statement of other possibilities of production, appropriation an

### 4.3. Revealing the epistemicides of pseudo-participation

In his reasoning in defense of an epistemological diversity of the world, Santo concept of epistemicide, referring to the death of popular knowledge on behalf statements.

The spatial arrangements formulated as answers to the challenges of the Game of imaginative richness of space repertoire shown by the young people from the Lucia. The solutions are mostly very close to the creative diversity characte favelas. Some answers provided by the players were houses that are also workpla and streets thought of as a space of permanent negotiation between cars, playi meetings. In the same way, the self-produced space made by favela s dwellers t representation of their daily needs. It is a dynamic space in a state of per reflecting a continuous creative negotiation between individual needs and collec

When discussing the intervention models that are usually adopted in the favelas (government, academia and NGOs), Baltazar and Kapp (2007) point out that these by architects and urban planners, frequently ignore the dynamics and the auto favela s spaces. The opposite of autonomous logic developed by Cornelius Castori Souza (2013) as heteronomy.

> "The opposite of autonomy is heteronomy: here the laws [...] that go community are imposed to some [...] by a minority, on the marks of a asymmetry, i.e. from an institutionalized separation between rulers and ru 2013, p.174)

The heteronomous mode of intervention is unable to include the vernacular production, which in the context of the favela, are much more reasonable when everyday dynamics that represent that way of life. According to Baltazar and Kap

> These initiatives completely ignore the dynamic of the spaces of f self-production processes. They are indiscriminately done from top-d the same corporate logic of the legal city. If this is a problem in takes another dimension in favelas as besides leading to alienat spaces designed (and built) are minimum in cost and consequently in s flexibility at all. This leads to a recurrent process since, by beco lose any chance of political articulation and then they receive interventions with no criticism. (Baltazar & Kapp, 2007, p.3)

This alienation identified by the authors is in general terms the condition performed by the Vila Viva program. A critique of this operative mode should not exaltation of poverty or with the denial of the many possibilities of improv intervention, with the aid of the state s funding, could bring to this community to highlight the inefficiency of participatory processes that should enable technical planning and popular knowledge in the spatial restructuring of favelas

### 4.4 Towards an open source participation

Popular participation happens in a preliminary stage of the process proposed by
corresponds to the elaboration of the PGE (specific global plan). Kapp and Balta
another paper, a fairly detailed discussion of all stages of the PGE, where deci
scale and the guidelines for interventions are set out. In the structure of Vila
only stage open to community involvement. They are represented in participato
reference group that includes, among others, representative members from the dw
the Aglomerado. Community assembly should approve the guidelines set out
accompanied by the budget, in order to obtain the necessary resources for int
stage, all interventions become responsibility of private construction compani
municipal government. Therefore, both the hiring of executive projects and t
become responsibility of these companies. The municipal government only monitor
companies on site, to ensure the implementation of the guidelines that have beer
in community assembly. In the stages following the approval of PGE there is no
openness for community involvement. We present below (Figure 2) an interpretatic
diagram of the main stages, their competences and degree of participatory ope
spatial restructuring process of Vila Viva.

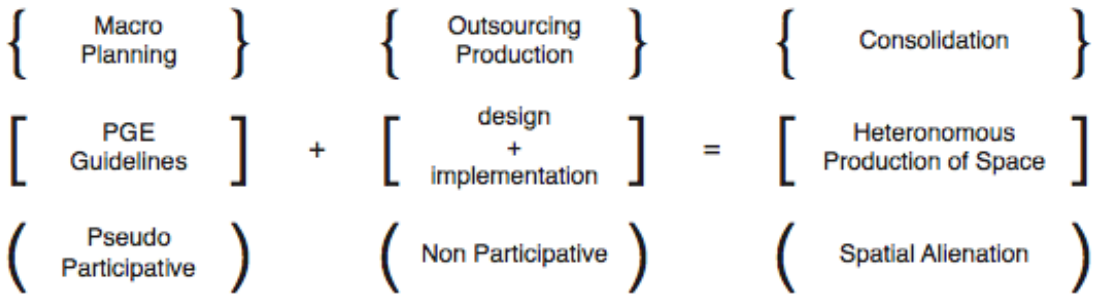


Figure 2. Interpretative summary diagram of urban restructuring stages of

This participatory process tends to instrumentalize the participation due to a
in its structure. First one must consider that a discussion placed in very gen
happens in PGE, inevitably escapes the possibilities of a balanced debate betwee
community. Unable to understand the real dimension of the issues placed at that
is led to agree with decisions that are often presented as the only possibilitie
for spatial inventiveness, with which they could contribute. Second, the PGE
dialogue only when it is related to what must be done , and not to how it sho
ignores what would be the greatest contributing potential of the community in
process. Discussing the processes of production, or the how to do , would
participatory process to the real scale of understanding of the community, whic
the production of everyday space, the scale of the neighborhood relations.

Furthermore, the model of communicative/collaborative participation by which the PGE
is not the most appropriate when taking into account the level of social inequa
initial reasoning of this paper, we argue regarding the incompatibility between
models based on communication. In Brazilian favelas, the balance of the condi
Habermas for a decision-making based on communicative reason does not exist. So
about the risks of a communicative/collaborative planning, when under condit
inequality, becoming weak in the face of conservative forces of instrumentalizat

> "However, the very existence of deep inequalities make the
> communicative action difficult. The communicative action can collabo

> the achievement of more autonomy, but at the same time, a certai
> individual and collective autonomy is a prerequisite for the commun
> (Souza, 2013, p.150).

We propose to think of games as one of the possible tools to produce this minimu
by Souza. We understand that some critical repertoire would be crucial to the
between the technicians of the Vila Viva program and the community representa
assemblies. As a pedagogical tool designed for this first instance of spatial
facilitate learning by means of experience, in contrast to other processes based
They could therefore make it easier for the community to approach and understan
that will be placed under discussion, besides encouraging community engagement.

In the Dissent Game match, we witness the players in a process of taking into
qualities of their immediate space. During the session, the teenagers compared
with similar examples known by them. Comments like: "My uncle's house is like t
same as in my street" were often heard. At the same time, less common solut
something new to the repertoire known by them were mentioned with exclamation,
such a street!", or even questioned, as in "is there a square like that?"

In addition to the previously mentioned PGE problems, Kapp and Baltazar (20
discussion by proposing a reflection on how participatory process tends to contr

> Autonomy is the ability of individuals and, foremost, collectivities
> own means of action and interaction, as long as they do not restra
> autonomous means being ruled by self-defined norms. In contrast,
> participation indicates that people are allowed to take part in decis
> being able to change its norms. (Kapp & Baltazar, 2012, p.1)

This reflection confronts us with the challenge of thinking about the game not
tool for civic-spatial learning. The greatest leap forward into an indeed ema
should be thought of in relation to the open game logic. An open participatory p
community to participate in the decision-making process with enough autonomy to
interfere with the structure of the process. To turn noise into game elements
longer a metaphor from a philosophical abstraction, but a real possibility of o
listening channels to the contributions of popular spatial knowledge, in orde
adequate space to the lives of their real users.

### 4.5 The virtual as a possibility for dialogue and cooperation

The Game of Dissent was proposed as an alternative activity that would allow in
reflection among young people from the Aglomerado, moving it from the personal angu
immediate. A shift from the real problems into a virtual plataform. For Huizin
features of the games in general is that they are not everyday life or real li
escape from real life to a temporary sphere of activity with its own orientat
p.11).

Considering the virtual nature of the games, we associate the "escape from rea
Huizinga with the virtualization scheme proposed by LØvy (1996). In it, the disp
(real) to the virtual consists of an "inventive return" of a given solution
Therefore, virtualizing the territory through the game is an attempt to shift
platform where the problematization would become possible. On the virtual plan
an oriented dialogue to critical reflection about the changes in everyday spa
easier way.

Also according to LØvy (1996), the opposite movement, the return from virtual t
allows "other operations to emerge, unleashes conflicts, unlocks situations, int
of collaboration "(Levy, 1996, p.6). In this regard it is interesting to thi
between the Game of Dissent and reality. The game board consisted of a white
spatial representation formulated during the game came from an abstract support
players, oriented by the dynamics of the cards, contributed with spatial soluti
As this process occurred, we realized the effects of collaboration between the
favela and the architecture students. The space represented on the board reveale
everyday space of the favelas, and it also absorbed the contributions of studer
some degree, to the codes of architecture and urbanism.

The virtualization of the process of spatial design via the game turned out
disruption in a consolidated cycle of architectural production process, which
sequence: multidisciplinary team of project, design, and implementation/construc
multidisciplinary project team, usually composed of architects, urban planners a
the centralization of responsibility for the production of space. Nevertheless
mind that even this multidisciplinary team is subjected to heteronomous logic
profits of construction companies. As a counter-model to this process, we prop
previous cycle, considering the virtualization through the open game both in th
the implementation/contruction phase, according to the proposed diagram in Figur

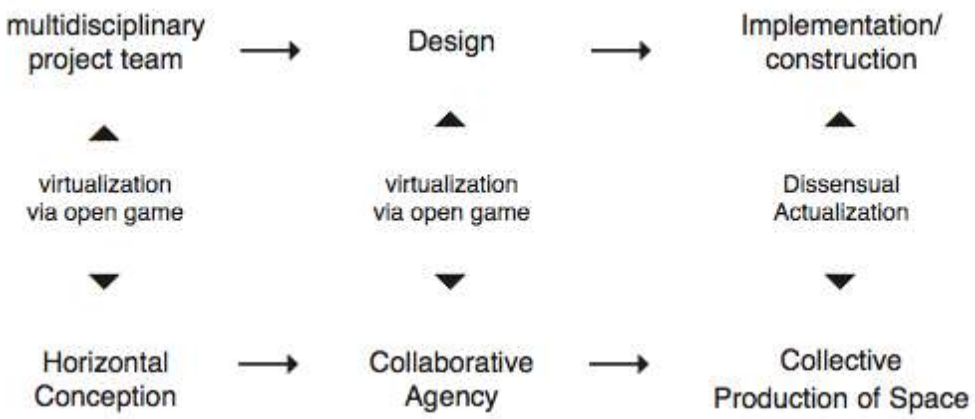


Figure 3. Propositive diagram for the collective production of space

In this other cycle a horizontal design process and a collaborative architectur
the centralizing role of the multidisciplinary project team, usually justified
knowledge. This step back consisting of the collective problematization of the
virtualization, is what is meant here as an emancipatory participative process.
dissensual actualization of space, that is, an indeed collective production of s

## 5. Conclusion or the meta-game

To conclude this paper, we would like to return to the initial proposal, that
sharing of responsibility for the production of space through the lens of games.
will use Flusser s proposition of relating every game to a meta-game. Flusser
occur in games (Flusser, n.d., p.2) and therefore, that every game opens a co

game (Flusser, n.d., p.3). Through these statements, we will conclude with two in different directions.

The first one refers to the emancipatory role that we claim for social particip be understood as more than decision-making process. Participating also repres autonomy, empowerment and the increase of imaginative repertoire. In the open ga emancipated player is the one who is able to propose changes on the game stru stating that "games occur in games," Flusser (n.d.) invites us to think ab emancipation in a dialectic way. To play (to participate) would be a means to em same time, emancipation would be a way to propose other games.

The second consideration arises from the statement that every game opens a comp game. The experience of the Game of Dissent, described in this paper, enabled u competences that allowed us to establish a critique of the urban restructu Aglomerado Santa Lucia and also to reflect on the structure of the current part consensual orientation. However, another competence was outlined in the last se the case of developing it in depth in this paper, we would suggest it to be reflections. An open source participation, as in the open games, emerges a emancipation also for the fields of architecture and urban planning. When it co of space, replacing the centralizing role of the architect/planner by the collab to break up the architectural mode of production driven by real estate market, conception of production of space, currently thought of as the production of sense, this would represent the opening of the architectural field to reinventi limits and possibilities.

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# EMPOWERING SEGREGATED ROMA COMMUNITIES: LESSONS FROM 'SHACK TO 3E HOUSE' PROJECT

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Keywords: third sector, housing, segregated Roma communities

Access to resources, inequalities in living conditions and housing shortages
decades widely recognised as the main challenges for urban planning, especial
countries. Since the fall of communism regime, the rapid socio-economic tra
caused similar problems also in post-socialist countries, however with different
In Slovakia, there are more than 800 segregated neighbourhoods, housing 300,000
10% of Slovak population), predominantly of Roma ethnicity. These settlements s
exclusion, poverty, absence of basic services, socio-pathological phenomena and
Government initiatives aiming to integrate and regularise these 'pockets of pov
efficient and number of these settlements A lack of a tripleng strategy, unclear
responsibilities between national and local governance and traditional planni
tools proved to be unsuccessful in addressing multi-dimensional problems conn
communities.
A pilot project on the basis of partnership between local authorities, communit
Shack to 3E house', was established in 2012, aiming to improve quality of
neighbourhoods, using tools typical for developing countries, such as micro-mortgages schemes, slum-
upgrading and self-help housing provision. In 2014 also started implementation of
project ideas into the national strategies.
Proposed paper looks at a process of transfer of knowledge, planning pra
implementation from developing countries into a 'developed country'. Paper also
of Third Sector in testing experience gained through the project, elaborated pr
governmental sector into the large-scale institutional solution.

## 1. Introduction

After 1989, transition of economic and politic system in Slovakia has brought
planning practices and instruments. As before the planners served merely as
supranational ideologies and economic decisions into the physical fabric of pa
and Stanilov, 2009), today they have to face various environmental, economic and
requiring comprehensive solutions. Also, as the 'public involvement' in pla
processes was during the former regimes only formal (if any), thus new plannin
embrace also new approaches and instruments, allowing for people to participate
their environment. Similar to other transitory countries, for planning systems
challenges, the transfer of ideas and planning practices from abroad is an i
Budi , 2001). At the same time, the system change has also brought new fra
stratification into the society, widening the social and economic gaps between
top and many others on the bottom. Of the most challenging and requiring u

solutions is the situation of Roma[1], living in marginalised, segregated settle
easter part of the country. In these settlements, the poverty combined with long
and attempts of assimilation, resulted in social exclusion of many of these comm
al., 2003), while number of people living in these area has been increasing (UND

However, the government attempts to address the needs of the communities have
failed, resulting in deepening the Roma dependency on the paternalistic st
stereotyping of Roma community as 'undeserved' (Mu inka, 2012a). Even though
governmental shift in rhetoric aiming to eventually promote 'empowerment' appr
bring an positive shift into the mainstream policy making, however, it without
strategy. Thus, the NGO local municipality of Rankovce in partnership with ET
local-based civic association 'Pre Lep ivot' decided to test the possible pr
services to people who needed them most. Based on the tools often used in devel
micro-financing schemes and incremental housing strategy - drafted a project o
through which individual families are provided houses according their needs, w
informal education and vocational trainings, as a first steps of the traps
marginalised settlements.

In the first part, paper outlines the current context of situation of Roma
approximately 200,000 Roma live in, - using Yiftachel's (2009) concept - 'gray
landscapes, in spatially segregated and separated areas, urban and rural ghetto
article briefly introduces the planning and state framework that governs addr
Roma communities, with a particular attention to the housing, as this is the
study. In the third part is introduced the project 'From shack to 3E house'
community associations provides alternative housing delivery method, based on m
incremental housing, developing a missing instruments in state systems. However
in the following part, there are deep differences between government approach
Roma communities. In this contexts, the role of community-based civic associatio
only in developing alternative ways of service delivery and planning instrum
translating the values of the community and positive role-modelling in current
solidarity and empathy among Slovak society is decreasing (Radi ovÆ, 2001). In
proposes the question for further research and challenges that needs to be addr
more harms and negative consequences of new policies.

This article is based on the study of written sources, enrolment in various Thi
and policy making processes, especially of being a housing programme coordinato
organisation ETP Slovakia, and interviews with experts and Slovak policy-maker
observations and experiences made during number of research and work stays in
settlements in Slovakia.

## 2. Segregated Roma communities in Slovakia

### 2.1 Current situation

The most recent territorial mapping of Roma residential patterns published i
communities (UNDP, 2014) show that 60% of Roma live integrated among the majo
society. The rest, almost 220,000 people, live in 800 segregated or separated R
in urban concentrations (ghettos) or spatially separated and segregated concent

[1] following methods used by national monitoring of Roma communities, see UNDP 2014.
komun t 2013 [Atlas of Roma communities], Bratislava., by Roma are meant peopl
themselves Roma and are considered Roma by their surroundings, as well as those wh
themselves to be Roma.

located predominantly in rural areas, commonly called 'Roma settlements' or 'm
communities' (as adopted by national strategy 'Long-term Housing Conception' (SR

The living conditions in these areas, especially on the countryside, display
deprivation and social exclusion: poverty, level of unemployment reaching up
education level, socio-pathological phenomena (crime, alcohol abuses), and deper
help (FiladelfiovÆ et al., 2014). The physical structure of the fabric in thes
with very low technical status of building stock, reflected also in poor sani
Another problem is also the informality of the dwellings and whole areas, an
access to basic infrastructure and services. Facilities and amenities are usuall
parts of the urban structures (UNDP, 2014). Also, most of these areas are l
marginalised and less-thriving regions of easter Slovakia. Thus, the segreg
supported by marginalisation of the whole region. Radi ovÆ (2001) calls this
marginalisation' and warns that this situation often results into definitive so
community from overall economic and social life of major population.

Table 1. Example of municipality NÆlepkovo. In the municipality there are locat
forms of Roma concentrations (1) separated on the margins of the village, (2) s
(2), and segregated in distance 2 km (3,4), in which the segregation was supp
development of new housing, in socialist period (3), in late 1990s (4), rece
disaster planning (1).

Even though there are difference among the settlements, in general, as several
(Va e ka et al., 2003, Mu inka and eds., 2012), the residents of these areas
generational circles of poverty - neighbourhood effect in these areas is so
mobility towards up is in many cases almost impossible.

To put it shortly, Hurrle (2006) depicts the overall environment in the settl
World in the First World'. Also a shift in government rhetorics, replacing 'R
'socially disadvantaged', ebesta (in Scheffel et al., 2004) recognises as an
make Roma 'invisible'. Thus, Yiftachel's concept of 'gray spaces' (Yiftachel,
more than appropriate when thinking of the situation of Roma communities, as f
centuries have Roma population in Slovakia been under constant threat of evict
the marginal, impoverished, environmentally degraded outskirts of Slovak towns
spatially segregated location, where there 'otherness' cannot be seen (JurovÆ, 2

## 2.2 Government actions

As in many post-socialist countries, planning practice in Slovakia have in rec
deep shifts and transitions. During the communism, the planning system was al
centralised. National identity and economic planning was executed on the highes
role of the local planners was to 'act as a technical translators' of the sup
physical layout of the individual cities' (Hirt and Stanilov, 2009,p.22). The
planning was thus not really meaningfully integrated into the physical. System
any spaces for citizen participation. Thus, in practice the most of the plannir
passive, distributing the values of communism theories of united citizenry and s

After 1989, transition of political and economic system brought not only new so
environmental challenges, but also requirements for instruments and methods
integration of all these dimensions and market-based ideology. Thus, pre-occupi
new system, it was not until 2000s, when Slovak Republic also started to deal w
of Roma communities. This was in particular since becoming an EU member state
started the preparation for Roma Inclusion Decade 2005-2015, the situation of
became also on EU priority list (Mu inka, 2012a) and thus under the pressure
institution, several national strategies have been adopted (Hurrle, 2006).

At the same time, increasing body of researches providing insights into proce
discrimination and poverty of Roma on both, micro- and macro-level (see for in
2001, Zoon, 2001, Va e ka et al., 2003)), emerged. Particularly considerable pi
the gaps of state disinterest was promoted by the local civic association. A re
Union and the Open Society Foundation identified over 900 projects in yea
implemented by NGOs, which had been targeted to Roma (www.osf.sk).

Stemming on both of these streams of academic and practical information, th
strategies occurred. As noted by several studies (Hurrle, 2006), one of the m
'Comprehensive Development Programme of Roma settlements' (SR, 2002). Document
multiple issues underlying Roma poverty and thus aimed at providing strategie
'slum-upgradings', particularly of underdeveloped and spatially segregate
Programmed argued for integrated interventions that were supposed to empower and
households, calling for involvement also a non-Roma parts in order to ensure pr
development strategies.

However, in reality, due to lack of financing (depended on external fundings a
weak political will, unclear departmental responsibilities, and lack of concre
the programme did not succeed. What have been left are fragmented pieces of pr
work, employment and housing provision, which are under responsibilities of var
and did not provide any systematic set of instruments. Since that, government h
new conceptions and strategies, re-formulating approach towards interventions fo
again, these national documents have been hardly binding and have not prov
instrument and integrated tools for addressing the complex innovative tools.
addressing problems of marginalised Roma communities have ended up in the resp
dependent on good will and proactive approach, of Local Authorities with onl
available (Mu inka, 2012b, SmatanovÆ, 2014).

## 3.1 Housing delivery innovation

State-supported housing delivery is one of the few tools that are available
NGOs to address the bad living conditions of segregated Roma communities. Natio
housing has been since 1998 covered by "Programme of housing development". With

of this program, Ministry of Transport, Construction and Regional Developme provides subsidies for local municipalities for the acquisition of municipal Programme is fore mostly aimed to fill in the deficit in public sector socia restitution processes after 1989, only small percentage of housing stock re administration. 'Long-term housing conception of marginalised society groups' obliged the housing programme to provide also solution for addressing bad hous Roma settlements.

The programme is now governed by Law no. 443/2010 (SR, 2010) on subsidies f development and social housing. The Law adjusts subsiding of construction of apartments, available to local authorities and selected non-governmental organi of apartments are delivered – of normal standard ($m^2$) and of lower standard (max flat area up to 60 $m^2$). Demto the higher construction state financial subsidies (8 targets Roma communities. However, this type is not only lower in floor area, mainly simple, unfurnished flats, in the row/apartment houses with a shared s support participation processes, the rest 20% of the construction costs are in off by the future Roma tenants of these apartments.

Being undoubtedly appropriate solution for some cases, in relation to segrega Roma communities the programme have number of critics. Firstly and most importan reinforces the Roma dependency trap and promotes again, paternalistic and cont as this tool is available only to LA and limited NGOs. The individual resident accessible tool through which they could improve their situation on their own. the construction does not in fact promotes 'empowerment', as it is not comple assistance (SmatanovÆ, 2014). Also in reality, due to lacking skills, this work by professional construction company (SmatanovÆ, 2010). Also quantitative rese low effectiveness of such a model. Regarding the scope of a deprived are programme seems to be costly and not very time-efficient (MTCRD, 2014). F quantitative evaluation prepared by Milan ime ka Foundation (Hojs k, 2008) almost 92% of new rental housing 'conserved' or deepened spatial segregation. spatial segregation is closely linked to deepening poverty and overall soc exclusion, the question of the purpose of such construction arises. Renting financial burden for tenants (Ma ÆkovÆ et al., 2014).

Important to note is also wider societal implications of the program. Direct di contributes to worsening of the general society mood. By majority is this pra favouritism 'because Roma again receive new free apartments', which may have term consequences than just short-term improvement of living conditions 'fort (see for instance (Mu inka et al., 2012)).

## 3.2 Project 'From Shack to 3E House'

Since the deficiencies in state housing model have become more apparent, the involved in delivering alternative services and dealing with disadvantage gro with number of initiatives. One of the most successful in providing social innov on transfer of knowledge has been a non-profit civic association ETP Slovakia.

ETP Slovakia was established as a direct continuer of Environmental Training Pr and Eastern Europe. This was initiated in 1992 by U.S. Agency for International was implemented until 1998 in six countries of Central and Eastern Europe. ETP S an independent entity since 1995. Since its establishment, ETP Slovakia has co local government and businesses as well as with NGOs in programs that increase of local development and improve the environment as well as provide assistance

individuals and families. Currently ETP has its traditional donor organisa
activities, e.g., on international level (Open Society Foundation, Habitat for
Financial Mechanism) as well as local profit-based companies. The background
funding in particular allows to promote the projects that have some idea-backgr
of the world, especially in developing countries. The international funding gi
also an accountability, what attracts Slovak professional who were educated in
to provide their voluntary consultancy and knowledge in the activities put for
was also the case of the author of this article, who was educated in univ
implemented this knowledge as a housing programme coordinator in the analysed
Shack to 3E House'.

The first projects focused on improving living condition of Roma from segrega
promoted ETP with an assistance of international donors in 2000s through m
programmes. One of the most successful proved to be financial tools allowing i
to 'help themselves' through small micro-mortgages and savings schemes (Bœtor
Mu inka, 2012b). Since 2004, organisation has provided more than 600 micro-mortg
amounts of up 1000 euros for housing improvements, or building basic sanitation
aimed at disadvantaged households who were not eligible for commercial and
mortgages. An essential part of this financial assistance was also partici
education programmes, delivered also by the same organisation.

In 2011 was ETP Slovakia asked by LA in Rankovce, a municipality in the easter
with 300 non-Roma and 700 Roma residents living on the municipality's fringe
provide an assistance with addressing housing shortage and bad living conditio
community on a larger scale. Due to the commitment and strong sense of care, I
for more holistic approach in addressing needs of local Roma community. With a
of UNDP and partnership with local-based civic association 'Pre Lep ivot',
providing community and social work in the community, project 'From Sha
House' (Ecologically and Economically Efficient) was elaborated.

In the first year of the project, number of meetings with all the stakeholders
understand the real requirements of the future clients, attitudes of all actors
informal education was provided. The meetings with the clients revealed that the
housing is an individual family house standing on its own plot of land (Ma Æ
This finding was in contrast to the state-distributed form of row/apartment ho
spaces. However, since the standard of individual family house requires more f
model of the 'incremental housing' was adopted. Based on the principle of three-
as a 'core' is delivered a house of 75 m² which can be later on by the residents easily extend
100, or 150 m² (see Table 2 for further details).

Project does not only envisage empowerment of clients by upgrading them fro
standers to active participants in their home construction, but also by helpi
skills and supporting their sense of responsibility. Essential part of the pr
beginning been the involvement in activation programmes. Initiative families h
the process of housing provision delivered also informal education, vocatio
through activities involving also non-Roma, possibility to extend their inform
housing is not limited only on the provision of 'better roof', but also involv
contribute to the empowerment of the families and help them to step-up from the

Table 2: Operation of micro-financing schemes for housing provision in the proje
3E House'

| |
|---|
| Roma families purchase the land usually with funds accumulated via ETP s Savings Pr<br>The municipality provided the land for project participants for EUR 3/m2. The prop<br>land is a very important step since homeowners will gain a sense of responsibilit<br>taxpayer, and, at the same time, become eligible to state social benefits in ca<br>situation does not improve after the project. The main objective of the Savings pr<br>provide the necessary funding to reach a pre-determined goal of the client, which<br>the client s personal development, housing investment, or business activities (ap<br>purpose of land purchase), while teaching basic financial knowledge skills to willi<br>and families, i.e. how to plan realistically achievable targets in the medium-ter<br>can save an amount of approximately EUR 50 per month over a period of 12–24 months<br>the client reaches the pre-determined savings amount in a newly established bank ac<br>incentive, he or she gets a bonus representing an equivalent amount (100%) for his<br>from the donor organisation (Ma ÆkovÆ et al., 2014).<br><br>Clients who have successfully participated in the Savings Programme, undertaken<br>education courses and demonstrated a strong commitment to change their living cond<br>provided with micro-loans up to the amount of EUR 6,000 for the materials and other<br>construction of 3E house, repayable over a period of 10 years. The interest rate i<br>3%, which corresponds to the average rate of inflation in Slovakia. The loans are p<br>framework of a specific programme for socially vulnerable families and individu<br>situation does not enable them to obtain conventional forms of financing due<br>unavailability (mortgages), or very unfavourable conditions (non-bank loans). T<br>provided in the form of construction material, tools and re-payment of all costs o<br>including administration, i.e., no cash is provided (ETP Annual Report 2012). Fund<br>Savings and Micro-loan Programmes is provided by the American charity organisation<br>Society Foundation and Habitat for Human |

Table 3: Construction of new housing units in progress, Rankovce, 2015. Illustra

### 3.3 Results of 'empowerment approach'

The pilot project involved first 6 houses that were build in 2013. The succe
escalated a snow-ball effect among the rest of Roma families across the region
the financial limitation of the micro-financing revolving fund, the project
another 12 families in building their houses (for details see Table 3).

As the project has been still evolving, it is difficult to make final evalu
September 2014 was executed preliminary monitoring, involving series of s
interviews with several members of the municipality, from both communities. The
depict the changes that have taken place in their life since the project sta
subjectively evaluate the project success. All of the respondents agreed th
significantly improved the life for the whole community in the positive way (
Also, the women from families involved in the project became more active, and w
local based community association 'Pre Lep ivot' that is run by non-Roma, wh
social work in the community, established a micro-business with second-hand cl
man have focused on production and sell of 'eco-bricets' (www.ozplz.sk). Also,
became a members of the civic association 'Pre Lep ivot' are apart from m
being active in addressing the cleanliness and safety in the municipality.

## 4. Transferability hurdles – attempts of institutionalisation

In a way, it can be summarised, the project 'From Shack to 3E House' follows al
in 'Comprehensive Development Programme of Roma settlements' (SR, 2002) and thu
the ideas set up in national strategies are feasible, effective and successful
set up the missing instruments that the state strategies lacked – incremental ho
argues Ferguson and Smets (2010), institutional housing finance is in crisi
countries, and particular schemes of incremental housing and micro-finance s
addressing needs of low/moderate-income families.

Thus, the final aim of the civic associations involved has been to introduce
Slovak legislation (national action plans and official strategies) as comp
solutions. Governments representatives from all fields and key bodies (Ministr
Ministry of Finance, Ministry of Inner Affairs, Ministry of Family and Labour)
regular site visits and participated in all the 'checkpoints' of the project ev
reports during 2012-2014, including the presentation of the project in House of
2013 (Ma ÆkovÆ et al., 2014).

However, until now, the central government in spite of having recognised benef
was not committed to officially acknowledge the likewise alternative solution
financial administrative support, even though the 2011 Proposal of Pilot Appro
Housing Infrastructure from Structural Funds of the European Union , which als
projects of building rental apartments for marginalised groups for EUR 18.529
Structural Funds between 2013 and 2015, or a National Housing Strategy 2015-2
2014), provided good chances for that.

The common problem of implementation of grassroots projects, and thus the 'acco
NGO (Kilby, 2006) is in this case not an issue – number of social innovation pr
ETP Slovakia have by legal institution already been implemented (Bœtora et al.
illustrate this situation, it is useful to adopt the idea of 'conflicting rat

illustrating how deep are the differences between institutional approach in un
'correct way of housing' and the real needs of poor Roma, translated into the
programme by civic association.

What is mentioned by the relevant government representatives is that such sol
integrated, multi-departmental approach, what is difficult to accomplish. It is
the consensus of all the state departments is almost impossible, as each depar
priorities and approaches in addressing Roma problems. Also, there are several
of the project that government representatives consider as not very appropriate.

The different rationalities causes by step-by-step construction and ownership n
strategy. What for Roma families symbolises their ability to stand up on theii
institution has not been recognised. Government programme delivers rental apa
idea of 'enabling vertical mobility' (MTCRD, 2014), however in reality, to esca
requires also accumulation of financial sources. As described already as vario
actually the homeownership that performs a critical economic, as well as
Homeownership is of key importance in building households wealth and way out o
low-income to middle-class (Ferguson and Navarrete, 2003).

Another 'clashing rationality' lies behind the incremental approach of the hous
the process of obtaining housing, including self-help constructions, which is g
as a 'correct method of housing'. Even though this methods have been already by
as rational, innovative and creative (Turner and Fichter, 1972, Smets, 2006
elaborated within valid EU building standards and requirements, from the instit
can perceived a mistrust in 'Roma being able to build the house themselves' and
the long consolidation time. As note Ferugson and Navarrete (2003), such an ap
the institutional bodies, in many countries all over the world governments and
the 'paradigm of housing as a product' and spread this model at any costs. A
'mistrust' can be observed in institutional bodies' seeing a 'risk' in provid
allowing Roma, who are mostly unemployed and depend on welfare benefits, as due
shortage of many the repayment is constantly under threat. Saving encourages the
of their money aside and demonstrates their ability and willingness to make regu
also proves the 95% repayment rate of micro-financing provided by ETP Slovakia

Last but not least is the non-respecting of Roma specificities, which is anchor
housing model, providing uniting solutions for everyone. However, this featur
programmes seems to occur often, as also LiØgeois (1994,p.95) argues that 'so
house the Roma at any price in the conditions that we regard as appropriate to
stem on the fundamental perception of 'what is right' and 'for whom'.

## 5. What made the project successful? Role of NGO

The role of community associations in the planning is not new, however, there ca
renewed interest on international level (Choudry, 2013, Banks et al., 2015), as
parts of Europe (Healey, 2015). In the transitional countries is the role of c
even more relevant, not only in promoting democracy (Choudry, 2013), but also a
basis and values different to these of state and thus being more effective and s

Since the fall of communism regime, Slovakia has experienced the explosion of ci
number of Third sector organisations has been continuously growing. According t
data, the number of registered civic associations exceeds 40,000 (Ministry of I
of persisting weak institutional environment, there is a growing number of new
involving not only 'laic activist', but also many professionals in the field wh

feel strong commitment and responsibility to the local issues and want to parti
the country's future (Bœtora et al., 2012).

These associations in Slovakia, as in many other countries, provide basic fur
representation of the voices of the certain societal groups, as an (1) experime
control of power – watchdogging, (3) alternative service delivery provision, an
source of alternative approaches to public policy. So far, the NGOs were the
promoting the ideas of 'empowerment' into the real life. These include most
through providing social services, such as social field workers, Roma adviso
assistance, and health assistance for Roma communities (see also (JarÆbik, 2003)

In fact, in real every-day activities of Slovak civic association cover all the
discussed case study. Project 'From shack to 3E house' is based on a gap in ins
in state housing delivery. Since government instruments are available only to L
comes with a provision of instrument available to individual families and thus a
decide about their future. These ideas and practices are based on a general shi
approach' towards the 'empowering approach', using specific tools of micro-m
schemes, and incremental housing. However, these tools have also their critique
developing countries. Many of them where in this case however transformed into a
help, often being criticised for depletion of sources for the poor, is in thi
Roma families their first work, thus it provides also the training for the
opportunities. Important is also to stress that this programme does not aim to
only option, on the contrary, project aims to be recognised as a complementary
state housing strategies.

Being of special importance in case of addressing ethical issues, such as of R
and successfulness of civic associations to (5) promote equity and different mo
transition from a social structure based on forced equity a developed profit-dr
influenced general societal moral settings and preferences. As notes also Radi
an overall trend of decreasing of social solidarity among Slovak society.
The situation is even sharper when Roma are concerned, as any institutional hel
by majority perceived as unacceptable, unfair and thus left merely on the basis
charity (Hojs k, 2010) of the voluntary-based civic associations. As Friedmann
non-governmental organisations/third sector/civil society show hope that an a
might be possible through the voluntary actions of civil society

Therefore, the role of civic associations, as a value-driven bodies, is in th
essentials. The value-basis drives civic associations to pursue public benefit
profits or social/political benefits. Kilby (2006,p.953) sees the values of NG
Weltanschauung, a world view, from which derives their motivation to serve for
relation to the case study, it is thus important to look at the underlying r
problems connected to Roma communities. On the level of national-state rhetori
identified two basic principles that underlie these actions. First is the
discriminatory measures – to level the inequality in chances caused by histor
which has resulted in current state of exclusion and marginalisation (see for in
This approach is complemented by the knowledge that without an external help,
Roma there is no-way-out to get from the poverty traps and state dependen
segregated Roma settlements (Radi ovÆ, 2001, JarÆbik, 2003, Marcin in and Mar
However, the approach of civic association was based on different basis, s
development, protect the environment and assist in the development of the s
educational and cultural potential of people, organisations and communities wit
problem solving within disadvantaged regions, socially disadvantaged group

minorities' (Ma ÆkovÆ et al., 2014). This approach is not based on promoting e
the pubic-led are, but also, promoting development, empowerment and care.

The crucial part of the civic associations activities is then their step-by-ste
the standard practice and formal procedures. As also Murphy (2014,p.146) argue
are community-based planning founded on a new ethic and morality: 'A new worl
imagined as divorced from charity and based on care. Within this framework, int
a gift but the expected response from community members who support one ano
conclusions and vision for future provides also Friedmann (2011), aruging also
step incremental approach in planning practice, no-longer based on ideologies
transformative momentum of a more responsible and public-good based societies.

## 6 Further research

This article aimed to open up a discussion that have receive so far only marg
each of the issues presented requires further, deeper elaboration. Firstly, ta
associations in finding innovative solutions for empowerment of given Roma c
model for planning practice in Slovakia on the local level; there is still an
state planners on regional and national level to address the marginalisation o
provide a solutions on these scale. If not, any long-term future solutions for
non-Roma will not be efficient.

Secondly, the overarching challenge is that of values and attitudes of the soci
both ready, able and willing to address the issues of Roma marginality? A
stereotyping among non-Roma in the courtly persist, shall there be taken any in
order to change the attitudes and values of a majority society?

## 6. Conclusions

To sum up, paper looked at the situation of Roma communities living in segregat
settlements in Slovakia. For a decades have Roma minority in Slovakia expe
deliberate attempts of assimilation, creating a 'gray spaces' in Slovak la
illustrated on the case of housing, since the fall of communism regime, the go
instruments have been also failing in addressing needs of these communities. On
'From Shack to 3E House' and its unsuccessful attempts of institutionalisation
between government approach and perception of Roma needs and the reality. As
especially in the case of addressing needs of marginalised Roma is the invo
associations vital due to the lack of solidarity and networks within these co
study also illustrated the role of civic association in filling the niches
services in alternative ways and developing innovative approaches, with an a
formal, institutionalised planning practice. However, as these issue in Slovak
been articulated, further researchers are needed and the values and underlying
assistance for Roma in need must be re-thought.

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# How to establish a disaster-resilient ageing community based on local eld Institutions in Taiwan?

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Keywords: resilience, disaster resistant community, elderly welfare institution.

## Abstract

While ageing population in Taiwan surged to 11.5% in 2014, ageing in place emerging concept in public health policy, which proposes a community-based ca increasing ageing population. Among all the issues regarding population ageing, from natural disasters would be the most challenging. Meanwhile, local elderly w with relatively sufficient storage, professional nursing/medical care services be able to sustain better self-support status during and after disaster. Ac experience in Taiwan, rescue force usually could not reach most rural area very occurring due to the disconnected communication and destructed routes. Local el could act as shelters for community residents. In recent years, there have been given to capability of disaster resilience for elderly welfare institutions disaster management. Discussion regarding how institution resilient capacity co in the community is still lacking.

The aim of this paper is to explore how well communities could respond to disas integrating the existing elderly welfare institutions. This paper would divide first part is the analysis of the spatial distribution of elderly welfare in disaster potential area in Taiwan. And the second part will define the role of about institution for community, and identify the disaster-resistant level for di institutions. Finally, it would feedback to overall institutions in community f policy at local level. The framework is expected to propose a community-level and enhance disaster carrying capacity.

## 1.! Introduction

### 1.1.! Research background

#### 1.1.1.! Long-term care challenges for the ageing in Taiwan

In Taiwan, the population above 65 years of age reached the standard of an ageir and the proportion was over 11.5% in 2014, which surpassed the benchmark of an which is 7%. It is estimated that the proportion will go up to 14% in 2017 an society. After one-decade, Taiwan will become a super-aged society. Meanwhile make younger population decrease and dependency ratio surge. The demographic ch not only in the age structure but also in the size of households. Only half of long-term care live with their children, yet the size of households continues to shrir elderly by families has declined due to the lack of caregivers among family mer care, however, is not affordable for most families. ("White paper of population

Compared to the complete network available for evacuation and disaster reductio people in rural areas face more threats and difficulties regarding the disaster process. Since young people leave their hometowns, this also increases both t

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elderly living alone and their vulnerability to a disaster. So, the establishme
is necessary at the local level.

### 1.1.2. Ageing in place

A common issue of ageing is the lack of adequate and affordable health care in t
people live, as they are no longer able to live in their own homes. World Healt
guide for global age-friendly cities, based on the concept of active ageing. I
friendly city should adjust the structure of urban spaces to make services
environment more available for the elderly to meet their needs.

One of the principles of an age-friendly city is to offer community-based su
services, which are important for maintaining the health and independence of old pe
community. On the other hand, the community should be responsible for emerger
including older people s needs and capacities in preparing for and responding to

Shih (1999) proposed that long-term care should transform from care in the com
by the community , and finally to care with the community. Wu and Chuang
mentioned that the goal for a long-term care policy in 21st Century Taiwan shou
local services that connect resources in the community to establish a long-term
on the community. This kind of long-term care follows the ageing in place
enhances the cost-effectiveness of the service. At the same time, the key role
gradually transfers from the home to the community.

### 1.1.3.! Long-term care model in Taiwan

The long-term care model in Taiwan can be divided into three parts, and each
provide different kinds of services to meet the needs of the elderly. It shoul
based services, community-based services, and home-based services. Home-based
incompetent elders get continuing care, and caregivers will provide services at
Community-based services are aimed at enhancing the willingness of family car
advance the independence of the elders in the community, which provides services
the elderly. These kinds of services help the elderly to stay in their familia
accept different professional services at the same time. Finally, institution-
care for the elderly in daily life and with whole-day medical assistance.

In recent years, the local government tried to promote community care services.
term Governance, from 2013 to 2016, there were subsidies for nutritious catering
services, and various other welfare activities for the elderly.

In the Senior Citizens Welfare Act, Article 19 clearly states that institution-
integrate with family-based and community-based services, and give support to i
community-based services. It shows that long-term care in Taiwan has been dev
community-based care to fulfill the spirits of aging in place, so elderly wel
addition to the original work of these institutions, should take up the crucial
for the elders of a community.

Table1. Comparison of institution-base services, community-base services, and ho

| Category | Institution-based | Community-based serv | Home-based ser |
|---|---|---|---|
| Attrib | To provide al services to the eld the instit | To provide serv specific place in the community | To provide services |
| Content | 1. Residence servi 2. Medical service. | 1. Health care servi 2. Medical service. | 1. Medical service. 2. Recovery service. |

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| | | | |
|---|---|---|---|
| | 3. Recovery service.<br>4. Livelihood service.<br>5. Food service.<br>6. Emergency care service.<br>7. Social life service.<br>8. Parent education service.<br>9. Day-care service. | 3. Recovery service.<br>4. Aids service.<br>5. Psychological consultation service.<br>6. Day-care service.<br>7. Food service.<br>8. Family support service.<br>9. Education service.<br>10. Legal service.<br>11. Transportation service.<br>12. Retirement preparation service.<br>13. Recreation service.<br>14. Information supply and transfer service. | 3. Body care.<br>4. Housekeeping service.<br>5. Visit-care service.<br>6. Phone-care service.<br>7. Food service.<br>8. Emergency care service.<br>9. Household cleaning service. |

### 1.1.4.! The need for community-oriented long term care facilities

The focus of long-term care for elderly people has gradually shifted from instit
communities, and the institutions have become part of the professional caregive
based services. At the same time, institutions can make use of resources in
provide informal assistance to residents inside institutions, so community-bas
people is regarded as a concept of self and mutual assistance (Chen, 2009). Lai
an institution as more than just a place separated from the outside with a hi
should integrate with the community actively and remain in a good relationship
of the community. On the other hand, community-based care is a welfare provic
from nation to community, so he defined the community-based cares of an i
localization, decentralization, and service based.

Localization is to provide long-term care, varied according to local characteris
that long-term care is not a fixed and inflexible mechanism to apply everywher
long-term care providers shifting from central government to local governmer
decentralization. Deinstitutionalization aims to support elderly people receivi
the community where they live, so all the cares correspond to a miniaturizati
community.

While institution-based services tend to integrate with community-base care, the
welfare institutions has been given more attention. Chuang (2008) mentioned tha
offer a variety of community-based care, such as home-based care and day care; c
residents in a community take advantage of the facilities in institutions to ac
functions. Furthermore, institutions could act as emergency shelters because
living facilities. For instance, there is safety management in kitchens and bat
medical care providers. In addition to providing care to the elderly, elderly
have become shelters for the elderly and residents in the community when d
Institutions can supply their storage of food and water, and they are a compa
sleep (Dosa et al., 2008). Disaster mitigation gradually is incorporated into o
community-based services that elderly welfare institutions offer. Laditka et al.
preparedness of elderly welfare institutions after the Katrina Hurricane, and i
plans for disaster prevention and protection at the community level excluded
Likewise, institutions were not aware of existing health care resources, so vul
the face of a disaster.

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Above all, the role of elderly welfare institutions, which provide services onl
institutions, transformed into an important core of the community elderly care
outreaching professional medical and multiple care such as emergency care and disaster
prevention services to community, the network of long-term care becomes more access
available to the elderly.

### 1.1.5.! Ageing society & disaster vulnerability

With the ageing population quickly growing, there is more attention given to t
people belonging to a high vulnerability group (Cohen & Ahearn, 1980; Tierney &
Fernandez et al. (2002) stated that the vulnerability of the elderly includes
mobility of the elderly decreases due to the degeneration of physical function o
of health. Compared to healthy people, the speed of the elderly to respond to
slower. Another aspect focused on the alertness of the elderly to escape a di
sensory functions of the elderly decline, they are not able to respond to disast
elderly people the loss of social capital, social networks, and socio-economic s
capability to recover.

FEMA (2012) pointed out the evacuation capability of elderly people is much low
population, and mental traumas make them take longer time to recovery when di
Therefore, the elderly suffer higher vulnerabilities from different physical
conditions. In the case of an increased proportion of elderly in a populatio
resilience to disasters and reducing their losses from a disaster have become
Corresponding to the specific needs of disaster response, The Disaster Preventio
Plan (2013) regards the elderly as a disadvantaged group, so they are a prio
assistance after a disaster. The Ministry of Interior, the Ministry of Health a
governments should promote preparedness for disadvantaged groups, offering hos
social welfare institutions, and other places to shelter the elderly.

Taking into consideration the different health conditions of elderly people, the st
change according to differing levels of vulnerability. The National Disaster Pre
Center (NCDR) (2008) categorized the elderly into four groups according to di
conditions.

(1) The elderly rely on institution-based care:
Because people in this group live in elderly welfare institutions, the preparedn
disaster focuses on the safety of the physical environment of an institution, th
protection and prevention, plans for disaster management, the delivery of ev
support among regional institutions, and disaster insurance.

(2) Incompetent elderly receiving community-based care:
People in this group need assistance regardless of mitigation, preparedness, and
disaster. Consequently, it is necessary to plan shelters with professional car
aids, and to provide relative medical facilities for the elderly of specific dem

(3) The elderly capable of looking after themselves receiving community-based ca
The strategy focuses on education about disasters, so people in this group
knowledge of self-protection in the face of a disaster, and strengthen their ab
who live alone or are incapable of movement by themselves in a disaster.

(4) Others:
Offer recovery planning about economics and housing reconstruction assistance to

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### 1.2.! Research Objectives

The vulnerability of elderly people in the face of a disaster differs accordin
and need for caregivers, and the differences are worthy of more discussion, specific
enhancement of resiliency to a disaster.

Hence, our research scope covers the review of different types of elderly welf
the situation that extends from the services of elderly welfare institutions to
identifying the role of existing elderly welfare institutions in response to d
provide some suggestions to the entire institution-based service system.

Objective 1: Enhancement of the function of elderly welfare institutions: Disaster response
! Objective 2: Identification of elderly welfare institutions in disaster pron
! Objective 3:Suggestions about disaster management to various kinds of elderl institutions

## 2.! Conceptual framework

### 2.1.! The role of elderly welfare institutions based on ageing in place

According to the population projection of WHO World Health Organization , th
incompetent elders will grow four times from 2000 by 2050. And The average
elderly people in Taiwan will become 30% then. There will be plenty of demand
care, including home-based care, community-based care, and medical institution
"Global Age-friendly Cities: A Guide", it was mentioned that health and suppor
community are a very important part of maintaining active ageing. Through sup
available and multiple services, a long-term care network based on community can

AARP (American Association of Retired Persons) echoed the concept of ageing in
and they advocated for the establishment of a liveable community. The community
the spirit of active ageing. The principles of a liveable community includ
connectivity between community and health facilities, supporting home-based or c
related services, and relative health-based resources to improve the health of
community.

Ageing is a continuous process, and the concept of active ageing can only slow
ageing. When ageing reaches a certain level, elderly people still have to rely
services, which can provide 24-hour medical care and professional nursing. In
Welfare Act Article 19 mentions The institution-base service shall be formed as a combin
home-based and community-based services, and shall support home-based or comm
service, which expect elderly welfare institutions can be the main providers o
and home-based services and contribute to elderly people s active ageing in th
from this act amended from 2014 to now, elderly welfare institutions are not af
the community-based care (Shih, 2013) and there is still a long way to develop
from elderly welfare institutions in the network of long-term care in Taiwan.

### 2.2.! Strengthening the relief role of elderly welfare institution by red of at-risk communities

According to Establishment Standards of Senior Citizens Welfare Institutions,
service can be divided into domiciliary care institutions and long-term care ins
Domiciliary care institutions provide seniors who can take care of themselves fo
life but without any relative with legal support obligation living. The average

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residents in domiciliary care institutions are better than those in other types medical device is relatively simple. On the other hand, long-term care instit characteristics of residents and can be classified into three categories:

! Nursing: services for incompetent elderly people who are unable to take care elderly people in need of nursing services such as a nasogastric tube or cathe

! Long-term care: services to elderly people with long-term chronic diseases w nursing services 24 hours a day.

! Caring for senior citizens with dementia: services to senior citizens who ar middle degree dementia, are capable of moving by themselves, but are in need services.

Long-term care institutions and nursing institutions should possess the foll support 24 hour care: dormitories, bathing and hygiene facilities, and kitch heating, storing and freezing. In comparison to domiciliary care institutions, l care institutions lack capabilities and the average health condition is worse. nursing records, pharmaceuticals, storage of medical equipment, and adequate emergency rescue, long-term care institutions possess nursing stations equipped room, service stand, and treatment trolley. These medical facilities meet each demands. In the face of disaster, long-term care facilities have more complete consequently, this type of institution-based service has the potential to provid the elderly in a community.

Similarly, the arrangement of caregiver corresponds to different types of instit below presents the comparison. Due to better health, the elderly in domicilia need fewer caregivers than the elderly in long-term care institutions. The dens of personnel between the three categories of long-term care institutions from respectively, from caring for dementia senior citizens with dementia, long-term nursing. In other words, the order of dependency on care giving is that caring with dementia is the highest one, and long-term care is higher than nursing. Th based services in Taiwan will be sorted by the arrangement of personnel and med this paper: institutions for senior citizens with dementia are on the highest l followed by long-term care institutions, nursing institutions, and finally institutions.

Table 2. Comparison of caregiver ratio (caregiver to residents) and medical

| | | Domiciliary care institutions | Long-term care institutions | | |
|---|---|---|---|---|---|
| | | | Nursing | Long-term care | Caring dementia senior citizens |
| The arrangement of personnel | Nursing personnel | At least 1 staff 1/20 | | 1/15 | 1/20 |
| | Social worker | 1 /80 | 1 /100 | 1 /100 | 1 /100 |
| | Caregivers | Day care:1 Night care:1/3 | Day care: Night care:1/ | Day care: Night care:/1 | Day care: Night care:1/15 |
| Medical faci | | A. Nursing records B. Storage of medical | A. Nursing records B. Storage of medical equipment and pharmaceuti C. Adequate equipments for emergency rescue D. Nursing equipments preparatory room, service | | |

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| | | | | |
|---|---|---|---|---|
| | equipment pharmaceutical C. Adequate equipments for emergency rescue | stand and treatme | | |
| Level of medicaf | Lowes | Lowe | Higher | Highest |

## 2.3.! The role of disaster prevention according to the type of the instit

According to the abilities of taking care of oneself in daily life and the strength institutions provide, the capabilities of disaster protection for institution- divided into 4 levels. From high to low, the level of disaster protection is citizens with dementia, long-term care, nursing care, and domiciliary care. When institution are more incompetent, the institution should possess more medica example, regarding self-relief, long-term care institutions that provide care t dementia are much more vulnerable in the face of disaster due to the health elderly people in the institution. When disaster strikes, elderly people in th cannot rely on their own strength to escape, so the density of caregivers shoul limits for selection of the location of the institution should be stricter. On the othe care institutions providing care to senior citizens with dementia should be at disaster protection due to high resiliency and coexistence with disaster.

Table 3. The analysis of disaster protection in types of institutions

| | Domiciliary institutions | Long-term care institutions | | |
|---|---|---|---|---|
| | | Nursir | Long-term c | Caring dementia senior citizens |
| Medica Resources | Lowes | Lowe | Highe | Highes |
| Caregivers | Lowes | Lowe | Higher | Highest |
| Level of dir protection | Lowes | Lowe | Higher | Highest |

## 2.4.! Challenges elderly welfare institution faced when provide relief se disaster prevention

The relevant norms about the establishment of elderly welfare institutions foc conditions of the building, including the differences among the health conditio the arrangement of caregivers and medical facility. However, these norms stil regarding the influence of disaster prevention. In addition, the Establishment Citizens Welfare Institutions only refers to the requirements of facilities re residents inside the institution, but not to regulations corresponding to disast

Regarding local disaster prevention, the Disaster Prevention and Protection A Regional Plan of Disaster Prevention and Protection should be conducted by the c and township (town, city) level. Furthermore, township authority is responsib community disaster prevention and protection affairs. In addition, for disadvantaged government should provide the necessary assistance at the stage of prevention, protection at the stage of response.

Although the elderly are regarded centrally in the Disaster Prevention and Prot still a lack of further discussion about the elderly with different needs in dis

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Regarding the lack of regulations about the location of an institution, ins
anywhere in a community. As such, there are increasing challenges in response t
institution. Lee (2013) discussed the problems institutions meet in the proces
event-oriented method. Many institutions located in rural areas with properties
lack medical resources because cost is the first consideration. Although rural
the formal relief network is incomplete in response to a disaster. In additio
evacuation and the facilities for disaster protection should be taken into t
disaster management of institutions. Benson (2002) generalized the factors of e
CDC s records. The factors included how long institutions spend on evacuati
institutions prepare for disaster mitigation, whether the arrangement of manp
whether the storage of water and food is enough, the complex demands for medicin
plenty of difficulties institutions will meet in the process of long-distance
prevention of disaster tends to seek for a local shelter. In this paper, the
elderly welfare institutions will develop on the basis of self-rescue, and then
assistance of residents in communities.

## 3.! Methodology

### 3.1. Scope of the study

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In order to identify the role institutions should play in disaster prevention a
this paper uses the village as a spatial unit of analysis, which corresponds to

### 3.2.! Secondary database collection

Because the spatial units in this paper are village administrative units, the
digital maps will be based on villages. The main sources for data are from t
information" of the Ministry of the Interior Department, in 2013, and digital m
Ministry of Transportation and Communications. These contain "Taiwan county
administrative boundaries" and "Taiwan village boundaries." "The position of slo
from 2008 to 2013 ", "inundation potential map of rainfall up to 600mm in one
"distribution of fault map" are from National Disaster Prevention and Rescue Cen

### 3.3.! Overlay analysis of Geographic Information System (GIS)

Through the overlay analysis of potential disaster areas and the distribution
institutions, the institutions in high-risk communities can be pointed out. Aft
roles of these institutions face in a disaster according to the type of service
can be used as basic data for the establishment of the community disaster prevention
future.

## 4.! Issue discussion and preliminary GIS analysis results

### 4.1.! Preliminary issue of identification and analysis

#### 4.1.1.! Issues I: The distribution of medical care resources in Taiwan do
demand of the elderly population in the face of a disaster. When dis
elderly in hazard-prone communities are highly vulnerable, and they
immediate services of medical resources.

! Analysis:
The distribution of large medical institutions corresponding to the villages
that major medical resources are located unevenly and cannot assist every village.
hand, comparing the distribution of large medical institutions with are out o

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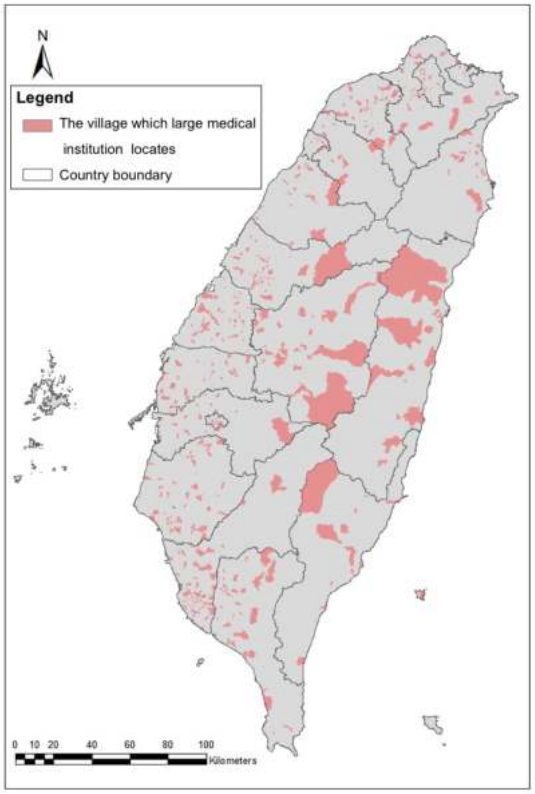
of large medical institutions. As a result, medical resources cannot handle
ageing trend, and the communities elderly people live in are unable to provi
continuous medical services. The elders are incapable of receiving med
immediately, so several problems for ageing in place emerge. In addition, whe
a hazard, those villages cannot get timely medical care.

A community with a high proportion of elderly people contains not only high v
also low accessibility to medical resources. Under this uneven distribut
institutions, communities should seek other local resources with medical and



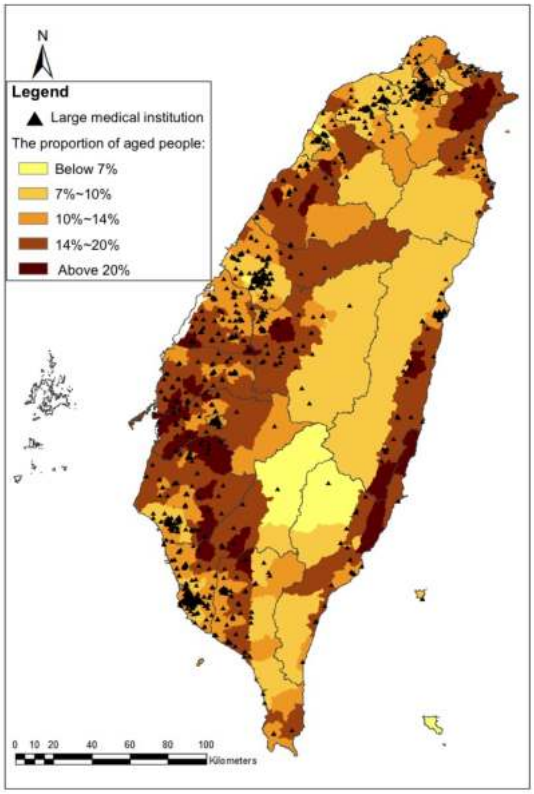




Figure 1. The distribution of large medical institution corresponding to the village

Figure 2. The distribution of large medica
institution with the degree of aging villa

4.1.2.! Issue II: When located in a high-risk environment, elderly welfar
Taiwan should play a more important role based on ageing in place.

! Analysis:
Dilley (2005) estimated countries most exposed to multiple hazards in a
Publication: Natural Disaster Hotspots A Global Risk Analysis. In Taiwan,
area and population are exposed to three and more hazards, and 99% of the
population have suffered from two and more hazards. Taiwan is the riskiest co
hazards in the world.

As the disaster potential area of distribution shows below, almost all of Tai
landslide disaster risk map, earthquake disaster risk map, and inundation
rainfall up to 600mm in one day. Through an overlaying analysis of the t
disasters, four communities are located in multi-disaster potential areas, in
community in Kaohsiung City, the Renhe and Dongshan communities in Nantou Co
the Shuangfeng community in New Taipei City. For high-risk areas exposed to disas

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important to improve their capabilities of responding to a disaster. When co
problem of not having external assistance in addition to local hospitals, lo
institutions with medical resources and professional caregivers can provide r
the community. The function of elderly welfare institutions in a community
than long-term care, and they should be upgraded to provide relief and med
services in the face of a disaster.

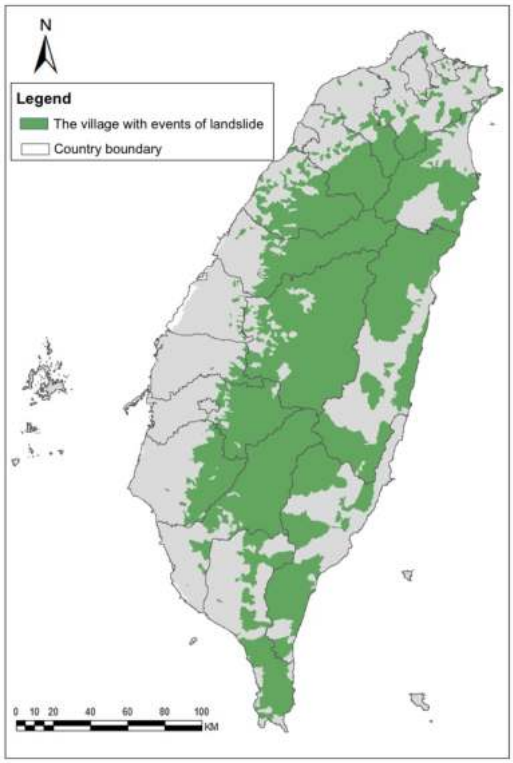


Figure 3. Landslide disaster risk map

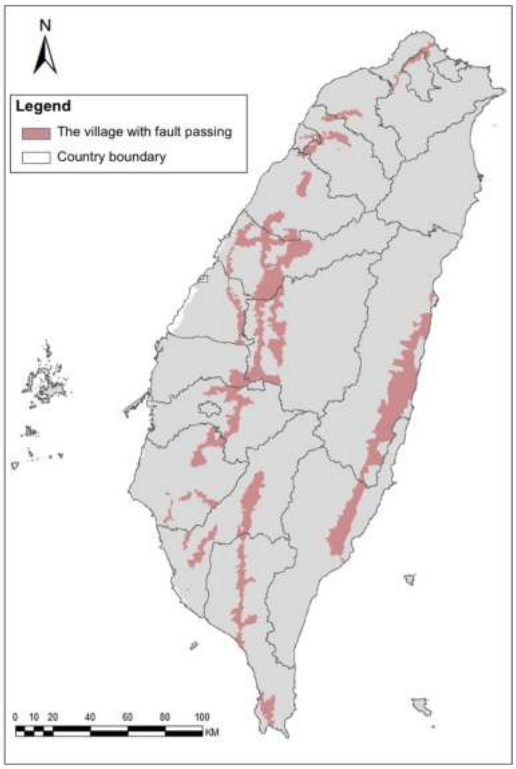


Figure 4. Earthquake disaster

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Figure 5. Inundation potential map of rainfall up to 600mm in one day

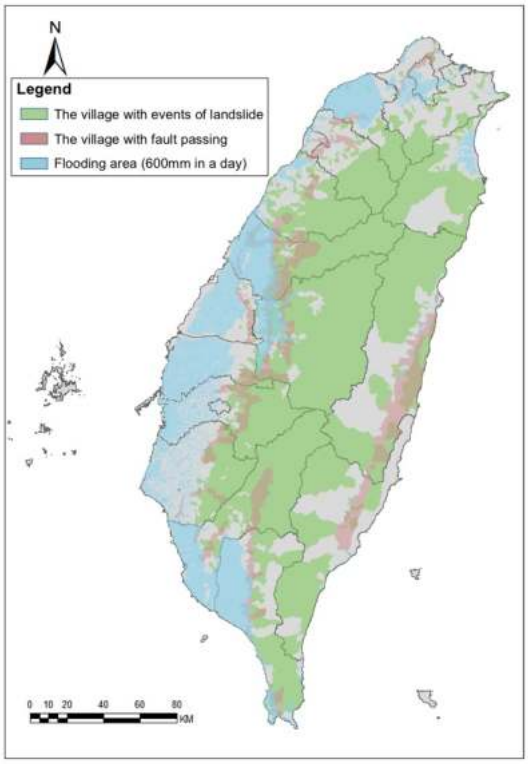


Figure 6. Multiple disaster risk map

4.1.3. Issue III: Review of elderly welfare institutions: elderly welfare institutions should avoid selecting a potential disaster area as a location.

- Analysis:

In order to implement the spirit of the land of ageing, the role of elderly welfare institutions in the community contains community-based care services and medical services. Therefore, they are in an important position to provide services to the elderly, and they should strengthen their response to disasters and enhance resiliency.

Besides the interior facilities discussed earlier, the location of elderly welfare institutions is also the risks in disasters. Therefore, the following analysis will focus on the distribution of facilities prone to slope disasters, earthquakes disasters, and flood disasters to understand the higher level of vulnerability of these elderly welfare institutions.

Table 4. The analysis of disaster distribution in types of institutions

| | | Disaster type | | | |
|---|---|---|---|---|---|
| | | Fault distribution | Slope disasters | Flood disaster | Multiple disaster |
| Domiciliary care institution | | 1 | | 2 | 0 |
| Long-term care institutions | Nursing | 48 | 38 | 185 | 6 |
| | Long-term care | 13 | 5 | 41 | 0 |
| | Care for dementia senior citizens | 0 | 0 | 2 | 0 |

-

| | | | | |
|---|---|---|---|---|
| Tota | 62 | 45 | 230 | 6 |

Finally, after a comprehensive analysis of the three disasters corresponding
community, it turns out that there are 304 institutions located in potential di
accounting for 29.50 % of the total number of elderly welfare institutions
nearly 30 % of elderly welfare institutions suffer from damage in the face of
the residents in the institutions belong to disadvantaged groups, so the vuln
gets higher. Thus, elderly welfare institutions should have more stringent s
the selection of a location.

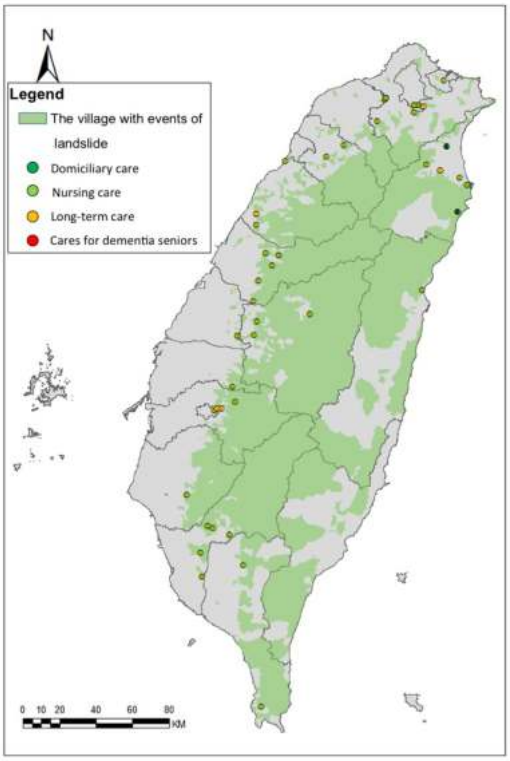


Figure 7. The distribution of institution and landslide disaster risk ma

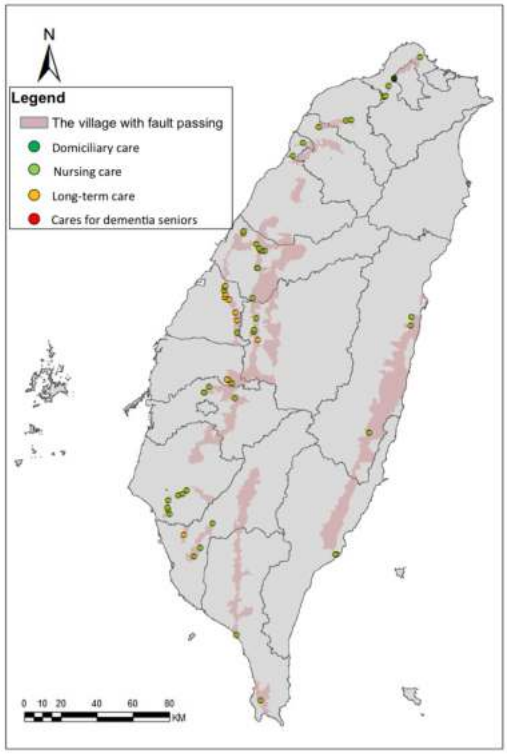


Figure 8. The distribution of institution earthquake disaster risk m

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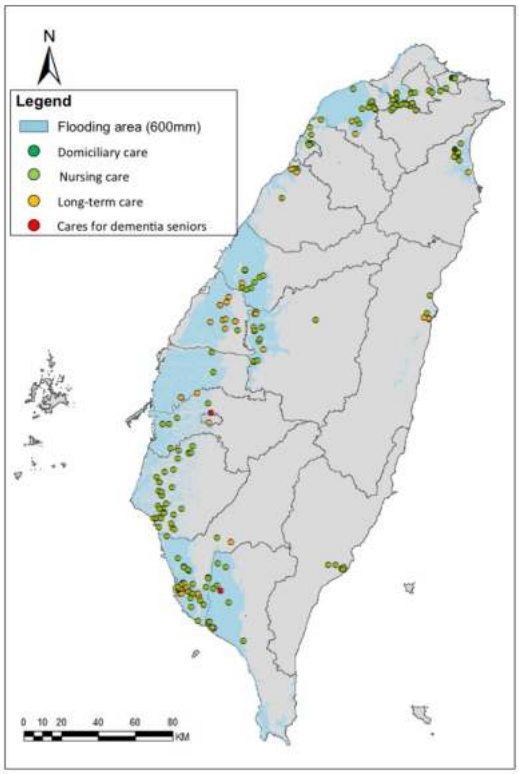


Figure 9. The distribution of institution and inundation potential map of rainfall up to 600mm in one day

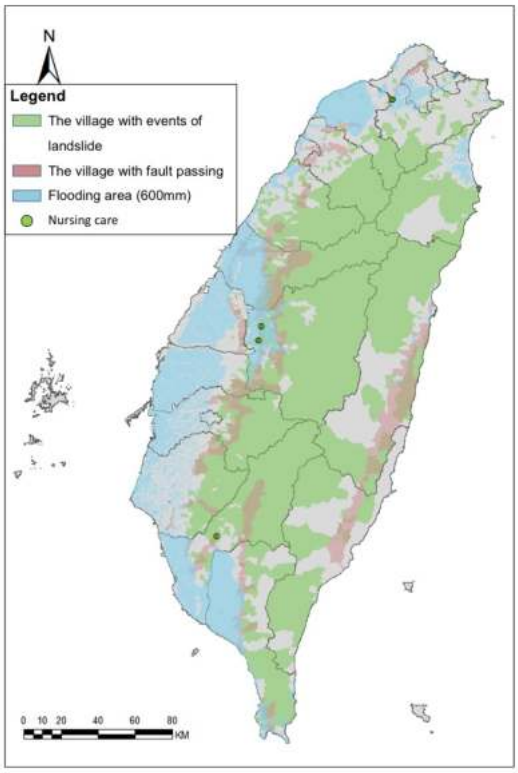


Figure 10. The distribution of institution and multiple disaster risk map

### 4.2.! Discussions

Overall, the enhancement of the function of elderly welfare institutions can su
medical resources. In addition, to strengthen the function of disaster preventi
about the selection for a location is as follows:

#### 4.2.1.! Location Guidance of elderly welfare institution

First of all, the location being selected should not be in a potential disaste
into consideration its feasibility as a shelter for the community. The authorit
should propose limitations and regulations for location selection in order to r
vulnerability of an institution.

#### 4.2.2.! The equipment for the mitigation of disaster in existing elderly

Regarding the distribution of existing elderly welfare institutions,
institutions are not in disaster potential areas. In other words, nea
institutions might suffer damage in the event of a disaster. While the ex
the institutions cannot prevent a hazard from striking, the institutions
structure of building and obtain equipment for the mitigation of disast
gates and ramps to improve disaster response.

!

### 4.2.3.! Special designs of elderly welfare institutions in a disaster pot

Since community-oriented elderly welfare institutions will be set up in disaste
the future, those institutions should enhance the function of disaster mitigation
Urban Planning Law and Building Code and Regulations. The special designs inclu
relatively low damage prone area as the location, setting water gates, and the
above two floors, which allows residents in the institutions to evacuate to the

### 4.2.4.! Multi-services of elderly welfare institutions

While the role of disaster response varies in different types of institutions, t
type institutions could increase the resiliency of the institution itself. For
institutions can adopt some elderly people able to take care of themselves,
education and relative training in response to disaster. When disaster strikes,
of the institution can help evacuate incompetent elderly people. Thus, the
institution does not completely rely on the staff, thereby increasing the ef
response.

## 5.! Conclusions

In this paper, the community-based services of elderly welfare institutions
regarding disaster mitigation in the aim of carrying out the spirit of ageing in
the facilities and caregiver allocations among the different categories of in
institution-based services can offer 24-hour care and medical assistance.
institutions in a community as the disaster mitigation core could provide outrea
pharmaceutical services and living facilities. This would reduce the vulnerabili
in the community. A neighbourhood elderly disaster shelter is particularly si
communities disconnected with outside. Community-based care can reduce the harm
environment in the face of disaster, instead of waiting for external rescue. On
community-based care network is built, it enhances the awareness of the residen
in coping with disaster while increasing the resilience of community. The resil
coexist with the disaster (Beatley, 1998) and implement the concept of resili
future, there will be a more in-depth discussion the cognitive role plays when f
a community within different kinds of institutions.

When responding to a disaster, institutions should be more open to the residents
and should strengthen the role of resistance to a disaster between institutions
resiliency of a community considers not only the old and spaces but also th
between individuals, institutions and community. In consequence, this paper ide
role institutions play in the face of disaster and proposed some suggestion
institutions use when policy making. On the whole, communities and institution
an intimate network of disaster response and mitigation under long-term car
enhances both of the resiliency of community and institutions at local level.

## 6.! Acknowledgments !

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and Long-Term Care Facilities and Adaptive Land Use Control Strategies (MOST 1
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# BOTTOM-UP URBAN REGENERATION: THE FORMING AND MECHANISM OF SONGZHUANG ART VILLAGE, BEIJING

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Keywords: Bottom-Up Regeneration, Planning, Mechanism, Local Actors, Songzhuang Art Village

## Abstract

This research discusses about the bottom-up regeneration process of Songzhuang Art Village in Beijing, China. As a typical but unusual development process in urban regeneration, Songzhu case shows the vitality of the local actors. The research includes three major issues. First is the study of the regeneration process of Songzhuang, in which the government-led top-down planning process and the local bottom-up development process are both discusses and compared. The second issue discuss is about the mechanism of such process. The last issue to discuss is the role of planning in the bottom-up regeneration process.

According to the research, Songzhuang s success relies on bottom-up regeneration rather than the top-down process. It is been discusses that such spontaneous growth path could have more actors involved, with dynamic local economy and opportunities for spatial restructuring.

Most importantly, the mechanism of Songzhuang s bottom-up regeneration process is composed by four key items: core actors (artists, villagers, and village government), extended actors (investment groups, marketing groups, and public services groups, etc.), conditions and catalysts (flow of people, capital, spaces, information, and policies), and reactions. All of these items contribute to the growth and prosperity of the art industry.

Finally, we look into the role of planning, in order to find out better approaches for planners when dealing with the cases like Songzhuang. To rethink planning strategies. To be aware of the emerging new economy, and to cooperate with local self-management principles.

This research could be helpful for gaining deeper understanding of Songzhuang Art Village, but also understand the general mechanism of similar cases. In a context of the rapid growing creative economy around the globe, such research seems crucial and necessary.

## 1 Introduction

### *1.1 Songzhuang Art Village and Art Villages in China*

Songzhuang Village locates in Tongzhou District, the east periphery area of Beijing. The distance between Songzhuang and east 5th ring road is 10 km of the city, with 26.4 km to the east 2nd ring road. Figure 1. Songzhuang Art Village. (a), Location of Songzhuang Village in Beijing shows the connection between Songzhuang Village and downtown Beijing.

Songzhuang Village covers a total area of 116 km$^2$, with 24.86 km$^2$ area been constructed, and more than 3.37 km$^2$ area, 13.6% in proportion, is considered to be the core zone of art village. Figure 1. Songzhuang Art Village. (b), Circumference of Songzhuang and Songzhuang Art Village shows the Area of Songzhuang Village, with the dark black parts representing the constructed area and the red part representing the Songzhuang Art Village.

The circumference of Songzhuang Art Village is blur. Though Songzhuang Village has much longer history, the art industry composes almost the whole part of Songzhuang s daily people usually use both Songzhuang and Songzhuang Art Village to represent suc specialized area by art industry, so it is with the following context.

Since the year 2005, Songzhuang became more popular in China for its artists community and art industry. Over 7,500 artists working in Songzhuang (Songzhuang Cultural and Creative Industry Cluster Management Committee, 2013), with the annual 3.10 billion dollars of contribution in GDP (FAN Lingzi, 2008). As the largest original art community in Asia, Songzhuang created a miracle not only for the prosperous art industry, but also for the bottom-up regeneration process in perspective of urban planning.

Many studies divide the development process of Songzhuang into three part, the agricultural development phase, the industrialization phase and the creative economy phase (JIANG Yifan, 2007). In our research, we studies such dual-approach, the top-down and bottom-up processes that assigned or applied in Songzhuang.

In recent years, art villages are commonly seen in several metropolitan cities in China. The common characteristics they share are the periphery location, the agglomeration of artists and the related art industries they bred. In 2009, Oriental Painters Village in Shanghai became the famous and larges painters community in Yangtze Delta Region (QIN Yuanyuan, 2011). Another famous one, is the Da Fen Village, known as the oil painting village in Shenzhen (ZHANG Kun, 2014). Besides Songzhuang, 798 is another crucial place for art industry in Beijing, many years ago (FAN Linzi, 2008). Considering the rise of the creative industry in China, places like Songzhuang are getting more popular (Michael Keane, 2006).

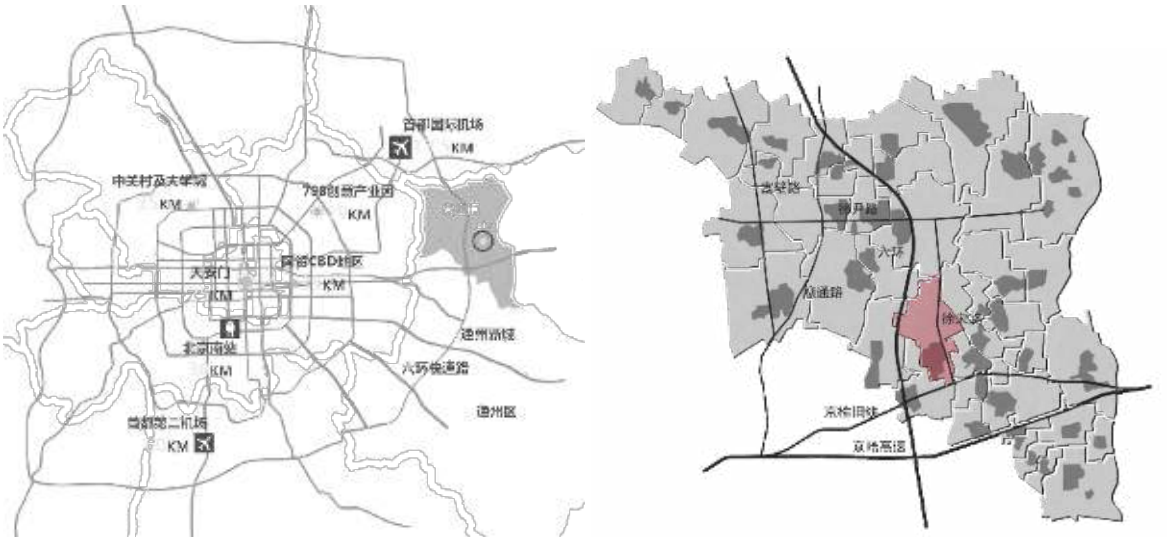


Figure 1. Songzhuang Art Village. (a), Location of Songzhuang Village in Beijing. (b), Circumference of Songzhuang and Songzhuang Art Village

### *1.2 Literature Review: Creative Class and Informal Urban Regeneration*

The term of creative class was studies due to the trigger transformation is caused by a group of artist, typical in creative class. Though some scholars call them new-industrial class (Michael Indergaard, 2009), the term of creative class is widely accepted. Richard Florida shall be men in this field, for his research on creative class around 2002. In his research, besides the normal groups of workers, creative class is a group of bring economic growth to countries that can attract its members (Richard Florida, 2002). This could well describe the process of artists group that gathered

and settled down in Songzhuang. However, the artists group in Songzhuang shows some extra characteristics, not only the specialized technics they have (Richard Florida, 2002).

We also concern about the process of places chosen. The special attractions that drive the creative class to agglomerate. Most of the scholars think such factors include the tolerant local policies and culture that allow the creative activities and economy to grow (KONG Jianhua, 2008). Florida raised the theory of 3T , Technology, Talents, Tolerance, and this Tolerance shows th that required. Moreover, some scholars believes the process of agglomeration is due to other characteristics, such as the native environment, and the stable rent value are the main factors (KONG Jianhua, 2007). Policies are playing a relatively important role in the whole process. Place-making strategies are very crucial (John Paul Catungal, etc., 2009). Florida pointed out that the competiveness of a country relies on the ability of motivate, attract and keep the creative class (Richard Florida, 2002), in other words, the public policies towards creative class will decide the fate of the country.

On the other hand, as the main focus of this research is on the process of bottom-up regeneration. How is the mechanism for such process? Songzhuang s bottom-up regeneration process could be described as a kind of informal development by local actors, since the actors are not the conventional ones from the top institute that we ve commonly seen in many urban development ca

Fran Tonkiss studied the informality in her book about the connection between the physical space and the unphysical society. She describes the informal development around the globe due to many reasons, though some of them are described as slums or jerry-built. However, there is still some good sides of informality (Fran Tonkiss, 2013). One of the positive side that been mentioned is a more effective way of dealing with the fragmentation of the land in periphery areas (ZHU Jieming, 2008). Moreover, the informal development usually implies such kind of social relationship that each members would receive the self-help from the community (Fran Tonkiss, 2013). Especially, she pointed out that the informal development in creative class shall be regarde informality (Fran Tonkiss, 2013). And such kind of informal space they created could even emerge new economy, as the term of system of production is used to describe such phenomen Scott, 2006).

In a word, combining with the literatures we had reviewed, not limited in the materials we listed above, and knowing the differences between creative communities, we think Songzh should be studied carefully and systematically. Therefore, we designed a structure for the research.

### *1.3 Research Structure*

The research studies both the development process of Songzhuang and then the mechanism of the process. In total, five major parts are related.

In the first part, the research discusses the failure of the government-led planning on Songzhuang, in which different roles were assigned, but never been realized or adopted by Songzhuang.

The second part discusses Songzhang in reality: with the bottom-up regeneration process that make Songzhuang a special art village.

Thirdly, we compare such assigned Top-down approach and the spontaneous bottom-up process from the perspective of social transform, economic transform and special transform.

In the fourth part, we discusses the mechanism of bottom-up regeneration, considering the case of Songzhuang. A structure consists of core actors, extended actors, conditions and catalysts, and the reactions is raised. And such abstract model for bottom-up regeneration process could be seen as the mechanism model for similar cases.

Finally, we pay attention to the role of planning in such process. The research discusses several principles that could make planning more effective in dealing with cases like Songzhuang.

## 2 Government-led Planning: Assigned Roles through Top-down Planning Process

### *2.1 Assigned Roles by Municipal Government*

Beijing is the capital city and the second largest city of China, acting as the political and cultural center through ages. Along with several eastern coastal cities like Shanghai, Guangzhou and Shenzhen, Beijing has long been the pioneer city benefiting the rapid urbanization process in last 37 years. However, the municipal government had made nearly mandatory decisions of previous planning programs and policies towards Songzhuang s role.

Our study reviews the planning programs and policies that interfered Songzhuang since 1957, summarizing their differences in the assigned role, authorized level, attitude to art village, etc. Tracing the planned development orientation for Songzhuang, the dominant idea is always the centre periphery principle. Table 1. The Assigned Role of Songzhuang from Official Planning and Policies Files displays such three kinds of functions assigned for Songzhuang during the years: manufactory zone, eco-protection zone or residential zone.

Table 1. The Assigned Role of Songzhuang from Official Planning and Policies Files

| ***Assigned Role for Songzhuang*** | ***Planning or Policy Name*** | ***Effective Time*** | ***Authorities Level*** | ***Attitude to Art Village*** |
|---|---|---|---|---|
| *Farmland & Green Space* | Beijing City Master Plan | 1991-2010 | Municipal | - |
| *Countryside Manufactory Yard Region* | Economic Plan of Beijing | 1998-2004 | Municipal | - |
| *Farmland & Green Space* | Beijing City Master Plan | 2005-2020 | Municipal | Ignore |
| *Residential & Creative Industry Cluster* | Tongzhou New City Master Plan | 2006-2020 | District | Creative Zone |
| *Residential & Creative Industry Cluster* | Tongzhou Land Use Plan | 2006-2020 | District | Creative Zone |
| *Residential & Creative Industry Cluster* | Songzhuang Town Plan | 2006-2020 | Town | Creative Zone |
| *Original Art Industry Cluster* | Strategic Plan for Songzhuang Creative Industrial Area | - | Town | *Art Industry* |
| *Original Art Industry Cluster* | Concept Plan for Songzhuang Creative Industrial Park | - | Town | *Art Industry* |

(Source: Urban planning files and Policies of Beijing (1991-2013))

### *2.2 Periphery Eco-Protection Zone: Restriction in Urban Development*

In 1957 edition of master plan of Beijing, the downtown city was the only part that been urbanized, while Datong County (Tongzhou District) was assigned as the assistant city (ZHAO Yanjing, 2004). Together, they formed a structure of the mother-satellite cities (Beijing City Construction Master Plan Proposal, 1957). In 1982, the number of satellite cities increased to 4. Those cities functioned as residential zones, including Tongzhou (Beijing City Construction Master Plan Drafts, 1982).

In 1993, in order to avoid such single-centred structure, the focus of urban development shifted to suburbs. 14 satellite cities were planned in the urban periphery. Till now, 11 out of the 14 satellite cities had developed into more integrated new towns, forming a belt around Beijing (ZHAO Yanjing, 2004). In the previous master plans, Songzhuang haven't been absorbed into the urbanizing area, therefore, it was assigned as a space for primitive agriculture region or eco-protection zone.

However, as the national political centre, downtown Beijing has always maintained a strong attraction (ZHAO Yanjing, 2004). Such strong central structure integrate with a top-down

development tradition, Beijing s structure is similar to the prototype of the land-valu Alonso s theory. In other words, places like Songzhuang had no resource or opportunity for development before 1998.

### *2.3 Manufactory Dream: Attempts for Industrialization*

During 1998 to 2004, the de-industrialization policy of downtown Beijing advocated manufactory enterprises displace outward. Villages in periphery started to foster their own "industrial compound", not an exception for Songzhuang. In the next seven years, 122 industrial enterprises occupying 120 hectares of land which attracted migrant labors of more than 4,700 people (JIN Shiming, 2008).

However, in 2004, the restructuring of Beijing s industries required the periphery areas to adopt the de-industrialization policy either, for the excessive productivity would been expelled outside of Beijing, with low efficiency enterprises to close down. Soon as such proposal became a compulsory movement, "Industrial Compound Clean-up Movement", which put an end to Songzhuang s industrializing process.

However, by 2004, there were 173.33 hectares of industrial land in Songzhuang. Such abandoned industrial land became one of the priory problems confronting Songzhuang, as many villagers transformed their own homesteads into family workshops. During the industrial period, the untreated pollutants made rivers seriously polluted, while families turned farmlands into small production sites, which is now abandoned. As ecological spatial coverage gradually declined, large numbers of farmland been eroded.

However, the primitive accumulation providing premise for development in Songzhuang is also due to this period, though the environment was damaged.

### *2.4 Residential Zone: Affiliated Area of Tongzhou New City*

In 2004, according to the Beijing City Master Plan (2004-2020) , the city structure shifted to two axis- two belts- multi centres . Songzhuang was involved in one of the hot spot in development, the Tongzhou New City. Enacted in the same year, "Tongzhou New City Plan (2005-2020)" determined its comprehensive concern on service functions as well as cultural industry base, However, according to the plan, Songzhuang was assigned to be the residential area, with the main body of the villages were cleared up for the new city.

### *2.5 Start to Realize the Fact: Take Art Community into Account*

In 2005, Tongzhou New City regulatory detailed planning (district level) clarifies the development density and spatial of Tongzhou. Though it had taken Songzhuang Art Village into consideration, the land use function for Songzhuang still remained as eco-protection zone and residential area.

It is from the year of 2005, that the municipal government started to realize the existing and potential of Songzhuang Art Village. Beijing confirmed the creative and cultural industries as its pillar industries, batching the creative industrial park (Desmond Hui, 2006). In 2006, Songzhuang was confirmed as the first batch of 10 cultural and creative industry communities.

## 3 Songzhuang in Reality: The Process of Bottom-Up Regeneration

The urban regeneration of Songzhuang is a typical process of bottom-up regeneration by social, economic and spatial transformation. This process was triggered by the artists groups. Comparing to the process of top-down planning, the bottom-up approaches are coincidental, flexible but practical.

### *3.1 Beginning: Emergence of Artists Community*

In the year of 1993, the first artist from the downtown settled down in Songzhuang. In the following 2 years, a total number of more than 400 artists quickly gathered and started their careers.

In 1995, Yuanmingyuan Painters Village had been banned in the name of remaining the social order , most of 1114 freelance and artists of Yuanmingyuan Painters fled to Songzhuang. Among them were famous artist like FANG Lijun, YUE Minjun, Xianting, HUANG Yongyu. Prestigious figures attracted more artists to agglomerate in this village. In 1997, artists accomondationed in every natural village in this region.

### *3.2 Blooming: Rapid Development of Art Industry*

Due to the fact that the art industry in Songzhuang not only benefits the villagers and artists, but also enlighten other villages in Beijing to find proper ways for development. For this, Songzhuang was awarded one of the first pilot villages of Beijing new countryside planning in 2005 (Jin Shiming etc., 2008). Art industry gradually drew the official attention and turned into one of the leading development industries of Tongzhou.

The spontaneous growth of the artists community promoted the process of social, economic and spatial transformation. Art industrial park, art institutions grew rapidly. Only from 2005 to 2010, in Songzhuang, art galleries increased from 1 to 113, while art museum grew from 0 to 14. The total art production grew from 3,000 to 100,000 with the artist's studio increased from 300 to 4,500(Songzhuang Cultural and Creative Industry Cluster Management Committee, 2013).

## 4 Transformation: Spontaneous Bottom-Up Process VS. Assigned Top-Down Approach

As been put forehead, the regeneration of Songzhuang took place due to the spontaneous process that attracted actors and resources to gather, instead of the assigned Top-down approach. We started to compare the different process, in order to gain better understanding of how the local actors achieved the bottom-up regeneration in Songzhuang.

We compared such approaches, the top-down one and the bottom-up one from three aspects: social, economic and spatial transform.

### *4.1 Social Transform: Involving More Actors*

#### *4.1.1 The Increase of Actors in Urban Regeneration Process*

To distinguish from the actors like municipal government of Beijing or the district government of Tongzhou District. This research uses the term local actors to refer those actors who are as the vital entities of the bottom-up process of urban regeneration. For instance, artists, villagers, village government, organizations, investment groups, etc. In the mechanism part, we would define the characteristics and resources of the actors.

In the top-down process, the development remained stuck and homogeneity, manifesting the lack of basic public services, no lift in inhabitants living conditions and less social or cultural activities. This could be ascribed to the less actors involvement in the local agenda of development. As the city center occupied all the development resources, it seems difficult for Songzhuang to adopt a normal way to get resources from a top-down process.

However, from the bottom-up point of view, the art industry involved actors like the village government, villagers, etc., which also attracted actors like groups from the third sector, the investment companies, and other art related actors to join the process of regeneration in Songzhuang. In a word, it is the increasing in number and density of local actors, as well as the activities that resulted in the transform of economy and space consequently.

#### *4.1.2 Organization as an Actor to Support the Art Society*

In 2005, Songzhuang Art Promotion Association (SAPA) was founded. As the first NGO in Songzhuang servicing local artists and art institutions, SAPA set up the network for local artists, gaining the knowledge of the art community in general, as well as making plans for aiding artists in needs. Along with other associations, organizations and different level of government, SAPA have played a crucial role in art information sharing and cultural promotion.

Songzhuang Youth Entrepreneurship and Employment Service Centre (SYEESC) and Songzhuang Agglomeration Public Service Platform were established in 2010, with a clear goal of promoting employment locally and providing temporary housing, funds, supports and services. The target groups include not only the artiest, but also local villagers.

#### *4.1.3* Actors Influence on the Process

Local actors in Songzhuang showed a great influence on the process of regeneration. Figure 2. The Events Classified by Actors, 1992-2014 shows a significant attitude change of municipal government and town government, for the decisions are made more adopted for art industry development later on. However, the activities led by local actors became more impressive, as more local development affairs are managed by local actors. This figure also implies how the influence transfer from actors from the top to local actors, and how such cooperation emerged since 2005.

Another way to prove the increase of the local actors influence, is by looking into the social and cultural activities happing in Songzhuang. The creative events had led to consumptions and tourism. The nationwide largest and most influential art festival, Songzhuang Art Festival, generated. Such kind of art convention increased from 50 sessions in 2005 to 3,500 sessions in 2010, including 1,000 sessions of local exhibition, 2,000 of domestic ones, and 500 of international ones. The number of visitors also increased from 30,000 to 500,000 in 5 years as showed in Table 2. The Comparison of Art Convention between the Year 2005 and 2010.

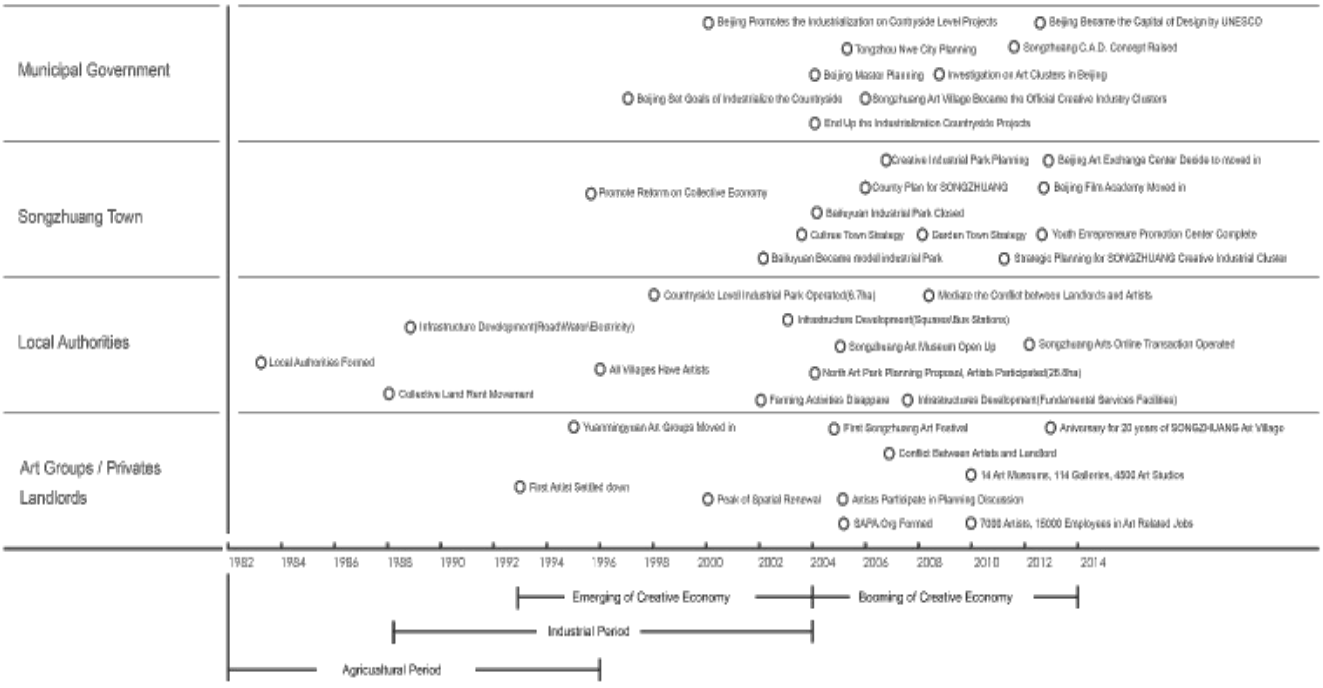


Figure 2. The Events Classified by Actors, 1992-2014

(Source: Multiple Source from Internet, Organized by YE Qiming, 2014)

Table 2. The Comparison of Art Convention between the Year 2005 and 2010

| *Comparsion Index* | *Year of 2005* | *Year of 2010* |
|---|---|---|
| ***Number of Participants*** | 50 | 3500 |
| ***Session of Local Art Convention*** | 8 | 1000 |
| ***Session of Domestic Art Convention*** | 10 | 2000 |
| ***Session of International Art Convention*** | 10 | 500 |
| ***Number of Related Domestic Provinces*** | 8 | 35 |
| ***Number of Related Countries or Regions*** | 5 | 30 |

(Source: Songzhuang Cultural and Creative Industry Cluster Management Committee, 2013)

## *4.2 Economic Transform: From Periphery Manufactory to Art Industry Headquarter*

### *4.2.1 Manufactory as Failed Attempts but Primitive Accumulation*

Though the manufactory existed for a long period of time in Songzhuang, but in small scale and economic insignificant. Technically, the restriction of development in periphery areas had not changed until 1998. In 1998, the policy of promoting the industrial compound in periphery ar like Songzhuang was published. During that time, industrialization is regarded as a radical development. As respond to industrial compound , the top-down policy, the number of manufactor enterprises in Songzhuang grew to 122 in 2004, Songzhuang's main income were from those enterprises during that time.

Due to the low efficiency, low productivity, high cost of environment, serious industrial homogenization, intense competition, inconspicuous jobs increase and the policy changing from the top-down, Songzhuang s industrialization put to an end. This left polluted rivers and poisoned lan with only 70% (YANG Jiaqi, 2008) of land been eroded by construction activities (including the existing farm houses).

However, Songzhuang village government got the primitive accumulation for development. The capital form those manufactory enterprises provides premise for the attract art activities. It is also in this period of time, the infrastructures of the village had been improved a lot, both of the accessibility and individual mobility improved at the same time. Moreover, the connection between Songzhuang and downtown Beijing had been enhanced.

### *4.2.2 Art Industry from Spontaneous to Municipal Strategy*

It witnessed a rapid development of Songzhuang Art industry since the year 2005, not only attracting artists to settled down, but also created more than 1.5 million art related job opportunities. Artists' need for residence, creation, social interaction and marketing had been realized in those deserted sites or villagers houses. The industry compounds were turned into art workshops or small bars. Related investment summed up to 3.23 million dollars from local villagers and private investment groups (Songzhuang Cultural and Creative Industry Cluster Management Committee, 2013).

From a small artist agglomeration to a large art community, more art industry projects located in Songzhuang. Such market driven investment proved that the bottom-up regeneration process helped Songzhuang to earn more resources from outside, rather than from the municipality. The municipal government started to adjust its policies. In 2005, Tongzhou District set developing goal of Central Art District" for Songzhuang for the first time (Tongzhou New City Master Plan, 2006-2020).

By defining the community a success, the municipal government decided to remain the 55.7 hectares original art creation zone, with three state-invested projects for art exchange, convention and exhibition. The National Art Trade and Exhibition Complex, 29 hectare of construction area, 0.8

billion dollars of investment, the National Fashion and Creation Centre, 60.9 hectares, 4.85 billion dollars, and Beijing World Trade Art Centre, 23.8 hectares, 0.29 billion dollars (Songzhuang Cultural and Creative Industry Cluster Management Committee, 2013).

Although it is still under debating the impact of giant development on the protected original art creating zone, such attitude change from the municipal government and district government implied the potential of Songzhuang s art industry.

#### *4.2.3 Spill-over Effect of Art Industry*

The spill-over effect on increasing local villagers income is another benefits brought by the art industry. It was possible for both local villagers and immigrant workers to open up their business in Songzhuang. Villagers established galleries, restaurants and cafes, providing public services, and even running art schools. In that way, villagers are involved in this art industry.

In 2013, the average income of villagers in Songzhuang had rised to 6,462 dollars per year (Yang LIU, 2013), which matched the overall Beijing urban annual per capital income. Comparing to other periphery areas, of which people could only earn 2,908 dollars per year (Beijing StasticalYear Book, 2014), Songzhuang s bottom-up regeneration is quite a success from the point view of economy.

### *4.3 Spatial Transform: From Function Implant to Restructuring*

Before the year of 1998, to develop the rural land to other uses is restricted. The land use function for Songzhuang was implanted with either eco-protection zone, agriculture, industrial compound, or residential area. Eco-protection zone and agriculture zones belong to non-constructive land, which suppressed the possibility of economic activities in Songzhuang (Urban Land Use Classification and Standard of Planning and Construction GB50137-2011).

However, through the process of bottom-up transformation, artists could find and make use of a proper space. By trading with villagers privately, they could gain rights to use the land or houses for a relatively long time. This could be seen as the catalysts and premise for further spontaneous gathering of art related actors.

Meanwhile, it is the artists and art related actors, who brought about new functions and meanings at the beginning, along with the resources that could reform the space. The restructuring process of the land reactivated the power of spaces. New types of function, like the creation spaces, marketing spaces, exhibition spaces, art investment spaces, etc., are emerging in a short time.

Not only the type of functions that increased, but also the shared actors and their lease relations. In total, the type of spatial transformation could be concluded into five categories, according to the records of the survey in Songzhuang (Songzhuang Cultural and Creative Industry Cluster Management Committee, 2013). As Figure 3. Five Types of Land Transfer in Songzhuang shows such five types of land that been transferred into art industry use. The solid arrows imply the direction of rent activities, while the hollow arrow describes the reclamation of land. The term of Art related actors is used to describe actors like artists, art investment groups, etc. relationship with the industry.

Type 1, the land is owned by different villagers, which could be rent entirely or partially by art related actors. Type 2, the land is owned by villagers collectively but abandoned, which authorized the village government to handle daily affairs, could be rent directly or be built into art district and then rent to art related actors. Type 3, the land is owned by villagers collectively for industrial use, which is out of use now, could be rent by art related actors. Type 4, the land is owned by villagers collectively but already rent to manufactory enterprises. In the case of the manufactory enterprises would like to keep the land, they could rent the land to the art related actors in second hand. Type 5, the land is owned by villagers collectively. Given the fact that the current right of use belongs to the manufactory enterprises, in the case of the contracts between the villagers collective and enterprises are over, the land would be reclaimed and rent to the art related actors.

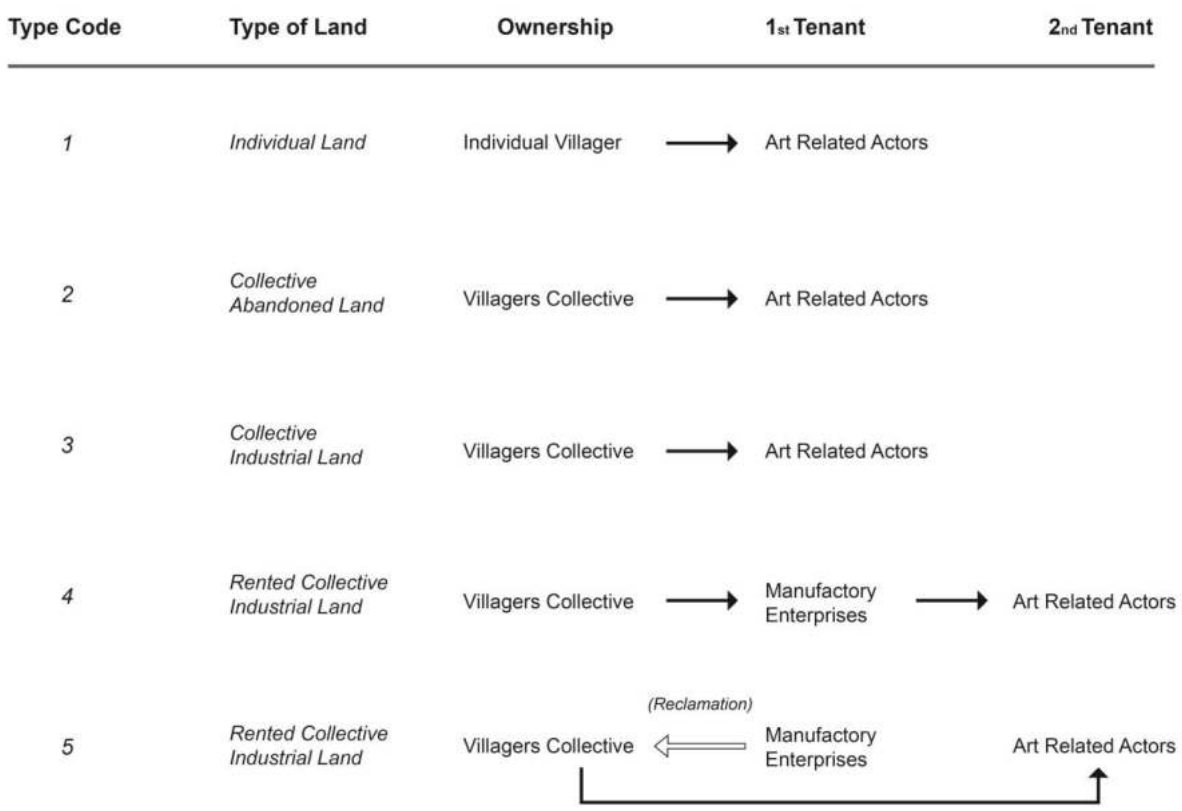


Figure 3. Five Types of Land Transfer in Songzhuang

(Source: Information Based on Field Survey, Organized by YE Qiming, 2014)

## 5 Mechanism of Bottom-up Urban Regeneration

### *5.1 Overall Structure*

Songzhuang Art Village is formed based on the resources exchange between villagers and artists. For the artists, through the exchange, they could get the space for art creation. For villagers, they could gain rents from the artists. Later on, as the village government joined the arena, they began to support more artists to settle down in Songzhuang. And they take the responsibility for mediation between villagers and artists. They regenerated the infrastructure for artists. Such three actors forms the basic relationship in the structure.

As the art industry grew bigger and more complex, diverted actors joined the arena. The art related actors in second phase and supporting actors in the third phase together complement the groups of actors in Songzhuang.

Besides the actors, the conditions and catalysts for the regeneration process is also crucial, along with the regulations derived from the self-managed local wisdom. Figure 4. Structure of Bottom-up Urban Regeneration Mechanism shows the whole structure of the mechanism.

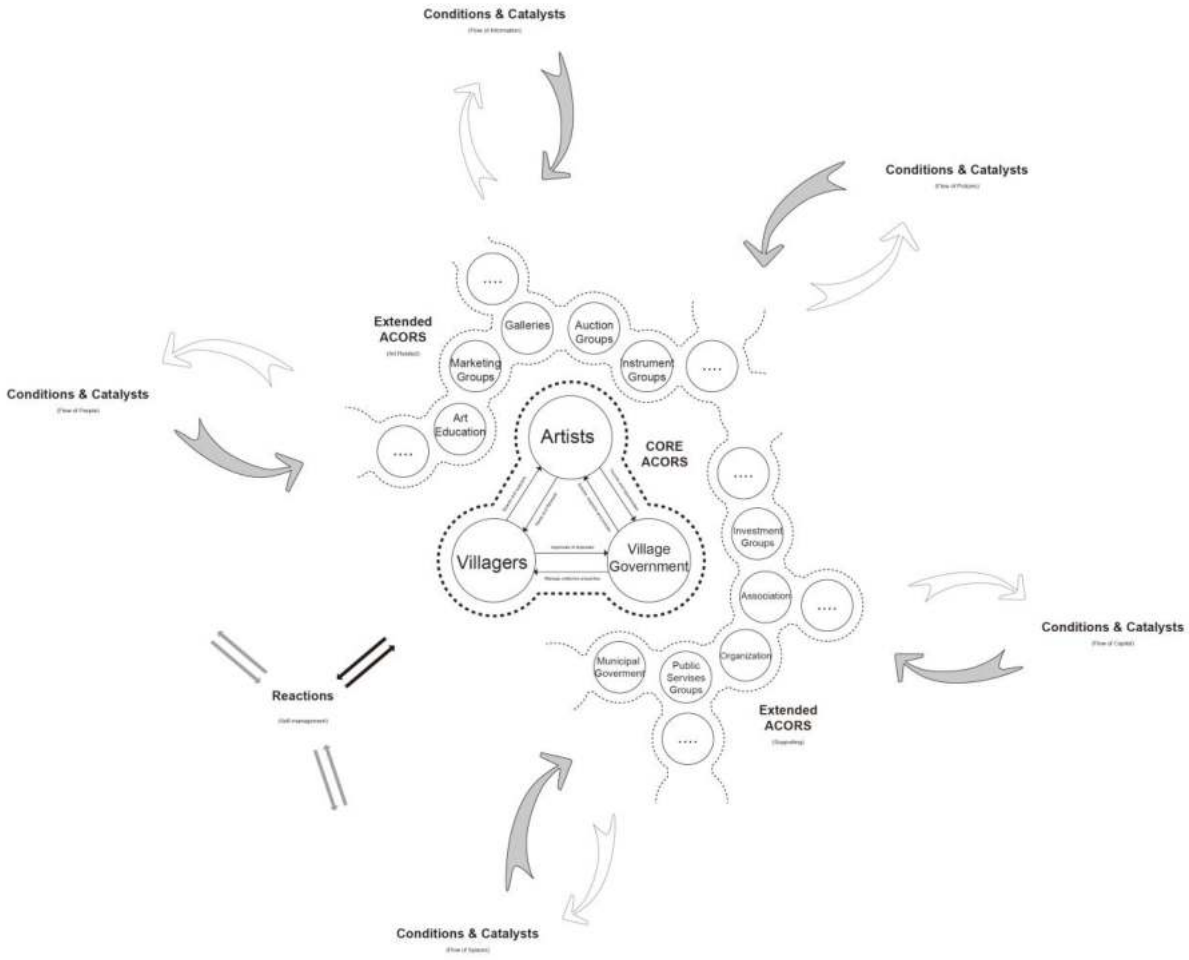


Figure 4. Structure of Bottom-up Urban Regeneration Mechanism

(Source: Information Based on Field Survey, Organized by YE Qiming, 2015)

## *5.2 Core Actors*

Three main actors from the bottom sector compose the core of such regeneration structure: artists, villagers and village government. They exchange the resources of what they have, for the goal of better art industry and better livelihood.

### *5.2.1 Artists*

For artists, they played the role of art creators, who attracted other art related actors to come. In that way, the prosperous art industry help the village government to gain more resources for lifting the living conditions for local groups. On the other hand, the artists will directly contribute to the rise in income of local villagers, by renting the land or houses. Artists also benefit to their own groups by establishing a professional network (J.ScottA.J., 2006), providing social networks for individual artist in or out of Songzhuang.

### *5.2.2 Villagers*

For villagers, who have the resources of individual land and also could collectively influence the results of dealing with collective land, play the role of supporting artists and the art industry. Villagers offer spaces, life necessities, opening up restaurants and bars, delivering materials for art creation. Later on, most of the functions are replaced by professional services groups. Anyhow, the spaces that provided by villagers are crucial.

#### *5.2.3 Village Government*

For village government, the most local level authority who keeps the resources of the collective land and primitive accumulations from the manufactory era. In Songzhuang s case, it i village government plays an active role in providing fundamental services, collective spaces and supporting policies for artists. On the other hand, village government done well in managing the land and sharing the profits to villagers, which earns the approval of further actions.

#### *5.2.4 Summary of Core Actors*

Over all, artists, villagers and village government in Songzhuang established a very efficient resource exchange rules and negotiating network form the very beginning of the transforming process. Such close interests links went tighter since the industry rapidly grew since 2005. Hence, the extended actors would invited into this system to seek opportunities in Songzhuang art industry.

### *5.3 Extended Actors*

In many studies, Songzhuang s developing process had been divided into sections according to the contribution of each economic sectors. However, from the point view of the mechanism, it is important to rethink the division according to the development path of art industry. In this research, we would like to regard this process as the growth of an organic entity, which consist of three major parts: the core actors primitive phase, the extension of art industry phase, and the supporting services phase. Thereore, besides the core actors, such art related actors and supporting actors are crucial in promoting the art industry to more comprehensive level.

#### *5.3.1 Art Related Actors*

Art related actors include marketing groups, galleries, auction groups, art education groups and art instrument manufactory enterprises, etc. Art related actors find their market, in Songzhuang, by the meantime contribute to the growth of art industry here.

Galleries groups are the first groups that followed by education and instrument manufactory. It is natural to know that since the industry chain extending, art industry is never only about art creation, but marketing, education and also the material supporting system for art creation.

#### *5.3.2 Supporting Actors*

If the roles of art related actors are crucial, then the roles that supporting actors play are necessary for art industry to survive. This large group with the aim of supporting the life system in Songzhuang includes the investment groups, organizations, associations, public services sectors, etc., as well as the municipal government later on. They provide capital, social help, food, leisure of life, exterior policy, etc.

Songzhuang s experience shows the hardware of the supporting system always come road, the public spaces, the internet, etc. Then, the software for supporting system, the supporting actors, would emerge naturally, as the art industry grows.

#### *5.3.3 Summary of Extended Actors*

Moreover, the art related actors and supporting actors work together to promote the industry more comprehensive and influenced. On the other hand, they helped reshape the core actors, as they could interfere the market and livelihood of Songzhuang. In that way, the core actors and the extended actors are interactive somehow.

### *5.4 Conditions and Catalysts: Five Mutative Flows*

As the trigger action of the process, it is easy to think that what kind of condition or what is the special characteristics that Songzhuang had to have attracted the artists while breeding the art industry. As Richard Florida stated, the most important factors that influence the creative class is Technology, Talent and Tolerance, which is widely known as 3T theory. He stresse elements are crucial to the creative class in the perspective of environment, mechanism and policies

(Richard Florida, 2002). Other scholars think that the knowledge, economy and spaces are highly relevant when referring to creative industry (Graeme Evans, 2009).

However, Based on the very fact that Songzhuang locates in the periphery area of Beijing, and the art industry is still growing. Unike those creative places that are gentrified, Songzhuang even complicated. Given the fact of that, it is necessary to think completely the factors, not only constrained in the dimensions of 3T .

This conclusion is made also by comparing Songzhuang Art Village with SOHO Creative Cluster, New York, and 798 Art Districts, Beijing. As shows in Table 3. Comparison between Creative Communities: SOHO, 798, and Songzhuang, Songzhuang manifests more primitive characteristics with the still growing number of art related population, and the less relatively expensive rent cost, etc. Most importantly, Songzhuang remains the large ratio of art creation group. While in the other two cases, the major function of the space is marketing or exhibition in both of their last period of time. In other words, Songzhuang still keeps the primitive motivation.

In general, we think there are five flows that could influence the actors as well as the process of urban regeneration. Such five flows include: people, spaces, capital, information and policies. All the five flows formed not only the conditions that could explain the reason of attraction, but also in the state of mutative. Hence, each flow could be sensitive to another and comprehensively acting on the art industry and the process.

#### *5.4.1 Flow of People*

People is always the main factor in any regeneration process. And Beijing as the capital city of China, has many art schools and companies, with a long tradition of cultural and creative industry development in China. Young artists are attracted by such a network (J.ScottA.J., 2006) to come to the city to find a fortune. This provides premise for the gathering of artists in Songzhuang. On the other hand, it is the Artists nature to cluster and escape from the main stream that contribut formation of Songzhuang Art Village. In the point view of people as flow, Songzhuang s prosperous could largely credited to the constantly input of artists and the art related population.

Nevertheless, it is not the talents, as Florida put, that only matters, but the overall group with both good and bad ones. As Songzhuang s artists formed a structure of pyramid. The more you reached the top of art, the little number of masters there are. While, the bottom artists group is in a state of flux. Though cruel, such flux is essential to keep the artists group in good quality and fresh.

#### *5.4.2 Flow of Spaces*

Rent cost is the first characteristics of space. As the rent rose in centre Beijing 19 times in 1994 to 2012, while Songzhuang s rent just rose 6 times. Such rent is acceptable to most forms a positive conditions for artists and art related actors to agglomerate.

Convenience of transport comes secondly. Songzhuang is not far from the downtown Beijing, but not inside of the downtown city, not quite as usual as many other creative clusters around the globe (Thomas A Hutton, 2009). However, it is quite convenient to reach through public transportation and it is important to keep such convenience for both artists and people who would know about Songzhuang.

Native environment is the third characteristics of spaces. It is important for artists to be satisfied with such kind of situations (Trevor Barnes, 2009). Unlike urban environment, Songzhuang serves as a sanctuary, or paradise for artists. The rural life style inspire them to create more freely (KONG Jianhua, 2007). Once such condition gone, the attraction for artists would fade away.

However, as the spaces could be changed from time to time, artists and art related actors would react to such changes. And this always depends on how much degree it changes and how does that feel individually. It is some cases in Songzhuang that due to some contract conflict between villagers and artists (YANG Liu, 2009), some had chosen to leave. Also, this could happen when the environment turned more commercial, as showed in Table 3, the SOHO and 798 s case.

In a word, the flow of spaces describes a mutative Garden City for artists. St on the distances between reality and their dreams.

Table 3. Comparison between Creative Communities: SOHO, 798, and Songzhuang

| ***Factors*** | ***Parameters*** | ***SOHO*** | ***798*** | ***Songzhuang Art Village*** |
|---|---|---|---|---|
| | Located City | New York | Beijing | Beijing |
| ***Spatial Information*** | Area(ha) | 44 | 40 | 130 |
| | Distance to Downtown (km) | - | 6.7 | 10 |
| | Agglomerate Time | 1950 | 2001 | 1994 |
| ***Development Period*** | Boom Time | 1960 | 2005 | 2006 |
| | Decline Time | 2000 | 2010 | - |
| | Local Residents | 6,541 | 0 | 1,500 |
| | Artists Number (Peak) | 5,000 | 2,000 | 7,000 |
| ***Demographic Information*** | Population Number (Peak) | 8,000 | 100 | 8,500 |
| | Employees Number (Peak) | 14,000 | 230 | 15,000 |
| | Artists Ratio of City (Peak) | 30% | 0.20% | 5% |
| | Galleries Number (Original) | 0 | 0 | 0 |
| ***Gallery Information*** | Galleries Number (Peak) | 300 | 207 | 113 |
| | Galleries Number (Now) | 0 | 173 | 113 |
| ***Commercial Services*** | Restaurant Number (Peak) | 200 | 237 | 77 |
| | Original Rent (Dollars/$m^2$/a) | 0.78 | 0.6 | 0.2 |
| ***Rent Values*** | Current Rent (Dollars/$m^2$/a) | 55.8 | 5.8 | 0.9 |
| | Growth Multiples | 71.5 | 9.7 | 4.5 |

(Source: Multiple Source form Internet, Organized by YE Qiming, 2014)

#### *5.4.3 Flow of Capital*

In the process of urban regeneration of Songzhuang, one of the most important factor that drives the transformation is the capital flow. In the very beginning, Songzhuang got the first real capital flow through the manufactory period. This primitive accumulation was crucial for village government to upgrade the infrastructures. For that reason, the accessibility, mobility and the living conditions could reached the criteria of the first arriving artist group.

The second capital flow is the money artists brought to Songzhuang for space regeneration. They rent the land or houses for a relatively long time, and renewal the space according to the agreement with the villagers or manufactory enterprises. Some of them even build their own houses with yards. Capitals make all the renewals possible, as Andy put: from art to culture economy (Andy C Pratt, 2009). And this also give opportunities for new business to start and new talents been found.

Thirdly, the capital flow was attracted by the value of art productions, as many investment enterprises and projects emerged in Songzhuang, the capital largely reshaped the structure of Songzhuang and also helped to form the market rule of art industry. Nevertheless, including the artists, the whole art industry never create capital flows, they manipulate the flow through the value of art productions and the rule of market. As Florida puts, the base for creative class is economy, as the creative class could transfer this into capital value (Richard Florida, 2002). Once the value faded, the flow would respond quickly.

#### *5.4.4 Flow of Information*

Florida believes that through the events planning and marketing, the information flow could broadcast the creativity through the network (Richard Florida, 2002). The power of information at the first stage spread from artist to artist, which delivered the message of Songzhuang would become a new paradise for art creation, a symbol and cultural highland (HU Xiaowu, 2012).

Therefore, the function of information is quite important. Not only as an information receiver, but also the generator, through the massive festivals, exhibitions and exchange activities, Songzhuang generated more information than the era of manufactory or agriculture, and soon became headquarter of art. And the products of art also communicate with the world by sharing the spirits and value of Songzhuang.

From the point view of the market, the information exchange could largely help the market find the right artists to support. For artists, it is easy to have more tunnels and choices to make themselves been found. Moreover, not only the actors would be influenced by that, but also other flows.

#### *5.4.5 Flow of Policies*

For the flow of policies, two dimensions should be mentioned, the first is the supervision and constrains from the government, and the second is the support policies from the government.

Comparing to the events that happens in downtown city in 2005, which the artists had to flee from Yuanmingyuan Painters Village, the governance environment is quite loose in Songzhuang. This is crucial, for the nature of artists is chasing freedom (YAN Changyuan, 2005), that they could express their disagreement even in some sensitive matters. Besides that, though the trading and rebuilding the rural land or houses is forbidden according to the law, somehow, as not the only case in Songzhuang, people could complete such exchange privately. As a blind region in supervision, the regeneration in Songzhuang could be that prosperous.

Secondly, as the top-down plans fail, the village government plays a very important role. It should be stressed that the `village government s` attitude towards the artists decided the emerging of the new economy. If the attitude were negative, the art industry would never appear. By supporting the art industry, village government are active in attracting investment in civic projects, negotiating among stakeholders, and appealing for privileges from top actors. The way they dealt with such affairs were quite smart, that most of the stakeholders were involved in the process rather than standing outside.

As many key urban policy actors continue to focus on developing strategic programmes and policies to boost creativity and economic growth (Rowland Atkinson, etc., 2009), it is important to know the influence of polices that could have on the art industry. Hence, if the policies were to change, the art industry would suffer. Till now, no signs show the change in policies. But some policies that would accelerate the commercialization of Songzhuang to a gentrified art marketing place like 798 and SOHO, dramatically changing the characteristics of the spaces flow for art creation, would certainly strike the industry.

### *5.5 Reactions: Principles of Self-management*

As the outcome of the reaction, the self-management are generated spontaneously. Confronting the crisis of the rising population in Songzhuang and the limited spatial, natural resources, along with the occasional conflicts for rents, several prestigious artists and the village government formed a group in charging of setting principles for Songzhuang, along with artists and villagers.

Such principles mainly constrains the construction activities that could do harm to the public spaces and environment of Songzhuang, on the other hand, it sets the limit for rent, in order to prevent the land owners driving up the rents. Other regulations like the projects with public concern should have a public hearing. Such kind of democratic action is the addition to democratic village collective institute combining with the art groups inside. In a word, the main idea of the principles is to involve more actors to get benefits from the industry. Such reaction is spontaneously generated from the bottom, which functions well so far.

By self-management, in 2005, Songzhuang Art Museum became the first projects that involves the local actors of Songzhuang, with the designers, the sponsors, art groups and village government mostly come from the local community. It is believed that Songzhuang Art Museum is not only the real start of the art industry, but also a symbol of successful self-management.

## 6 The Role of Planning

Considering the bottom-up regeneration, Songzhuang s case shows how the actors excha resources, establishing the industry step by step, and managing themselves in a smart way. On the other hand, the failure of the hypothesis from the top-down process proves that the any strategies ignore the local initiative would lose effectiveness. Hence, the question is for cases like Songzhuang, how planning could respond?

Though the top-down process fails in Songzhuang, however, in our point of view, the role of planning is still needed and even crucial in the future. The only matter is how we revise the attitude and be more inclusive in interfering the process in cases like that. It is important to switch the traditional planning models to the one that are more insightful, practical and flexible.

### *6.1 Rethink Planning Strategies*

First of all, to rethink planning strategies. Songzhuang s case witness how suc the municipal point of view lost effect on the local level especially in such periphery area. The reason of this is the ideology that planners usually adopted: centric-periphery structure, of which, it is usually natural to regard the downtown city as the most important part that takes the leading role in every aspect. It is not wrong, however, it would be easy for us to ignore the possibilities for development in areas like Songzhuang.

To rethink the strategies, it does not mean that the previous thoughts would be totally turned over. However, a more flexible strategies are needed in those less important areas . It is not for the sake of the development in those individual regions, but also to seek economic development opportunities for the entire city. The more flexible and diverted functions a city adopted, the more sustainable it would be (Jane Jacobs, 1970). Such adjustment in strategies could be quite crucial but also tough in technical, for the balance between constrain and flexibility.

### *6.2 Understand Better of Local Actors and Resources*

In the process of bottom-up regeneration of Songzhuang, the initiatives are created by local actors. The artists, villagers, and the village government act as the primitive core actors, which attracted more extended actors to agglomerate in Songzhuang. Such actors could been gathered and such process been managed only through the market-driven way, rather than the process from top-down.

On the other hand, the resources such as the flow of capital from the investment groups, the land resources of the individual or enterprises, the flexible and supporting policies from the village government, and the network of local community are something hard to define and been taken advantage of without a better understanding of the local situation. All of these resources are brought by local actors promoting the transform in a spontaneous way according to the mechanism we analysed before.

Hence, it is crucial for planners to define these local actors, including the core actors and the potential extended actors. Through the process of understanding the resources, planners could pay more attention to how to conduct those resources and integrate them in the process of planning. The cooperative way to take advantage of those resources could contribute to a better integration of planning and the local participation. On one hand, this could amend the strategies and orientations from the top, on the other hand, to have common goals with the local actors, gaining better the trust and cooperation.

### *6.3 Cooperate with Local Self-management Regulations*

To make planning more effective and practical in local context, it is better to understand the local regulations, for the local policies are the important knowledge to get (Lachlan Barber, 2014). First, in those areas with the bottom-up regeneration, the self-management should be learnt. Secondly, find the common interests shared by both self-management and the planning process to seek cooperation. For example, in Songzhuang s case, the self-management regulated the jerry-built (Fran Tonkiss 2013), which is also banned in the point view of planning institute. Then the cooperation could be bridged between local actors and planners. Besides that, planners could provide more effective solution to these matters.

Sometimes, it is needed to conduct in a cooperative way with the local actors. In case of there is some occasion that could not been dealt with through a self-management way, or there is some exterior projects needed to be implanted, then, the participatory process with local actors is necessary. Try to conduct and intervene the process by put the planners themselves as the stakeholders in the management process.

### *6.4 Summary: Smart Planning in Local Context*

In a word, it is required to have a better senses and insights for real local place, as well as for local development. Make flexible strategies to allow new economy and lifestyle to emerge, know better of the local actors, take better advantage of the resources, cooperate with local wisdoms, and participate in the process of self-management. Only in that way, planning could be accepted and practical in local context.

These should be regarded as the quality and responsibility for planners, in order to avoid ineffective top-down process, and to confront a more mutative planning environment.

## 7 Conclusion

As a typical example of bottom-up regeneration, Songzhuang s development implies the ineffective conventional top-down approach of planning, and also shows the energy of the bottom-up process by local actors.

The research studies both processes individually, and make a comparison eventually. By comparing of the assigned role of Songzhuang, the research discovers that through the spontaneous growth path,

more actors are involved, more powerful the local economy could be, and more chances to get restructured, from social, economic and spatial perspectives.

Most importantly, the research discovers the mechanism of bottom-up regeneration, considering Songzhuang as the case. The crucial part of the mechanism is the core actors, which consist of artists, villagers and village government. It is believed through the resources exchange among core actors that attracted more extended actors, such as investment groups, marketing groups, public services groups, organizations and associations, etc., to join the community. Besides the core actors and extended actors, five flows as the conditions and catalysts are important in the mechanism. The flows of people, spaces, capital, policies, and information are quite mutative, and influential in the process of regeneration. And it is such five flows that contribute to the growth of the art industry. Moreover, during the process of regeneration, local actors have developed a self-management principles, that promote the art industry and local community to develop sustainably.

Finally, we look into the role of planning, to find out better approaches for planners when dealing with the cases like Songzhuang. To rethink planning strategies and be aware of the emerging new economy in those areas, flexibility are called. To understand better of local actors and resources, in order to make plan more practical. To cooperate with local self-management principles that made by local actors, participating in the process and combing the planning wills with the appeals from local actors, could make the plan more acceptable.

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# FULL PAPERS (POSTER PRESENTATIONS)

Arranged by tracks and name of the first author.

# TRACK 02

## Territorial Cohesion in the Multi-Actor Arena

# Territorial Cohesion Planning Based on Multiple-Stakeholder Demand: A Case study of KDW Region in China

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## 1. Introduction

Since reform and opening, with the rapid progress of urbanization, Chinese cities gradually stepped into territorial cohesion stage. Under the pressure of decentralization and free market economic policies, the stakeholders of regional spatial is becoming diversification. The territorial cohesion has been into a multi-actor arena involving government, market and social individuals.

The paper studies a case-- Kuitun-Dushanzi-Wusu Territorial Cohesion Planning . KDW distr locates at Xinjiang Autonomous region in China. It is an important national petrochemical base. Due to historical reasons, the administrative division is complex there, involving several governments, central and local enterprises and many other stakeholders. Recent years, although the rapid development of the petrochemical industry, it brings up the extensive growth, homogeneous competition, local barriers and etc. It exerts serious threaten to the environment of the overall region as well.

Firstly, this paper analyzes the development demands from multi-interest stakeholders in KDW district. The Matrix was built to describe the different stakeholders demand regional spatial, industry and resource environment. Secondly, this paper analyzes the complex interest relationship exerted from multi-interest demanding and the external driving force exerted from territorial cohesion development. Finally, under the premise of guaranteeing the environment quality, the paper uses scenario planning and set three kinds of scenario: transforming petrochemical industry, reducing the production of petrochemical industry and continuing petrochemical industry. What s more, it simulates three scenarios, based on go implementation orientation, and explores the plan of regional integration.

## 1. Background of regional integration development in China

After reform and opening-up, with the rapid progress of urbanization, the traditional urban development mode within administrative territory cannot catch up with the pace of rapid-changingsituation any more. More and more Chinese cities have initiated the new development mode of regional integration. When the region enters the stage of integrativedevelopment, frequent, close and diversified interaction will be generated among different cities (Friedman 1966). Under the promotion of political decentralization and economic marketization, the stakeholders of regional space

are becoming diversified. Regional integration has developed into a gameof multi-Stakeholder, involving government, market and various social entities.

*1.1Decentralization promotes competition and cooperation among local governments*

The essence of China s economic reform is to promote economic development through opening and administrative decentralization. (QIAN Yingyi and Weingast, 1996) By sta system of tax distribution in 1994, decentralization has effectively stimulated the development enthusiasm of local governments. It makes local governments pay more attention to the growth of urban economy. Meanwhile, the corporatization characteristic of local governments becomes increasingly obvious.

In the decentralization system, under the drive of land-for-budget fiscal strategy, China s urban space expands rapidly. As a result, the distance among cities is reduced day by day, the externality of spatial economy becomes increasingly prominent, and competition among local governments is hastened. On the other hand, resources of different level oflocal governments are limited, and administrative territory cannot be adjusted in a short term. Therefore, regional cooperation is required among the local governments.

*1.2 Marketization drives integrative development of multiple parties*

With the transformation from planned economy to market economy in China, free site selection of enterprises becomes possible. With the reform of household registration system, cross-regional population migration has already become a normal state. The increase of population mobility means the possibility of selecting residence and working place according to the market price mechanism. Under the stimulation of regional traffic improvement, inter-district development of regional integration is promoted through the market-oriented action of voting with feet .

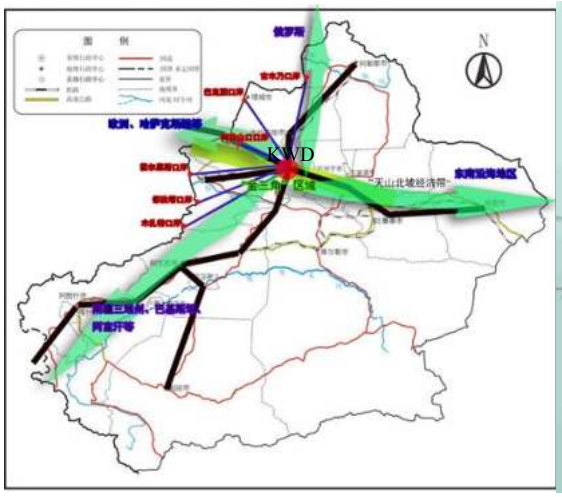
**2. Foundation for competition among multiple stakeholders**

In this paper, the research on regional integration is conducted by a case study of KDW region. This region is an important petrochemical industry base in China, and its economy grows rapidly in recent years. However, local barriers, extensive growth, and homogeneous competition are formed gradually in the development process. As a result, the environment of the overall region is severely threatened. Therefore, regional integration planning is urgently required to standardize development of local governments and promote positive, orderly and sustainable urbanization.

*2.1 Location and historical development*

Including three adjacent cities of Kuitun, Dushanzi and Wusu, KDW region is located in the middle of Xinjiang Uygur Autonomous Region of China. It is an important node on Silk Road

Economic Belt and international energy channel. This region was the nomadic place of Mongolia Oyiradtribe at ancient times. Qing Government established Wusu county system here in 1761 and garrisoned this place. In 1897, petroleum was found in Dushanzi in the southeast of this region, and mine area was formed later. After liberation, the 7th Division Headquarter of Xinjiang Production and Construction Corps (XPCC) migrated to Kuitun in the northeast of this region in 1957. At that time, urban construction was started. In 1958, Dushanzi Mine Area was separated from Wusu County and managed by the newly founded petrochemical industry city, Karamay City. In 1975, Kuitun was separated from Wusu County and Kuitun City was established. In 1996, Wusu County was changed into Wusu City.



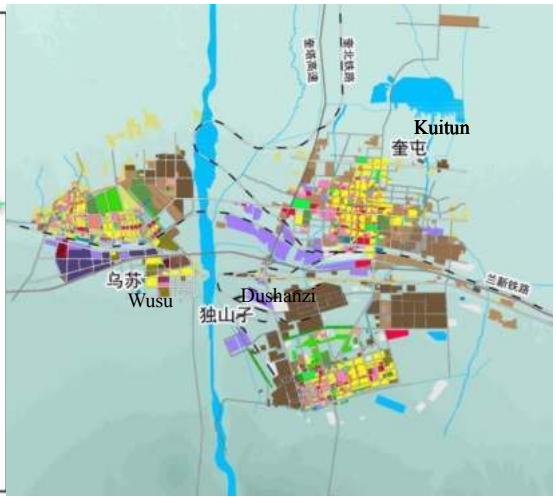




Fig. 1 Location of KDWFig. 2 Current situation about regional space of KDW

*2.2 Complicated administrative and governance system*

Due to historical reasons, the administrative system of KDW is quite complicated. Besides the three cities, it also covers multiple stakeholders such as the large-scale national enterprise Dushanzi Petrochemical Corporation of PetroChina Company Limited, XPCC and Tia District . Among them, Kuitun is the city of XPCC. Joint development will be conducted between it and XPCC for a long time and it represents the development demand and interest of XPCC to some extent. Dushanzi continues the management mode of unifying government and enterprises in planned economy period and represents the development demand and interest of central enterprises to some extent. In the population of Wusu, ethnic minorities occupy a high proportion (36.7% in 2013), and it represents the development demand and interest of minority autonomous regions to some extent.

**3. Challenges faced by competition among multiple stakeholders**

*3.1 Industrial isomorphism and repeated construction*

Processingpetroleum resources has created alike industrial structuresin this region. In 2013, the location quotient of petroleum processing industry in KDW region reached 3.52 in Sinkiang, while the location quotient of other industries was below 0.6,which reveals the fact of petroleum-processingis itspillar industry. In the past, Kuitun and Wusu had advantages in cotton spinning and featuredagricultural processing industries respectively, but these two regions begin to invest in petroleum refining industry construction by imitating Dushanzi in recent years. The phenomenon of industrial isomorphism and repeated construction is increasingly intensified. Almost all 6 industrial parks in KDW region treat petroleum refining as the leading industry. On the one hand, this is driven by the handsome profit of petroleum refining. On the other hand, the monopoly of Sino-Petro for petrochemical materials has controlled its pricing mechanism. As a result, Kuitun and Wusu were forced to make a fresh start and build their own industry systems. It is hard to form coordinatedupstream and downstream value-chain mechanism of petrochemical industry with differentiation in this region.

*3.2Extensive growth of urban land*

From 2006 to 2014, urban construction land of 93.4 square kilometers was newly increased in KDW region with rapid land expansion. On the contrast offast land expansion, the population growth is slow. From 2006 to 2014, the population was increased by only 217 thousand. Therefore, intensiveness of land utilization declines continuously. In this region (except Wusu), reserved land resources are severely insufficient. At present, relatively extensive urbanization is not sustainable.

*3.3Increase of ecological environment pressure*

Under the influence of wide inversion belt and high still wind frequency, diffusion conditions of atmospheric pollutants are poor in KDW region. Owing to the rapid expansion of upstreampetrochemical industries, the ambient air quality in this region declines year by year. From 2009 to 2013, the days of good atmospheric environment decreased by 12%, especially in Kuitun which is located in the downwind direction. The amount of coal quantity in winter will rise in this region, so the major atmospheric pollutants have exceeded corresponding national standards.

## 4. Analysis on multiple demands of various stakeholders

One Belt And One Road Strategy proposes that the unique regional advantages of Sinkiang should be expressed and Silk Road Economic Belt must be promoted. As a result, KDW region has developed into a hot spot of national and Sinkiang development in a short time. Resource conditions of the three cities are different. Kuitun has population and service advantages, but it is located in the downwind direction. Dushanzi possesses advantages of petrochemical industry base,

but its service support is insufficient and the space is limited. Wusu is equipped with advantages of space resources, but its industry development lags behind and the population congregationis insufficient. Faced with the same development opportunity, the three places have demands of both competition and cooperation.

### **4.1** *Industrialdemands*

Dushanzi is the site where large-scale national petrochemical enterprises are located, so its major development demand is to consolidate and expand petroleum refining capacity. With talent and service advantages, major development demand of Kuitun is to developemerging industries like downstream petrochemical industry and equipment manufacturing industry. At the same time, Kuitun possesses advantages in service industry like trade and logistics. Industry development lags behind in Wusu, but its space is huge. Therefore, development of petrochemical industry with high profit is naturally set as the major development demand. Besides, its late-mover advantage in service industry is also obvious.

### *4.2Spatialdemand*

Limited space in Dushanzi has severely restricted the expansion of petrochemical production capacity. Therefore, it hopes to develop Kui-dong (east of Kuitun) region under the cooperation with Kuitun and expand its development space. Kuitun needs to keep a distance fromDushanzi in space, so as to prevent petrochemical pollution. Meanwhile, it plans to exploitKui-bei (north of Kuitun) and Kui-dong (east of Kuitun) regions which are far away from the downtown, so as to develop emerging industries. With a huge space in the south and north, Wusu hopes to develop the north region and promote petrochemical industry as well as to develop the south region and turn it into the new carrier of regional service agglomeration.

### *4.3 Environmental demand*

Kuitun is in aunfavorable downwind and downstream geographic position, and its requirement for environment is quite urgent. It requires both Dushanzi and Wusu to reduce pollution of atmospheric environment and water environment. Dushanzi and Wusu require each other to reduce pollution for them.

Table 1 Demand matrix ofregional integration development in Kuitun, Dushanzi and Wusu

| | Kuitun | Dushanzi | Wusu |
|---|---|---|---|
| Strength | High population; concentrated service | Upwind direction; good industrial base | Upstream of water source; huge space |

| | | | |
|---|---|---|---|
| | facilities | | |
| Weakness | Downwind direction; downstream; under great influence of pollution | Limited space | Low population; low economic level |
| Industry demand | To develop emerging industries and service industry; to develop downstream chemical industry under the support of petrochemical industry in Dushanzi | To expand petroleum refining capacity | To develop multiple industry system dominated by petrochemical industry and to perfect service industry |
| Space demand | To develop Kuibei and Kuidong regions and promote emerging industries | Hope to develop Kuidong region together with Kuitun and expand the development space | To develop the north region and promote petrochemical industry; to develop the south region and turn it into the new carrier of regional service agglomeration |
| Environment demand | Require Dushanzi in the upwind direction to reduce atmospheric pollution and Wusu in the upstream to reduce water pollution | Require Wusu in the upstream to reduce water pollution | Require Dushanzi to reduce atmospheric pollution |

## 5. Scenario analysis on regional integration under multiple demands of various stakeholders

Regional integration development involves multiple stakeholders and the external environment has great uncertainty. Therefore, it is necessary to introduce scenario planning into regional integration in KDW. Different from the traditional one-way and rigid planning thought, scenario planning puts forward multiple scenariosthrough setting scenario elements and premises. It tries to simulate multiple scenarios, carry out evaluation, and provide intellectual support for development decision-making.

### *5.1Scenario elements and scenario premises*

The core issue of KDW region is the relation among industry development, space and environment. Therefore, major scenario elements cover industry, space and environment.

KDW region is still at the stage of resource driving development, and positive externality of economy is formed due to the rich petroleum resources and large-scale petrochemical enterprises in Dushanzi. Meanwhile, there is a lack of necessary supervision means and transaction rules. Moreover, excess emission of pollutants is the concentrated reflection of negative economic externality. Therefore, scenario premise of regional integration development in KDW is to adopt the same technical measures of energy-saving and emission reduction for pollutant enterprises on the basis of a uniform development bottom line (bottom line of atmospheric pollutantemission). At the same time, different scenarios must be established on the system of combining the government with the market. Either simple government intervention or laissez-faire market is undesirable.

*5.2 Scenario scheme*

5.2.1 Scenario 1: Transformation and comprehensive elimination of pollution

The current situation where upstream petrochemical industries take up a dominant position should be comprehensively changed by grasping the opportunity of national economic transition and relying on the construction of Silk Road Economic Belt. Petroleum refining projects under planning should be stopped immediately and existprojects must be relocatedto external regions gradually. Replacement with equipment manufacturing and modern service industry should be reachedstep by step. The upstream petrochemical production capacity must decrease by 50% till 2030. In this way, substantial elimination of pollution sources will be realized.

5.2.2 Scenario 2: Optimization and moderate elimination of pollution

The development foundation of the existing petrochemical industry should be consolidated, and petroleum refining industry must be positively guided to develop toward the direction of downstream fine chemical engineering. Thethreshold of industry project development can be set up, and petroleum refining projects with a total investment amount of less than RMB 500 million Yuan should be relocatedto outside regions gradually.Upstream petrochemical production capacity must decrease by 20% till 2030. In this way, elimination of some pollution sources will be realized.

5.2.3 Scenario 3: Continuity and control for newly increased pollution

The existing development trend of petrochemical industry should be continued. Production capacity of large-scale petrochemical projects must be expanded and small-scale petroleum refining projects should be controlled. The newly increased pollution sources must be controlled effectively in the aspect of environmental protection.

*5.3 Scenario simulation*

5.3.1 Simulation of scenario 1

Economic industry: Due to the large range of industrial adjustment and transition, economic growth in recent period will slow down. However, after 2020, a new round of rapid growth will be realized. The economic aggregate in 2030 will be 4.2 times more than that during the current period, and proportion of the tertiary industry will increase from 23% to 42%.

Population and land use: Development of modern service industry and new-pattern industries will boost employment, vigorateurbanization of local regions and attractlabor force outside the region. By estimating the employment posts based on the industry scenario, urban population in 2030 will double the current situation. With adjustment for industrial structure and decrease of land occupation demand, growth of land use will slow down and construction land index percapita will be reduced substantially when compared with the current situation. Thus intensiveness and consolidation of landcan be realized.

Pollutant emission: Pollutant emission model is established according to industry development and capacity in various regions. As per the calculation results, the emission load of SO2, NOX, PM10 and VOCs in 2030 will decrease by 51.48%, 64.14%, 43.20%, and 57.80%.

5.3.2 Simulation of scenario 2

Economic industry: Due to moderate transition of industries, economic growth in the region is relatively gentle. The economic aggregate in 2030 will be 3.1 times more than that during the current period, and proportion of the tertiary industry will increase from 23% to 36%.

Population and land use: The employment posts will rise. The population urbanization demand of the region can be met and a few labor forces outside the region will be absorbed. By estimating the employment posts based on the industry scenario, urban population in 2030 will increase by 40% when compared with the current situation. Construction land index percapita will be reduced to some extent.

Pollutant emission: The emission load of SO2, NOX, PM10 and VOCs in 2030 will decrease by 33.89%, 48.15%, 19.84%, and 13.90%.

5.3.3 Simulation of scenario 3

Economic industry: It is still dominated by traditional competitive industries. In recent period, the economy will grow rapidly and the growth will slow down during a long term. The economic aggregate in 2030 will be 3.0 times more than that during the current period, and proportion of the tertiary industry will increase from 23% to 30%.

Population and land use: The employment posts provided by the industry system dominated by upstream petrochemical industry are limited. By estimating the employment posts based on the

industry scenario, urban population in 2030 will increase by 10% when compared with the current situation. Construction land index percapita will rise substantially.

Pollutant emission: The emission load of SO2, NOX, PM10 and VOCs in 2030 will rise by 14.57%, 4.29%, 35.14%, and 22.30%.

*5.4Scenario assessment*

Scenario assessment is conducted from two aspects: (1) to evaluate whether different schemes can promote economic development & prosperity, intensiveness and high efficiency of landland usage, and improvement of environmental quality by directing at the development objectives; (2) to evaluate from the aspects of implementation cost and transaction cost by directing at planning implementation. Meanwhile, due to the existence of multiple stakeholders, operation of any scenario will affect various stakeholders. From the angle of welfare economics, KDW region has already broken the critical point of Pareto Optimality and Karldor-Hicks efficiency is more acceptable. If a reform is enough to make the beneficiary s income compensat party s loss, such reform is called Karldor-Hicks efficiency. According to the standards of Pareto Optimality, in multiple subjects, the reform cannot be continued once one subject is damaged. However, according to Karldor-Hicks efficiency, the reform can be continued as long as the compensation transfer can increase income of the overall region. Therefore, Karldor-Hicks efficiency is an important standard of evaluating the possibility of scenario implementation.

Scenario 1: Ideal scheme; low implementation feasibility

Through comprehensive industrial transformation and elimination of pollution, economic development & prosperity, intensiveness and high efficiency of land and improvement of environmental quality can be promoted. Therefore, it is an ideal scheme under goal orientation. However, its implementation cost is high. Meanwhile, powerful administrative means of the government is required to advance relocation and adjustment of petrochemical production capacity. There is a lack of market cultivation, which goes against reduction of transaction cost.

Scenario 2: A feasible and implementable scheme suitable

Through moderate industrial transformation and effective control for pollution sources, it plays a positive role in economic development, spatial intensification and improvement of environmental quality. Meanwhile, the implementation cost is moderate. By giving consideration to the demands of three parties, it meets Karldor-Hicks efficiency.

Scenario 3: Breaking the bottom line; not recommended

Implementation cost of this scenario is low, but the environmental quality has broken the bottom line of ecology according to the simulation. Therefore, it is not recommended.

Table 2: A list for simulation of three scenarios

| | Goal orientation | | | Implementation orientation | | |
|---|---|---|---|---|---|---|
| Evaluation factor | Environmental dimension | Economic dimension | Spatial dimension | Economic cost | Transaction cost | Karldor-Hicks efficiency |
| | Emission load of SO2, NOX, PM10 and VOCs | Economic aggregate and growth rate | Changes of population and land density | Enterprise Relocation cost andopportunity cost of reducing capacity | Administrative intervention and marketization degree | Whether Karldor-Hicks efficiency is reached |
| Scenario 1 | Decrease by 51.48%, 64.14%, 43.20% and 57.80% | The economic aggregate is high; growth at the earlier stage is slow; growth during the later period is fast | Population rises rapidly, the density increases substantially, and the space is intensive | High | Strong administrative intervention is required, and the marketization degree is low | Yes |
| Scenario 2 | Decrease by 33.89%, 48.15%, 19.84% and 13.90% | The economic aggregate is high; growth is steady | Population rises moderately, the density increases, and the space is relatively intensive | Moderate | Administrative intervention of a certain degree is required, and the marketization degree is moderate | Yes |
| Scenario 3 | Rise by 14.57%, 4.29%, 35.14% and 22.30% | The economic aggregate is high; growth at the earlier stage is fast; growth during the later period tends to be gentle | Population rises slowly, the density decreases, and the space isextensive | Low | There is a lack of administrative intervention and market failure exists | No |

## 6. Conclusion

The case of KDW region represents the typical phenomenon of regional development when administrative intervention reduces and the imperfectmarket rule exists in the process of transformation from planned economy to market economy in China. In regional integration of multiple participants, scenario planning will provide effective schemes for decision-making under complicated and uncertain environment. According to the regional integration planning in KDW, key points of realizing multi-party regional integration are summarized. Firstly, based on uniform cognition about the bottom line of regional development, the game rule is formed and external effect is internalized. Secondly, effective compensation mechanism should be established by facing multiple stakeholders, Karldor-Hicks efficiency must be realized, and increase of overall benefit in the region should be promoted.

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# TRACK 05

## Legal Environment for Effective (Good) Governance and Efficient (Sustainable) Use of Land

# Fuzzy governance approach to wholesale conversion of industrial buildings under the new revitalization policy: a case study of Kwun Tong, Hong Kong

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Keywords: fuzzy governance, revitalization policy, industrial land regeneration

## 1. INTRODUCTION

The package of measures to facilitate redevelopment and wholesale conversion of buildings (the revitalization policy ) came into operation in HK on 1 April 20 owners to apply for waivers at a nil fee for change of use of the existing buildings. Reg bottom-up revitalization enthusiasm, hard negotiation for all the owners of t building to agree the conversion, 26% of the applications withdrawn by applicants slow conversion process made the HK government worried.

The objective of this research is to explore fuzzy governance methods and opti revitalization policy at the operational level. Kwun Tong is chose as the typ research mainly consists of two parts. (i) Find problems: because of the scatte hard negotiations between owners restrict the wholesale conversion applicatio conversion procedures have strict structure restriction and make interior space modern needs. The regional supporting system is lack, such as parking and pedest Kwun Tong is supposed to be changed from an industrial district to a commercial d fuzzy governance methods: a) Three-layered fuzzy negotiation and after-compensat b) Individual floor conversion (such as ground floor); c) Flexible building c process for better spatial uses in the future; d) Regional planning guidance to benefit-oriented conversion in order to gain a double-track balance.

## 2. GENERAL REVITALIZATION POLICY AND IMPLEMENT RESULT

### 2.1policy of redevelopment and wholesale conversion

Measures To Encourage Redevelopment In Non-Industrial Zones: Allow lease modifi exchange for redevelopment at "pay for what you build" premium (i.e. based on th proposed development intensity) for redevelopment of industrial buildings situat zones.

Measures To Encourage Wholesale Conversion In "Industrial", "Other Specified Us And "Commercial" Zones: Owners may apply at a nil waiver fee for change in use existing industrial buildings during the lifetime of the building or until expi whichever is earlier.

### 2.2implement result

The package of measures to facilitate redevelopment and wholesale conversion of buildings (the revitalisation measures ) came into operation on 1 April 2010. shows the latest position with regard to the applications under the revitalisati

Table 1. Applications under the Revitalisation Measures (Position as at the en
Source: HK Development Bureau

| | Wholesale Conversion | Redevelopment | Total |
|---|---|---|---|
| Applications received | 133 | 21 | 154 |
| Approved | 91 | 17 | 108 |
| executed | 64 | 7 | 71 |
| pending execution | 6 | 4 | 10 |
| Withdrawn/terminated by applicants after approval/execution | 21 | 6 | 27 |
| Under processing | 19 | 4 | 23 |
| Withdrawn by applicants during processing | 18 | 0 | 18 |
| Rejected due to not meeting the eligibility criteria | 5 | 0 | 5 |

For the applications for wholesale conversion approved by the Lands Department, located in Kwun Tong and Kwai Chung, and the major proposed new uses for the conve include office, eating place, shop and services, and hotel. For the approve redevelopment, they are situated mainly in Kwun Tong, Yau Tong, Cheung Sha Wan, and Wong Chuk Hang, and the proposed new uses after redevelopment include commercial and hotel.

Generally speaking, whether the wholesale conversion or the redevelopment is acc

## 3. FUZZY GOVERNANCE APPROACH TO WHOLESALE CONVERSION

### 3.1 case selection: Kwun Tong, Hong Kong

Site of the study involves 81 hectares of all kind of land. Among them, there a industrial land and 256 industrial buildings, 37 cases wholesale conversion applicat industrial buildings, including four multiple applications) and one case applications.

Figure 1. Site: Kwun Tong industrial area

From the view of land uses in 2010, 62.1% of industrial land, totalling 50.4 hec institutions, communities land follows, totalling 17.5 hectares, 21.6% ; relativel commercial land , accounting for 7.5 and 4.5 hectares respectively , accounting the remaining land for the road.

Figure 2. Land uses layout (M:industrial/ C:commercial/ G/IC:government/ C

3.2problems during wholesale conversion of industrial buildings

Firstly, according to statistics, within the scope of the study a total of 84 si buildings. Layered unit including 70 industrial buildings, 9 industrial / office warehouse and four vacant premises; and work with a number of owners of a total including 165 tiered units of industrial buildings, 6 Block industrial / office mix. Because of the scattered property rights, hard negotiations between owners conversion application

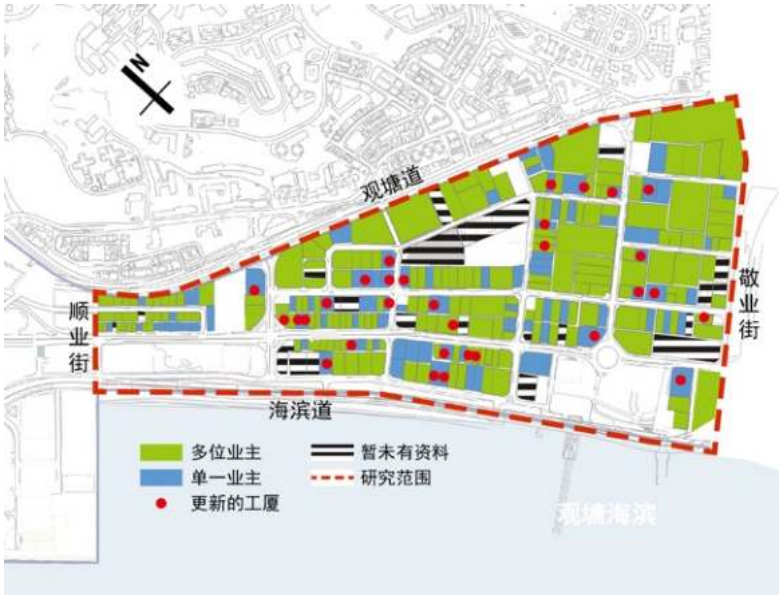


Figure 3. The relation between property rights (green: scattered right, blu right) and conversion implement (red dot)

Secondly, as we know, the height of the level during the industrial era is much h distribution is not flexible. During the research, a lot of the property right o

conversion procedures have strict structure restriction and make interior space modern needs.

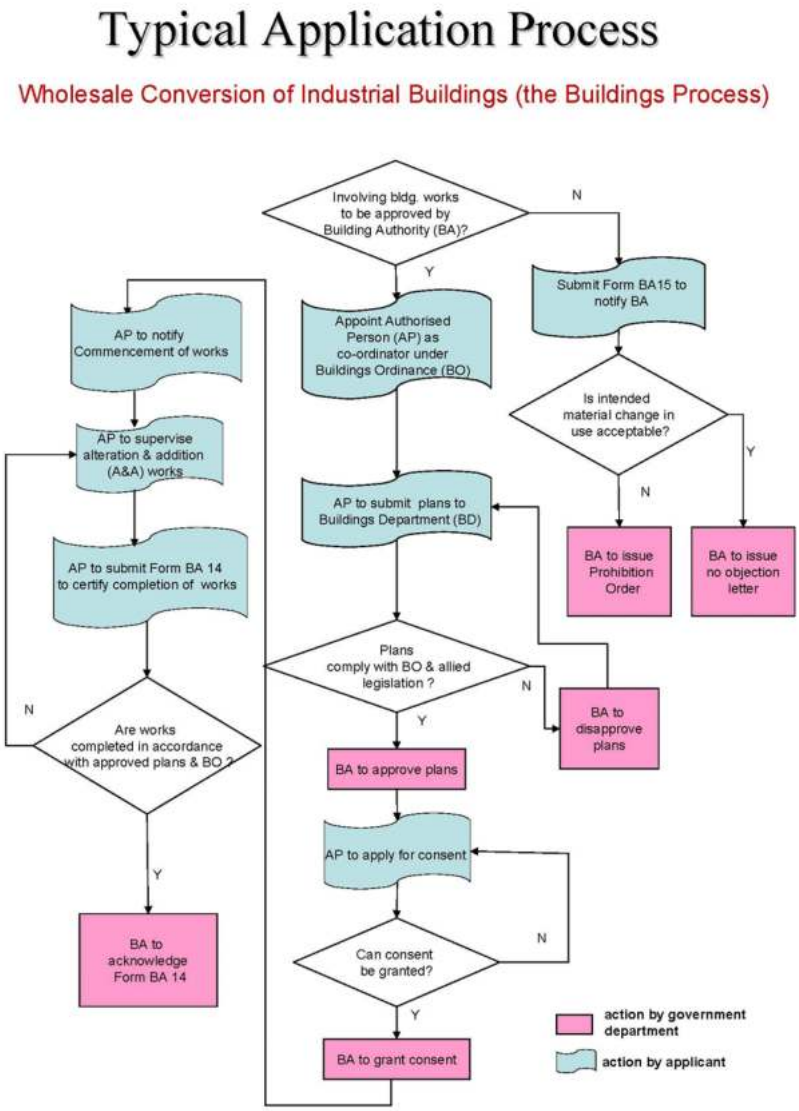


Figure 3. building application process in HK

Thirdly, HK Government did not make excessive interference in the planning, no s adjustment of land, simply set for industrial use to commercial alternative. The industrial building is independent and lack of co-ordination. So regional suppor such as parking and pedestrian bridge, when Kwun Tong is supposed to be changed district to a commercial district

3.3fuzzy governance methods

a) fuzzy negotiation and after-compensation mechanism

Firstly, it is after-compensation mechanism (for planned land property of the profit
the land compensation in accordance with the standard, the District Government
appropriate proportion from land-transferring fees and return it to the original
establish a special fund to encourage reinvestment in Kwon Tong.

Secondly, it is transfer payments (for planned land property of the non-profitable
detailed plan, a lot of land for public service facilities, green spaces and munici
these industrial land blocks, resulting in great economic pressure on the implement
encouraged to have transfer payments or package sell with planned land of the profit
level.

b) Individual floor conversion (such as ground floor)
A lot of conflicts occur because the owner of ground floor property want to have
the upper level right owners have lower interests. As a result, the conversion
according to the existing policy (100% supporting rate of the conversion). So,
individual floor conversion is suggested to solve this problem. However the co
tested by the Experimental permit is welcomed.

c) Flexible building conversion approval process for better spatial uses in the
Due to the flexible space distribution need of the modern company, if the polic
building conversion in the perspective of the structure, the outcome and fit to
satisfied. So such kind of restriction should be removed gradually.

d) Regional planning guidance to optimize bottom-up benefit-oriented conversion in
double-track balance.
Regional planning guidance is needed, such as parking and pedestrian bridge, whe
supposed to be changed from an industrial district to a commercial district.
oriented conversion can only accelerate the process of the renewal but lack of t
Up-bottom planning control is advised during the whole industrial land regenerati
track balance can be achieved.

## 4. Conclusions

As to the problems which HK government is facing and the difficulties during the
conversion of the industrial buildings, the following fuzzy governance methods a
fuzzy negotiation and after-compensation mechanism; b) Individual floor conversi
floor); c) Flexible building conversion approval process for better spatial uses
Regional planning guidance to optimize bottom-up benefit-oriented conversion in
double-track balance.

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# The urban and environmental analysis of The Mokotowski Ventilation Corridor

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Keywords: Sustainability, Ventilation corridor,

## Abstract

*The Scientific Project made by the Student Scientific Association of Spatial Planning placed on Faculty of Geodesy and Cartography Warsaw University of Technology titled*: The urban an environmental analysis of The Mokotowski Ventilation Corridor . *The project focused on c many sided researchs and analysis indispensable to assess the actual impact of buildings in the corridor on air exchange system in its proximity.*

*Undertaken actions indicated the complexity of a problem with location buildings in open urban areas, which are at the same time significant elements of the ventilation system of Warsaw. All implemented analysis led to conclusion, that the buildings recently introduced into aforementioned ventilation corridor affect adversely air exchange, not only on the premises, but also in the areas adjacent. Students performed air flow simulations and shading analysis of the corridor region. Additionally, they conducted researchs to urban barriers. Moreover, students took into consederation Polish law regulations concerning buildings these sites impact of local statutory plans, zoning, buildings permits, agreement with developers for suitable improvements of analyzed area.*

*The final work is the concept of area development plan sitated in a fragment of the corridor. Plan is a proposition of proper land development, which does not interfere with the ventilation system and includes needs of local population.*

## The impact of variuos types of land use on city ventilation process, based on example of Mokotowski ventilation corridor

### 1. The reasons of current condition

Ventilation corridors are important elements of urban greenery system. They deliver clear air from suburbs to centre. Similar function is provided by wide streets and open airport areas, due to their lack of urban development. Ventilation corridors are characterized by fast and undisturbed airflow during windy weather.

In the last twenty years, which were the period of Polish political transformation, urban landscape has changed significantly. Process of transformation is thus far unaccomplished and it still provokes plenty of modifications. It is not only related to the urban planning. The concept of transformation

contains multiplicity of changes that took place in Poland since introduction a new, democratic political system in1989. These changes refer to economy, industry, society, democracy, and many other related domains. Urbanization is also included.

Urbanization is interpreted as a process of population concentration in certain points of geographical space, mostly in the cities. Along with liberalization of market, economy and industry from central planning, it became finally possible to start a private businesses and investments. As a result process of urbanization accelerated and changed its nature ultimately free from central planning. Open market attracted many developers who wanted to build new facilities, like multi-family houses, office buildings and shopping centres.

Lack of supervision over the use of land for construction purposes, caused by confusion in state and local government legislation, has led to chaotic and mostly thoughtless development of open areas in cities and in suburbs. Constant changes in legislation of construction, urban planning and environment impeded a proper supervision. It prevented uniform spatial planning, which is the responsibility of local government units. All mentioned factors led to urban disorder in Warsaw and reduction of green areas, whih ceased to be protected due to constant amendments and revisions of law.

## 2. The influence of green areas for city climate

The green areas in Warsaw are arranged in irregular system, which is characteristic of the remains of former palace garden units, protected areas or large forests. It is impossible to determined compact green areas system in spatial structure of the city. It is random and gradually decreases.

The Mokotowski ventilation corridor, which is the important part of Warsaw green areas system, has been protected for many years by the planning documents reffering to whole city area. This documents prevented the creation of new buildings on ventilation corridor area. In this way, city government tried to keep the free corridor to air exchange in the city. The main assemtion defined these places as areas of low buildings, green areas and sport areas. The main assumption was sustenance monocentral linear layout development.

In 1916 Prof. To wi ski prepared The sketch of the Regulatory Plan of Plan was placed the first conception about compact green area system. The main ventilation corridor supposed to be the Vistula River. Additional parts of this system are formed from green areas corridors or unbuilt areas e.g. railway areas. This planned green system survived communism period of time. In the 1995 year passed The Act on Protection of Agricultural and forest land. This kind of land use stopped be protected in this Act.

Figure 1: Extent of Mokotowski Ventilation Corridor.

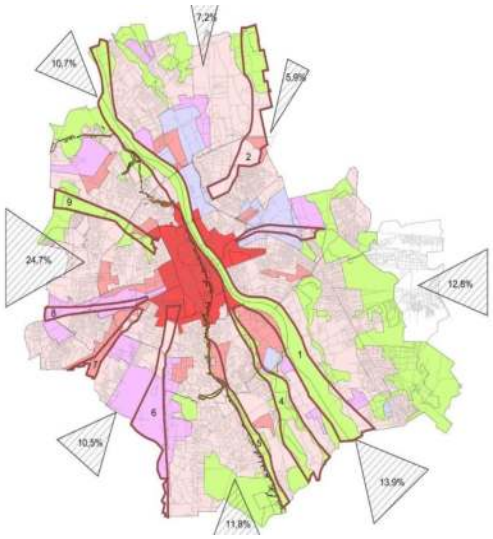


Figure 2: Urban ventilation corridor system in Warsaw

The attractiveness of undevelopment land become more important than city ventilation system in the period of capitalism. That procedure result of systematic reduction of ventilation corridors areas, which had an impact on the deteroration of health air condition. In Mokotowski ventilation corridor, on the biggest green areas was created new housing estates Marina Mokot w, Eko Park and Wi niowy Business Park.

The existance of green areas in the city is very important for air condition and local climate in the city. Green areas in the city are the areas, which are defined as air refinery . Clima the result of natural and anthropogenic factors. The second kind of factors can degrade climate. There are: the size of development area, the structure and building density, type of industry and pollution and the degree of interference in the environment. It is impossible to avoid these factors, because they are inextricably linked with the city. They are also cause the exsistence of phenomena as heat island. It occurs in places where the atmosphere gets a large amount of heat from energy and technological processes and the substrate absorbs the rediation of the sun. However, it should limit the impact of these factors to climate of the city. It can be done by designed of adjacent thermal surfaces and nonthermal green areas. The green areas should have linear shape and be in accordance with the prevailing wind directions, and layout development should include the topography and local angional air circulation.

The green purifies the air in the proces of photosynthesis and reduce the temperature and humidity of air. Planning the location of green areas in the whole city should be taken into account the characteristis of the wind: speed, direction and return. The green areas and development may be the barier for wind, which can loose its speed immediately on it. In that situation can be formed the phenomenon called nozzle and aerodynamic shadow. The aerodynamic shadow is that place, where the wind speed is very low. While in the aerodynamic nozzle, the wind speed increases rapidly. When the air mass enters the tunel, it begins to move with the direction of the tunel. Remember these specific behawior of wind it can be influenced on ventilation of the city and local climate.

## 3. Built impact on the climate of the city and wind flow

Wind fields modification on city area is determined by air pressure difference between city area and suburban area. The amended thermal conditions inside the city are generated local air circulation e.g. breeze. Higher temperature in city area creates local circulation with winds blowing to inside the city. The main factor causing this type of circulation, is change in the air temperature field inside and over the city.

The wind directions in the city are also generated by street layout. When the air circulation is powerless, which mostly happened in the evenings, the main streets allow air penetration from the outskirtes to city center.

The air flow in urban area depends on surface roughness. This index is calculated as item area projected on a plane to total area, multiplied by the average height of element. The city surface roughness increases thermal and mechanical turbulence, especially in the nights. The city surface reduces the local wind flow, when the winds speeds are high and strengthens the air flow during periods of weak regioanl winds.

Varied heights and building orientation cause certain effects in air flows. The air flow around and between buildings was recognized in researches in aerodynamic tunels.

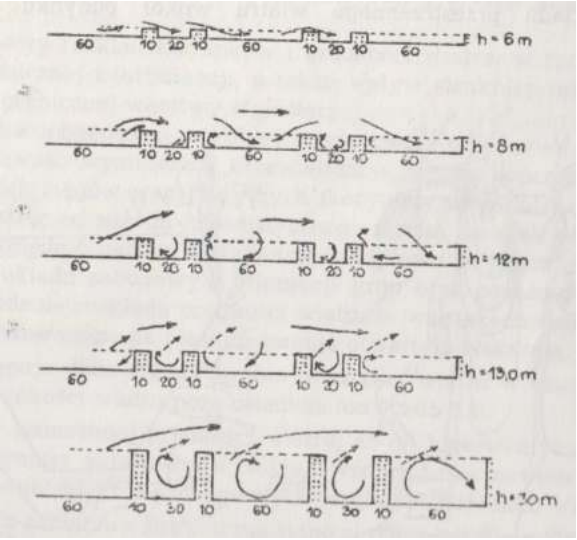


Figure 3: The air flow in urban area

Groups of the high building cause an increase in wind speed on the courtyards and wind flow over the buildings to next street canyon. Smaller courtyards cause wind deceleration on them, while massive blocks cause wind deceleration in adjacent streets. In wide streets canyons, the wind direction is parallel to street axis.

## 4. Land use structure of Mokotowski Urban Ventilation Corridor -the types and characteristics of individual areas

Mokotowski Urban Ventilation Corridor is located in four districts of Warsaw: Mokot w, Ursyn w, Italy, Ochota. Each of these districts has a different structure and form of land use. There are public facilities, numerous green spaces, allotments and all types of buildings: residential, office and brownfields. What is more, we are able to distinguish the production and service areas (5,3%) the areas with predominantly single-family housing (20.3 %), the areas with predominantly multi-family residential buildings (13.9 %), the areas of health services, science and administration (9.6 %), the areas of sport and recreation services (11.4% ) and the areas of services ( 39.5 %).

Therefore, it is hard to define the name of building system for the entire area of the urban ventilation corridor. There are built-up areas with modern office buildings, luxury apartments and little aesthetic industrial buildings or neglected multi-family residential buildings. Residential buildings are inscribed in a rectangular street layout. On this area dominated development of low buildings - 3-4 floors. There are also the 7- and 8 - storey blocks where at the lowest levels established services. A large group of buildings are a modern apartment and office buildings belonging to the settlements Marina Mokot w and Eco- Park. The area of Mokotowski ventilation corridor have got very well developed public transport network and the satisfactory condition of the roads and pavements. These housing estates are characterized by a clear urban layout.

The first settlement - Marina Mokot w is located entirely inside the air corridor. In the southern and central part of the settlement are located the highest 8- storey buildings. In the eastern part of the settlement the buildings are lower 2-3 storey. The average number of floors is 4.26 , and the rate of development intensity is 1.31. These parameters are accepted in local zoning plans.

The second of settlement EkoPark is characterized by higher rates than residential Marina Mokot w. The average number of storeys is 5.87 and the whole area of the project took the 18000 sqm. The rate of development intensity is 1.46. The whole project represents 10 residential quarters. The quarters are rectangular and adjacent to each other by longer sides . The quarters making the significant barrier aerodynamic, because they are a long string of buildings.

Green areas can be divided into: appointed green areas (27 % of all green areas) , greenery under a system of fortification nineteenth - century fortress Warsaw ( 2%), green forest ( 6%) and allotments (65 %). Among the appointed green areas we can distinguish The Pole Mokotowskie Park. This place is frequented by residents of Warsaw. It is a place of rest , relaxation, sport.

## 5. Frontal area index the method to show the buildings impact for the ventilation city system

The frontal area index is a method that is used to designate architectural barriers blocking the flow of air and determine the most probably ventilation paths between buildings. There are many opportunities to use this method in spatial planing, especially in urban areas. This method was used for the first time at the Technical Unversity in Hong Kong. The frontal index is calculated as the total area of building facets projected to plane normal facing the particular wind direction, diveded by the plane area. This relationship is shown in the following equation and figure:

$$f = Afacets/Aplane$$

gdzie:
f the frontal area index,
Afacets - the total area of building facets facing the wind direction,
Adzia ki the plane area.

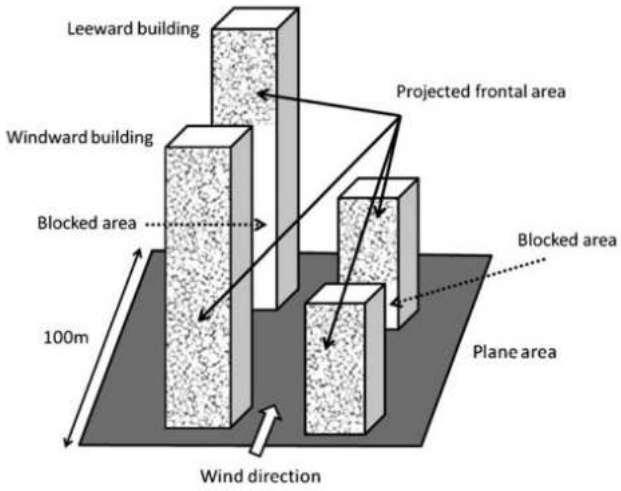


Figure 4: Graphical idea of frontal area index ratio

This method shows the influence of different landuse on city ventilation system. Analyzing the Mokotowski Ventilation Corridor, the frontal area index shows that development effects on the air flow through the Corridor area. Additionally, it was possible to visualize the air circulation through the Corridor before implementation of housing estates.

To show the differences in local air circulation, they were made two analyzes. The end result of this analysis was raster with grid cell of 100 m 100 m. Each pixel con index s value on this sguare plane.

The first analysis was based on Corridor s land use in 2002 year. At that time, th the airport (in the south) and service buildings (in the north of corridor) were the only clusters of the buildings in that area. It can be noticed that the frontal area index for the significant part of the study area was in the 0 0,017 interval, which is the low value. In this areas are also green areas e.g. parks, squares, cemetery.

The second analysis was made for data from the 2012 year. For ten years, investors have built housing development in the corridor area. The new development is low ( to 12 m) and medium high (12 25 m). The frontal area index has changed significantly for this areas. The new housing estates have built in the central part of ventilation corridor, which is also the narrowest part. Most of new buildings have got 12-25 metres high, so they are valid architectral barier, which locks air flow through the Corridor.

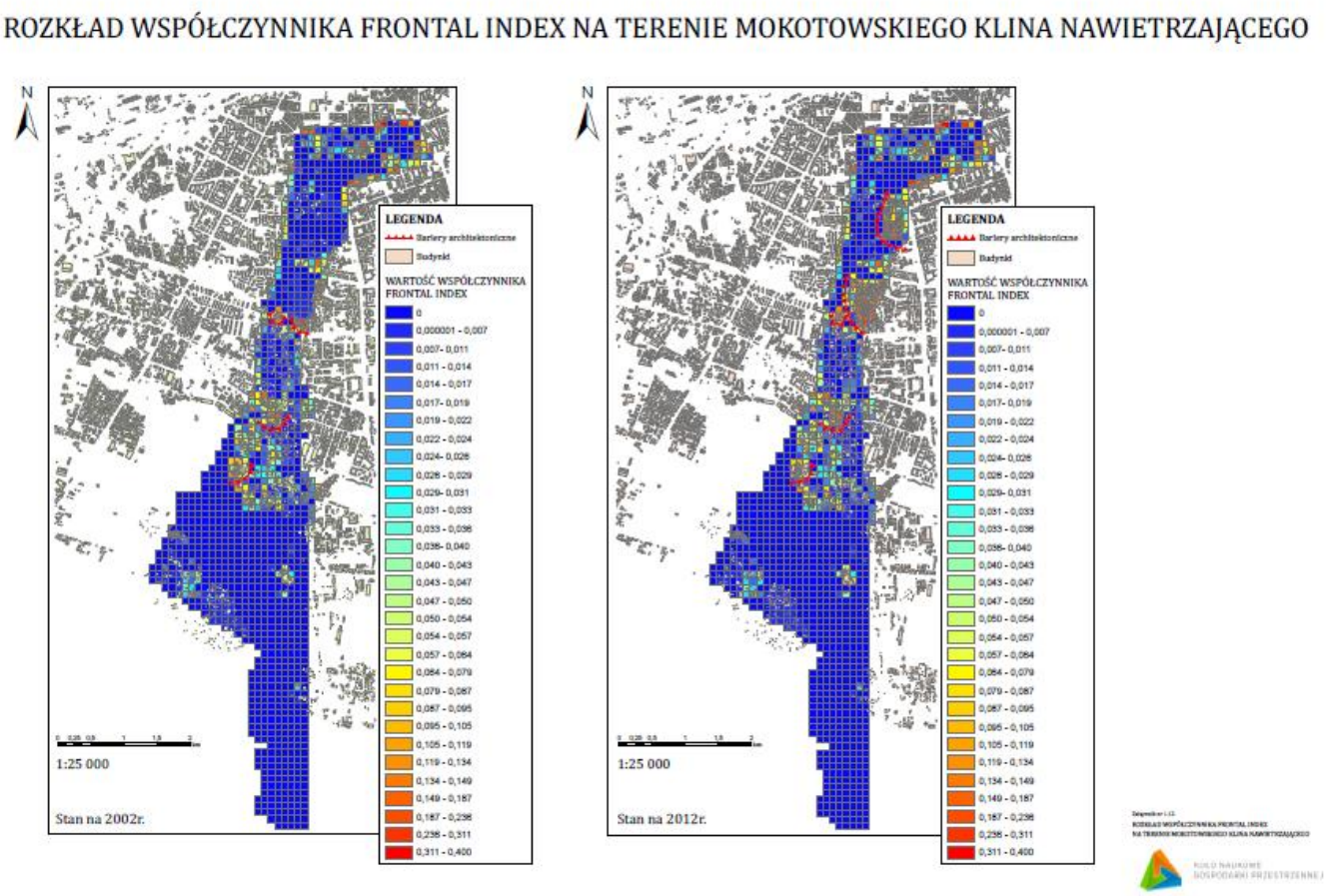


Figure 5 Distribution of frontal area index in Mokotowski Ventilation Corridor

## 6. The wind flow models for housing estates Marina Mokot w and Eko Park

The frontal index analysis confirmed the hypothesis that new housing estates are significant architectural barrier for air flow. The next analysis was made in the Autodesk In this application were made the wind flow models through the development areas. Using Vasari Application it was possible to mark aerodynamic shadows and nozzle in this areas, because in this programme it is necessary to input typical wind direction and wind speed.

The first model was made for Marina Mokot w estate. It can be noticed that south-western wind has got the same speed before the housing development. When the air flow hits on narrow spaces between buildings, the wind speed increases and formed an effect called aerody is not the predominant trend in this case. The housing estate constitutes the barier for wind flow, which is more observable. Group of buildings locks air flow and formed aerodyna north part of Marina Estate (navy blue in the figure). As a result of the estate construction is reduction in functionality of Mokotowski ventilation corridor.

The second analysis focused on Eko Park Estate model. As in the previous case the urban grid formed some places, in which we can observed aerodynamic nozzles and aerodynamic shadows. The second form is dominant trend, because the longer facades of buildings in this estate areperpendicualr to prevailing winds.

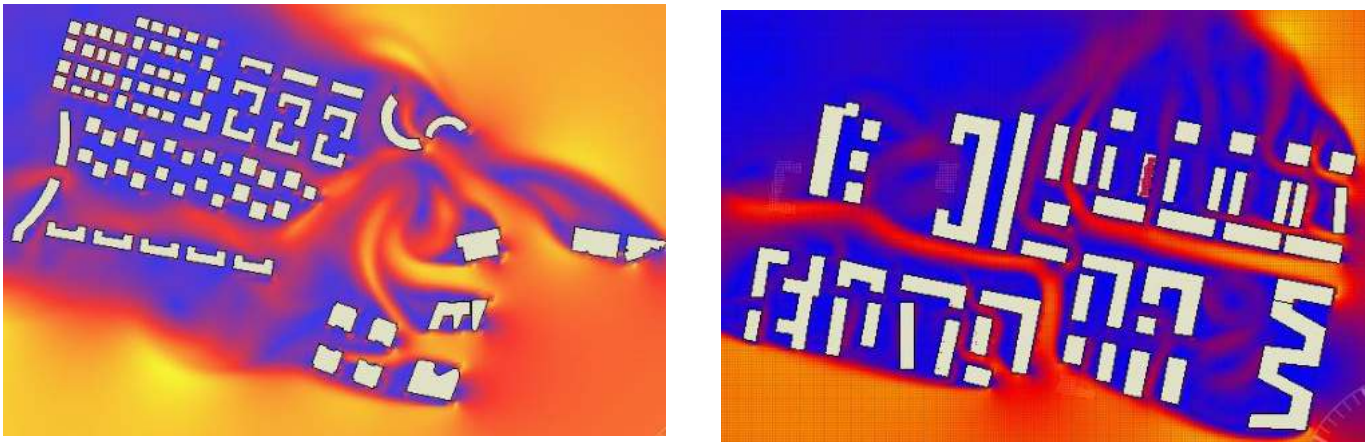

Figure 6: Visualisation of projected frontal area

In both cases, the residential geometrical structure stops vertical air flow, which means that efficiency of Mokotowski ventilation corridor is significantly reduced. But it does not mean that both of this built-up areas completely blocks air flow. In places, where wind has got the lowest speed formed the low-pressure zones. When the wind bypasses the urban areas, it is sucked to windless zones, where the air pressure is very low. Thereby follows air flow through the next part of ventilation corridor, but the wind speed is lower. This situation occurs when the wind do not hit on the next barrier immediately.

**Conclusions**

Urban areas are addicted to air flow and air pollution. Large complexes of green areas in the city can improve residents health conditions. This areas affect on local climat: wind speed and direction, temperature and air humidity, sunlight. Compact green system provides natural permanence and stimulates local air exchange. The ventilation corridors are important part of cities ventilation system. They are created mostly to the city center and running along prevailing wind.

For recent years, the total green area in cities have decreased. A large part of this areas, which have attractive location are planned for new urban areas. Situations like these, provokes discussions about leave the green areas in central parts of cities.

The analysis, which were made, allowed to extract the conclusions about the relationship between development and air flow through the Mokotowski ventilation corridor.

Analysis of air flow through the urban area shows that high buildings create architectural barier, which changes winds directions and reduce the wind speed on the leeward of buildings. This situation has an impact on air health conditions in built-up areas in city, especially in the lowest level of atmosphere the level, in which live residents.

The green areas next to built-up areas is positive phenomenon, because green areas reduce the heat island areas and cause intensive, local air mass flow. This flow formed when extremely hot urban areas adjacent to the much colder green areas. This atmospheric phenomenon influences to atmosphere regeneration and it is very important in summer time, when occur the atmospheric silence.

To maintain health and normal Warsaw ventilation system it is necessary to protect unbuilt parts of ventilation corridors and restrain city government from allow this areas for new housing estates, services or offices. This is important, because high development is the barier for clean air mass. Ventilation corridors should be continuous, green strips which connected city green areas with green areas abroad the city. Thanks to described land use planning, the supply of clean air to the dense city centre is possible.

The undeveloped part of Mokotowski ventilation corridor forms the air exchange proces in housing estates on its territory, in the neighborhood and in the central part of the city. This proces is very important for inhabitants because it guarantees adequate air quality. Therefore, it is imperative to prohibit construction new development on the discussed area. Local Spatial Management Plan and Study of the Conditions and Directions of the Spatial Management should protect the Mokotowski Ventilation Corridor and promote a larger share of biologically active area. Spatial planners mission is creating urban spaces with respect for the environment.

# TRACK 06

## Urban Design Quality and its Social Dimension

# On Which Gezi Gives Birth To: Turkey s First Squat Don Quixote House

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**Keywords:** squat, occupy, social movement

Every single marginal group belongs to what is called subculture . This marg
*their different sense in politics, sociality, music, arts, and fashion, which make them stand as an opponent of mainstream: Mainstream media, mainstream fashion styles, popular music, dominant political ideology, accepted social gender, and so on. Henceforth, their opposing* stand and antagonist position make them be transgressive . Hereby, the spa
*potential to be a space for crime, from view of power holders. On the other hand, where they* inherently express themselves are the spaces for other or the heterotopi
*sense. These are the spaces where intersections, juxtapositions and superimpositions of many differences take place. Indeed, such urban spaces become a means of free expression, personal experience and collective memory. The other spaces of those marginals, therefore, are what* Lefebvre called as lived space , since they initiate a collective habita
*appropriating and reclaiming the urban space. Here, urban space becomes an effective tool to express oneself and such expression particularly manifested itself whereby a social movement, an uprising where small groups of marginals have chance to act together. This paper analyzes* spaces for other where marginal groups habit themselves and maintain an a
life. The Don Quixote House in stanbul which emerged as a squat is
create an other space , which initiated after Gezi Uprising. Therefore, this paper is for
how Gezi Uprising triggers marginals to create such squat as a communal ha
*use.*

## 1. As an Introduction

> *Man make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past.* (Marx, 1852)

People, the subordinated, citizens of somewhere have been under an illusion of imitated democracy interjections, which just whispers justice, freedom and equality while shouts submission, obey, hegemony and authority as an indirect voice of the power. Such illusion is inserted in our very daily life; in schools, in workplaces, in street, in park, in museum, in justice hall, or merely in our homes. We are, subliminally, exposed to certain rules and obligations through which we are conditioned to do or not to do. Such illusion, therefore, would be maintained as we, people, accumulate impositions and oppressions while they accumulate surplus and capital. Such illusion prevent us to see the reality, or we just wait for a milestone that would trigger u from the given, break our everyday routines and go beyond shackles that we were urged to be submitted. We inherently respond this trigger as seeking for a ground to manifest ourselves, both individually and collectively, and form a collective resistance to overwhelm invasion of public realm by the government. We, therefore, create a room to breathe again where we lose fear and live dream;

taste the freedom. This ground, which is encouraged through a social movement or makes us real we ; such we does not belong to any typical group or i homogeneity. Rather, in a social movement, as it s a collective action, we contains m men, children, elder, disabled, LGBTI, conservative, nonbeliever,marginal, political and even, apolitical. This collectiveness prompts people to pull away their labels and act as a whole in this heterogeneity. The ground this collective action initiates becomes a very unique place for those who labelled as marginal from subculture , since they, as others , find a gro actively and freely. This ground, physically and mentally, would be turned into a space where they contaminate their marginality. This marginality comes from their unusual way of dressing and hair style, unconventional behaviours unlike majority and different everyday routines. This marginality comes due to their different sense in politics, sociality, music, arts, and fashion, which make them stand as an opponent of mainstream: Mainstream media, mainstream styles, popular music, dominant political ideology, accepted social gender, and so on. Maintaining, therefore, an opponent standing in urban life, they take antagonist position against the homogeneous, the ordered, which makes them to be treated as transgressive . The spaces they produce tend to be regarded as spaces for crime or illega operations. On the other hand, the spaces they produce are those where they inherently express themselves as an active participant of urban life. Those spaces are the spaces of other who are too different to be anywhere else. (Zurkin, 2008, pp. 724-728) Reminding us Foucauldian concept of heterotopia , such spaces of other do exist in terms of intersections, juxtapositions and superimpositions of differences and interactions within urban life, by its actors. For that matter, heterotopias are the spaces that cannot be utilized through conventional type of property regulations; again they cannot be limited within borders of physical plans and; therefore, cannot be reduced into a physical space. Rather, those spaces can be what Lefebvre called as lived spaces social interactions and daily experiences with urban space. Within these framew and lived space , it should be pointed here that how social movements trigger and encourage, especially marginals, to produce their other space via emerging collective action in such would be discussed throughout this paper. Among those productions, which require use and appropriation of space, squatting is one of them based on the concept of occupying an abando uninhabited space to form a communal habitat for uncovering public use. Regarding such concept, this paper aims to seek how Don Quixote House, Turkey s first squat emerged after park forums organized as an extension of Gezi Uprising, was prompted by inhabitants as an other space whereby triggers of Gezi and its inherent call for collective action.

## 2. Introductory on Social Movements

> Social movement is a system of practices resulting from the articulation of a conjuncture of the system of urban agents with other social practices, such that its development tends objectively towards the structural transformation of the urban system, or towards a substantial change in the balance of power in the class struggle, that is to say, in the power of the State. (Pickvance,1975, pp. 29-49)

Social movements, with various initiator causes, recall public action and collective decision-making processes in a way to obtain a social change regarding civil rights, environmental problems, rights of homosexuals and trans, labour, anti-globalization,anti-capitalism, feminist action, women rights, workers rights, student rights and so on. Whether they eventuate wit systems or not, they tend to uncover potentials of societies emerged through collective action. It cannot be ignored that revolutions may be occurred via ineradicable changes in systems, as Luther King stated: A social movement that only moves people, is merely a revolt. A movement that changes both people and institutions is a revolution. (King, 2000) However, it is also in regard social movements with their revealed potential and encouragement to make people change their

daily routines to change whatever they would be able to. Even could not reach concrete results for some cases, social movements tend to uncover various interactions in society with its actors. Whether emerged as an organization or a spontaneous occurrence, social movements often exhibited a capacity to contain transcending social borders through cross-class mobilization (Prujit, 2007, p.516), which leads to horizontal cooperation rather than the vertical one with hierarchical requirements. This non-hierarchical cooperation consists of participants of different class backgrounds such as urban poor, middle-class activists (like students), workers, academicians or public employees. This variety is obtained since such movements are prompted via public action, not with top impulse or authority order. People from different backgrounds, with different reasons behind them, participate in such actions.

Regarding their organizational patterns, social movements may differ as bottom-up or top-down. Bottom-up mobilizations are more likely to what we discussed as horizontal cooperation, as it involves networks of activists and occasional participants, creation of committees, newsletters and neighbourhood centers. On the other hand, top-down mobilization occurs via political parties to build local organizations when they aim to dominate or exploit a movement started by bottom-up. (Prujit, 2007, p.516)At that point, any top-down intervention by political groups or parties often considered as detrimental since it may turn into a state-oriented bureaucracy, which clashes ideal of self-management. (Prujit, 2007, p.516) Such state-like interventions cause contradictions among inner formation of social movements. Souza also pointed that out:

> It goes without saying that social movements are not free of contradictions; they operate inside heteronomous societies, that is, in the middle of a more or less hostile environment, and in terms of political culture and political practices one can find quite often problems such as imitation of statecraft and state-like structures at the microlevel (or to remember Foucault [1984], at the level of the microphysics of power ) on the par authoritarian leaders, ambiguities, and so on. However, civil society and even the poor are not only or entirely powerless people who need to be empowered ; em course mean revolutionary changes sometimes, but it is also a *process*. A process of conquering *autonomy* and overcoming *heteronomy*. (De Souza, 2006, p.329)

Being discussed by philosophers since the 18th century, the concept of autonomy and heteronomy are also valid for today s discussions where former means living a laws and later means an external law or a law imposed from outside or above.(De Souza, 2006, p.329) Here, our previously mentioned bottom-up mobilizations fit well to conce it consists direct action of oppressed groups who are the subordinated. Unlike top-down mobilizations, that of subordinated deals with production of a local power that resists through inner potentials of daily life in a spontaneous and temporal action sublimed from commanders and imperial orders. (qtd. in Sarg n, 1997, p.29) What Foucault also contributed to relation between bottom-up mobilizations and social movements is that he emphasized the power of knowledge, particularly which refers to knowledge of the space, of people s needs and language and important for oppressed groups to exert some kind of power. For him, that bottom-up power is based on people s knowledge, the local one, and for social movements; the more they use their knowledge, the more strategic they can think and act. (De Souza, 2006, p.330) By this local knowledge , which should not be underestimated, local tools and ways of operations can be produced against state apparatuses. Such local knowledge, which makes way to a local resistance , can be able to unpredictable, unplanned, indeterminate, but new, domestic and perspicacious actions, tools, methods and ways to define its respective sphere of resistance and ground for counter-hegemony.Providing its impressive reflections by means of public participation and their bottom-up power, such social movements gain relatively great success even if they do not result with what is understood as

conventional type of revolution. Their success is in what they revive and whom they awake, that is to say, it inspires a revival and an awakening, at least.

## 3. What Gezi Revives, Whom It Awakes

> In Gezi, you first met with yourself. There was a specific moment when you came face to face with who you are and what you fear. Then, you also had to take a look at what you believe in; how you relate to your body, to authority, to justice, to knowledge; and ultimately, of course, to freedom. After this first check-up came the sensations. Feeling Gezi came before thinking it. Sensations ran along the soft core, because it is through bodies - rushing up hills, hidden in staircases and in each breath- that desires stretched into force. Gezi started with a joyful display of real anger against the assemblages of capitalism, urban pillage, environmental destruction, conservative morals, body policing, selective justice, and whirling injustices. Gezi was just the beginning -the struggle continues. Freedom has a price and a hope its joys.
>
> Love was hypnotic in Gezi. It brushed away the rational. It left you naked, vulnerable, and happy. It breathed air into passion-torn little hearts. It had a transformative effect, like some psychedelic trip that queers you up some more. Love was surprising, again and again. Death was there too. One, two, three, four dead in the street, shot in the h One does not get used to death. Smiling sweet people have been dying in this country before, during, and after Gezi.
>
> Killed by some sort of love; dead at work; found dead in the street; crushed in factories; strangled by family, hanged, starved to death; lynched in the neighborhood; burned alive with fire or acid; just missing. Some of the dead become heroes while others become martyrs. Death has a texture in this country, just like love. More softl selves collectively died in Gezi, each in their own way. Smooth quiet deaths of the ego faced the monstrosity of unaccounted crimes. With its dosage of love and death, Gezi was poetic. (Ayka , 2014)

In our previous discussions on social movements and the bottom-up power as the most effective initiator of such movements, Gezi Uprising should be placed as one of the bottom-up mobilization which breaks out with a spontaneous manner of people. Being leader-free, party-free and free from any kind of political groups,Gezi (I d prefer to use Gezi , instead of Gezi Uprising) social movement for those people who had never participated in any political actions, any rebellions, any manifestations or meetings, even who had never, merely, think of what is going in world, in country or just in street.For those, and others of course, Gezi is an awakening which opens a path to think, question, challenge and act. Looking back to beginning of the protests, one can surely say that it was, at first, a call for environmental, also urban, action which exhibited an antagonist standing against transformation of a public park into a shopping mall with a replica architecture body of Ottoman style. This detrimental, discretionary (on Sultan s desire) and hege urban public space not only damages publicity, but also the life there; the trees, the homeless, the lovers, the children, the elder, the graffiti-maker, the street artist, the street hawker, the friends who just drink beer after work or the lonely who just passing through. This intervention of state underits brutalism is for submitting its power, baring its teeth, and showing how its authority can control everything, even private lives as well as public one.

Here, a Lefebvrian classification of levels; global (state), mediatory (mixed) and private (habiting) fits well to our discussion regarding Gezi. For Lefebvre, in global level, we simply see the representation of power of state both mentally and physically; like the hegemonic pressure of politicians over public or their political strategies. For that matter, the built and unbuilt domain like schools, churches, monuments, towns, roads, highways, and urban fabric could be considered as physical representation of power. (Lefebvre, 2003, p.79) All of them remind the desire of state to control people by means of creating a centrality which eases the dominate everything. Those built and unbuilt domain also shows the capacity of state to collect capitalist commodities. The mediatory level; the mixed one, is like a link between global and private levels. As Lefebvre indicated, it s the level of city :

> ...Yet this level is nothing but an intermediary (mixed) between society, the state, global power and knowledge, institutions and ideologies on the one hand and habiting on the other. Wherever the global attempts to govern local, whenever generality attempts to absorb particularities, the middle level (mixed, M) comes into play: it is a terrain suitable for defence or attack, for struggle.(Lefebvre, 2003, p.80)

The misperceived, but relatively the most significant level is the private one, which is the level of habiting . However, it is somehow misconcepted with term habitat which merel typologies; like apartments, private houses, squatters and campgrounds. Different form habiting, habitatis a basic formal frame that reduces human being into simple life acts and reproducing. However, on the other hand, habiting , which private level substantiall of, is more than a physical boundary or a collection of simple habits. Habiting includes all lived experiences of a human being, her/his being and her/his acts on public sphere, her/his resistances, and her/his reactions to pressure. Habiting covers the revolutionary potential. (Lefebvre, 2003, p.82) It implies that revolution will be on street; so it encourages acting on street. Therefore, appropriation of public space will emerge right after that, and a space which initially belongs to mediatory level will transform into something else, like in Gezi, where a public park turned into a communal living space after such protests against state.

Regarding Lefebvre s levels, in the case of Gezi, it s so clear that th Gezi Park is simply the direct interference of global level to mediatory one and later on, the private level of habiting.Although the protests started up with environmentally conscious concerns, together with continuing brutal interventions of state and its police force and accumulated oppressions and prohibitions of state, the protests turned to be something else: It s the transition of a to social movement which instigated masses of people. With this transition, Gezi should be attributed to be achieved a success to reach masses of people without containing them under single monotype shelter. Therefore, Gezi achieves a certain potential for social change, which Castells put forward three goals to get it: First one is to realize collective consumption demands which promotes city as a use value against commodification. Second is to establish and strength an autonomous cultural identity and promote communication instead of programmed one-way information flows. Third is to provi territorially based self-management. (Castells qtd. in Prujit, 2007, p.516)

## **4.** Something of Personal Gezi Experiences

No matter which satisfying concrete results Gezi does reach, what it revived has, still, been affecting socio-political conjuncture of Turkey. Feeling Gezi, in person, makes me to see, hear, and observe this revival; in streets, squares, parks, and even wherever one could keep her/himself hiding

from police. Hazim Nazim Hikmet called you to be as unique and free as a tree while being as friendly as a forest. Marx reminded you that the shadows of trees were not for sale. On the walls, you could read that the revolution would not be televised- that was the point at which penguins met Guy Debord DenizGezmi and his friends called out for a long life to the brotherhood of Kurds and Turks. Emma Goldman invited us to dance through the revolution. (Ayka , 2014) I great challenge for those who dreams revolution from his couch reading a book on it, writing an article on it, thinking on it or just growing an endless desire to get it. It was also an experience of challenge for those who had never think of a revolution, who even know nothing on revolution, or who had never questioned the life we forced to live and just kept livinglike however it goes.

Gezi called something new which we had never met or faced before: It s to act tog together I don t mean reduced/restricted togetherness of people from same political ideology, same ethnicity, same religion,same team supporters or any other same purpose. By acting together, here, I mean real all, except lovers of Erdo an. Had I not experienced it myself, I would hardly believe tha those people have never leaugued together, come and move as a whole. I would hardly believe those people can barely sleep at night because of thinking other people, even they don t know who they are,who still continue protesting on streets. I would hardly believe people, even me myself, trust a stranger from resistance and stay at her/his home to protect from police and gas. I would hardly believe people, me myself too, forget all their fears on gas, pressurized wate Akrep , police or even, custody. In this sense, Gezi is the groundbreaking; it provided a ground to surpass all conventional discourses, prejudices, charges and old methods. We just woke one morning and saw brutal treatment of police to protestors on 28th of May, and after we found ourselves in streets as if we have always been there. Had I not saw it myself, I would hardly believe such thousands immediately and spontaneously come together after organizing on social media. I would hardly believe such thousands, after being exposed to gas for several times, still keep waiting for some other time to be exposed by gas again. I would hardly believe,every morning I wake up by hoping- surely know that the rest also wake up with that hope- resisters who injured previous night can also wake up too. I would hardly believe I have difficulty in controlling my anger and nerve when I saw lawyers were beaten or when I saw, on 15th of June, that Gezi blockaded and resisters sheltered Divan. Gezi, therefore, is where we left our fears behind, where we started to learn thinking from different perspectives, where we tried to think of others. It is where we saw potentials of collective reaction and where we regret traditional resistance templates. By means of it, we constructed Gezi Spirit, which maintains itself not only in street mobilizations but also in park forums and other post activities emerged as an extension of Gezi Uprising.

## 5.Gezi Spirit: From Streets to Park Forums and *Post-Gezi*

Gezi Spirit which recalls our humane sides does not limit itself with street mobilizations and active resistance; rather it continues in passive field and begins as Post-Gezi eventsone of which is park forums emerged after violent evacuation of Gezi on 15th of June. These forums are what Gezi gave birth to our urban lives like other concepts it did so: passive resistance, horizontal organization and civil disobedience. Before Gezi, we used parks and other urban public spaces as if they are merely urban blanks . Parks, therefore, are spaces where state attributed a functi where we subliminally force to recreate our bodies there by sitting on proper and definite arrangements and maintaining certain activities that state lets us to do. Theoretically, such parks are the unique spaces of cities where people can touch and feel green; however, in to step on grass. That is, even in a space to recreate , people are strictly restrai saying them what and where to do.Despite their innocent appearance of serving a space citizens; what is in real is that parks as recreational spaces obscure a hidden message which provides a

social control over people by state. (Batuman&Ak , 2000, p.23)This reduction of green into an imitated nature functions as a control mechanism of state causes certain misconceptions towards parks as a combination of green and urban public space. Park forums, as a Post-Gezi activism, straighten this misconception by reclaiming parks as an urban public space and revealing its essence; publicity. As a society, we had not been familiar to such alternative uses of parks in a way that we desire to use it. Organizing forums there? Before Gezi, it was almost impossible to organize a forum in parks and gather people there to make them mention their problems, solutions, and proposals on agenda and also listen others whether they agree with them or not. However, with revival and awakening by Gezi, we start to question every operations and interventions of state and other power blocks, as well as concepts like democracy, equality and freedom. Here, one of the essential impulses to arrange such forums is privation of democracy. Horkheimeralso explains privation of rational basis of democracy and its relation with power-holders:

> Deprived of its rational foundation, the democratic principle becomes exclusively dependent upon the so-called interests of the people, and these are functions of blind or all too conscious economic forces. They do not offer any guarantee against tyranny. In the period of the free marketsystem, for instance, institutions based on the idea of human rights were accepted by many people as a good instrument for controlling the government and maintaining peace. But if the situation changes, if powerful economic groups find it useful to set up a dictatorship and abolish majority rule, no objection founded on reason can be opposed to their action. If they have a real chance of success, they would simply be foolish not to take it. The only consideration that could prevent them from doing so would be the possibility that their own interests would be endangered and not concern over violation of a truth, of reason. Once the philosophical foundation of democracy has collapsed, the statement that dictatorship is bad is rationally valid only for those who are not its beneficiaries, and there is no theoretical obstacle to the transformation of this statement into its opposite. (Horkheimer, 2004, pp. 19-20)

Seeking democracy s rational foundation, park forums are pertinent and hopeful to maintain Gezi Spirit by addressing to all. The horizontalcooperation they have, also gives opportunity to make all people, especially marginals/others those who were exposed to certain prejudices, participate in and give voice. Providing a platform for freedom of speech, park forums have a single rule which is to be respectful to others and listen to them. Therefore, a remarkable awareness is raised up which provides working in solidarity and collective production of ideas, solutions and actions. Even in the most crowded forum, every participant could directly express themselves. People discussed political issues, organized meetings and reported forum sessions in the media to inform the public and create a web of solidarity. Since some forums harboured a great number of individuals from various ideological backgrounds, there was great effort to continue the emphatic dialogue that was discovered at Gezi, mostly successful.Workshops were continued in public spaces. Someforums emphasized a communication strategy with local residents who did not necessarily support Gezi. (Ahkat, 2014) With such inclusive approach, park forums reach different voices and alternative decisions would be taken whereby free expression. Here, urban public spaces are attained more importance since people realize what those spaces really submit if they occupy it, use it and appropriate it.

Yelde irmeni Forum, one of park forums in Kad k y, was initiated as a st car park in their neighbourhood into a green area. Like other forums flourished different regions of country, Yelde irmeni Forum tends to raise a public awareness to protect unity of their neighbourhoo and the heterogeneity their neighbourhood brings. They try to uncover forgotten relationships and

practices through expressing and discussing their ideas freely in forums. As one of the concrete results of such discussions, they planted car park in their neighbourhood which is a concrete urbanization/overbuilding in Istanbul. They, therefore, provide a room for breath within this overbuilt environment. Apart from discussing territorial issues, their very domestic demands for their neighbourhood includes more green, safe places for kids to play, convenient restoration of historical buildings, and arrangement in bus lines. (Y ld ral, 2014) Later on several discussions and meetings in neighbourhood, sometime, Don Quixote occupied Yelde irmeni.

## 6. In the Way of Gezi: Don Quixote Occupied the Neighbourhood!

> Gezi Park continues blowing its spirit! 'Chapullers' have interiorised freedom, solidarity and communication of the Gezi period and now they transform the inspiration they got from Gezi into new forms. Yelde irmeni Solidarity, one of the forums which neighbourhoods after Gezi invaded a desolate building which has been functioning as garbage for 20 years and now is trying to turn it into a public space. This organisation with no hierarchy wants to create here a 'miniature' Gezi, put it into service of the inhabitants and in this way show that another world is possible. (P nar, 2013)

Watching Fatih Pinar s, an activist participated both Gezi protests and Post-G mobilizations, documentary on Don Quixote House and how it was constructed with solidarity and voluntary consciousness, it can conveniently be said that *Another world is possible* . Even saying that motto shows how Gezi change minds, how it encourages and triggers all, especially others/marginals to express themselves. These precious attempts of organizing forums, squatting, solidarity events, barter and second hand bazaars, workshops, direct actions and the rest, at least, make us satisfy ourselves that those hearts of Mehmet, Ethem, Abdocan, Ali smail, andHasanF ratcan feel free in peace that their loss is not needless.

In documentary, one of the activistssaid Under the domination of money and unearned income, all the commonly used places are being taken away. Whilst they are invading our lives, we need new public spaces to make possible again our sense of community , and one another adds What we are after is, in fact, to create again the public spaces that have been taken from us. (P r Their attempt is for reclaiming the space by occupying it, redefining and reproducing with a necessary appropriation. Those people in Yelde irmeni, by taking all the responsibilit organized a community by themselves rather than to wait local politics to do so. (P nar, 2013) Why they did occupy this abandoned building is so clear, as one of a marginal activist explained in such documentary: Because they have not left us any space in city, because there are no more places w we can breathe, because there are no areas where we can express ourselves, or because we cannot find the real tranquillity and from now on we take the initiative. (P nar, 2013) D miniature Gezi, is a cultural, political and economic encounter-intervention that re space not on behalf of any particular group, but for the ancient and progressive notion of a popular commons . (P nar, 2013)

Being a production of a collective initiative, Don Quixote House is Turkey s first formed via courage of Gezi. It is the first for Turkey, but squatting is r world. It has been done in New York City, indeed, in this very neighbourhood, for more than 130 years -that is, ever since the 1860s, when urban development became an observable, cyclical process (of construction, inhabitation and use, abandonment, dereliction and destruction) that repeated itself every 30 years or so. Squatting, as either an individual act or as a movement of some kind, c

little, if any, attention in the world of surveillance. (P nar, 2013) Later on firs New York, it had flourished along different parts of world where people suffer from capitalism, property rights, human rights, lack of social space or any other state oppression. Activists, punks, hippies, street kids and other homeless individuals took over and reclaimed derelict buildings and squatting would continue whenever housing crisis emerge, or whenever some others are alienated from society and have no place to breathe, to act, simply, to live. As Mayer further explains:

> As with squatters of social centers or large buildings, the occupied squares represent(ed) not only a collective form of residence on the basis of shared resources, but also a political action: in this case laying siege to centers of financial and political power. Importantly, they have also served to explore direct-democratic decision-making, to prefigure post-capitalist ways of life, and to devise innovative forms of political action. As with squatting, the practice of occupying has enacted a democratic (re)appropriation of public squares epitomized by their inhabitation. As with squatting, the power of bodies that continue to be present that don t go home at the end of the demonstration and that speal rather than being represented by others exerts a forceful message as it gives *ongoing presence* to political protest. In today s situation of the worldwide spreac of the Occupy movement, it is helpful to take some lessons from squatte they have influenced the trajectory of many contemporary movements and struggles. Squatting is a unique form of protest activity that holds a potential of unfurling energies; it focuses action in a way that is prefigurative of another mode of organizing society and challenging a paramount institution of capitalist society: private property. (Mayer, 2013, pp. 1-2)

For that matter, squatting recalls Lefebvre s right to the city together with his lived space and habiting . For our case of squatting, these concepts intertwined that one requi another to be realized. The emergent need for a communal gathering space for inhabitants of Yelde irmeni generated Don Quixote Housing as a lived experience of coll domestic memory. As for Lefebvre s question of Who has the right to the city terms of the problematic of possession regarding struggle between private and communal use of public space. For case of squatting, the appropriation of space to establish the notion of dispossession through a communal production and sharing of space turns individual interest into a communal one, which eliminates conventional forms of possession. By this way, the squat becomes a place of resistance not only for providing a social and cultural action, but also towards emerging gentrification which is the privatization of public domain. The new definition that squats submitted for public space recalls what Lefebvre suggested as lived space . (Lefebvre, 1991, p.33) Approaching space as a social producti lived (social) space is where inhabitants, as real actors of urban life, generate either individual or collective actions to provoke new formations both spatially and socially. Therefore, lived space is the immeasurable one; a space that directly interacted with limitless borders of imagination, experience, personal and collective memory, and individual expression, where expression deserves quite importance among others; since, expression requires an act, a stand, and a real use. By this expression, inhabitants would play key role in organizing urban life where s/he resists, decides, uses, initiates, changes, appropriates, and gets. Interrelated deeply with lived space, Lefebvre s ha itself from formal guidelines of *habitat* and reaches an alternative meaning of comprehension of existence, series of experiences and a collective place of change and revival. Habiting can simply and essentially considered like being , as he pointed out in *The Urban Revolution*:

> Although we cannot arbitrarily assimilate habiting to unconscious of psychology and psychoanalysis, there is a definite analogy to the extent that our failure to recognize habiting can serve as an illustration of the theory of the unconsciousness. In order to rediscover the word and its meaning, in order even to utter them, we need to make use of concepts and categories that fall within the scope of the inhabitant s proximity to the unknown and the misunderstood in the everyday, and go beyond, to general theory, to philosophy and metaphilosophy...the relation of the human be its own nature, to being and its own being, is situated in habiting there.(Lefebvre, 1991, pp.81-82)

Don Quixote House, regarding those theoretical conceptualizations, is a new means of habiting and lived space which constructed in the hands of activists and inhabi The occupation story of that building abandoned for fifteen years is best summarized with Selin Top s words who is a participant of the occupy : We came and opened the door. So then we said: N is ours, this is everybody s . (Zucker, 2014) Her words do not only describe the squatting process but summarize their mission as well: it was never the squatte the house, like in most other European squats. Rather, it was about giving the Gezi experience a home; finding a place for the newly reclaimed sphere of interaction, political activism and non-hierarchical deliberation to put down roots. To create a free space, outside of the reach o transformation in the interest of capital- open to everyone. (Zucker, 2014) Unlike other examples of squats in world, Don Quixote House is not for permanent living; indeed, it serves as a social center where everyone can come and join the meetings, workshops, and other activities of art or just drink a tea and have a chat with others. With its temporal usage, it desires to appeal to everyone, not only inhabitants of Yelde irmeni. At that point, TalatDo ano lu s, who played a and reproduction of squat, words are remarkable to catch an attention towards dynamic structure of Don Quixote House: Here, every change is welcomed. For instance, the name o change next month as HacivatKarag z. Or if somebody come and suggest placing instead of windows, new stuff would be placed there. Here, a dynamic structure would exist. 2014) For that matter, Don Quixote House serves an autonomous ground where anyone can do/organize whatever s/he wants providing writing down the program table.

Here, the context of Yelde irmeni neighbourhood should be emphasized that the supports have remarkable contributions in development of solidarity for constructing Don Quixote. For Kadik y, the district that Yelde irmeni neighbourhood is part of, this is a vital issue. Mo another urban renewal project is threatening to raise the rents in the area even more: the train station Haydarpa a, a huge historical building at the water front right next to Kadik an iconic site in Istanbul for over a 100 years. In 2010, a fire of still undefined origin destroyed part of its roof. Having lost its function to other means of transportation like the recently inaugurated intercontinental underground railway Marmaray, Haydarpa a is having closed. (Zucker, 2014) Having such critical position regarding rent ownership and land value, inhabitants of Kad k y, has maintained a kind of reactive and conscious attitude towards bruta Being close to leftist ideologies, Kad k y is a home to what society called as margina artists, intellectuals, punks, hippies, rappers as well as neo-nationalist aunts . This heterogene therefore, provides an inclusive atmosphere towards differences, changes and novelties, one which is initiative of Don Quixote House.Selin G. from squat also pointed inhabitants respectable during construction process of house: While we were working in house, neighbourhood brought tea; another cooked some food and gave us. Except from our solidarity, inhabitants of neighbourhood also supported us so much. (Kural, 2014) Selin Top also recognizes the need to do something for them, to catch their attention and make them feel is everyone s. For her, this task is essential to the squat s mission of

center and free space for the neighbourhood. (Zucker, 2014) Therefore, all necessities of house are tried to be provided via this solidarity between activists and domestic inhabitants.

One last, but quite important, point for Don Quixote House is that it reclaims publicity by means of an unconventional way of redefinition/reproduction of space. Its nonapparent motto of turning street into a space/moving space to street is just a result of seeking the other space and reclaiming that other . Therefore, activists of Don Quixote started such reclaiming by putting exteric walls away which sets a barricade-like separator between house and street. They placed transparent glass walls instead of previous masses, which was the first attempt to gain *publicity* back. The others followed that initial attempt: open up space to sky, transforming space into a street and spatialize the street. Don Quixote, therefore, become a communal house that serves as a st winter and summer. (Balpetek, 2014)

## 7. Conclusion

Don Quixote House in Yelde irmeni, has its very inspiration from Gezi and wh as Gezi Spirit, have put important contributions to our public lives by attributing new meanings to it; collective production, communal life, solidarity and space for others, of those also recalled during and after Gezi. Being as a concrete reflection of Gezi, Don Quixote does not merely construct a new physical space for communal sharing; however, it also presents a social space that make us dreaming of again: another world is possible. Yes, another world is possible where money is not the ba necessity, where individual awareness turns into a collective one, where personal interest becomes an interest for all and where all people kindly welcomed without questioning who they are. It might appear as a romantic dream, but it is what Don Quixote and other squats cou Let me say again: *another world is possible.* which lives on public space, which is not televised, which is not on books, may be which is not written; but which is on streets.

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***Title:*** *Assessment of public participation process by using urban coding methodology in urban design: case study Bostanci urban block*

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***Keywords:*** *Participatory Urban Design, Urban Coding, Parametric Urban Design*

***Abstract:***

*One of the most important pillars of social dimension in urban design,* ***participation****, basically means the integration of users into the urban design processes. Participatory design processes seek a balance among variable thoughts that belong to users. Participation requires flexibility in the production of urban spaces since it theoretically needs to bring different thoughts together and let them change in the context of design goals.*

***Urban coding****, as defined by Marshall (2011: 6),* is the application of any kind of code used in t context. Urban codes include form*-based codes, building codes, layout codes, zoning codes, and generative codes. Not to be confused with design guidelines or general statements of policy, urban codes are regulatory, not advisory (Talen, 2009). For the creation of healthy and sustainable communities, urban codes should create the flexibility that participatory design demands. This requires a bottom-up* approach like generative coding, which rejects predetermined forms and patterns in *stepwise process by which a form might emerge from the evolutionary actions of a group of* collaborators (Mehaffy, 2008*: 57). In this context urban coding and participatory design approach have a significant relationship and impact on making a decision.*

*The aim of the presentation is to demonstrate the social dimension of urban design by using quantitative methods and to show how urban spaces alter by using participatory methods and how this change can show itself in the context of urban coding by giving an example from Bostanci neighborhood in Istanbul.*

## *1. Introduction*

Participation basically is identified as the involvement of group of people to the design process. One of the most important pillars of social dimension in urban design, **participation**, the integration of users into the urban design processes seek a balance among variable thoughts that belong to users.

According to Sherry Arnstein, participation is a categorical term for citizen power which means the redistribution of power that enables the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future. Arnstein defines eight levels of citizen participation starts from non-participative levels to citizen control on which have-not citizens obtain the majority of decision making seats, or full managerial power (Arnstein, 1969). Participation levels on urban design scale has been directly or indirectly related to political and democratic ideologies which contributes to participation process on urban planning scale. Arnstein s ladder of citizen participatio contributes to the analysis of the level of democratic situation and making an inference about decision making process on urban design scale as well.

Actors and stakeholders and most importantly user of the specific area contributes to design process by having an interaction with institutions and with each other as well, is replacing the simplistic debate on urban participation which asks whether cities should be organized bottom-up or top-down (Tan, 2014).

Participation requires flexibility in the production of urban spaces since it theoretically needs to bring different thoughts together and let them change in the context of design goals.

Urban coding, as defined by Marshall (2011: 6), is the application of any kind of code u context . Urban codes include form-based codes, building codes, layout codes, zoning codes and generative codes. Not to be confused with design guidelines or general statements of policy, urban codes are regulatory, not advisory (Talen, 2009). For the creation of healthy and sustainable communities, urban codes should create the flexibility that participatory design demands. This requires a bottom-up approach like generative coding, which rejects predetermined forms and pattern in favor the stepwise process by which a form might emerge from the evolutionary actions of a group of collaborator 57). In this context urban coding and participatory design approach have a significant relationship and impact on making a decision.

Bostanci neighborhood in Istanbul is defined as a hypothetical research area of urban design studio in Middle East Technical University in Turkey. Rapid urban transformation and ignorance of actors/stakeholders causes different kind of problematic situations. This research has been based on parcel by parcel urban coding methodology as a controlling mechanism and gives an opportunity for creating a flexible design process. Bostanci neighborhood has been selected as a representative of any urban transformation area in Turkey.

## *2. Design framework*

Bostanci is located on the Anatolian side of Istanbul, neighborhood of Kadiköy. Area fronts the Sea of Marmara. Research area is determined as one specific urban block in Bostanci which is approximately sixteen thousand square meters with eight parcel and eleven building (Table 1)

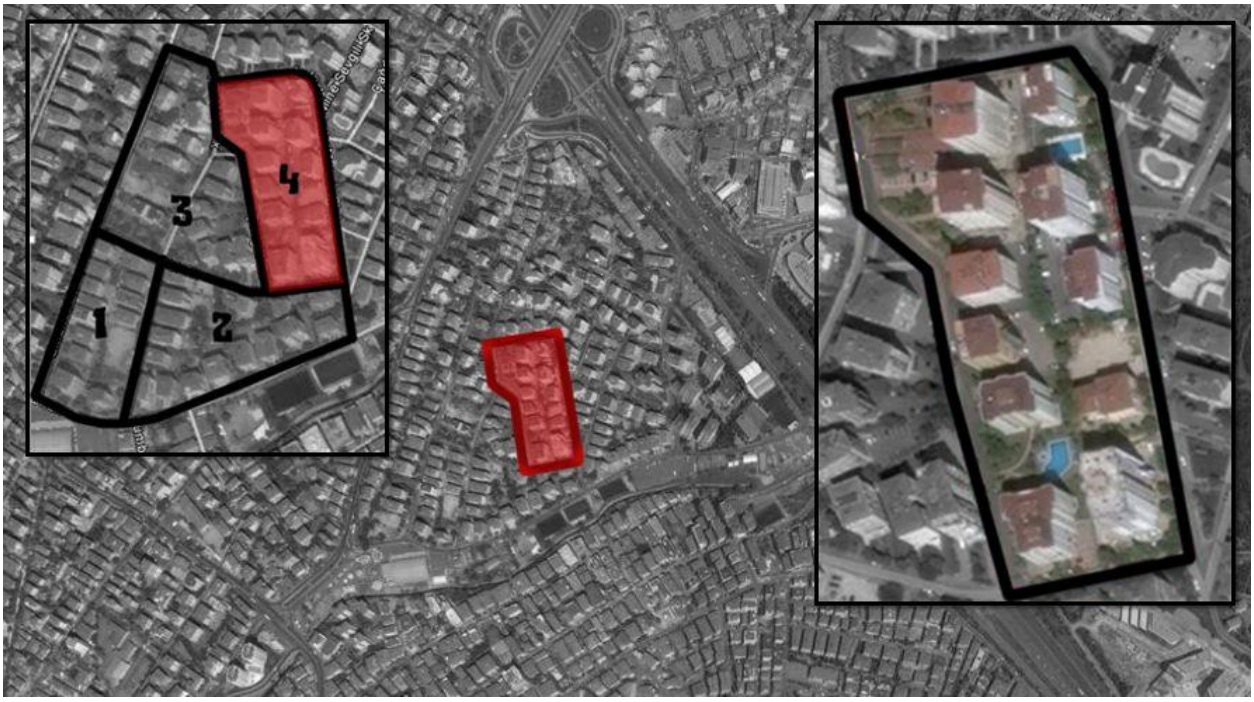


Figure 1. Location of the block in Bostanci Neighborhood

Existing building layout changes from two to five hundred square meters. Building coverage ratio is between 0.18 and 0.46 and floor area ratio starts from two to eight point eighty four (Table 2). Block has parcel size, plot depth and rugosity variation and good sun exposure and wind permeability. It creates an opportunity for privacy because of its impermeable structure which does not let access to urban block except the apartment residents. On the other hand this impermeable structure is considered as a weakness of the block according to plan decisions. Typical architecture, disconnection within buildings, having no common and semi/public spaces in urban block and morphological variation due to lack of functional usage are another weaknesses which do not let flexible growth of the block.

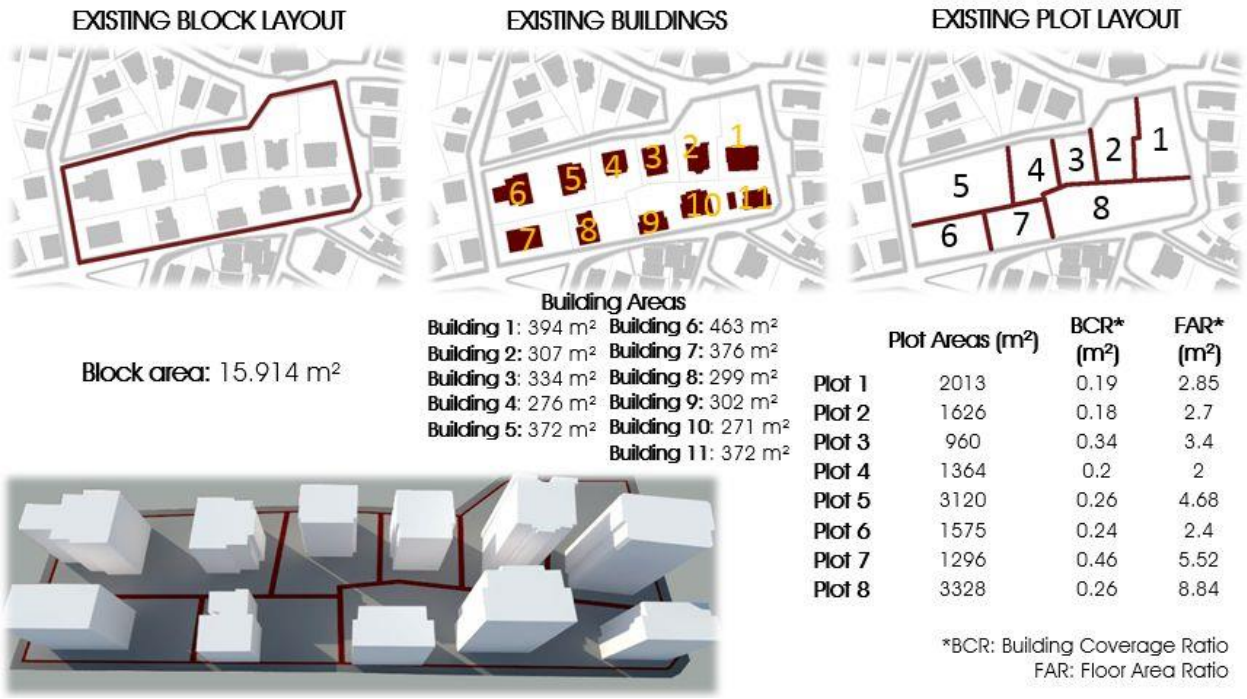


Figure 2. Existing Physical Structure of the Urban Block

Firstly plan decisions have been determined as a challenge of this hypothetic research project. In order to keep the building development right the same, plot layout will be remain the same. The ground level of the buildings will be commercial area and residential units have been planned on t levels. Floor area ratio will be three in the block which distributed equally unlike existing buildings which changes from two to eight because of several high rise buildings in the block. Last plan decision is composing an attached building housing.

Fine grain urban composition as a design concept will widen the spectrum of architectural types which can intervene monotonous architecture of the block. In addition to the design concept there is two different design principles; creating an inner space within the block and active street frontage for commercial area on ground level.

### *3. Design codes*

The aim of the research is demonstrate the social dimension of urban design by using quantitative methods and show how urban spaces alter by using participatory methods and how this change can show itself in the context of urban coding. Urban coding system has been separated into four morphological elements; street, block, plot, building. Street is a public thoroughfare in a built environment. A block is defined as the smallest unit of development which give access to its plots by street/s. A plot is identified as a piece of land which represents the smallest expression of undivided ownership. Buildings is any relatively permanent enclosed structure on a plot of land, usually having a vertical surfaces, covering

surfaces and openings. The main elements of urban morphology and their relationship in different combination created the code matrix. For example one of the results of block and plot relationship is continuity which is the internal circulation within a block. The total number of segments on a route gives the value of continuity of the route. Continuity factor is basically expressed as the amount of segments on the routes and the total amount of the routes in the network. Expected performance of the continuity is efficient use of internal space in block in terms of the provision of parking space, fire safety and supporting the possibility of the emergence of retail. Building and building relationship can cause the emergence of the code of compactness. Compactness is the ratio between the total external wall areas of the building envelopes to their total volume. Compactness factor is calculated as the external surface of the building envelope and volume of the enclosed space of the building. Expected performance of this code is passive heating of the close-connected units problematic conditions for the efficiency of solar access.

In the urban block of Bostanci, firstly active street frontage has been coded in accordance with the plan decisions and design principles. Active street frontage is the building facades of the block facing with the public space. Different kind of commercial usage, diversity of local facilities and characterization of urban block provides an opportunity for an active frontage. Thus granularity, strip width and façade openings have been coded.

Granularity of an urban for can be revealed in terms of plot layout. In comparison of the two different patterns having the same size of surfaces, which are subdivided into the different amount of plots, the one involving more amount of plots can be regarded as multi-particulated in grain with the more relative granularity factor value.

Granularity is formulated by using plot surfaces and external setbacks. In this case since our plot layout will remain the same and does not let fine grain urban form, plots are divided into a number of strips. So the granularity is going to be increased in the block provides an opportunity for diversity in plot composition different building types which means variety in commercial usage, efficient use of the leftover spaces.

Second code for active street frontage is creating a variety in strip width. In order to create more variety in street segment plot should be fragmented into defined range of strip widths. According to the code minimum division of strip width should be minimum twelve meters in this context. In order to create a rhythm on the strip widths, each plot should have at least one twelve-meter strip. After dividing twelve-meter strip for each plot, remaining parts should be maximum number of strip width which is twenty three in this context. The reason for this number is, when strip width reaches to twenty four, it can be divided into two according to the situation which is unwanted in this case.

Repetition of façade openings is another code for rhythm which is defined by total façade opening areas on surface of buildings fronting the street, is a tool to create a rhythmic visual order. In accordance with the parcel by parcel development, rhythm on façade opening code is defined by initiator. When the first developer has designed its own façade openings, other building that has the same range of strip width with the first initiator, should have the same façade openings. For example if fourteen meter strip has a thirty percentage of façade openings the other strip widths between from twelve to fourteen should be thirty percentage of façade openings.

Second design principle is creating an internal common space which consists of three different variety in depth, permeability and counter positioning. The variations in the length of side edges of plot change the depth of plot which constitute the block median. According to sense of enclosure theory optimum height to width ratio should be decided according to the block width. Thus ratio is considered as part of the code formulation while creating usable common spaces.

One of the plot strips within plot can reach to block median in order to create variable (open/close/semi close) common spaces within block. In this case back facade of the building will be blind facade and confronted strip should reach to the block median and should have the same strip size.

Permeability code explains that one of the plot strips within plot can reach to block median in order to create variable (open/close/semi close) common spaces within block. In this case back facade of the building will be blind facade and confronted strip should reach to the block median and should have the same strip size. If openings are going to be given from edge of plot; whole front surface of the building should be regressed at least 4m. If opening are going to given from inside strip plots; at least 4m opening in first floor should be given.

Third code is counter-positioning is measured by calculating the ratio between the numbers of building entrances visible from any other building entrance located opposing sides of block median and the total number of buildings on the street.

### *4. (Trans)Formation of the block*

Urban design codes is used for plot-by-plot urban transformation process for Bostanci urban block. Transformation of the block has been appeared from first building to eighth building in accordance with the design codes which is explained previously. All these codes has been implemented (SIRASIYLA). In this scenario three different actors contributed to the process.

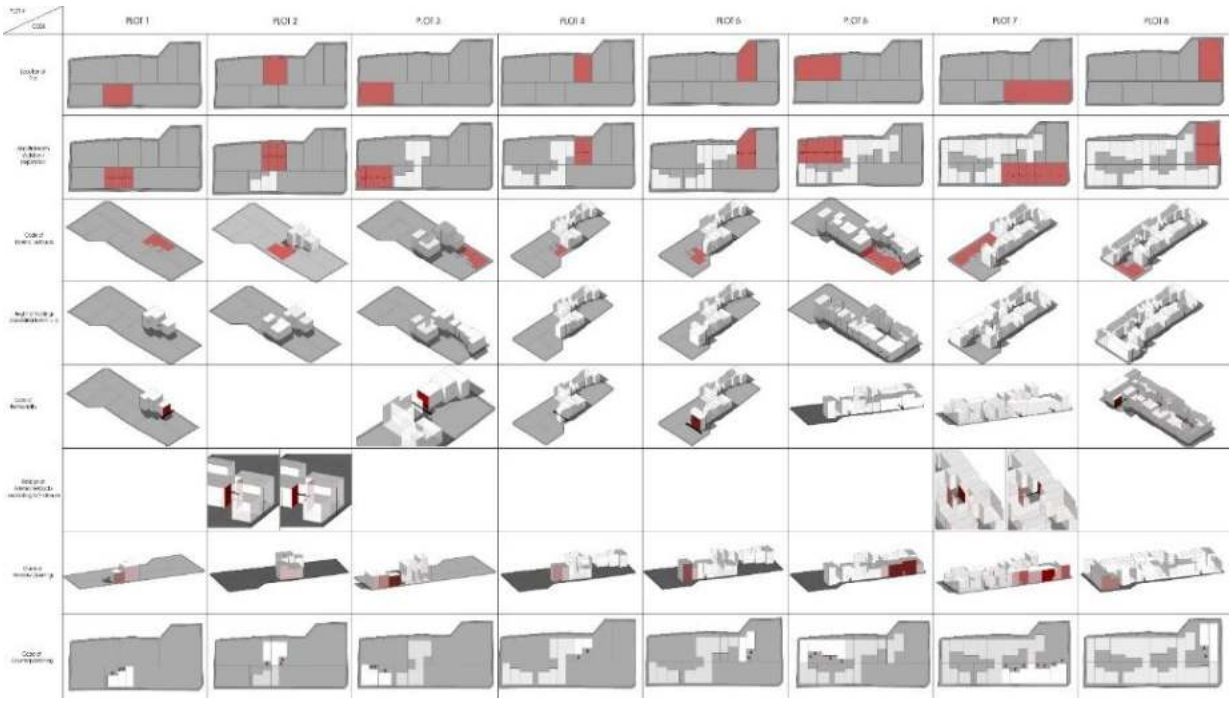

Figure 3. Formation of the Urban Block

When the first plot has decided to build his own house, owner or developer of the plot determines firstly its plot strip width in order to contribute its active street frontage principles in accordance with the codes given by urban designer. Developer can determine its strip width in the range of designer s codes. For example first plot has divided its own plot into three different strips. According to the repetition code, developer should define at least one twelve meter plot strip in its own plot. Other strips should reach maximum strip widths for creating variety in commercial area.

After defining strip width of the plot building mass is defined, building mass is distributed into three strips according to the developer s and architect s decision. In order to create a plot, building mass should give a setback from block median in accordance with the code of variety in depth. Access and service into the courtyards is provided by permeability code and since the access is given from the edge of plot, whole front surface of the building is regressed four meter. Finally entrance of the strips has been located inside of the block according to the counter positioning code. Façade openings have been defined as thirty percentage transparency.

Second plot is facing first developed plot, so firstly developer decides a random ground area of massing according to given codes. Setbacks of the buildings from block median should be formed according the height of counter positioning buildings for creating meaningful spaces in between them. According to the decided Floor Area Ratio, considering height of these buildings, setbacks should be rearranged in order to provide needed distance between them. In this case one of the strip plots should increase its setback, in

the last version of its buildings ground area, its height is increased. Access is given agai of the plot and façade opening is defined as forty percentage of the total building façade.

Remained six plots have been transformed in the same process and final version of transformation of the block is identified according to the owner/developer of the each block within the design principles.

## *5. Conclusion*

Urban morphology and urban coding gives an opportunity for the decision making process for all the actors/stakeholders. After defining basic plan decisions, design concept and design principles with all stakeholders, urban block can transform itself by using urban coding system of the urban designer who leaves the main decisions to the user or the owner of the plot on architectural basis. This method is based on plot by ploy development which refers to phase by phase development in practical life and takes fourth dimension into account.

Finally general aim of the poster presentation is to demonstrate the social dimension of urban design by using quantitative methods and to show how urban spaces alter by using participatory methods and how this change can demonstrate itself in the context of urban coding by giving an example from Bostanci urban block in Istanbul.

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# Study on the Adaptive Utilization of Urban and Architectural Heritages under Urban Renewal from a Human-oriented Point of View

## -- Taking York and Pingyao as Examples

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**Abstract:** How to protect the urban and architectural heritages from being damaged and how to utilize and develop these heritages to satisfy the demand of people against the background of rapid economic and social development are two significant subjects in urgent need of solution. Taking Pingyao and York as examples, this paper studies the utilization of urban and architectural heritages under urban renewal from a human-oriented point of view.

First of all, on the basis of the humanistic theory, urban renewal theory, urban and architectural heritage protection theory, this paper adopts the method of document research and theory deduction, to provide solutions for the protection of urban and architectural heritages under city renewal from the perspective of cognition.

Secondly, by applying the comparative study and empirical study to compare and study the protection and utilization of urban and architectural heritages on national level, urban level (Pingyao and York), and on specific instances (the South Avenue of Pingyao and the Shambles of York) of Britain and China, this paper analyses and concludes different architectural utilization methods under different environments that are applicable to the development demand of human, so as to provide instruction and guidance for the protection and utilization of urban and architectural heritages.

## 1. Background

With the rapid growth of our economy and the vigorous promotion of urbanization process, the ecological environment of architectural and urban heritages have been subjected to severe threats, especially in the process of urban renewal. Under the banner of "Transformation of the Old City" and for the purpose of maximizing economic returns, some cities have invented the "crew-cut" demolition strategy to blindly build new high-rise buildings in the old city, as a result of which both cultural heritages and historic environments have been severely damaged. 1 In face of these circumstances, what we can do, besides feeling the unavoidable pains, is to reflect in depth on the roots of these problems. To fundamentally address these problems, the first step is to employ the dialectical thought to clarify the important role of the protection and succession of architectural and urban heritages in promoting urban, social and economic development (why protecting architectural and urban heritages?). RUAN Yisan et al. (2003) hold that "The historic heritages of a city constitute its precious wealth and strategic resources, and a rational and effective use of these historic heritages on a long-term basis is of significant importance for achieving the sustainable development of the city." ZHANG Song (2005) believes that "Protecting historic environments does not mean that we freeze historic buildings and protect them like museums; instead, such protection should constitute an important strategic part of urban development. Besides protecting cultural relics and historic sites as well as historic streets, it is also supposed to integrate the positive factors of urban economy and social culture to become a deep control force of social development."2 CAO Changzhi (2012) claims that, "The basic attributes of historic and cities include not only the authenticity of historic heritages, but also the succession of historic contexts and the dynamics of conservation patterns. Each historic

city itself is a social space and a dynamic survival environment, and must be developed under protection and protected through development."[3] The second step to be taken is to properly deal with the relations between protecting and using architectural and urban heritages (how to protect architectural and urban heritages?). Some scholars propose that "Adaptive reuse provides the best protection of existing buildings (HE Jing, 2004)[4]; Professor CAO Changzhi, based on his theoretical study of the intrinsic attributes and characteristics of historic cities and the laws of their protection and development, believes that the critical conjunction point of the success of the renewal of historic cities lies in rationally using architectural and urban heritages, and he has preliminarily generalized and abstracted several patterns of protecting and using architectural and urban heritages. Each of these patterns emphasizes different aspects in terms of protection objects and protection methods, and their applicability and theoretical basis still need to be discussed in depth. Then, have they embodied the inherent laws of urban development? Do they have any universal relevance in urban renewal? How should we select a proper pattern of rationally using architectural and urban heritages? Questions like these will become the points of penetration for further studying how to achieve a harmonious win-win situation between the protection of architectural and urban heritages and the development of cities and societies at large.

## 2 Theoretical basis

### 2.1 Ideological basis of people orientation

According to great American philosopher Frome, "The so-called humanism means that each person embodies all the humanities, thus each person has all that the mankind has."[5] Fundamentally speaking, "Humanism means that human is the measure of all things, and that the comprehensive development of the mankind is the goal and criterion of all social efforts."[6] For Marx and Engels, the history of social development is the history of the purposeful activities of the mankind. They think that the objective regularity of the development of human society can not be separated from the analysis of the purposiveness of the mankind. On that account, the present paper attempts to explore the purposes of both the renewal of cities and the protection of architectural and urban heritages from the perspective of "human development".

### 2.2 Maslow's Hierarchy of Needs

Maslow holds that the inner strength of individual growth and development is the motivation constituted by various needs of different natures, that these needs follow a an order of priority and a hierarchy, and that the needs at various layers and their satisfaction will determine the realm or degree of individual personality development. In *Maslow's Hierarchy of Needs*, he divides human needs into five layers according to their order of priority from low to high: (1) physiological need, (2) security need, (3) social need, (4)need of self-esteem, and (5) need of self-actualization, among which the former three are needs of lower layers and the latter two are needs of higher layers.

### 2.3 Practical patterns of rationally using cultural heritages

When exploring the patterns of rationally using cultural heritages, Professor CAO Changzhi mainly summarizes five major patterns: viewing pattern, practical pattern,

experiential pattern, memorial pattern and composite pattern.[7] To be specific, the viewing pattern refers to those cultural heritages which have distinct characteristics, rich connotations and precious values but have lost the space available for use by the modern society, can only be used as historical memories and physical evidence and must be repaired and stored completely according to their original form. The practical pattern refers to those historic buildings and structures which have direct use values and whose appearance, internal facilities and so forth can be partially and properly changed to satisfy the needs of contemporary life on the basis of protecting and keep authentic historical information, styles and characteristics.[8] The experiential pattern mainly refers to those cultural relics and historic buildings which have special functions and cultural significance. The memorial pattern mainly refers to those buildings and structures which imply important historic, revolutionary or memorial significance. The composite pattern refers to those which require at least two patterns of protection. Among these five patterns, the practical pattern, as the basic pattern of rationally using cultural heritages, is mostly widely applied to the practical cases of the protection and use of architectural and urban heritages in urban renewal. Thus, the further theoretical study conducted in the present paper mainly concentrates on "the practical pattern".

### 2.4 Life cycle of buildings

The length of the life cycle of buildings is determined by two factors: its material life and functional life. The material life of buildings points to the life that can be normally sustained by their structures, maintenance systems, equipment and so forth under the conditions of adequate maintenance, repair and transformation, and it constitutes the premise and basis of the sustaining and development their life. The functional life of buildings refers to their use functions endowed by the society when they adapt to its needs. The adaptive reuse of buildings directs attention to the adjustment of the gap between their material life and functional life in their full life cycle. When the material life of a building still remains but its functional life has gone, it's necessary to inject new functions into the building to extend its functional life; conversely, when the functional life of a building still remains but its material life can no longer adapt to the needs of development, the building must be transformed, repaired or otherwise treated to extend its material life. In the full life cycle of buildings, these two circumstances are mutually dependent and take turns to dominate until the full life cycle is over.[9] From the perspective of humanistic thought, attention is paid to the material life of buildings for the purpose of satisfying people's physiological and security needs, and to the functional life of buildings for the purposes of satisfying people's social need and need of self-esteem and further providing a guarantee for satisfying their need of self-actualization. The innovative point of the present paper lies exactly in selecting the pattern of using architectural and urban heritages based on human needs.

## 3. Conceptual Framework

### 3.1 Relations between protecting and developing architectural and urban heritages

As proposed by the *Venice Charter* in 1964, "The goal of protection is not only to protect

a specific historic site to satisfy people's remembrance of history and culture, but also to continue our culture or even our life itself at the material level. Using historic sites for the goal of social sharing is always favorable for the protection of historic sites, and this constitutes the tenet of such protection." The *Charter of Machu Picchu* further fully elaborated the above viewpoint in 1977. As explicitly proposed by the Charter, "The protection, restoration and reuse of existing historic sites and historic buildings must be combined with urban construction, thus to ensure that these cultural relics continue to have their economic significance and vital force." In other words, to better bring into play the role of architectural and urban heritages in contemporary social life, it is logical that they must be rationally and effectively put into use.

There is a dialectical relation between protection and development, that is, while protection is a relatively static concept and points to the preservation and succession of the essence of history, development adapts to the needs of historical development and innovatively uses and continues architectural and urban heritages. After being influenced, renewed and used by social development, architectural and urban heritages tend to have richer contents and more use values, so adapting to the needs of social development constitutes the path of sustainable protection and development. Thus, in correctly dealing with the relations between protection and development, the key lies in identifying the integration point between "protection" and "development" and finding an effective approach of inseparably interconnecting them to achieve a harmonious and win-win situation.

### 3.2 Goal of protecting and developing architectural and urban heritages -- Promoting social and human development

The protection of historic and cultural heritages is a relative protection concept, and its significance lies in summing up the course of development of human civilization and getting people to understand the developing venation of human culture. Generally speaking, the goal of protecting architectural and urban heritages can be interpreted from the following aspects: First, to improve people's life quality. Architectural and urban heritages are embodiments of people's traditional lifestyles and living environments, and protecting them helps to alleviate the destruction of people's life quality by the abruptly-changing urban environment. Second, to reflect urban diversity. Due to the increasingly intensified trend of homogenization in building techniques and architectural styles, the architectural environments created all over the world tend to follow the same pattern. In the face of such danger, the protection of historic regions can not only greatly contribute to the preservation and development of each country's culture and social values, but also enhance the richness and diversity of the world's cultural heritages and historic buildings. Third, to promote sustainable social development. Just as pointed out by the *Venice Charter*, it's our responsibility to pass on the heritages we have inherited from our ancestors to our children "in such a way as to embody their authenticity". Fourth, to improve the competitiveness of cities and drive urban revitalization. In short, the goal of protecting architectural and urban heritages is to employ the special values possessed by these architectural and urban heritages for the purpose of promoting urban development in various aspects, or, to say it in another way, the development of the mankind and society at large.

### 3.3 Study on the adaptive use patterns of urban and architectural heritages in the renewal of historic cities from a humanistic perspective

Starting with the above researches, the present paper has taken the perspective of human development to analyze the common value orientation between urban renewal and protection of architectural and urban heritages, and cited two typical historic cities (Pingyao Ancient City, China and York Ancient City, UK) as cases to conduct a horizontal (among several patterns)/vertical (between China and UK) comparative study with regard to the patterns of using architectural and urban heritages they have adopted in their urban renewal. It also attempts to further construct a theoretical model of the adaptive use pattern of architectural and urban heritages in urban renewal and answer the question of how to architectural and urban heritages, with the expectation of providing a scientific basis for selecting a proper pattern of rationally using architectural and urban heritages in urban renewal in the future.

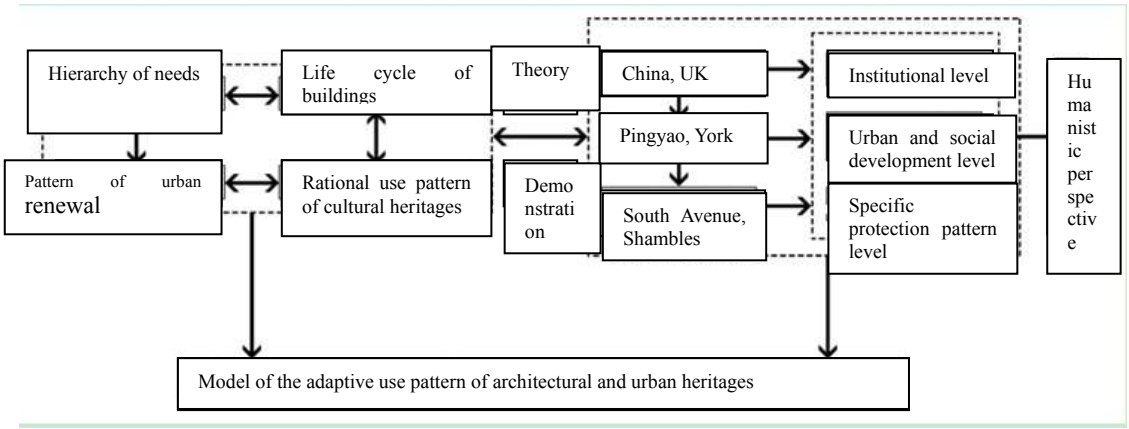


Figure 1. The study Framework

## 4. Case Study

### 4.1 A case study of Pingyao and York in terms of urban heritage protection

#### 4.1.1 Protection of urban heritages in Pingyao

Pingyao Ancient City is located in central Shanxi Province, on the south edge of Jinzhong Basin. Since the Tang Dynasty, it has gone through the rises and declines of the Five Dynasties as well as the Song, Liao, Jin, Yuan, Ming and Qing Dynasties. In the era of exchange shops in the late Qing Dynasty, driven by the prosperity of commercial economy, the building of the ancient city saw a golden time, and, with the gradual increase of luxurious mansions, the architectural style of the ancient city basically took shape then.

(1) Style and features of the ancient city

Pingyao Ancient City was built in strict accordance with the codes of etiquette in a square layout, basically facing the south in direction; taking into consideration local terrain and sunshine conditions, it was slightly shifted eastward by 15 degrees. As a county jurisdiction, Pingyao followed the codes of etiquette to set the size of its city wall and moat (1.5km in side length), and was built with six city gates (i.e., one south gate, one north gate, two east gates and two west gates). Taking the south as the superior direction, there were

upper east gate, lower east gate, upper west gate and lower west gate, respectively named as Taihe, Qinhan, Yongding and Fengyi. It can be said that Pingyao Ancient City has provided a living example of the form system of city wall and moat at county level in the ancient China. The overall spatial layout of Pingyao Ancient City fully reflects the historic and cultural features of the Chinese Han nationality: Adopting the South Avenue as the central axis of the city, and laying out various buildings facing the south; following the traditional codes of etiquette regarding "left as superior and right as inferior" and "left honoring civil and right honoring martial" and adopting a balanced and symmetric layout to deploy Confucian temple, academy of classical learning, Wenchang pavilion, Kuixing tower and other buildings with civil connotations on the east (left) side of the central axis and to deploy the temple enshrining and worshipping Guan Yu, military drill field and other buildings with martial connotations on the west (right) side; properly laying out the city god's temple and county government office also according to the codes of etiquette, etc. As for the street layout, there is a grid road system constituted by four avenues, eight streets and 72 narrow alleys, so there are arterial roads, sub-arterial roads, streets and alleys arranged and interconnected distinctively and in strict sequence, retaining the neighborhood system prevailing in the Ming and Qing Dynasties.

(2) Protection strategies

Methods of protecting the ancient city: The ownerships of all the cultural relics protection units within the ancient city belong to the government, and they are put under the centralized management of the protection and management committee of the ancient city; the ownerships and power of operation of other buildings basically belong to individuals and enterprises, however, in the case of any individual or enterprise wanting to transform their buildings or change their use functions, the approval of the protection and management committee of the ancient city must be obtained. The ancient city is divided into protection zones of three levels, for which different protection strategies are employed.

When renovating traditional dwelling houses, it is required that the original external appearances of these architectures (architectural complexes) be maintained, and that their original structural forms, configuration modes and decorations be retained; that the buildings, structures and appurtenances of the original architectures with historic and artistic values be repaired and reinforced with original materials and by original processes in situ; that original doors and windows be repaired or replaced with traditional wooden doors and windows; and that the painting of wooden structures after repairing these traditional dwelling houses be conducted in strict accordance with the traditional practice. Buildings built in violation of relevant laws and regulations or out of tune with the style and features of the ancient city should be dismantled; the ancient Confucian temple, city god's temple, Qingxu Temple, Rishengchang Exchange Shop and a series of other architectures and dwelling houses from the Ming and Qing Dynasties and with the value of cultural relics have been successively put under protection, and reinstated to the largest extent. The damaged city wall, city gate towers, barbican entrances and other facilities have also been reinstated to exhibit the integrity of the form system of the ancient city; the county government office, city god's temple, Confucian temple and so forth have also been renovated to embody the features of the codes of etiquette implied by the layout of the ancient city.

### 4.1.2 Protection of urban heritages in York

York is one of the four key protected historic cities in the UK (and is about to be applied for the list of world heritage), and, having been well preserved, it mainly concentrates on the development of the tourist industry and is similar to the Pingyao Ancient City of China in many aspects. York is famous for its history, which is also preserved in its architectures. Each year tens of thousands of tourists pour into York to visit the survived Middle Ages architectures and the relics of the Romans and the Vikings interspersed among these architectures.

(1) Style and features of the ancient city

The distribution of the 35 protection zones in York roughly surrounds the core protection zone to form a large area, and the rest protection zones are dispersed in radial pattern on the seven main passages extending outward, which is consistent with the outward extension of the ancient city itself and has well reflected the traditional pattern of the ancient city.

The core protection zone of the ancient city has inherited the spatial characteristics of cities since the eras of the ancient Rome, Anglo and Middle Ages. At those times the lanes, alleys, public spaces and internal architectural spaces were very narrow and compact in cities, showing apparent traces of planning, and York is very much similar to many frontier cities in China, in that they all developed due to the needs of wars. The core protection zone of the ancient city includes the entire ancient city and the traditional blocks on its northwest side. On its east, south and north sides it is demarcated by the circular road outside the city wall, and on its northwest side it includes the entrance areas of two main entry passages outside the city. Within the scope of the core protection zone of the ancient city, both historic architectures and environments have been well preserved, like the relics and residual city defense system of the ancient Rome, the ancient city wall and city gates, etc., and even a segment of dilapidated wall is protected by a grass lawn. To protect historic environments, besides building circular roads outside the city along the city wall, pedestrian streets, half-pedestrian streets, one-way traffic lines and so forth have also been planned, supplemented by the green spaces both inside and outside the city wall to combine heritage protection and park construction. In addition, many historic parks and gardens have also been designated here.

(2) Protection strategies

Having gone through a series of urban transformation, York Ancient City has saw some changes in its urban pattern, however, the transformation of York is based on urban protection. The historic blocks of York have distinct local characteristics, and the traditional shops beside the streets are not only the favorite of tourists but also provide the daily necessities of residents. Thus, to maintain the vitality of historic architectures, the functions of some historic architectures may be correspondingly changed according to market needs. For example, the lower layers of historic dwelling houses beside some historic blocks may be transformed into commercial facilities, but the upper layers can still be reserved for use as residential facilities or office space. A rich variety of mixed use is insisted and encouraged to achieve the building of a sustainable residential quarter. To balance the traffic needs of the city, a pedestrian system is also planned in the urban center.

## 4.2 A case study of South Avenue and Shambles

### 4.2.1 Study on the use pattern of architectural and urban heritages on the South Avenue

The South Avenue is the central axis of the symmetric layout of Pingyao Ancient City, and is a south-north avenue facing the south gate (Yingxun Gate), serving as the backbone of the city. Starting from the gate of Xingguo Temple in the south and ended at the junction of the East Avenue and West Avenue in the north, it runs through the city, and is 690m in length (738m calculated from the south city wall).

(1) An operation type-based analysis on the adaptive use of shops on the South Avenue

Among 22 shops which have adopted the use pattern of continuing the original functions, 21 (95.5%) are dwelling houses and one is a shop. It can thus be seen that the continuity of residential function is stronger than that of other operation types. Among 48 shops which have adopted the use pattern of leaning close to the original functions, 42 are shops (87.5%) and six (12.5%) are cultural facilities (like museum, etc.). It can thus be seen that people have sometimes chosen to transform historic architectures into commercial and cultural facilities to memorize their original states. Among 51 shops which have adopted the use pattern of renewing the original functions, 30 (58.82%) are shops, 18 (25.30%) are hotels and restaurants and the other three are respectively residential, cultural and financial facilities. It can thus be seen that people mainly transform historic architectures into service facilities for the purpose of adapting them to the needs of modern society.

(2) An architectural life cycle-based analysis on the adaptive use of shops on the South Avenue

Among 22 shops which have adopted the use pattern of continuing the original functions, all of them have a weak material life and a normal functional life. This suggests that, as far as the historic architectures adopting the use pattern of continuing the original functions are concerned, a higher demand is imposed on the adaptability of their functional life in comparison to their material life. Among 48 shops which have adopted the use pattern of leaning close to the original functions, 41 (85.4%) have a normal material life, six (12.5%) have no material life and one (2.1%) has a weak material life; none of them has a functional life. This suggests that, as far as the historic architectures adopting the use pattern of leaning close on the original functions are concerned, a higher demand is imposed on the adaptability of their material life in comparison to their functional life. However, given that people usually have relatively strong emotional appeals with regard to the historic architectures for which the use pattern of leaning close on the original functions is adopted, further demonstration is always required before decision making. Among 51 shops which have adopted the use pattern of renewing the original functions, 49 (96.1%) have a normal material life, and two (3.9%) have a weak material life; none of them has a functional life. This suggests that, as far as the historic architectures adopting the use pattern of renewing the original functions are concerned, a higher demand is imposed on the adaptability of their material life in comparison to their functional life.

### 4.2.2 Study on the use pattern of architectural and urban heritages on the

**Shambles**

Starting from the Newgate Street in the north and ended on the Belfrey Street, the Shambles is 103m in total length, and is not only the most ancient street in York but also one of the most well-preserved streets from the Middle Ages in Europe. Many houses on the street were first built in the 15th century, and protruding arcades were designed on the second and third floors of these houses in a ladder pattern.

(1) An operation type-based analysis on the adaptive use of shops on the Shambles

Among 38 shops which have adopted the use pattern of continuing the original functions, all of them are dwelling houses. It can thus be seen that the continuity of residential function is stronger than that of other operation types. Among five shops which have adopted the use pattern of leaning close to the original functions, three are shops (60%) and two (40%) are restaurants. It can thus been seen that the use pattern of leaning close to the original functions is adopted in York in only a few cases; they have chosen to adopt the use pattern of continuing the original functions for most architectures which can still basically adapt to the needs of modern society, and, for those which can not adapt to such needs, they have adopted the relatively thorough the use pattern of renewing the original functions. To put it simply, there are not so many cases in which the eclectic use pattern of leaning close to the original functions is adopted, which reflects the characteristics of British culture which are different from the Confucian mean characteristics of Chinese culture. Among 51 shops which have adopted the use pattern of renewing the original functions, 35 (68%) are shops, seven (14%) are office spaces, six (12%) are restaurants and the other three (6%) are cultural facilities. It can thus be seen that people mainly transform historic architectures into service facilities for the purpose of adapting them to the needs of modern society.

(2) An architectural life cycle-based analysis on the adaptive use of shops on the Shambles

Among 38 shops which have adopted the use pattern of continuing the original functions, all of them have a weak material life and a normal functional life. This suggests that, as far as the historic architectures adopting the use pattern of continuing the original functions are concerned, a higher demand is imposed on the adaptability of their functional life in comparison to their material life. Among five shops which have adopted the use pattern of leaning close to the original functions, four have a normal or weak material life, and all of them have a normal functional life. This suggests that, as far as the historic architectures adopting the use pattern of leaning close on the original functions are concerned, a higher demand is imposed on the adaptability of both material life and functional life, because, when Shambles adopts the use pattern of leaning close on the original functions, they have introduced some new functions which can better adapt to the needs of modern society than original functions. To put it simply, although the original functions can adapt to the needs of modern society as well, they can not adapt as well as these new functions. Such a practice is different from that employed by Pingyao which adopts the use pattern of leaning close on the original functions in cases where the original functions can no longer adapt to the needs of modern society but people still have relatively strong emotional appeals for these original functions. Among 51 shops which have adopted the use pattern of renewing the original

functions, 49 (96.1%) have a normal material life, and two (3.9%) have a weak material life; 47 (92%) have a normal functional life, and the other four have no functional life. This suggests that, as far as the historic architectures adopting the use pattern of renewing the original functions are concerned, a higher demand is imposed on the adaptability of both material life and functional life.

## 5 Conclusion

Based on a field survey of the above cases and related analysis, it can be seen that, no matter it's in the rapidly-developing China or relatively stable UK, the goal of urban renewal, i.e., the adaptive transformation of cities and architectures, is always to adapt to the needs of modern society. The adaptive applications of these protection patterns have shown certain laws, as described below.

(1) To continue original functions

When an architectural or urban heritage has both its material life and its functional life, it means that it can not only satisfy people's basic needs (physiological and security needs) but also meet their higher needs (social need, need of self-esteem and need of self-actualization). In this case, the use pattern of continuing the original functions should be adopted to well preserve their original style, features and use functions. Correspondingly, urban renewal should employ the mode of comprehensive improvement, mainly covering fire protection facilities, infrastructure, public service facilities, street fronts, environments, energy conservation transformation of buildings, etc., but should not change their main structure or use functions.

When the material life of an architectural or urban heritage has gone (or is already very weak) but its functional life still remains, it means that it can no longer satisfy people's basic needs but can still meet their higher needs. In this case, the use pattern of continuing the original functions should be adopted to cautiously restore (or repair or transform) its material remains, so that it can satisfy people's basic needs. Correspondingly, urban renewal should employ the mode of comprehensive improvement.

(2) To lean close on original functions

When the material life of an architectural or urban heritage still remains but its functional life has gone (that is, its original use functions can no longer adapt to the needs of modern society) and people still have relatively strong emotional appeals for its original functions, it means that it can satisfy people's basic needs but can not fully meet their higher needs. In this case, the use pattern of leaning close on the original functions should be adopted to retain the characteristics of its original use functions in a special way, so that it meet people's higher needs. Correspondingly, urban renewal should employ the mode of comprehensive improvement to partially or wholly change the use functions of the architecture without changing the subject of right or the term of the land use right. The original main structure of the architecture should be retained, so that, on the one hand, its overall style and features can be continued, and, on the other hand, its internal functions can still meet the needs of modern society.

When the material life of an architectural or urban heritage has gone (or is already very weak) and its functional life no long exists (that is, its original use functions can no longer adapt to the needs of modern society) but people still have relatively strong emotional appeals for its original functions, it means that it neither satisfy people's basic needs nor fully meet their higher needs. In this case, the use pattern of leaning close on the original functions should be adopted to cautiously restore (or repair or transform) its material remains, so that it can satisfy people's basic needs; meanwhile, a special way should be employed to retain the characteristics of its original use functions, so that it meet people's higher needs. Correspondingly, urban renewal should employ the mode of comprehensive improvement.

(3) To renew original functions

When the material life of an architectural or urban heritage still remains but its functional life no long exists, it means that it can satisfy people's basic needs but can not meet their higher needs. In this case, the use pattern of renewing the original functions should be adopted to replace the original functions with new functions which can adapt to the needs of modern society, so that it can satisfy people's higher needs. Correspondingly, urban renewal should employ the mode of functional renewal to partially or wholly change the use functions of the architecture without changing the original main structure of the architecture, so that, on the one hand, its overall style and features can be continued, and, on the other hand, its internal functions can still meet the needs of modern society.

When the material life and functional life of an architectural or urban heritage have both gone, it means that it can neither satisfy people's basic needs nor meet their higher needs. In this case, it should be allowed to disappear without making any efforts to restore it. Correspondingly, urban renewal should employ the mode of rational transformation to orderly transform the architectures in the city, and to rationally use the land in the city in a way that adapts to the development of the city.

**Table I Model of the adaptive use pattern of architectural and urban heritages from a humanistic perspective**

| | | | Architectural life cycle | | | |
|---|---|---|---|---|---|---|
| | | | Material life | Functional life | | |
| Pattern of rationally using cultural heritages | To continue original functions | Cautious restoration, repair or transformation | No or weak | Yes | Comprehensive improvement | Mode of urban renewal |
| | | Daily maintenance | Yes | Yes | | |
| | To lean close on original functions (retain the characteristics of its original use functions in a special way) | Cautious restoration, repair or transformation | No or weak | No, people still have relatively strong emotional appeals for its original functions | Comprehensive improvement | |
| | | Maintenance of appearance, and internal transformation | Yes | No, people still have relatively strong emotional appeals for its original functions | | |
| | To renew original functions (replace the original functions with new functions which can adapt to the needs of modern society) | Maintenance of appearance, and internal transformation | Yes | No | Functional renewal | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Others | Allowed to disappear | No | No | Rational transformation | |

| | |
|---|---|
| Basic needs (physiological and security needs) | Higher needs (social need, need of self-esteem and need of self-actualization) |
| Maslow's Hierarchy of Needs | |

Note:

Material life: No: The heritage no longer exists;

Weak: The heritage is incomplete, and only has a few remains that can not be put into normal use;

Yes: The heritage can still be normally used.

Functional life:

No: The original use functions of the heritage can no longer adapt to the needs of modern society;

Yes: The original use functions of the heritage can still adapt to the needs of modern society.

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# SCENE OF PUBLIC SPACE

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## PhD Thesis Theme

Scene of Public Space.
Developing Trends of Social Rituals.

## Veronika Kastlova (1985)

Completed studies of Theatre Direction at the Faculty of Theatre of the University of Janacek in Brno and also at the Faculty of Architecture of the Czech Technical University in Prague where is, at present, specializing on the Scenography in public space theme, within the framework of her PhD studies, and under supervision of Arch. Vladimir Soukenka, Associated Professor. Produced several short documentaries dealing with topics closely connected with architecture and urban planning.

## Current State of the Research

There are several specific features in dramatic art: awareness that it is being created, that it is being felt, taken notice of, respectively spectator's and actor's awareness of being present. Furthermore there are repetitions, process hic et nunc, impermanency, primary display function and last but not least there is the fact, that for interpreter (actor, performer) his own body is the most important material for creation. From the above mentioned, only the first feature is the most important basis, i.e. spectator's and actor's awareness of being present for taking into account relationship between architecture and theatre.

## Theoretical Background - Scenology

Common interface between architecture and theatre is dealt with in the scientific branch called scenology. According to Prof. Vostry, Czech theatre researcher, scenology which is dealing with scenic situations in general, i.e. "someone is made to watch something". It has two basic axes – specific and non-specific. Specific scenic situation means "actor playing a role" and non-specific scenic situation is used for real daily situations. The latter mentioned is the one to be considered within the ephemeral part of public space.

## Motivation

Present disappearing of image of the cities, the way how we would like to have it, and effort to find a solution for this unpleasant state, lead to various considerations.
For public space, consisting of substantial part (material and spatial part) and non-substantial part (scenic or ephemeral part), the latter mentioned seems to be more important one *(Fig. 1)*.

## Goals

Public space could be symbolically understood as a scene where a number of interactions – social rituals take place. The key question is to define architectural and urbanistic procedures used for urban scene design of public spaces in the cities during their problematic situation today. Image of public spaces should be of communicative, meeting and of „theatre" nature. What kind of role can theatre (which is based on social rituals) play in vitalization of public spaces in more detailed way of understanding?

## Conclusion

If ephemeral part is considered essential for public space design, it is possible to define for this part of public space design principles used in theatre production. In both, similar creative processes are used. It seems that it is possible to design public space as a scenic space, particularly for non-specific scenic situations, with the use of theatre creative processes *(Fig. 2)*. So let us design enjoyment and catharsis of public spaces.

A scene of public space cannot be, by its nature, a theatre scene but this scene of public space could (and should) use elements of theatre namely to support its ephemeral part *(Fig. 3 and Fig. 4)*.
If we try to consider urban design procedure using the theatre point of view, interesting conclusions can be derived. From historical contexts of theatre and urbanism, the analysis of their present situation and especially different and common items defined, it follows that a scene of public space cannot be, by its nature, a theatre scene. The reason is, that there does not exist conscious current relationship of actor-spectator.

*Fig. 1 Public Space as a Scenic Image. Prague, Charles Bridge, 2006*

*Fig. 2 Theme of Public Space. London, Canary Wharf, 2012*

*Fig. 3 Ephemeral Part of Public Space. Coaly Market in Prague, 1916*

*Fig. 4 Ephemeral Part of Public Space. Coaly Market in Prague, 2005*

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# Using the Theory of Landscape Prototype Enhancement of Neighborhood Planning Social Cohesion Take the Xu Jiahui Park Design as an Example

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Abstract: The landscape consists of landscape and appreciation the landscape, landscape design in the neighborhood is to meet the needs of appreciation. Therefore, planning designers and architects should stand in the position of viewing emotion at design time, They should understand what the most viewers want to see and what can touch or fluctuate emotion in the hearts of viewers by strengthening social cohesion. Landscape design in the neighborhood based on the regional culture or emotional tend to make people have a rich emotional resonance. This paper takes Xu Jiahui Park as an example, defining design prototype theory, analyzing from the perspective of regional prototype and emotional prototype , and explorating the park landscape design based on the prototype theory.
Keywords: Design prototype, Local culture, Emotion

## 1. The theory of landscape prototype

### *1.1 The landscape origin*

From ancient time, the generation of outstanding landscape works has its own reasons. The inspiration of creating these works often comes from original artistic which creation the initial impulse "roots". The roots have two means: one is Looking for historical birthplace upwards, the other one is Up to find the source of the feelings. The first emphasizes is that the development of landscape evolution influenced by its areas, all unique to the local climate, geography, culture and other factors which had been hidden in the consciousness of the local residents, The landscape design methods in the application of this phenomenon is called "Landscape Design base on its regional prototype". And the second emphasizes is much more abstract which By creating emotional space, make the viewer's cognitive and emotional resonance. The Emotional was hidden in the audience heart bottom which need to be activated on the works of art by landscape architects (Jin yunfeng, 2005).

### *1.2 Basing on the design of landscape prototype*

The unique features of a local environment always give special characteristics to its inhabitants. On the landscape design of regional prototype can be done by recreating the regional scene. Scene reappearance through landscape design to arouse the people on the traditional consciousness of life and make them feel familiar. Scene reappearance should have full-bodied local atmosphere which ask the landscape designer to have a deeply understand or live experience on the site (Jin yunfeng, 2013). It is also should be continue in the design of the original region about life essence, absorb those local characteristics which can make people able to maintain the healthy development of the ecological balance in the region; To the original region part which hinder the development of itself should use of existing technology to make it perfect. Through combination of retention and development to build a new landscape culture which Implementation inheritance and continuously surpass ourselves.

The prototype theory which based on the emotional space can perform as a form of independent innovation. It is one kind of landscape design based on the rich and colorful emotions, it can Inspire the positive energy of visitor s life. In addition to the physical entity, immaterial culture story can also arouse people's excitement and curiosity, Scenes through one by one emotional together to bring changes of mood (Su long, 2005) .

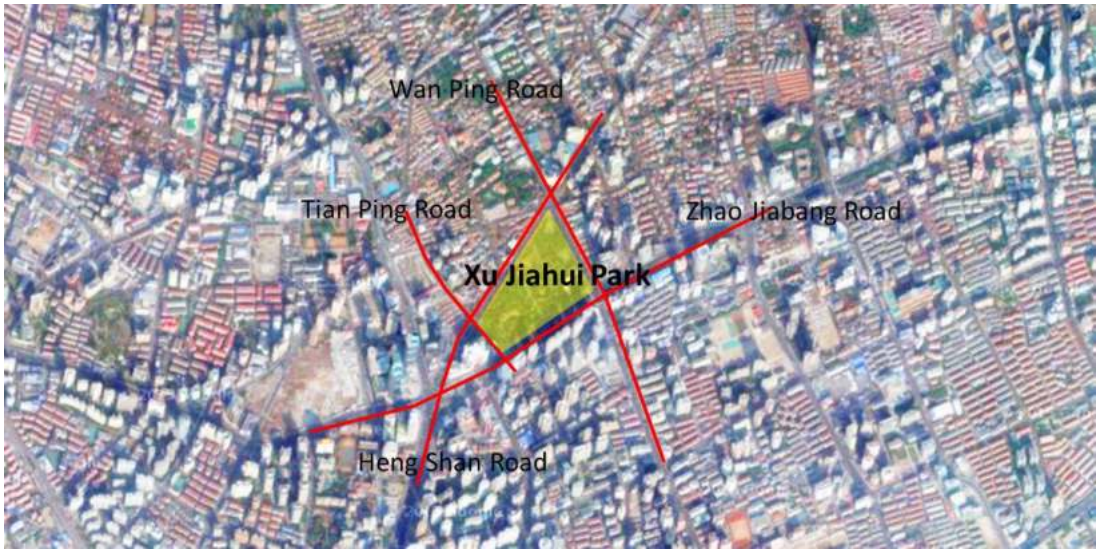


Figure 1. The location of Xujiahui Park

## 2. Analysis of landscape prototype of XUJIAHUI Park

Xujiahui park is adjacent to the largest business district in xujiahui Shanghai. The park is north to Hengshan Road, south to Zhaojiabang Road, West to Tianping Road and East to Wangping Road, covering an area of about 72700 square meters (Figure 1). The base shape of the whole site is like as a trapezium. There are multiple gates organize the stream of people which making it much better integration with surrounding environment and enhance the accumulation ability of the park. Xujiahui Park had been built which improve the regional environment and meet the citizens' leisure activities, is also has strong ecological benefits.

### *2.1 Prototype of Site Region*

#### 2.1.1 Analysis of The Whole Site Region Prototype

Xujiahui Park is like a mini map of Shanghai. It is base on two methods of art symbolic and analogies to tall us a story about Shanghai history. A lot of continuous landscape bridges connect with the History, Nowadays and the future of Shanghai which make visitors who are walking around the park on reading a photo album. So, the best tour way is come from the south entrance, standing on the top of park where getting a whole view, and then, getting a depth experience (Fu zhongxian, 2004) .

The landscape bridge start from the southwest corner near to Zhaojiabang Road and Tianping Road, it show commemoration and admire on national industry in modern times. Walking along the landscape bridge and turn on the northeast direction, a lot of villas which belong to department store had been protected can be seen in there. The villas make visitors close to the history and open

mystical veil of history. And walk along, as you stand on the landscape bridge which bridging upon the park that old map of Shanghai emerge from there. Visitors overlook the whole history on the bridge, all kinds history stories were combined together to arouse visitors sense of history mission. Meanwhile, visitors can also overlook the river system which as a supporter element connect time and space in the park. The river symbolize as Huangpu River which was called as a mother river of Shanghai, dividing the park into two parts to show the different urban texture about Pudong and Puxi in shanghai. The river tell us a continuous story about the development of Shanghai history from industrial age to nowadays. At the end of the bridge is a view of the thinking about future by landscape designer. (Figure 2 Figure 3)

Figure 2. Landscape bridge of Xujiahui Park

Figure 3. River system of Xujiahui Park

Xujiahui Park making the history of Shanghai as a clue and connecting the tradition culture with society, Reappear a view of the location original live in modern landscape. Old and New human landscape were connected by modern technology to achieve symbiosis of old and new space-time, making Shanghai culture inherited. (Figure 4)

Figure 4. Site-plan by hand painting Xujiahui Park

2.1.2 Analysis of partial Site Region Prototype

The landscape architectures are much easier to touch the interest of visitors. And then, there are four cases in the park will be taken to explain how the site region prototype make resonance with visitors.

(1) The memory of Dazhonghua Rubber Factory

Dazhonghua Rubber Factory is a pioneer of China National Industry and had made a great contribution in the history of china rubber industry. It had been stopped to run and relocated in 2000 for the ecological build of Xujiahui district. Most of the buildings were removed except a chimney in the southwest corner of factory to be as a commemoration point. There is a original view of the factory was carved on the bottom of the chimney where base on landscape reappear to record the developmental history of factory. At the moment, the chimney had became as a famous mark of Xujiahui Park, it was also giving an inspiration of environmental protection to people. (Figure 5)

(2) Red building

Red building is located on one side of Hengshan Road. it s as a ruins of Baidai record Company, have a style of period times. The record company which opened the record production in China was built by French, and the record of production in China, it records the evolution of Chinese modern art history. Landscape architects used processing technique to repairing old as before on the Red building. They protected the original red brick wall and extracted the French landscape gardening methods for planning external environment to coordinate the building inside and outside environment. The landscape space where integrate with the modern living environment was built. It satisfies the viewer curiosity of historic buildings.

(3) A Strip Reflecting Pool

Landscape architect use modern way to build a landscape pool which the chimney reflected in. It is also a way make Geographical element Integrated into the Modern landscape. Although the pool look like simple but it Has profound connotation. Changing the water reflection of the sky, Dynamic and static, virtual and real, old and new combination gives the pool of life. (Figure 6)

Figure 5. The entrance of chimney

Figure 6. A Strip Reflecting Pool

(4) Landscape on lake

Four landscape bridge were built upon the lake which significance of the Huangpu River, they are respectively symbolize four Bridges "xupu", "Lupu" and "Nanpu" and "Yangpu" in Shanghai. They are also designed a Yuyuan Garden on the corner of lake. The design of landscape along main veins point brings a kind of homesick feelings bailment.

2.1.3 Analysis on landscape plants of regional prototype

Xujiahui park without adopting enclosed design, fusion of the surrounding environment in the design of urban texture, it faces to the society and open. landscape plant design in the park full respect to regional block texture, because the style is different ways which the park near to. The plants on boundary play an role on closing park and the surrounding environment. Plants design on the Hengshang Road Adopted rules display way on planting for Adapt to the artistic style of it; Plants design near the Zhaojiabang Road is also in harmony with the surrounding roads, uses the natural way for planting. (Figure 7)

Overlooking on a bridge, the map of Shanghai was performed by plants, combination of modern plant and historical residences form, bring the viewer strong visual impact. (Figure 8)

Figure 7. The plants design of walkways

Figure 8. The map of Shanghai made by pants

*2.2 Emotional prototype*

Figure 9. Creative sculpture in Xujiahui park

Figure 10. A Run way

Emotional prototype material selection are not limited to the scope of the area, all of them which shock the viewer inner elements are emotional prototype material, Such as moving plot historical stories, creative sculpture products, novel emotional experience places, etc. The landscape design which based on the emotional have its vitality, it can make busy citizen completely relax in here and get release emotions. (Figure 9)

2.2.1 Atmosphere Build

The lake as the center, axis straight road and waterfront curved road were Combined into the Skeleton of the park, and the Landscape bridges like solid skeleton of space form. The whole park spaces have variety levels which Combined with the primary and secondary, Advancing begets, Strewn at random discretion. Different landscape corridors which String together by the time have different psychological feelings, Stimulate visitor heart from miss the history to the dreams of the future. (Figure 10) Winding corridor water system and time are intertwined, the Running water is sometimes depression soothing and sometimes is actively, making the visitor Sentimentally attached for The passage of time.

Figure 11 Rich levels view Figure 12. Variety of activity space

In each landscape nodes to use of building envelopes, different materials contrast and collage, configuration of the different plants, forming a series of different sizes and rich layers of space. (Figure 11, Figure 12) Different spaces attract different people and Gather a variety of activities; The same spaces at different times will attract different activity groups and rich activities. Bring to different ages viewer an experience which will be much more exquisite and stimulate their inner feeling.

Construction of artistic conception and atmosphere of rendering can t leave away the plant configuration, the plants morphology and flower color directly influence people's deepest joy and sadness. At the major entrance where nearby the Zhangjiabang Road and Tianping Road is fundamental key with Yulan plants, Cooperate with the plum blossom, Chinese flowering crabapple to significance of a feeling of good and strong, give people colorful romantic mood; Nearby one side of the Linping Road, base on red tree to be a key plants, such as maple, maple, and Nantian bamboo. When autumn comes, the Red leaves like fire and yellow leaves like gold, Such a warm color represents happiness.

2.2.2 The Angle of Views

In front of the Xujiahui Park was built, there are just two meters elevation on the site, it is not conducive to build a watch level. In order to form a good viewing Angle, the design would improve the land of northwest corner in the park to make the park surrounded by topography. Gently undulating terrain and plants constitute a gleaming surround close space, obscured the peripheral urban road dust and noise to be a good microclimate in the center area. (Figure 13) The main activity area layout in central of the park, a good landscape views were gotten From the surrounding landscape node static to dynamic center landscape nodes. As the viewer look around the center to the outside is like a place by oneself in the city of the bosom nature, to provide a joyful mood to visitor. (Figure 14)

## 3. The conclusion

Landscape Divided into two parts: Landscape and the viewer of Landscape. When landscape architects begin to design he must be clear about why do the landscape? And who is the viewer? There is no doubt that Landscape design is done for the viewer, and the design process must be standing on the position of the view. Therefore, a good design must be "people-oriented", "based on people's feelings"(The Feelings mentioned here, on the one hand there is a part of the geopolitical foundation, on the other hand is arises spontaneously). Furthermore, the landscape design is by taking advantage of good story with the surface of the earth to touch visitor heart and give visitor ups and downs of emotion.

Figure 13. Activity space in Surround close (Picture source: online)

Figure 14. A good view of landscape (Picture source: online)

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# TRACK 07

## Dealing with Urban and Rural Decline: Interplay of Actors and Responsibilities

# Jak DEVELOPMENT OF NOWE WARPNO – IMPLEMENTATION OF A DON T MOVE IMPROVE DEVICE IN A SMALL POLISH TOWN

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Abstract:

Nowe Warpno is a typical example of a town stricken with economic collapse o nevertheless managed to survive due to the attitude of local authorities and re analysis carried out for this rural-urban municipality unveils that it has bee negative occurrence of shrinking towns. Existence of Nowe Warpno has always associated with lake fishery formerly supported by functioning shipyard, com harbours. The crisis of Polish fishery – liquidation of local shipyard, Polish Schengen Area, abolition of duty-free zone on the town grounds caused deteric disappearance of life within Nowe Warpno until the beginning of the 21st cent Strategy of Development supported by efficient local authorities aiming at rev economic development, effective acquirement of regional and EU funding, in addit compensation from Maritime Department reasonably allocated by the authorities, a a decaying village into a tourist destination. Wise management established th richest and best-administered municipalities in Poland. For Nowe Warpno the la from deterioration to averting the crisis . The article depicts endogenous and influenced the success of this small community. Among the positive tendencies a the initiative of inhabitants fighting for development of expansively function actions have a lot in common with the idea originated in a district of Boston:

Keywords:local planning, town revitalisation, european union s funds, local rev small towns

## 1. Introduction

In the time of globalisation, urban centres participate in international investments, inhabitants and tourists. Those cities, which raised a broad symbolic cap battle for creating an attractive touristic product on a global market. The si big, but also small cities. Among this group we can also rate such historical centres Gimignano (7105 residents) and Polish Kazimierz Dolny by the Vistula River Therefore, there are cities which regardless of their scale are globally or over-local to the value of the gathered legacy and compilation of unique features, that nature. There are also cities so far lacking the local, domestic or even global identit small Polish cities, which in the last quarter of a century had to face up to transformation, are peculiarly interesting example. Closing one local industry b turnabout of an economic profile of the city, usually faster than services a developed there. The process of de-industrialization worries the most, due to the co cities and the sequence of negative occurrences such as the unemployment, impo and finally depopulation of small centres, connected with the job-search migration to UE countries. These phenomena cause the shrinkage of small cities and require

organizational potential of theirs authorities and citizens in order to protect maintaining the official, judicial, or health function of the district service further regression or stagnation. Tourism, considered as a leading industry fu important role in the process of the largest post-industrial centres revit significant link to stopping the degradation of small cities.

2. Nowe Warpno – a city with a great history.

Figure Nowe Warpno – location

Nowe Warpno is a classic example of the small town, affected by an economical r It is a least populous urban-rural municipality in Poland situated in Western location). The exact date of town s foundation is arguable, however it probably year. This little city is situated on a cape, which is a part of a Nowowarpie skie Lake from the eastern side. Originally Nowe Warpno laid on th was joined with the dry land by weir. Raising fortifications hasn t been ne defensive conditions of the town. Entirely wooden buildings were put up at fou streets and a marketplace. Uninhabited character of buildings led to many fires Warpno and caused its destruction. Despite historical turbulence associated wit as well as the changing state affiliation, citizens for centuries led a calm l natural environment and season s cycles. According to Wojciech opuch : Existe was connected above all with the lake and bay fishery, as well as with farming and Especially fishings, their processing and sale determined the economic state prince's privilege for the organisation of trade fish fairs gave the city hug activity associated with town s by-water location developed apart from the fis part of the XVI century a shipyard was founded and in the XVIII century seve operated in the city. Apart from a fishing port, a trade port functioned, thro goods were obtained from Wkrza ska Forest. The XIX and XX age brought an in Warpno, as a potential holiday resort. A closeness of the Wkrza ska Forest and tourism development. Even though Nowe Warpno never became a health resort wit other fishing towns set by the Baltic Sea, the tourism started playing a role Many steam ships, which serviced a regular sea-route to Szczecin, made a port Each tourist was able to find a bathing beach, hotels and inns in this town. Ho of tourism didn't affect the fall of fishery s significance. In the 30s Nowe Wa

fishing bay port and a headquarter department of a fishery master. Thanks to th
War has spared Nowe Warpno, it kept its urban planning arrangement and the ma
buildings, along with exceptional monuments such as : Town Hall (Figure 2) and
Assumption of the Virgin Mary. A fishery and a boatbuilding still remained
economy. In spite of restoration and touristic activation projects made in th
monochrome lifestyle has changed in 1996 , when the duty-free border crossing p
Warpno and Altwarp (DE) was opened. The opportunity of cheap alcohol purchase
visitors to Nowe Warpno. However they remained indifferent to city charms by sh
port market. The time period connected with the border trade ended along with
European Union and the "Schengen zone". From this moment on we can observe the
fishery, which is associated with permission to compensational cutter-scrappin
and Nowe Warpno started plunging into the slump, along with vanishing of passer
fishing cutters.

Figure Revitalization of town hall in Nowe Warpno

3. Process of the cities shrinkage.

There s no particular theory explaining the shrinkage of cities. Many asp
cause, that in order to understand its mechanisms, the course and effects,
theoretical concepts. One of attempts of interpretation is a reference to Gunnar Myrd
Process theory (1956) modified by Hokveld (2012) in which the reduction of ci
circle – is both cause and a result of the shrinkage of cities (Figure 3 -
shrinkage). There is no simple solution for stopping this process. The undert
depend on a way a shrinkage-process is perceived by local authorities and o
population s decrease. These strategies can have an adaptive character (plann
shrinkage conditions or can be orientated to re-increase with shrinkage as a

process might also be ignored – no action is being taken. Planning in the time
more difficult than in the increase conditions, therefore a way of managing
shrinking cities is very important. Building the development strategy based o
favouring the improvement of city s social-economic situation is crucial. For
the periods of growth, stagnation and fall. Cities based on one, falling indust
position. Nowe Warpno was set in this situation. The last wave of the stagnatio
connected with fishery s fall. Nowe Warpno was afflicted by a deep crisis
unhesitating actions aiming at the creation of new strategy of social-economic

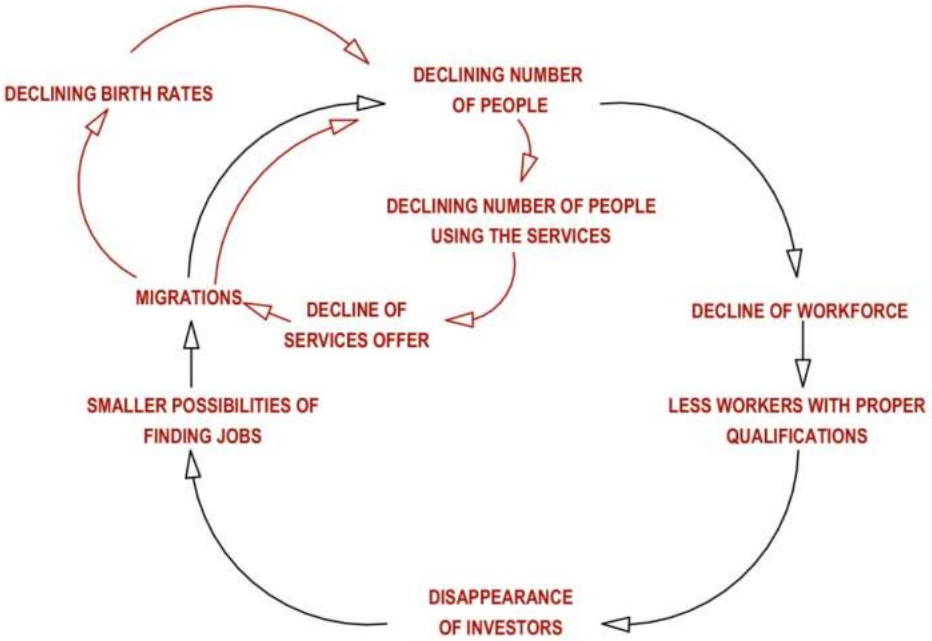


Figure "Vicious Circle" – sherinkage of cities, source: on the base of Hoekveld 2012, s.

4. Social-economic revitalisation of Nowe Warpno.

The revitalization is a method of reviving the degraded municipal compl
accumulated social-economic problems, the effect of which is technical consumpt
land development as well as the environmental degradation. It should consist i
the self-reliance of the local community and the ability to improve (restor
reducing the dependence on the public assistance. It s too often identified as th
buildings or the improvement in the public space, when it is only a part of ac
city. Such actions are rather a symptomatic treatment", effective in places
temporarily suppressed developmental potential. In most of the cases, those act
delete the causes, rather than symptoms of the degradation.

In 2004 a Strategy for Development of Nowe Warpno Community (for years 20
been created. It was later extended to 2007–2020 years. The priorities include
creation and modernisation of the infrastructure for improving the competitiven
strengthening the economic development in the community, enabling personal
development of residents, creating a new quality of life for Nowe Warpno reside
of the touristic and recreational function and exploiting its natural advan

investitions and up to now changes, it s easy to state that strategic aims ar fulfilled, if there s a vast support from the external financing and previously finances.

Recent years of Nowe Warpno pave a road from a shrinkage (fall) to a cr further development . Today's New Warpno present itself as a small dynamicall Wise managing by local authorities focused on the public activation and th development certainly plays a huge part in this process. A number of munici affecting such image of the city.

Amongst major investments, having a huge impact on an actual image of previously fishing, today more of a touristic one – those connected with a tran a greater role ( creating a road from a nearby Dobieszczyn to Nowe Warpno investment with local administration of Police government ). The reconstructio cost over 15 mln zloty. For a touristic Nowe Warpno this road is of a great imp the connection with a central voivod city – Szczecin from an hour up to 40 minu touristic motion, but also increases the attractiveness and worth of recr community.

The municipality also put an emphasis on the cyclists service, so that new bicyc

- road along the ancient railway line No. 424 Swobnica–Sonowo, incising the Tywy v the high hung bridge (length 15.8 km)
- the environmental education path between the newly built district road New Dobieszczyn and the Polish–German border – it leads through Wkrza sk protected by the Natura 2000 project, to a border river My liborka (lengt
- the bicycle route running along an old railway embankment from the Polna Warpno to the route W114 – near a Szczecin Bay (length 3.41 km)

Being involved in a project of the Westpomeranian Sailing Trail Nowe Warp the path marked by the water–leisure touristic potential. Project of the new sa the infrastructure is an extremely needed investment, which without a doubt will city from the waterside. The new sailing port was located on the southern side the development of the water infrastructure Nowe Warpno has an opportunity beneficial location. The city is an only Polish port located on the west coast cross–border character makes the city very attractive for both Polish and Additionally the revaluation of the city conducted in final years builds the s development. However refurbished squares and streets are waiting for their vi yachtsmen. The unique value, in comparison to other trail–cities is Nowe Warpno and still noticeable genius loci of a of fishing settlement. However through th the city shows one enduring principle, the fate of Nowe Warpno is permanently c regardless of the character of this relation. Today the city starts to write the

Figure4 Nowe Warpno – a place on the map of West Pomeranian Sailing Trail.Yacht Harbour
Warpno. The beneficiary's name: West Pomeranian Regional Tourist Organization. Proj
95254252,07 PLN; UE contribution: 35280000,00 PLN; time of realization 2009–2013

A town hall, a church and the public spaces underwent the renovation alon
pier of the north port, to which leads today the Yachtsmen Avenue. A new pr
northern coast of the cape finial with a view-tower was also built. On the sou
jetty was created and another section of waterside boulevards. This way the
were developed, without the loss of their natural picturesque character.

In May 2010 the Nowe Warpno city council passed a resolution on the rul
subsidy for conservation, restaurant and building works by the monument protec
register. Main aim was a gradual improvement of the building development. It
the situation, in which all citizens feel invited for the participation in the
the limits of one's possibilities. Conversation with residents, examining thei
served confirming them in the belief that it is they who are the hosts of are
its future. The process of the participatory planning was a period of the lear
Supplementing the infrastructure, repair and building of internal roads in the
matter guaranteed as public investments. A process of buildings revitalizations
square has been started. The commune participated in repairs funding them in
,when needed, was granted in form of low charged loans on easy terms. The resul
surpassed expectations of optimists. In the city area the improvement of
development included 70% of real estates. This example shows, how achievable it
by creating proper development conditions based on social (non-financial) capit
Undoubtedly, a small scale of this particular town affected this process.

Figure5 Tenement houses after revitalization co-financed by Community.

From 2004, when the revitalization was limited to the largest project structural funds, the social energy started changes in the private construction this action is realisation of dreams about living-improvement.

Figure6 The view tower on the cape in Nowe Warpno

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Today's image of the space of Nowe Warpno – tiny, picturesque town situate Bay, to which new roads and Wkrza ska Forest bicycle trails lead, might arouse of other urban centres. Unfortunately this wonderful image becomes a bit dist checking the demographic structure of the commune. The research of the depopul the negative birth rate, but at the same time it s not showing the essential funds which were dispatched to the social-economic development). We re allowed to st city managed to avoid the shrinkage process (in the sense of residents numb (deliquescence of cities). The demographic level from the pre-investment peri active actions of commune hasn t rejuvenate the society, neither attract ma

nearby centres. The problem still lies in the lack of of citizens with hig
dominancy of post-productive residents.

Young people migrate to other, bigger Polish cities or abroad – to Englan
Germany. Keeping the social capital in the city became a problem. The local aut
chances for development for the youth and convince them, that s it s easy to b
such small city. As part of the public activation they can find an annual Socia
Warpno.

Many projects focused on the increase of young people s number (on a productive
of spent money will not come off. A Centre of Education in Nowe Warpno was one
supposed to be the most modern educational centre, in the field of basic ed
Pomerania or perhaps throughout the country.

The architectural concepts of the Education Centre (Figure 7)were created by stu
architecture course at West Pomeranian University of Technology in Szczecin,
organised by Nowe Warpno s mayor. Teaching by experiencing was the idea of proje
the concept a building project occurred however investment won't be implemente
aren't able to guarantee an appropriate amount of pupils. It s a great financi
bigger missed opportunity. Creating such a modern school could ve attract stud
centres of Szczecin, Police and German Luckow or Altwarp. By following this exa
investors ready to live in Nowe Warpno (with perfect opportunities for their ch
some summer-houses, would ve been possible.

Figure 7 The concept of an educational center in Nowe Warpno

5. Summary

Present-day planning in Poland has a loose connection with management of develo
it lacks an operational segment allowing for its phasing, applying of implemer
the purpose of strategic city-planning, methods of building scenarios of regres
as well as methods of planning for functional areas – both problematic (eg. dep
areas predisposed to development (revitalization areas, areas of intensive inves

The most important task for local authorities is to monitor the social, sp
transformations. Detecting at the right time negative occurrences forerunni
development processes and evaluation of their durability is possible only wit
While carrying out the development policy, first thing to do is to block out t
factors. This knowledge is crucial at a time of preparation of strategic docu
community that administers that kind of knowledge can make decisions regardin
documentation and realisation of given policies on the base of the evaluation o
actions do not guarantee a successful return to the development path, they defi
of diminishing factors that hold back the development.

In addition to aforementioned actions, the key factor is cooperation with inh
times the support of inhabitants and other subjects actively involved in th
community for the actions encouraged by local authorities, has crucial meanin
crisis. A perfect example for that is the Community of Nowe Warpno, profiled in
few years its authorities with the support of all of the local society came fro
fall – back to full development.

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# Analysis for the Policy of Reorganizing Rural residential patches in China and the Dilemma of Ecological Niche in China s Urban and Rural Areas

Yufeng Yue[1] Weiqiang Wang Jian Li[2]

**Abstract:** *With the rapid economic development and significant urbanization in China, dual-structure phenomenon, caused by the great gap of development level in urban and rural areas, has become increasingly prominent. Compared with the urban areas, the development in terms of social, economic and cultural aspects in rural areas has encountered underlying dilemma. To narrow the gap between urban and rural development, the Ministry of Land and Resources has proposed planning policy for reorganizing rural lands, trying to achieve integration of the population and land resources in agricultural areas and construction of modern intensive rural residential areas to promote the overall development in urban and rural areas, and realize the modernization goals for the benefit of rural areas, agriculture industry and peasants there. This paper is aimed to adopt the research perspective and method of ecological niche theory, establish the ecological niche expansion model and analyze the theory essence of the Reorganization of rural residential patches to summarize the internal change mechanisms of the ecological niche in urban and rural areas during the process of consolidation.* Combined with author s planning and research in Henan P*rovince, Chinese agricultura populous province, the empirical analysis could be conducted to determine the niche development trend in urban and rural areas during the course of the consolidation, so as to propose a value judgment orientation for China rural governance and planning policy development, as well as the discussions on the niche dilemma and path direction of the rural development in China.*

**Key Words:** planning policy, ecological niche theory, reorganization of rural residential patches

## Introduction: the Reorganization of Rural Residential Patches under Urban-rural Dual Structure Background

With the rapid economic development and significant urbanization improvement in China, the social contradiction between urban and rural areas has become increasingly prominent. This has been vividly explained as the dual structure phenomenon to reflect the great difference standard in urban and rural areas. Moreover, it has also led to the severe imbalance in terms of social and economic development in urban and rural areas as well.

To enhance the development from the long-standing malpractice in China s backward rural Chinese Land Administration and Planning Departments have proposed to conduct centralized planning and construction in rural areas through Reorganization of rural residential patches to optimize the land resource construction and explore the social and economic development potentials in rural areas, as well as improvement to the living environment and realization of the mutual development goal for both urban and rural areas.

## Section 1: Theoretical Connotation of Reorganization of Rural Residential Patches

Reorganization of rural residential patches is an important measure to improve rural land use efficiency and intensification, as well as the proper, rational and scientific utilization (Baoxin Qiu, 2003). It is mainly adopted with the engineering technology and land ownership adjustment measure

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according to the readjustment to the residential land size, internal structure and spatial distribution based on the urban and rural planning.

*1.1 Governance Objective of Reorganization of Rural Residential Patches*

In urban and rural planning, the primary purpose to carry out Reorganization of rural residential patches is to improve the disorder that does not meet the requirement for sustainable development and inefficient land use in rural areas, so that a harmonious living environment could be built up to create conditions to promote the construction of the material and mental civilizations, as well as the development of urban and rural integration. Combined with rural collective land circulation, resource allocation of the collective construction land could be optimized not only to realize rural industrial structure adjustment and upgrading, but also to increase farmers income and emp

*1.2 Governance Measures on Reorganization of Rural Residential Patches*

Consolidation of rural residential patches is actually a kind of action program establishment and feasibility study on rural economic, social, ecological and other aspects of development. The study is consisted of technical feasibility, economic rationality and possible building plan. Through conducting technical analysis and argumentation to the planning program and risk assessment to the potential profit after the implementation of the Reorganization of rural residential patches, a reliable reference could be offered to investment decision to strive to achieve the best effect from the overall benefits of the consolidation of rural residential patches.

## Section 2: Expanded Application of Ecological Niche Theory

From the *dual structure* feature of China's urban and rural perspective, the competition mechanism between urban and rural areas had similarity like the two species competing for the resources (Figure 1) and the differentiation of urban and rural functions led to the differences in development trend and production function in these two aspects, which reached a dynamic equilibrium in resource requirement. The author believes that from the research field of the urban ecology, the Reorganization of rural residential patches enjoys the significant ecological niche feature in changing the long-term harmonious resource competition trend in urban and rural areas, Therefore, the author attempts, from the theoretical perspective of the ecological niche and with the implementation case for the Reorganization of rural residential patches as the basis, to analyze the theoretical mechanism of the ecological niche and potential difficulties aroused from the implementation of this policy.

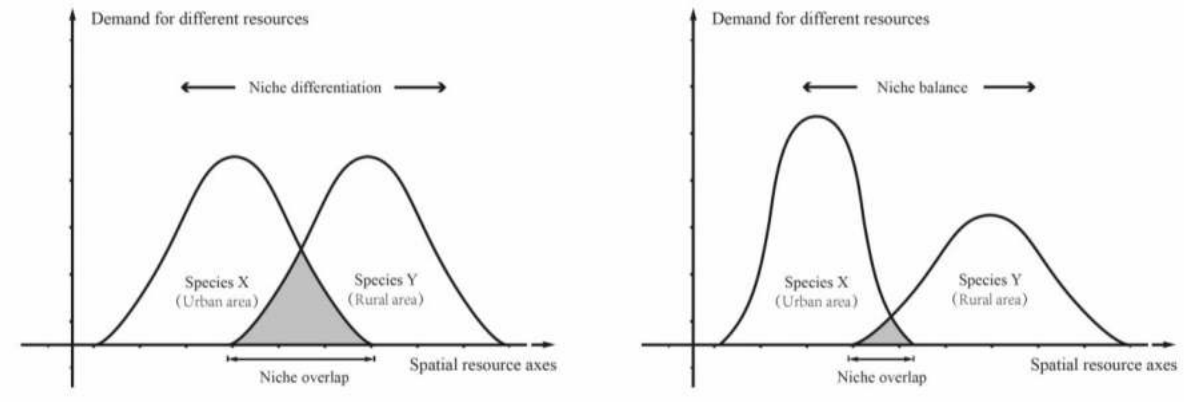


Figure 1. Urban and rural ecological niche expansion model

*2.1 Differentiation and Analysis of Ecological Niche Concept*

Ecological niche, initially put forward by J.Grinnel in 1917, refers to the basic living space that the biotic population occupied. It also mainly refers to the physical space. In general, the ecological niche belongs to the certain qualitative or quantitative description of the relationship between living organisms and the environment (Yuchang Shang, 1988).

It contains two meanings. Firstly, for individual organism or biotic population, it is a matter of the necessity for its survival or a collection of ecological factors or relationships for its use; secondly, for the organism s real living environment, it is a matter of the various ecologi relationship to the suitability of biological species (Rusong Wang, 1988). After eighty years of development, the ecological niche concept and theory has gone beyond the biological category and has penetrated into the field of urban ecology as the research area.

*2.2 Urban Ecological Niche and Rural Ecological Niche*

Urban ecological niche (Rusong Wang, 1988) is defined as a combination to provide people living in urban area with a variety of ecological factors (such as water, food, land, buildings, transportation, etc.) and ecological relationship that can be utilized by people (such as productivity level, environmental capacity, living quality, etc.).

Urban ecological niche is directed to city s special organic *ecological element*. It essentially refers t the urban residents living conditions and the quality of life satisfaction (Xiud the major subject of the city and the urban development is in fact aimed to continuously improve people s living quality. This has become an important issue for urban development on how t the urban ecosystem and establish suitable living and ecological environment.

Furthermore, the concept of urban and rural ecological niche is, during the discussions on the urban and its surrounding countryside s development, the degree of satisfaction from residents and rural areas on their living conditions and quality of life, namely the dynamic trend research on urban ecological element and rural ecological element.

*2.3 Intervention Mechanism of Urban and Rural Ecological Niche*

Urban ecological niche level, to some extent, is set to determine a city s sustainability. The gap between urban and rural ecological niches is a direct reflection of the competition between urban and rural areas. Survival, development, and constant improvement for the quality of life are the instinctive needs for urban and rural residents. From environmental ecological point of view, this instinct is also regarded as the ecological demand. Therefore, the urban and rural ecological niche suitability plays a decisive role for habitability in urban and rural areas.

Predictably, the planning and construction of rural residential patches, from social, economic, ecological and other aspects, could bring impact to urban and rural life appropriateness. This planning and governance policy based on rural development has become an important regulatory tool for the operational mechanism in urban and rural ecological niche. How to efficiently and harmoniously carry out a regional regulatory or the surrounding countryside s niche situation shoul part of the urban ecological planning. The author will also combine the management of urban and rural planning in Xinmi City, Henan Province to conduct the empirical analytic theory for urban and rural ecological niche.

## Section 3: Empirical Analytic Theory of Urban and Rural Ecological Niche

Over the years, population problem has become a major problem for urban development. The proportion of the city population is directly related to city s land use rate and u has also become a crucial constraint to impact the healthy development in social, natural ecological security aspects (Hualou Long, Yansui Liu, Xiuqin Wu,et al, 2009). Take Xinmi City of Henan Province as an example, it is located in Henan, China s most populous provinces and belongs under the jurisdiction of the provincial capital of Zhengzhou. It covers an area of 1,001 square kilometers and the residential population, according to the data in 2010, has reached above 800,000. Xinmi, as the key and centralized construction area called *Zhongyuan urban agglomeration* in central region of China, the regulation of its internal planning and rational development of the population hereby becomes more important.

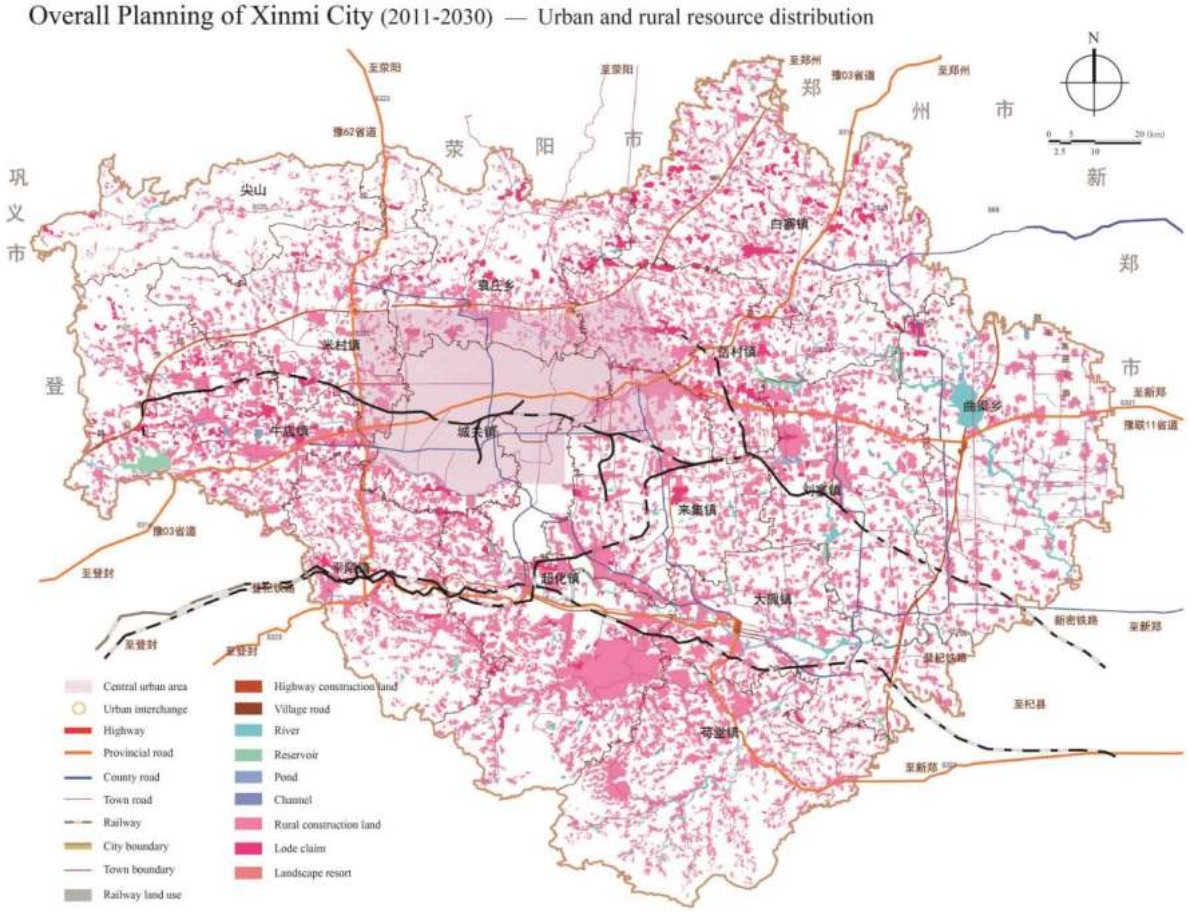


Figure 2. Urban and rural land resources distribution of Xinmi City

The agricultural population reaches 432,000 in Xinmi, representing the city s minimum half of total population in rural areas which has undoubtedly become a major issue for urban development. At present, Henan Province, with implementation of urbanization, industrialization and agricultural modernization as the development goals, is aiming to lead the entire optimization and adjustment of industrial structure and enhance economic vitality to reach the purpose of strengthening the overall competitiveness of the central plains urban cluster. Among them, the fundamental means for the so-called modernization of agriculture is to realize the population migration and the integration of

production resources though new rural residential patches consolidation, plan
(Figure 2).

*3.1 Reorganization of Rural Residential Patches and Planning Implementation in Xinmi City*

*3.1.1 Consolidation Principles for Rural Residential Patches*

As for the current situations, the rural construction in Xinmi is reflected by dense building and disordered layout, which may cause potential safety hazards; village road grade is backward and non-systematical, which could bring inconvenient transport to the external areas, as well as the inadequate infrastructure, outdated municipal facilities and poor living environment. Therefore, the three principles for old villages renovation and new rural construction have be

1) Government-led and prior planning. To ensure that the village renovation could comply with the public interest, realize social justice in area households innovation process innovation beneficiary to the majority of the villagers. Planning Departments are expected to shoulder the inevitable social responsibilities to strive to promote the mutual advancement of the rural special innovation and social reconstruction.

2) Urban-rural integration, one policy for one specific village. Under the guidance of the local policies, the villages at different regions and with various natures should be established by different innovation goals and strategies, so as to effectively carry out peasants survival, relo other issues from planning perspective to achieve comprehensive rural and urban integration.

3) Remove the village and build residential area for nearest settlement. Develop control requirements for land use, building strength, green systems, road traffic, public and municipal infrastructures and others to focus on the innovation of residents lifestyle. Considering rural farmers feelings resettlement should be completed by nearest settlement.

*3.1.2 Thought Analysis of the Consolidation of New Rural Residential Patches*

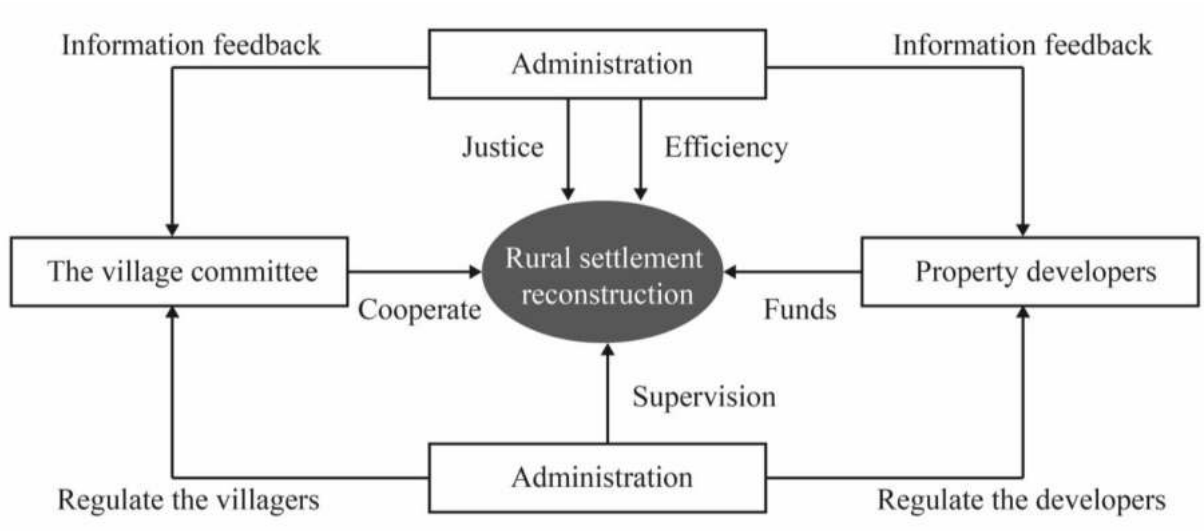


Figure 3. Collaboration mechanism between government - villagers - developers

1) Interest equalization system among the government, villagers and developers for innovation of the physical environment (Yong Liu, Cifang Wu, Zhirong Yang, 2008). Based on government s consideration for the interests of the villagers and development efficiency, farmers and developers could take part in the discussions on village innovation plan and government departments could be designated to monitor the implementation, supervision to standardize the whole process (Figure 3).

2) Diversified mode of function remodeling for village open space innovation. Remodeling can be considered at part of the villages to build up landscape with historical and cultural geographic features; besides, it can be set up as a platform to propagate the local cultural characteristics in Xinmi and plays a role for landscape enrichment to satisfy the cultural, recreational and leisure needs.

*3.1.3 Planning and Construction Overview for Rural Residential Patches*

In overall urban and rural development plan for Xinmi, the rural residential patches consolidation target could be conducted through consolidation of rural residential patches and great efforts for building new rural communities (44 comprehensive rural residential patches). Among these plans, the total population related with the plan reaches 150,000 and there are 3,000 to 5,000 people involved averagely in each community, representing 23 square kilometers for the total construction land.

The major innovation approach is to move and combine the remote areas and natural rural villages where the infrastructure is relatively backward; migrate and combine them into a large-scale village where is distributed along the main highway and with relatively more favorable and economically developed situation. In the meantime, the general idea for urban construction could be integrated to strengthen the construction in culture, education, business and other public service facilities and improve the overall living quality in rural communities (Figure 4).

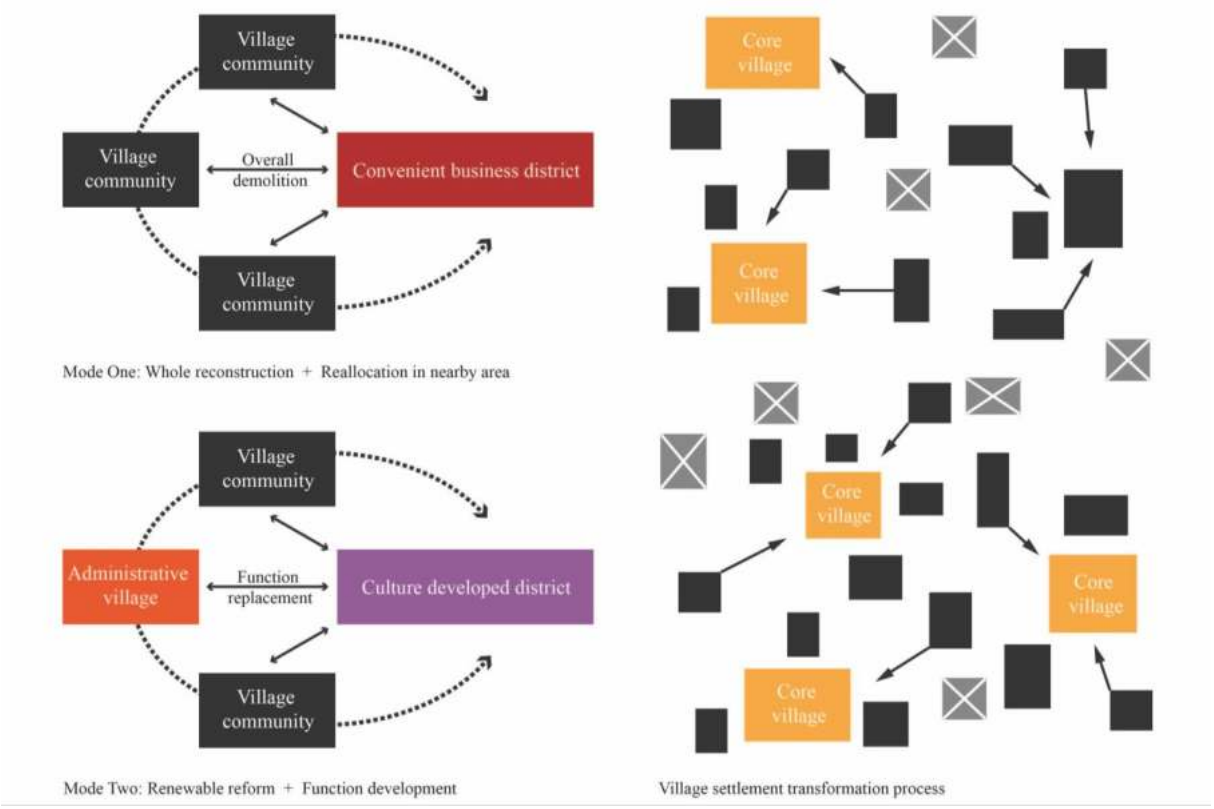

Figure 4. Rural residential renovation patterns

*3.2 Analysis of the Ecological Mechanism of the Rural Residential Patches Construction*

To adopt from analytical perspective of ecology and take ecological niche as an analysis tool to study the migrated population s nature under the rural residential patches consolid provides a main analysis of the level of urban and rural niche in Xinmi rural geographic areas, among which resource niche, environment niche, economic and social niche are included to eventually come out a comprehensive regional population s niche systems, in order to achieve predicting and optimizing the layout of the population.

*3.2.1 Niche Principles for Population Migration*

Regional niche reflects the suitability that the regional status brings to all kinds of economic activity and human life activity. It also reflect the region s nature, function, position, function, po resources and environment s advantages and disadvantages, which could be used attractiveness and centrifugal force to various types of economic activities, occupations and age groups (Xianqiang Mao, Jingshan Yu, Xiurui Guo, 2005). Ecological factors and ecological relationships within urban areas consisting of respective niche which is different from each other and the differences of production and life caused in these areas are known as ecological potential. It is not difficult to see that the movement of the village and combination to the town and city trend in Xinmi, Henan Zhongyuan areas is theoretically a result reflection of chemotaxis principle and balance principle of human production and life activities brought to the urban niche in the following aspects:

1) Seek good niche is a common feature of human production and life activities. Such chemotaxis behavior includes not only the behaviors to adapt the environment, but also includes the behaviors to conduct environment invocation. The result could lead to an urban agglomeration with capital, population and other elements (Rusong Wang, Jing Chen, 2007).

2) Result caused from human s agglomeration into the high niche areas to have over-explored and utilized and thereby reduced the life niche, resulting in a weak niche or even a negative niche and the emergence of the stagnation of the population flow or back-flow (Mingli Chen, 2010). This balance maintains a relatively stable status for population migration between urban and rural areas, cities and communities. Urban ecosystem is always developed toward the direction of succession to reduce the ecological potential.

As to the current situation, these two eco-regulation regular patterns are realistically affecting the village relocation and combination project process. That is, to select new rural settlements, the advantage and disadvantage status of each niche will be taken into account.

*3.2.2 Urban Ecological Essence in Rural Residential Patches Construction and Innovation*

*(1) Niche Analysis*

Through the research on the township and rural settlement in Xinmi, the following findings can be discovered. Firstly, compared with the northern and southeastern mountainous regions, central and northeast hilly areas and towns near Zhengzhou have obvious advantages in business services facilities, culture and education, health care and other aspects; secondly, by analyzing and comparison the current situation in the coal mining towns with the planning model developed in earlier stage, on the

one hand, the original township was developed based on the coal industry and led the upgrade of the related industries, their living quality is further improved accordingly; on the other hand, there are less employment opportunities in the urban areas currently. Compared with the surrounding mining towns with rapid development, the labor demand here is expected to be increased greatly.

From the urban ecological perspective (Yang Liu, Jian Liu, Jiangang Xu, 2008), the living niche in some of the industrially developed towns is now not less than the old town. With the population saturation status of the land for construction in main urban area and the surrounding areas, especially with the bordering Quliang County s industrial construction agglomeration area and the living niche in the surrounding emerging towns will be further improved. However, life potential niche in the main city and surrounding towns will be significantly reduced. According to the chemotaxis principle of the human activity, township s population standing in the rapid development trend and it will conduct internal integration of the population first, namely the merging of the rural communities. This is not only to better mobilize the population resources and advantages, but also to intensively and effectively improve the niche in town areas, resulting in the development of the internal population agglomeration in each township.

On the other hand, due to the improvement of the traffic transportation conditions in the old town, the positive interaction between industry and the community at surrounding residential locations between the mode of production will make life a shift in some rural residents, namely and town flow. Thus, after the merger of rural land, it will be in favor of re-segmentation, development of agricultural modernization, mechanization of agricultural production and efficient labor to further enhance the economic and social niche in rural communities.

*(2) Analysis of Ecological Benefits*

By analyzing the relationship between population agglomeration and urban ecological system, the author found that the city s rapid population agglomeration could effectivel residents living space and enable them to use social traffic transportation for a short distance to go back and forth between communities and towns. Hence, this could effectively relieve the traffic burden for previous difficult trip to city . To make a relatively smooth trip for back and original route could be objectively improved to strengthen government regulation mechanisms to adapt to the future development of the growing traffic.

Obviously, population agglomeration means that the environment they lived has been changed. To adapt this change, it is bound for people to carry out a variety of activities, which the consequences arising from these activities will be responded back to the artificial environment in which new changes are occurred there. Feedback relationship between people and the artificial environment indicates that their individual elements are connected each other and any part of change will cause a chain reaction to the other sectors. Consequently, the entire system reacts and makes changes accordingly. Therefore, population agglomeration is not just a simple problem to only impact on individual, but a significant impact brought to the harmonious development of the whole city s ecosystem.

Firstly, population agglomeration could force the government departments at rural or county level to improve their overall regulatory capacity. From a merge case regarding to the rural residential integration, to achieve *urbanization, industrialization, agricultural modernization* in Xinmi, lag problem to hinder the rural development should be solved as priority. The major problem in rural areas is considered as the problem related with production, culture, education and social security. Integration of the population is essentially the integration of resources and environment. Government, by the most limited administrative resources, is expected to improve the living conditions in rural areas and

enhance the ties with various town centers to make a reasonable and efficient allocation for the nature, economy and social resources.

Secondly, the optimization of the industrial structure of the city will be implemented, namely the integration of the population to drive the booming development of the labor-intensive industries. Under the current situations that high-tech and high value-added industries are not suitable to be developed, push the labor-intensive industries to drive the city s comprehensive industr be transformed from primary industry into the secondary industry or the tertiary industry will be considered as an effective safeguard mechanism, which also functions as a powerful catalyst for urban population s resources regulation.

In the meantime, to improve the social ecological environment also plays a pivotal role. The redistribution of land and natural resources could accelerate agricultural modernization, mechanization and efficiency, which marks the enhancement of urban development and production level. At the same time, from residential patch s perspective for the long-term development of the community, linkage development with township and city, to a large extent, could accelera According to the planning analysis, in the context of the development of the new rural construction and population agglomeration in township in Xinmi, the annual level of urbanization development will reach 2% averagely.

## Conclusion: Analysis of Ecological Niche for Reorganization of Rural Residential Patches

*(1) Regulatory Policy Analysis of the Village Relocation*

Except the limited financial and material resources at this stage, government is also subject to land use conditions in urban areas and is unable to continue expand the population capacity in urban areas. Hence, it is necessary to alleviate the trend of urban agglomeration or outward migration. To achieve this goal, through explore city s internal and textural potentials, subur functionality could be improved. By reducing the urban-rural ecological potential and reduce the floating population in urban areas, the urban infrastructure construction and development pressure could be largely lowered.

It is also worth noting that a single function of land use has a low internal diversity, weak symbiotic relationship and unproductive eco-efficiency. On the other hand, the diversity of the urban environment is a relatively more important symbol than the human environment in countryside. Therefore, the improved villages with strengthened internal diversity will not only improve the single relationship between the internal social culture and life in rural areas, but also promote symbiotic coordination with circular development mode to ensure the continued development in rural communities.

In summary, from the city s ecological regulation perspective, regional intensive huma save space, time and lower utility costs; meanwhile, it can also improve material and energy efficiency. The core theory of village relocation is to promote fundamentally an intensive and efficient ecological construction mode.

*(2) The Niche Dilemma of Rural Development*

However, the load capacity for human activities in urban and rural areas is limit. When population is surpassed a certain proportion, the ecological constraint will appear and urban ecological niche will be

reduced. Similarly, if overextended rural residential patch turns up to cause the mismatch between population and possession resources, this could also cause urban and rural niche imbalance, leading to urban and rural areas further competition for the resources. Village relocation under the governance of the Reorganization of rural residential patches is trying to enhance the niche in rural areas from economic, social and ecological dimensions, so as to change the status to avoid the rural resources from being plundered constantly by the urban development under the tide of urbanization.

Introspection is needed as competition aroused from urban-rural dual structure niche view that rural agglomeration essentially destroyed the original niche trend of urban-rural symbiosis and resulted in their niche overlapping with a deteriorated competitive relationship. In the long run, compared to urban areas, China s vast rural areas could always stand in a weak position for developme use limited resources to conduct centralized development in rural areas and avoid competition for resources between rural and urban areas requires a different route from urban development in rural areas planning. Unfortunately, the current centralized construction method used for rural residential patch, from the perspective of the niche, has encountered plight of homogeneous competition.

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# TRACK 09

## Energy and Space as Resources / Limits for Planning Decisions

# Correlation Studies on Residential Pattern and Carbon Emissions from Residents Transportation: A Case Study on Shanghai Caoyang Xincun[1]

Weiqiang Wang[2] Jian Li Yufeng Yue[3]

***Abstract:*** *Population density is relevant to the residence form characteristics and pattern classification, and the carbon emission from residential transportation is logically correlate with population density, facilities variety and traffic site distance. Existing related research shows that urban form cause influence on transportation and carbon emissions, however, on the part of residential scale, the relative research on spatial form and per capita transportation carbon emission still needs more empirical cases. This paper takes Shanghai Caoyang Xincun as the object, researches on the carbon emission with "3Ds" theory, through the investigation questionnaire to estimate the per capita transportation carbon emission of 54 estates sample. From the comparative analysis of the results, the volume ratio of Caoyang Xincun and population density present positive correlation with transportation carbon emissions per capita, but negative correlation with facilities variety. Considering settlements residents of social economy and traffic facilities layout unbalanced factors of traffic sites and accessibility and negatively correlation with transportation per capita carbon emissions. According to the analysis from the logical correlation between the carbon emission and eight residential patterns in the sample, it is concluded that the diversity of per capita transportation carbon emissions is caused by the superposition of variety of socioeconomic and travel needs of the spatial behaviour main body. Before the judgment of low-carbon estate pattern, the structural characteristics of spatial density and society should be clarified first, then the national conditions, regional development condition; socioeconomic factors need to be combined to guide the development of future residential pattern.*

**Keywords:** residential pattern, traffic carbon emission, caoyang xincun

## 1. Introduction

As the basic unit of the city, residence is the main area of housing, living and consumption that naturally becomes the main source of carbon emissions. China, a rapid developing country, during its nearly 30 years reform and opening-up process, rapidly developed in urbanization and industrialization. According to relative research, it is concluded that by 2020, this country's carbon dioxide emissions will surpass the USA, ranks the first (Claessens) in the world. By 2011, Chinese residential energy consumption had been the country's second largest in the total energy consumption, occupied 23% of the total (total final consumption TFC). At the same time, it was expected that by 2020, Chinese architectural development scale will reach 2.6 billion square meters, residential building will account for 1-1.5 billion of the total. In fact, the Chinese government always in a positive and responsible attitude to response UN's propose to reduce carbon emissions, and adopts various policies and technological innovations to reduce urban carbon emissions. At the same time, a large number of studies to the Chinese cities have also shown (Ma Jin, 2011); Zheng Siqi, 2010) that the residents trip, traffic model choice and carbon footprint is closely related to the residential development pattern. Therefore this study thinks that the optimization of residents form not only takes a long-term and structural effect on energy saving and emission reduction, but also shows an important

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planning path to realize low carbon urban development.

## 2.Literature Review

*2.1 Urban Morphology, Transportation and Carbon Emissions*

In terms of urban scale, the city's economic development will inevitably bring the increase of personal income, the expand of housing area and the improvement of car ownership. the understand of relationship between urban morphology and carbon emissions need to be started from the density. For the urban carbon emissions, a large number of research scholars started from the relations of urban structure, land use and transportation (Bourne, 1982; Anderson, et al. 1996), urban morphology influences structurally on residents' daily life behavior, transportation needs and mode, then directly leads to carbon emissions differences. Wahlgren (2007) found that city planning obviously influenced 10% of greenhouse gas (GHGs) on the city scale and 20% the residence scale.

Many researchers agree that if the relationship between urban form and transportation want be confirmed, at first we need to prove that the individual travel choice is due to the factor of urban form rather than other factors, but this would require the time-related inspection to the urban morphology changes impact on traffic behavior. Obviously it is arduous to take continuous monitoring and feedback on individual transportation data as research condition. Based on differences between Chinese and western countries, we need to combine with domestic samples to take further empirical research on the reference of related mature research theories and analysis methods.

The existing studies found that there is negative correlation relationship between urban density and carbon dioxide emissions (Kennedy et al, 2009; Grazi et. Al, 2008), which means the improvement of city density helps to reduce energy consumption and carbon emissions per capita. However, different with the conclusion of the higher urban density, the lower the carbon emissions per capita which is from the large number of research in the Europe and the United States (World Bank, 2010), in China, the "double high" or "double low" residential pattern often corresponds to a larger living space and higher energy consumption. But can this be concluded that there is simple linear growth in per capita transportation carbon emissions with increasing trend of residential volume and expanding of per capita area?

*2.2 The transportation of residential scale and the "3Ds" theory*

At the level of residential scale, transportation-related spatial form researches are mainly from the following three dimensions: Density , Diversity and Design. (Cervero and Kockelman, 1997), that the density has a significant influence on transportation had been confirmed eraly(Levinson, H., 1963), and the impact of built environment on the residents' transportation has become the focus of academic research in recent years. This study argues that the density is not only the strength index of the residential development, but also the guarantee of residents employment and the walking accessibility of service facilities; Residential diversity can mix up land function and the social classes, meanwhile, it can increase the concentration of service facilities; And the distance of residential interior to public transportation sites determines the walking accessibility and convenience degree to the destination. Therefore, the "3Ds" theory of Density, Diversity and Distance to transit is promoted based on the background of present China's fast urbanization and the much higher residential development intensity compared with the density of the European and American countries. This theory shows more pertinency and feasibility on the low carbon oriented residential morphology research.

*2.3 Residential type pattern and carbon emissions*

Residential morphology is closely related to the environmental sustainable development and energy use. Residential density under different urban scales contains different connotation of space development (Tsai, 2005). There exists interaction in factors of housing material form and urban system, land use, functional structure. The classification to the residential morphology and the description to the features can be defined and divided from the perspective of the density (1). Under the constraint of China's population and land resource, the type of residential morphology is more than just the physical space, also expresses the social-evolution logical characteristics of pattern types. Meanwhile, it reflects the residents' daily activities and functional requirements, thus determines the logical correlation between residential pattern types and traffic carbon emissions.

## 3.The object and analysis method

*3.1 the object selection*

Founded in 1951, Shanghai Caoyang Xincun is China's first workers new village. During the historical evolution process of the planned economy to market economy, it gradually formed the social class and the diversification of the spatial structure. Caoyang Xincun covers an area of 2.14 square kilometers, include 200 square meters plus residential construction area, with a total population of 13241 (2010 Shanghai six general statistics), the population density is 62000/km$^2$.

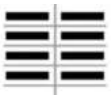
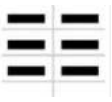
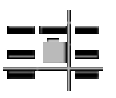
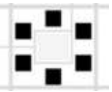
The selection of Caoyang Xincun as a object of correlation of residential density and transportation carbon emissions is based on the following three aspects: First, in terms of physical space, in a certain area, it has formed the low, medium and high density of coexistent residential pattern (figure 1). Secondly, after decades of evolution, it has formed a complete public facilities system and clear grade of service. Finally, its social structure morphology presents characteristics of strata hybridization in professional type and degree of education, etc.

Figure 1. Current spatial texture of Caoyang Xincun

*3.2 The division of data and residential type*

The study selected 54 community and gained basic spatial data through GIS. The per capita transportation carbon emissions are gained through the statistical analysis software based on 54 communities equidistant sampling and recycled questionnaires. Questionnaires are 1500 in total, 1023 valid with effective rate 68.2%. As the Xincun shows multi-gradient and multiple class in density structure, the research summarized eight typical residential pattern from the perspective of typology (table 1).

Table1. Density feature and spatial patterns in Caoyang Xincun

| Development intensity | Characteristic of spatial morphology | Type of model | Characteristic pattern of residential | | | Intensity indicator | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Typical form of Caoyang Xincun | Typical form of Caoyang Xincun | The serial number of the models | Volume ratio | Building density | Density of population (familys/ha) | Family density (familys/ha) | House area for each inhabitant ($m^2$/people) |
| Low-volume ratio | <3F | Building arrange in line | |  | Type1 | 0.97 | 31.7% | 1343.67 | 297 | 14.97 |
| Middle-volume ratio | 4F-6F | Building arrange in line | |  | Type2 | 1.72 | 38.2% | 2015.75 | 417 | 19.29 |
| | 4F-6F | Building arrange in mix of line and point | | | Type3 | 1.84 | 35.5% | 2210.25 | 436 | 19.18 |
| | 4F-6F | Building arrange in circle | | | Type4 | 2.39 | 36.7% | 816.50 | 355 | 35.58 |
| High-volume ratio | 7F-14F | Building arrange in line | |  | Type5 | 3.07 | 34.2% | 1583.80 | 374 | 39.45 |
| | 7F-14F | Building arrange in circle | | | Type6 | 3.55 | 31.1% | 1192.60 | 260 | 54.87 |
| | >15F | Building arrange in points | |  | Type7 | 4.50 | 29.2% | 1213.80 | 578 | 34.01 |
| | >15F | Building alone | | | Type8 | 4.51 | 29.4% | 823.25 | 346 | 58.32 |

In theory, improving the land plot ratio is the most effective way to increase the population density, but from the analysis of Caoyang Xincun data comparison, it can be found that the low plot ratio

pattern and high plot ratio pattern shows no significant differences in population density. If the higher spatial density carried more population capacity, then the high plot ratio in the sample of this survey cannot simply be understood as high density. On the one hand, the increase of the intensity of the per capita living space is along with residential development increasing, accompanied by the decrease of residential units and the population density, on the other hand, the mixture of residential pattern also reflects social structural differences between residents and family organization.

*3.3 Comparison on residential pattern and per capita residents carbon*

From per capita traffic emission of different residential types, the multilayer residential pattern (pattern two, three, four) and point small high-rise emission are significantly higher than other types, and the determinant low-rise, determinant small high-rise and enclosing type emissions are similar, single high-rise type is the lowest. Therefore, in Caoyang Xincun, the correlations between residential pattern types and per capita residents carbon emissions can not directly explained by the physical form. The difference of per capita transportation carbon emissions is caused due to the facility layout factors. It is not a simply linear corresponding relation between residential morphology and per capita traffic carbon emissions.

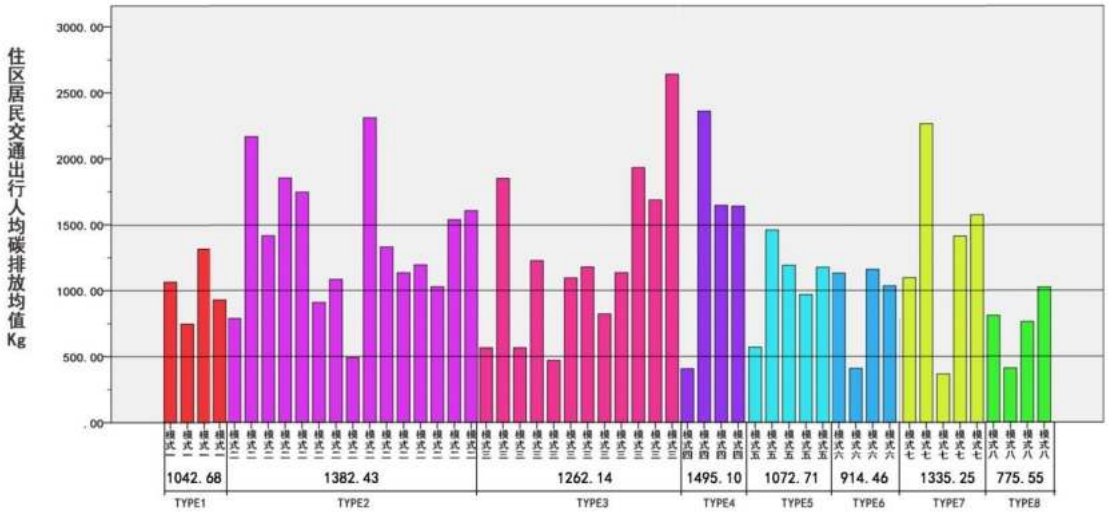



Figure.2 Current spatial texture of Caoyang Xincun

## 4.The correlation studies on per capita traffic carbon emissions based on the 3Ds theory

*4.1 Plot ratio, population density and per capita traffic carbon emissions*

From the comparison curve of different residential pattern plot ratio and per capita traffic emissions (figure 3), it shows that the curve slope is relatively flat in the determinant low-rise, the multi-layer, the mixed and enclosed pattern, and corresponds the volatility change of per capita traffic emissions, but it presents a positive correlation relationship between them. However, when the pattern changes from point high-rise to single high-rise, the mean plot ratio shows little variation, and per capita residential transportation energy consumption suddenly fall a turning point. the above characteristics shows that the strength of residential development in some extent can affect residents' transportation mode, but for high plot ratio estate, its per capita transit emission is slightly lower than the low and medium plot ratio estate, and shows difference distribution of pattern characteristics, mainly caused by

the population density. It could be further validated in the curve comparison of average population density and per capita traffic carbon emissions (figure 4), the change rule of both is quite similar.

Figure.3 Current spatial texture

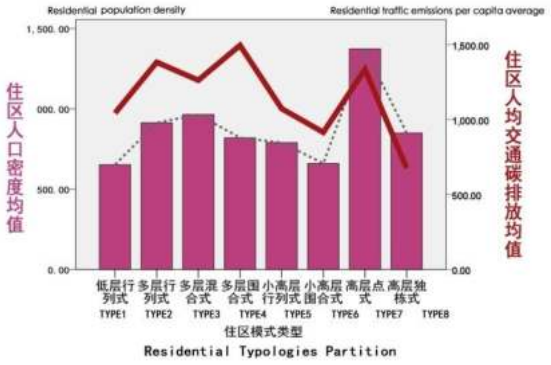



Figure.4 Current spatial texture

*4.2 Facilities diversity and per capita traffic carbon emissions*

From the type and quantity of public service facilities in Caoyang Xincun, its internal supporting facility construction standard is high and variety in types, thus in a certain extent, it reduces using behavioral requirements of external facilities. Caoyang Xincun, meanwhile, also influenced by negative space factors as the cut-off of waterfront and entrance guard settings. For the residents of different residential patterns, the imbalance of the accessibility level of some internal facilities is likely to increase external leisure travel probability. The type, size and accessibility of internal service facilities play a decisive role in maintaining residents' daily life and reduce the motorized transportation.

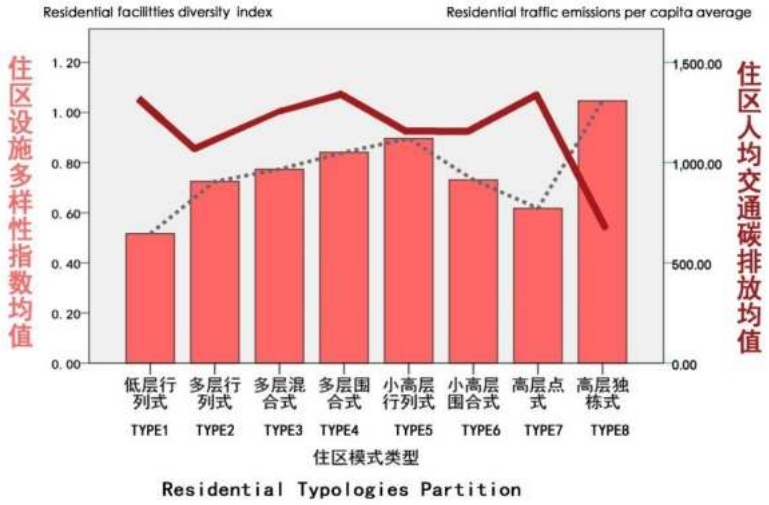



Figure.5 Current spatial texture

The research combined with GIS data takes diversity standardized calculation to the density of service facilities in different types of residential patterns, then obtains the diversity index by cumulative sums of the diversities value of medical, culture, education, business and other service facilities. From the average curve comparison of facilities diversity index from different residential pattern and per capita traffic emissions(figure 5), it shows that the multilayer and determinant small high-rise residential

facilities diversity index are relatively homogenization, but the low-rise and point high-rise pattern is relatively poor. At the same time, it shows negative correlation relationship between facilities diversity and per capita traffic emissions, i.e. the more abundant the surrounding facilities and the more convenient the accessibility, the lower the per capita residential traffic emissions.

*4.3 traffic site accessibility and per capita traffic carbon emissions*

After comprehensive comparison of the average curve of residential public site accessibility index of different pattern types(4) and traffic emissions(figure 6), the positive correlation is shown obviously between the bus site accessibility and per capita traffic emissions, which means that the distance of residence to bus site will have an immediate impact on the decision of taking bus. That is to say, the higher bus site accessibility will reduce the use of private vehicles, and the traffic energy consumption carbon emissions could be reduced by increasing the proportion of residents' public transportation.

Figure.6 Current spatial texture of Caoyang Xincun

In the corresponding relationship between the rail transit site accessibility and per capita traffic carbon emissions (figure 6), the determinant multilayer, mixed, enclosed and determinant small high-rise patterns are positively correlated with carbon emissions, it shows differences with distributions of public transportation site accessibility. It is need to be explained that in Caoyang Xincun, the urban rail transit site is located in the southeast area, so it reduces the accessibility for part of the multilayer and high-rise residential space. In terms of the social structure, the multi-layer mixed residents are mainly migrant workers and private cars takes a higher percentage, thus increases the per capita transportation carbon emissions; And multilayer enclosed and small high-rise determinant patterns are update projects since 2000 with higher commercialization degree, the residents are at high-income levels, the rail transit site accessibility may cause the adoption of other motorized traffic way. In conclusion, under the combined action of the spatial and socio-economic structure factors, the per capita traffic emissions of above three patterns shows no obvious negative correlation with rail transit stations accessibility. If with exclusion of socio-economic factors influence on transportation mode choice, the residential and public transport distance and site accessibility level is negatively related to the per capita traffic emissions.

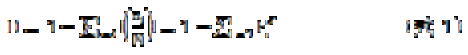
## 5.Conclusion

Under the background of global warming and China's economic and social transformation, the theory and empirical researches on relationships between the residential planning pattern and carbon emission characteristics are significant to guide China's practices; With the increasing of people's income and improving of living conditions, the carbon emission effect from residential energy consumption gradually become a core issue of academia and government departments. The study selected Shanghai Caoyang Xincun, from the classification of residential form, divided into high, medium and low density and reflected that the population density of the physical form characteristics and the pattern characteristics of per capita living area. From the correlation analysis of different residential pattern and per capita transportation carbon emissions, residential development intensity and population density was positively correlated with carbon emissions, and negatively correlated with service facilities diversity distribution and traffic site accessibility. The essence of residential pattern types and the carbon emissions is that the density index is spatial significant in development intensity and social structure, meanwhile is related with facility layout, supplement scale and traffic site accessibility. The diversity of per capita transportation carbon emissions is caused by the superposition of variety of spatial socioeconomic and travel needs. Under the background of rapid urbanization in China, the selection of residential pattern types should not be copied simply, the government needs to make quantitative evaluation on residence sustainable development and density characteristics from the angle of carbon emissions ,at the same time also needs to plan appropriate residential density and increase the employment of residential land and accessibility of public service facilities, provide more multiple class affordable housing planning with the goal of implement of low-carbon city development.

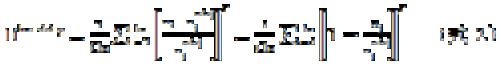
## Notes

① From the point of conception, "Type" is the distribution law of things and the abstraction on the co characteristics, but the "Pattern" is the methodology to solve one kind of problem, which concl the ways to analyse and solve certain things and rise to theoretical level.Residence is the mo fundamental and important content in human activities. Residential morphology types covers thr contents as material, economy, and society, and residential pattern is the systemization a structuralization to the residential morphology elements.From residential pattern system, this st thinks that residential pattern includes material and non-material elements. The material eleme include housing, facilities, roads and landscapes, etc., the non-material mainly include the soc relations, humanistic spirit, life style, etc.The density is the important quantitative indicat in residential patterns.

② In quantitative research, the uniform distribution extent description often uses the Simpson in on the different categories of numerical value of the same research object, the index is more u to calculate the concentration degree of economic composition, the formula is expressed as 1 mi the quadratic sum of each object value occupied in the whole structure, as:



When small changes are adopted on the above calculation method that obvious the distance of unif distribution on the objects from different levels, then a new formula is generated as:



In this formula, $D^{facility}$ is for residential facilities diversity measurement index, Cla is for the classification level value of one object, 1 / Cla is defined as the classification quantity wei factor, the smaller the factor value, the more the classification level. Formula in parenthes indicates the average relative distance between each class target value 1 and the actual measured va The smaller value means the smaller distance between the distribution form and the structur distribution target, also means that the greater quantity density of the distribution level of

i type facilities.From this formula, the facilities diversity index parameter value is between 0 1, the value more close to 1 indicates the facilities diversity distribution more uniform.

③ In the public facilities spatial accessibility evaluation method, the geographic information sys analysis platform is an indispensable technical support. With its support, there are lot of evaluat methods, mainly including ratio method, nearest-neighbour distance method, isoline method, grav model method, buffer method, travel cost method, accumulation method based on opportunity, and met based on spatial interaction, etc.This research adopts the potential evaluation model based on sp interaction, the formula is

$$A_i^p \quad {}^{n} \frac{M_j}{D_{ij} V_j}$$

means the spatial accessibility of residential place i to all facilities;means the service ability i facility;means the population scale impact factor;means the travel impedance of i to facilitie (distance or time); represents travel friction coefficient;N means public service facilities quant

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# TRACK 10

## Planning in Weak Institutional Environment

# CIVIC CROWDFUNDING: A BOTTOM-UP PRACTICE FOR A CONSENSUAL URBAN DEVELOPMENT

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## 1. Introduction

*Cities are actually transforming their governmental, economic, social structures. In this complexity, making right policies to guarantee the social justice and the quality of life is really difficult: there is not only a financial problems, in consequence of international crisis, but also a relational problem between people and local institutions. The public government itself to all the utilities and public services for the citizens, and, at the same time, people are losing confidence in the institutions.*
*In this critic context, planners should be the conjunction between people and government, applying good and effective participation methods. In this way, citizens could achieve the capacity to suggest decisions, strategies, local interventions, and in some limited cases they also could support economically their proposals through the civic crowdfunding. The value of this practice is not only financial: in this way we can improve the social cohesion, the sense of community, encouraging the bottom-up processes of requalification, increasing the social justice level. In this way, minorities are protected and the urban management is more democratic and inclusive.*
*The role of planners and local governments is fundamental to coordinate and orientate the bottom-up initiatives: citizens actions could integrate the traditional planning participatory budgeting. At last, a very significant contribute can be represented by the IC technologies: there are many crowdfunding web platforms, local or international, and some of this are dedicated to civic projects.*
*In this perspective, civic crowdfunding could be applied as a valid urban planning practice.*

## 2. Participation processes and bottom-up dynamics in contemporary cities

The complexity and the multiplicity of contemporary European cities require new governance strategies. The public participation to the decision making processes is a fundamental requirement to guarantee the success of the urban projects: we should forget the centralized government idea, and we should adopt a collaborative public-private vision.
The basic principle of civic crowdfunding is not economic, how we could think, but it s a social motivation: citizens who need public spaces or services are starting to make it themselves, because the institutional actors can t or don t want make it. From this point of view, the city is i as a city house (Salzano, 1998). In this vision, the collective financing is an important element to increase the sense of identity of an urban community, and to get stronger the feeling of belonging to the place where the citizens live. Without these elements, the management of the city, mainly when there are many critical and conflictual factors, it s very difficult. If don t consider the importance of public sharing about the urban planning, they objectives; the same is for the urbanists, who should adapt the theoretical principles of the discipline to the fluidity and multiplicity of the real city.
This mechanism works if there is a strong and deep motivation from citizens who live in a city, or in a neighborhood: the sense of identity in a limited urban area is more consolidated than in a whole city, especially when we have a very extended city (Leone, 1999).

The neighborhood is the ideal place where we can apply our survey: it s an i
between the private home and the public city, where there is a particular social balance (de Certeau, Giard, Mayol, 1994). In a neighborhood the feeling of belonging is stronger than the inefficiency of public administration: in fact the citizen are ready to make themselves some maintenance activities, to buy some urban furniture (benches, wastebaskets), although they continue to pay taxes.
It s an ethical question, not only economic or politic: the cultural changes i
also related to the social approach to the urban necessities, no more passive but more active and responsible (Bonafede, Lo Piccolo, 2010a, 2010b, 2011; Lo Piccolo, Thomas, 2009).
The neighborhood is a resistance place: resistance against the extreme globalisation, against the identity s decline (Picone, Schilleci, 2012). It s also a collective place oppo
a material place of relationship, very different from virtual places like social networks. Really, this two relational dimension should be integrated: the ICT could represent an aid to make better the communication between citizens each other or between citizens and public institutions.
The question of communication and confidence between citizens and institutions is essential for the activation of processes bottom-up: when the public institutions don t answer to the ci
requests and needs, the citizen start to organize themselves to solve the common problems. In many cases the civic administration can t guarantee the necessary interventions
of economic resources: the international crisis caused a consistent limitation of the public budget for the welfare, but this is only one of the aspects of the crisis. the main consequence is not financial but cultural: the cities are evolving to a new organization model, more inclusive and participative than traditional government. We can t imagine today an urban c
citizens don t have right to express their opinion about the public decisions,
development, about the valorisation of public spaces and about the services, the shared uses, the social conflict.
Another change of vision is related to the size of the urban projects, and consequently to the relevance that they have in the general economy of the city. The civic crowdfunding is a practice that come from citizens reaction to the lack of public government: some peop
make little reparations or maintenance activities. From a strictly practical point of view, it s
that involve ordinary citizens and not rich businessmen or supranational funding implies the drastic reduction of the available budget for the interventions. However, this is justified by the great symbolic and social value of the projects realized: making something that citizens have required and the same citizens have financed is truly an achievement of right to public space (Lefebvre, 1968). Actually we are living not only a financial crisis but a cultural, social and ethical crisis, about roles, institutions, political balances. People are becoming conscious of their territories: making a shopping mall instead of an equipped area for free time or for children, a public discharge instead of a public park, are political choices not shared with the urban community. As planners we need to make citizenship before to build city.
In some cases the conflict between citizens and public administration could be overcome by joining forces to work to the same objective: the civic crowdfunding could be integrated with the participatory budgeting.
The participatory budgeting was utilized for the first time in Porto Alegre, Brazil, in the 1989 (Allegretti, 2001), and then was utilized internationally as a valid instrument of civic management. It contributes to increase the sense of civic responsibility and the public participation in decision making process. In this way, a part of the budget of the city can be dedicated to a direct management by citizens: this is really a little part of the whole civic budge
alliance between politicians and citizens, and also a public endorsement and contribution to the civic requests.
The idea is very positive but it s difficult to apply in the real contest of the
Italian context, the participatory budgeting has been often replaced by the social budgeting, that is a different thing. In fact the social budgeting is only a public reporting of expenditure incurred by the city for goods and services, made as a final balance and not as a prevision (Viviani, 1999).
Moreover the participatory budgeting isn t regulated by a specific legislation: i
that depends entirely by the will and the commitment of individual persons.
The frequent result of this situation is therefore that the adoption of the participatory budget also is carried out in modalities arbitrarily set by each municipality. In many cases is never taken into

consideration the idea to let citizens participate directly in the management of municipal funds (Rindone, 2013).
We shouldn t forget that civic crowdfunding initiatives started as a bottom-up practices, to overstep the brake generally imposed by public administrations to grant funds for collective projects: then the civic crowdfunding is often a demonstrative instrument to opposition to the governmental approach to the urban questions.

## 3. Civic crowdfunding: how it works

The crowdfunding is a collective financing, born in the contest of arts and creative activities: then it has quickly spread in other contexts, like urban politics and planning. In this way, the crowdfunding takes a public finality and became civic . It works by specific web pl where the promoters can public their projects to collect donations from all the world, by various models of funding. There are specific platforms for particular typology of projects: cultural, urban, about school and education, for humanitarian campaigns (for example a campaign for a whole population who need help because of poverty, of war, of an earthquake, and more), or about animals and environmental protection. The crowdfunding platforms works like a social network: the final objective is claim the attention of people, explaining the reasons and the substance of the project, showing also images, schemes, tables, results, analysis and future prospective to application, to finally reach the amount fixed.
In the fig.1 there is an overview about crowdfunding working: it starts from an idea (in the specific case of civic crowdfunding the idea is related to the city), then it s published c crowdfunding platform, and finally we can reach three options: goal not reached, goal reached or goal exceeded.

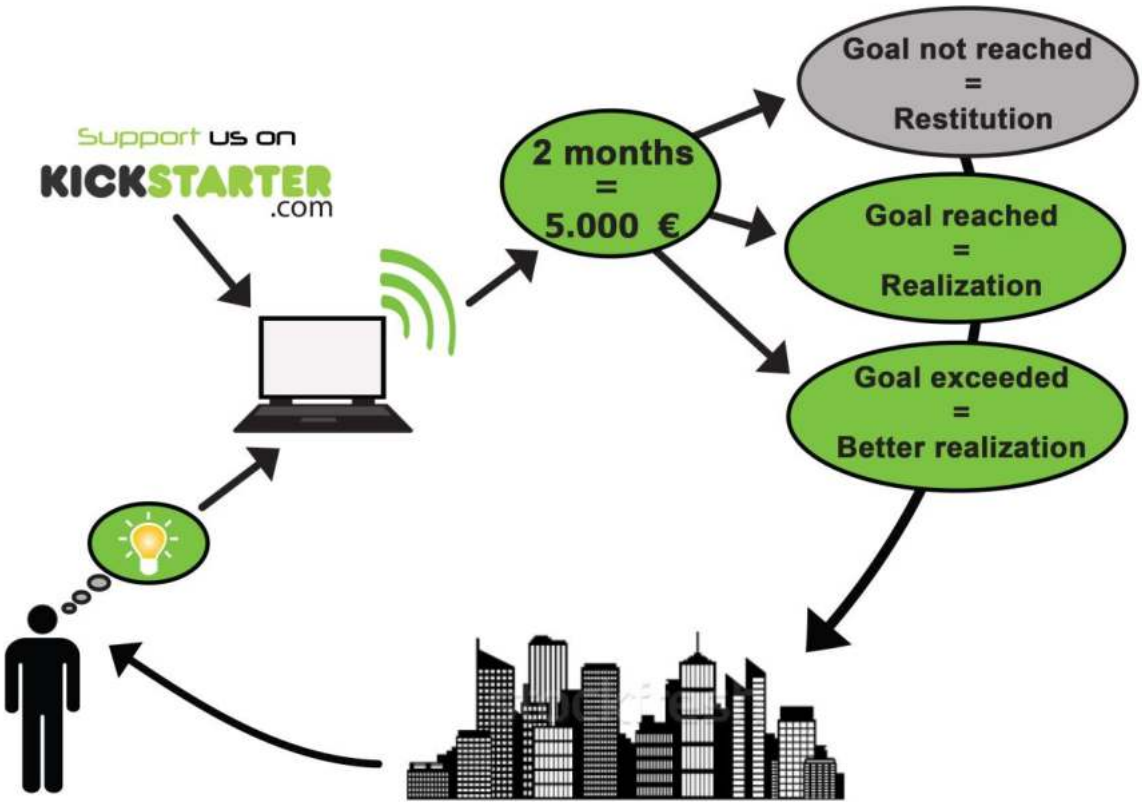


Figure 1. The crowdfunding s working.

Many crowdfunding platforms take a percentage variable according to the type of financing chosen: generally, this percentage is about 4-5% for the typology fixed funding , and about for the typology flexible funding . Some platforms are also intermediate typol

allow different approaches to the crowdfunding campaign. Generally the donations are collected on a PayPal account, and only in a few cases the campaign promoters can collect the donations on their own bank account or by cash.
The IC technologies and the web platform has really many vantages, but also problems.
The vantages are related with the directness and the immediacy of the communication: web is a virtual global place, where is possible communicate with a great amount of people in a click. The easy language, the utilize of cool pictures, the application of apposite marketing strategy to share the project and to increase its relevance by publicity, could be valid instruments to goal the objective. Another vantage is the transparency: all can visualize the amount raised, the time of the campaign, the information and contacts, and all contributors can get back their donation (in the fixed funding model) if the campaign doesn t reach the goal.
However, this mechanism hides some communication risks: the utilize of a marketing strategy could manipulate the public opinion about the project, but the project should take its origin from a common and shared will. Another problem is the digital divide: many people, especially in our application context (Palermo, Italy), aren't able to use computer or other informatics devices or have really difficulties in this operation; some other people, although are able to use ICT, do have confidence in informatics money transfers. There is also a privacy question: people give to the web platform some of their personal data (name, email contact), but if the civic crowdfunding were an institutional funding system they should give all their personal data, because the public institutions can t receive money from unknown persons. This may generate a privacy problem and an overload of the web platform (an ethical and technical problem).
In the fixed funding model the donations are blocked in the donator s credit amount for the project s realization is reached: so the money transfer is made ended successfully. This method is more adapt to project specific, when the promoters know the exact amount that is necessary for realize the project.
In the flexible funding model the donations are really made in every case: all the donations are raised, and the crowdfunding campaign is similar to a traditional fundraising campaign. This method is more adapt for social causes or humanitarian projects.
The time of the crowdfunding campaign is a very important factor: a long lasting campaign (some month) could raise more donations, but it will have a slow rhythm, while a short campaign (60 days max) could count on the emergency effect , a psychological strategy to induce people to support the cause. Some crowdfunding campaigns could have no time limits, like the fundraising for the humanitarian causes or for the promoting and defending of human rights.
The most important crowdfunding platforms in Italy are Produzioni dal Basso (https://www.produzionidalbasso.com), Eppela (http://www.eppela.com/) and De Rev (https://www.derev.com/it/), but there are many local projects really interesting like Laboriusa (http://laboriusa.it/). In the international context the most famous crowdfunding platform are surely Kickstarter (https://www.kickstarter.com/), but there are many recent platforms that are working well, like Indiegogo (https://www.indiegogo.com/). The projects are organized in several categories, especially in the generic web platform, to facilitate the individuation of the projects more interesting; each project is described by a video presentation, and a narrative text that explain the topic and the story of the initiative. Many projects can include the possibility to give rewards as a thank you sign for the contributors: this system are called reward-based , and, how to Alessio Barollo, is the method more adapt to the Italian context (Barollo, Castrataro, 2013).
rewards or perks should be related with the theme of the project, and should be easy to send through postal services. Alternatively, rewards could be an informatics product (a postcard, a little e-book or similar solutions), to send through e-mail. Rewards are a symbolic thank you, and not a product to sell: the whole crowdfunding system are based on the free donation, there isn t a commercial finality. This point is very important in relation to the tax governmental system, and in relation to the control of the money flows: in Italy there isn t a legislation about the crowdfunc (interpreted as a fundraising non-profit activity), so it s very difficult individuate experi follow the same procedure. The only Italian law about crowdfunding is about the equity-based crowdfunding, that is related with the company shares in the business sector: it s a modality very different from the topic of this paper, so we will not discuss it here.

In this way, the transparency and the honesty of the whole operation (publication of materials, crowdfunding campaign s conduction, money flows through PayPal, collection of data) are guaranteed only by individuals campaign promoters and by web platforms, without a systematic institutional control. At the same time, open a bank account specifically for this purpose in Italy it s a problem for a cultural association ( cultural is always non-profit): the control in each moment the money flow and must know the identity of the contributors, in order of a strict law against the money laundering. At this moment a cultural association who want start a civic crowdfunding campaign for the installation of some benches in a neighborhood square, for example, must utilize a PayPal account linked to a personal credit card and not to a bank account. Similarly, there isn t an univocal institutional regulation for the methods and for the participatory budgeting. From an urbanistic point of view, this means that the public participation processes in the Italian urban contexts are severely limited about their application tools: to make really a participation process and to negotiate the choices and the redistribution of the public resources, we need to give people some economic tools to make real the discussion results.

## 4. A practical civic crowdfunding experience within an urban park in Palermo, Italy

The case of study we want to present in this paper is a practical experience of public participation and civic crowdfunding in the city of Palermo, Italy. We want test a methodology and analyse the results from a technical point of view, to understand if this way could be really a public resource for the city.

We have chosen an urban area where the sense of identity and the feeling of belonging are really strong: the place where we have conducted our project is the Uditore Park. This place has a particular story: it was an abandoned land in the middle of the city. Two years ago a group of citizens, with some university professors, constituted independently an association and claimed the use of this land: they realized a park, whit private donations and the collaboration of many people. Many participants to this action was inhabitants of the neighborhood where is situated the park, that is called Uditore-Passo di Rigano (in the 5 district of Palermo). The par of people, who come from all the neighborhood of Palermo, because it s almost t park (the other parks are more peripheral and don t have enough games for children, sports equipment or space for dogs): but the people who live near the park, in that neighborhood, are the principal supporters of the park, and now identify themselves with this.

We needed a strong community who could represent a good substrate for the participation process, and for the civic crowdfunding campaign, so we have chosen the context of this urban park. We have prepared an ideas collection: we have started by the traditional qualitative methods of social analysis like the interviews (Corbetta, 1999), but then we have needed to adapt the strictly formal methods to a new modality, more flexible and near to behaviours of the people. So we have organized some meetings with the people within the park, according with the Uditore Park Association, in some particular occasions like summer events, to know what typology of services or furniture could be necessary in this place from the point of view of the users.

After this first step, we have prepared a box (fig.2) and a list of categorized options: the box was shaped like a little house, with four colours (each one for one specific category). In each colour section there was a slot to insert a ticket (like a vote ) with an idea, or a wish, for have prepared the tickets with some options predefined (these options derived from the first survey), related with sport and free time, games, furniture, other (the ca represented by a blank ticket for a free suggest).

Figure 2. The little house of ideas . A man choses a ticket to write an option.

We went to the park several times with the box, talking with the people and explaining the project, and then we left the box within the park for about one month. At the last, we have counted all the tickets and we have selected the projects more requested for each category: for the sport and free time the multipurpose field , for the games the seesaw , for the furniture the sha We didn t limit to the mathematic count: we have discussed these results in order to technical feasibility and appropriateness, and then we have presented the projects selected to the volunteers of the Uditore Park Association. They told us that was already working to realize a multipurpose field, so finally we have chosen the shade structure as the final project to realize.

At the same time, we have analysed many crowdfunding platforms, to select the platform more adapt to our project. At the last, we have chosen Indiegogo, because is very communicative, has a good graphic style, is very easy to use. The problem is the language (Indiegogo is an American platform, so the instructions are in English, but our supporters are Italians), but we think that the non-verbal (non-written) communication (colours, organization of the elements in the layout of the web page) could be more important than the verbal (written) communication.

We also have learned how PayPal works in this case, relating to a crowdfunding platform: we had to consider also PayPal transfer fees in the total amount we need for realize the project. We have chosen to utilize the PayPal count of the Uditore Park Association.

About the project and the material building of the shade structure, we would like to realize a natural and ecologic structure, similar to the other elements of the park. So we have taken contact with a team of architects who realized the last year a bamboo structure in this park. This team is called LAN (Natural Architecture Laboratory), and this is their website: http://www.lan-architetture.org/. The shade structure will be made of wood and Sicilian reed (Arundo Donax): so we will utilize local materials, helping the local economy.

This is the text we have published in the web platform (https://www.indiegogo.com/projects/viva-l-ombra-al-parco-uditore):

«Hurray the shade! Imagine a wonderful sunny day with a little bit of free time for a walk or other leisurely outdoor activity, but did you ever consider the practicality of a shade structure?

A shade structure:

- offers comfort for resting and allows you to remain outdoors without suffering from heat exposure;

- provides the perfect relaxing spot ideal for reading, chatting, having a picnic or meeting new people;
- offers a meeting space which promotes the importance of socialisation allowing you to rediscover the value of true sharing.

All of the above and more can be achieved under the shade, a totally ecological open structure which respects the environment and is in harmony with nature. Our aim is to greatly improve the site s context.
Who is the project for and where? Palermo s Uditore Park (Italy) is the ideal place in w idea can be realised. The park is a shared urban space, a green heart. It is a part of the city which until recently was disused: now it has been returned to the citizens and it's open to social and intercultural exchanges.
A park, made by local people with flowers, large and small cultural miracles, the place where we want to realise a public resource, a shade ecological structure starting from a bottom-up and innovative experience.
The collaboration with a great number of participants has been worthwhile; from all those who wrote on a note a wish, an idea or a dream for the Uditore Park as well as the users having their input. Now however the time has arrived to bring our proposals to fruition, and for this we need everybody again, including you!
The project originated from the idea of the working group Civic Crowdfundin territory , constituted by: Salvatore Abruscato (territorial planner), Floriana Cane (student architecture), Elena Giannola (architect and PhD in urban and regional planning), Francesco Paolo Riotta (urban planner, masters student of territorial, urban and environmental planning).
Thanks to the collaboration with the Uditore Park Association, we have started the participation process to kick-start the final project being realised. We have produced a collection of ideas in which many people have contributed towards and in the end have selected the shade structure.
The collection of ideas and the relative discussion have been an occasion of confront, dialogue and explain the motivation of each proposal.
The Uditore Park is a space recently returned to the community and is the perfect area for bringing about concrete experiences of urban regeneration and initiatives of environmental protection and enhancement.
A deep sense of community identify and belonging can be most definitely be found here!
The Uditore Park is managed by volunteers who work extremely hard to provide a public service to the city: it s a unique place in Palermo which has great potential.
With this project we can collaborate to utilise it in the best way possible!
Finally we want to say you thank you: you can give a contribution and receive a little gift of thanks in relation to the amount of your donation, such as a special thank yo Facebook/Twitter page, on our official website and on the project s presentatio special bookmark or digital/printed copy of the project s presentation brochure.
Let s get ready to have our shade structure ready for the summer!
Enjoy our park!»

## 5. Results

The experience at this moment is in progress: we can express a partial consideration about the process we conducted until now. The traditional participation methods can t be app the context selected: each region, each city and also each part of one city is different from the others, so with the guide of our technical expertise we had to adapt the traditional survey to the real people, modifying just a little the typology of questions and the modality to present the project in function of the interlocutors (ancient people, children, men or women). Colours and pictures are more expressive than texts, and we had to change our scientific language to explain the project in a way more simple and understandable.
In the precedent steps we had to manage the impetuosity of participants: it was difficult express our identity and our objectives, because in a context where the public administration is lacking, people search other representative entity as of referring points.

We worked in a particular place: it s a public space, but isn t a municipal area ( area is of the Regional Administration); the master plan provides for this area the destination to public offices, but now there is in progress a proposal of variant; many people attend the park, many people identify themselves with the park, but at the same time many peopl park and don t respect the environment and the furniture installed in the park contradictions.

In the transition from the disciplinary context to the real urban context, we have encountered many difficulties and we have spent a lot of time searching the optimal method, the best combination of elements to claim public attention, explain clearly the project and the objective, be short and incisive, change quickly language and expression modality in function of different people. Building this idea, before than building the structure, was a difficult and long lasting operation.

We found some critical points:

- The time is a strategic factor in this process: there is a conflict between the long time of the participation process, and the necessity to a short time of realization, to give a positive feedback to the participants and to take advantage of the period when the subject is much debated;
- The communication is fundamental, but there is a conflict between the technical language and the friendly language, more understandable but less exact;
- The collaboration with any civic association that takes care of the space selected is not always easy and granted;
- The social identity of the urban area selected for the project should be analyzed before planning a civic crowdfunding campaign;
- The public administration should be involved in the process: so the project could have positive effects related with the confidence between citizens and urban government.

Surely, the choice of the web platform, the application of marketing strategy, the advertising of the initiative, are also important points to consider.

We have organized some promoting events in different part of the city: one in a famous co-working space (and also restaurant) in the historical center of Palermo, others in bookshops, cultural centers, and finally within the park. At the end of the crowdfunding step, if we reach the fixed amount (5.000 ), we will organize the building phase with LAN and with some volunteers.

## 6. Conclusions

The civic crowdfunding could be really a strategic resource for the cities: but to apply this practice should be defined some rules more clearly than now. The role of public administration can t b marginal: public institutions and private citizens should collaborate to make a better quality of urban life. The public-private partnership can t be only interpreted as a compromise b public administration, who has the power but hasn t the financial resources, and the who haven t power and want a part of decisional power through financing the Actually the other citizens, who have not power and not enough financial resources, are excluded from the decision making process. The civic crowdfunding can be a valid instrument to build social cohesion, social inclusion, civic conscience, but can t be the unique solution crowdfunding is mainly ethical, and social: is fundamental to lay the foundations for a new citizenship, but to realize materially projects and to create public services we need an amount of money that the crowdfunding alone cannot achieve.

This is not only a financial question, but it s also related with legislative aspect o government: the role of the public administration is especially to give rules, because the public administration is the only one urban actor who can legitimize the bottom-up initiatives. In this way, we have to think in a collaborative vision to cross over the conflict: the city is a complex system, where there aren t only citizens and politicians. The city is really a multidim there are many balances and dynamics and it s very difficult recognize and control these phenomena. For this reason our engagement as urbanists is to enter in this complexity, analysing the potential usefulness of innovative strategies like the civic crowdfunding. We have to think in a multilevel vision: in the contemporary cities we can achieve our objectives only if we operate in

multiple and integrated ways to a unique target. In a fragmented context we have to fragment our action but not our intention.

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# TRACK 11

## Planning across Borders: Transnational, International and Intergovernmental Planning and Spatial Management

# FROM SILOS TO INTEGRATED COLLABORATION: LOCAL POLICY DESIGN AS MEANS TO PROMOTE THE COLLABORATIVE METROPOLITAN GOVERNANCE

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*Achieving integrated collaborative governance of multi-sector stakeholders goes beyond setting independently formulated policies across different domains. It entails taking into account a comprehensive approach among different areas of policy at the formulation and implementation stages. For collaborative metropolitan governance pursued at the city level, integrated collaboration means finding development paths that consider synergies and trade-off applicable for different stakeholders at different level. With the process of designing and administering collaboration varies according to the types of policies and institutions adopted in cities, the success of metropolitan-wide collaborative governance depends on the integrated outlook on local policies and institutional architecture.*

*This paper provides an overview of various local policy designs to administer collaboration, and seek to illustrate the policy framework to promote integrated collaborative governance. Four Indonesian metropolitan regions with a total of 23 member cities are observed as comparative case studies. Detailed examination of local institutional structure is conducted to sketch the local institutionalisation on collaborative activities. Despite the similar setup provided by the central government, the comparison of these cases demonstrates a different scale of operation, structure, and policy instruments. Drawing upon work on power dynamics and social relation, this paper illustrates the linkages between the selection of policy instruments and the institutional structure. Our findings point out that the comprehensive approach through coherence policies positively affects the intergovernmental collaboration, a step toward integrated metropolitan collaborative governance. The cross-sectoral collaboration, on the other hand, is affected in a lesser degree.*

## 1. Introduction

At the city level, the way local governments dealing with urban service provision under the growing pressures and opportunities of urbanization have been front and central since the concern of urbanization is raised. Among other challenges, financing and providing urban public infrastructure have been advocated both as urban and regional issues due to its nature that often reach beyond the administrative boundaries. The proponent of regionalism has been upholding the idea of a regional approach as the potential panacea to provide a wider reach of urban service (Brookings Institution, 2002; Feiock, 2004). In the metropolitan area where most of urban issues take place, achieving integrated planning and provision of urban service calls for integrated collaborative governance of multi-sector stakeholders. This type of collaborative governance takes into account comprehensive approach among different areas of policy, particularly at the formulation and implementation stages. With the politicization of infrastructure provision often found in cities, collaborative approach has been a struggle with each success considered as a major feat.

The notion of collaborative governance at the city level in Indonesian planning process is not novel although not exactly well developed and well expanded either. Prior to the decentralization, collaboration for metropolitan planning was handled by the provincial and/or central government with

less involvement of city level government. Consequently, collaborative metropolitan governance in Indonesia has yet developed a real tradition in comprehensive administration and implementation. In recent years following the decentralization and the push from central government to promote collaboration at city level, research on collaborative governance see increasing values of building knowledge in this area. Looking at the precedent research, this paper found that research on gauging the causal effect of local policies to the working of collaboration in Indonesian cities is considered a new arena of research as the implication remains unknown. Thus, responding to this research gap, this paper will concentrate firstly to understand the implication of local policy design toward the working of collaborative metropolitan governance. Secondly, considering the various types of collaboration implemented, this paper aims to answer whether the process of designing and administering collaboration differs according to the types of policies and institutions adopted in cities and if the success of metropolitan-wide collaborative governance depends on the integrated outlook of local policies.

In order to sufficiently answer the research objectives, this paper undertook an analysis of the local policy design of collaborative governance in four Indonesian metropolitan regions. As cases studies, all cities in four metropolitan region were observed. The metropolitan regions are Jakarta (9 cities), Surabaya (7 cities), Yogyakarta (3 cities), and Denpasar (4 cities). In this paper, the local policy design represents the policy setting developed by local governments that is directly and indirectly affect the working of collaborative activities at the local and regional level. Accordingly, the analysis of the local policy design started with the assumption that the process of collaborative metropolitan governance can or should always be improved depending on local policy selection. This policy selection in turn affects and is influenced by the institutional structure of local governments an interaction between local actors exist in the institutional environment set through local and regional political, social, and cultural characteristics. Thus, our hypothesis was that together institutions and policies create a local platform for local governments to conduct and direct their activities. This paper considered that the linkage between specific collaboration-supportive policy approaches and the extent of collaboration that their adoption entails are crucial to the study. By attempting to address the implication of local policy design on the operation of collaborative governance, a more clarity can be developed on whether the adoption of certain policy approaches affects the collaborative policymaking process at the local level or not. This assumption was largely built upon understanding that policy designs statutes, guidelines, programmes have consequences for the allocation of values in society, and at the same time reflect the culture and values of society itself (Schneider and Ingram, 1990).

This paper is presented in five sections. The introduction covers the background and rationale of the study based on the literature review and observation of Indonesian situation. The second part, the methodology, elaborates the analytical framework used for the analysis, including the parameters suitable for the data availability in Indonesia. The third part presents an overview of Indonesian collaborative metropolitan governance, providing information on the system prior and after the decentralization. The decentralization plays an important role in Indonesian collaborative governance as it changes how collaboration is administered and structured due to the change of authority in local practice. The fourth part brings about the research analysis in three sub-sections; the analysis of the local policy design in observed cities and regions, the analysis of the local institutional structure of collaborative policymaking, and the analysis on the interlinkages between the structure of institutions and the policy initiatives adopted by local governments. The final analysis is aimed to enable further understanding of the internal work of collaborative policymaking, particularly in addressing the causal effect of local policy design on collaborative interaction between actors. The conclusion will close the discussion by providing the implication of local policy design toward the future of Indonesian collaborative metropolitan governance.

## 2. Methodology

### *2.1 Addressing the Local Policy Design*

The primary data used to address the local policy design in this paper is policy instruments adopted in the observed cities. The mapping of policy instruments has largely directed to understand policymaking through the establishment of instrument choice. In order to map different types of policies, this study establishes a policy classification and catalogues policies issued by local governments in their websites, annual reports and development plans in the last 15 years following the decentralization accordingly. Interviews with policymakers were conducted to validate the availability and the status of the policy catalogued. As this research focuses on the local level, all of the policy instruments observed are sponsored solely by local governments to encourage collaborative arrangements in their jurisdictions. Policies issued by higher levels of government are referred in case a policy adoption is observed.

The classification of policy instruments used in this analysis is derived from the sample of the instruments of public policy by Linder and Peters (1989; 1990). Linder and Peters policy instruments were used as they provide a wide variation in instrument appraisal while allow user space to analyze the instruments from an institutional point of view which is a critical important of this paper. Linder and Peters sample of the instruments is divided into seven instruments to accommodate disparities of basic public policy and serves as sampling frames for drawing a stratified sample of instruments. The instruments are: direct provision, regulation, authority, contract, fiscal/tax, subsidy, and exhortation (Table 1). Previous studies that had utilized these instruments for analysis, among others, are McGuire (2000) for local economic development and Holmes (2010) for environmental management.

During the course of cataloguing local policies, this study found that exhortation, financial, and contract related instruments are generally based on the political situation and tend to be short-lived. Exhortation tends to be short lived since it is mostly directed through local program. Table 1 displays the policy mapping of Indonesian cities on collaboration, cataloguing into six major instruments adopted from Linder and Peters (1990). 20 policies currently active since the decentralization of 1999 have been identified.

Table 1. Instruments of collaboration-supportive policies in Indonesian cities.

| Exhortation | Direct provision | Fiscal/Subsidy/Tax |
|---|---|---|
| 1. Advocated in Master Plan<br>2. Advocated in the midterm Development Plan<br>3. Advocated in the long-term Development Plan<br>4. Advocated in the Program | 1. Shared local funding to state enterprise<br>2. Shared local funding to third parties (private sector/ other local government)<br>3. Local budgeting authority<br>4. Infrastructure transfer<br>5. Management of local asset | 1. Grants<br>2. Incentive<br>3. In-kind transfer |
| **Contract** | **Regulation (for Collaboration)** | **Authority** |
| 1. Consolidated contract issuance<br>2. Evaluation scheme<br>3. Conflict solving | 1. Regulation covering all sectors<br>2. Regulating nongovernmental sector only<br>3. Regulating local enterprise only | **1.** Procedural guideline in collaboration<br>**2.** Sub-district and village collaboration guidelines |

Source: Author (2014).

### *2.2 Analysing the Institutional Structure for Collaborative Policymaking*

The analysis on the institutional structure of collaborative policymaking is directed to explain the structural dimension of local institutions in conducting joint policymaking activities. The analysis, thus, was built upon a hypothetical idea that the state of Indonesian collaborative governance, particularly in building collaborative policymaking, is closely related to and can be explained partly through the extent of the institutional structure of local government interaction with other actors. This paper presume that through the identification of the institutional structure, further analysis on the institutionalisation of collaborative policymaking can be structured.

The study of institutional structure observes a governance architecture from the viewpoint of vertical and horizontal relations which often referred as intergovernmental relations (Rhodes, 1997; Wright, 2000). This paper considers the measurement of vertical and horizontal interaction in the analysis of the institutional structure of collaborative metropolitan governance is built on the basis of the operationalisation of regionalism whereas; vertically, higher interaction between local and provincial governments will result on higher probability of local governments to adopt provincial perspectives in their local policy planning. Similar rationale can be applied to the central-local interaction. Horizontally, the more local governments get involved with other local actors, governmental and nongovernmental, the more they become proactive towards collaboration.

This paper limits itself to analyse the horizontal interaction only, focusing on how the interaction forged among all local actors. The horizontal interaction, thus, is an attempt to explain how local actors interact among interdependent linkages in developing collective platform, bargaining, and determining joint policymaking activities within their allowed capacities. In this paper, the measuring instruments used for the analysis are retracted from the collaborative governance activities survey originally developed by Agranoff and McGuire (2003) to measure the institutional structure of the collaborative governance. Four parameters related to collaborative policymaking are observed as follows; consolidate policy effort, engage/agree in formal partnerships, engage in a joint policymaking, and engage in a joint policy implementation.

To collect the primary data, a structured survey was conducted during two periods (Table 2). The survey targeted chief officers from local governments (city level), working on the Local Development Planning Agency and City Planning, Public Works Agency and/or Collaboration Bureau and are responsible for planning and implementation of collaborative activities. The respondents were interviewed and asked to identify each collaborative policymaking activity their departments (or cities) currently engage with various organisations, including central and provincial government agencies, neighbouring city agencies, state owned enterprises as well as private and civic sector. Additional interviews were carried out with the central government (Ministry of National Development and Planning, Ministry of Public Works and Ministry of Interior) and 6 provincial governments Jakarta, Banten, West Java, Yogyakarta Special Province, East Java, and Bali where observed cities are located. Table 2 presents the data overview.

Table 2. Data collection from questionnaire survey.

| Metropolitan region | No. of local governments | Total respondent/ collected sample | % response rate | Period of survey |
|---|---|---|---|---|
| Jakarta | 9 | 17 | 88.89 | *, ** |
| Surabaya | 7 | 10 | 85.72 | * |
| Yogyakarta | 3 | 6 | 100.00 | * |
| Denpasar | 4 | 5 | 67.50 | ** |

Period of survey: *: October November 2012, **: May June 2013.

## 3. General Overview of Indonesian Collaborative Metropolitan Governance

Indonesian decentralization is often criticized to leave institutional arrangements at subnational levels further fragmented. After the regional autonomy was introduced, the local government, as expected, is reluctant to surrender some of its independence in managing urban development to the regional level government. This local and regional setting created strong push and pull among local and provincial government in most regions practicing regional collaborative governance. While establishing a single authority of metropolitan government is generally shunned by local governments due to strong political tensions among provincial and local governments, the growing need to establish a collaborative framework that can work in a fragmented system remains if not getting stronger. Therefore, owing to this fragmented political landscape, the rebuilding of regional governance becomes increasingly important policy and research agenda in Indonesia (Hudalah et al, 2013).

Figure 1. The transformation of institutional structure of collaborative metropolitan governance in the observed regions.

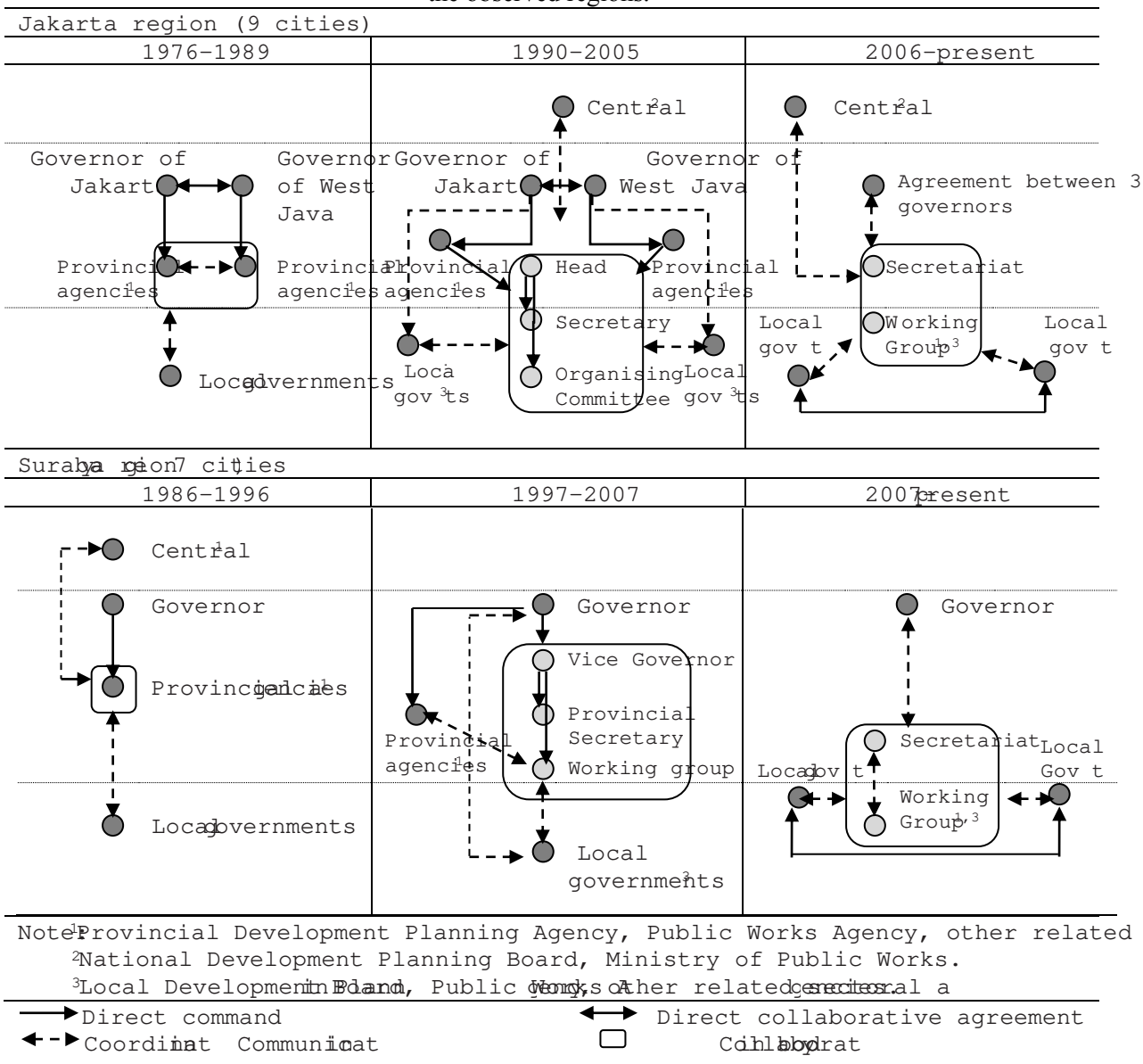
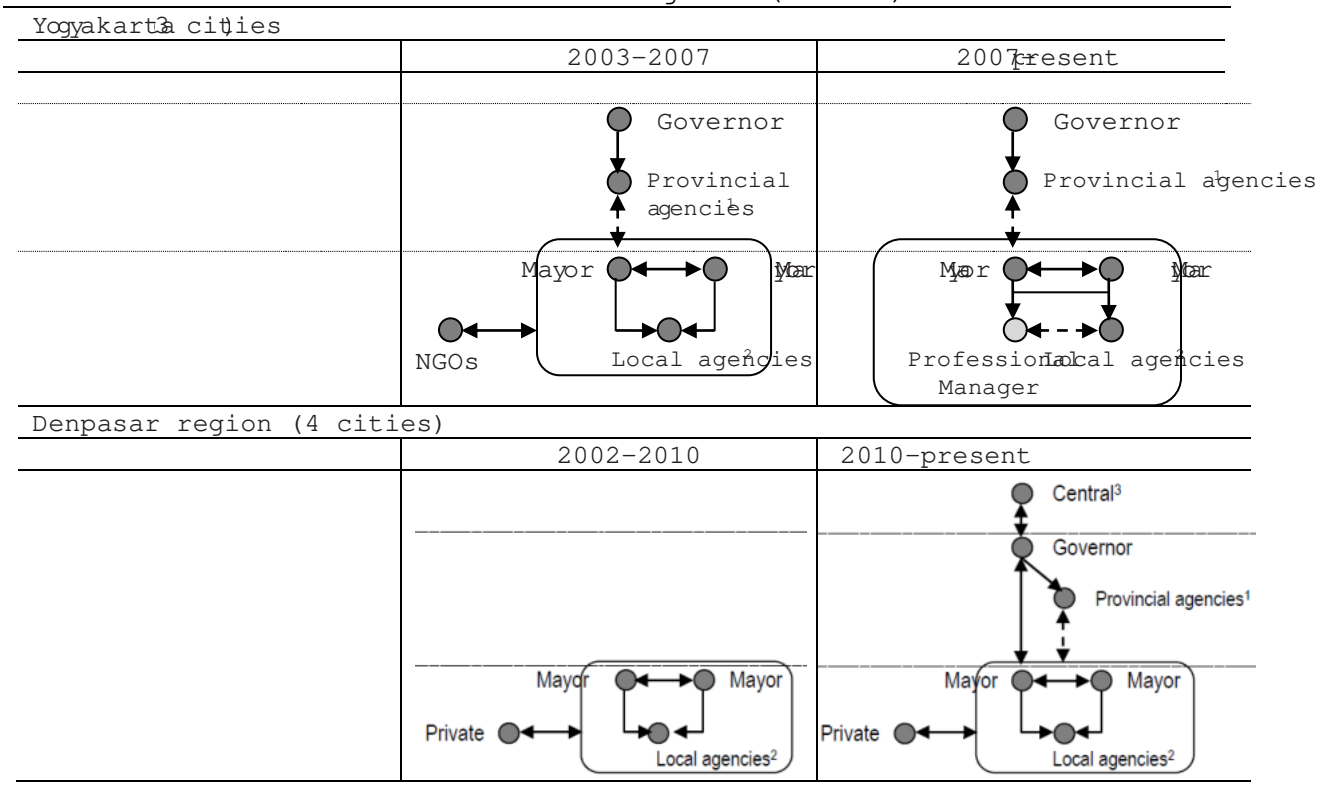


Figure 1. Transformation of institutional structure of collaborative metropolitan governance in the observed regions (cont d).




*Source: Author (2014).*

Prior to the decentralization, collaborative metropolitan governance was observed only in Jakarta and Surabaya, very limited to consider the number of urbanized regions. New collaborative metropolitan governance started to emerge again following the enactment of the decentralization law. Various types of collaborative arrangement, range from intergovernmental to contract agreement with the private sector, are experimented in major metropolitan regions. Some of collaborative arrangements were considered thrives, e.g. intergovernmental collaboration in Yogyakarta (see Firman, 2010; Zul Fahmi, 2010) and Denpasar, but others like Jakarta and Surabaya are struggling to set up an arrangement that can successfully plan, coordinate and monitor the implementation of development programs across jurisdictional boundaries.

Generally, collaborative governance between cities in metropolitan regions prior to the decentralization was a provincial issue. Both cases Jakarta and Surabaya were initiated by the provincial government and supported by the central government while local governments mostly acted as the implementing agency. Local governments communicated and coordinated their planning and implementation on a platform established by the provincial government. In this sense, local governments, public and private sectors played a passive role in this system where policies were produced by the higher level of governments and their involvement was limited to the implementation. On the other hand, with the decentralized and de-concentration of power applied to the lower level of government, collaborative governance between local governments in the metropolitan region moved from the provincial to local level. While previously the provincial government has a direct command to the collaborating body as it was established on the provincial level, the new system encourages that the collaborative platform to be developed at the local level (Figure 1). As a result, the local government now yields the autonomous power to decide, whether to collaborate or not.

## 4. Analysis on Indonesian Local Policy Design and Collaborative Governance

### *4.1 The Local Policy Design of Indonesian Collaborative Metropolitan Governance*

Table 3 reveals the percentage of adopted local collaboration-supportive policy instruments in the four observed metropolitan regions. Although the variation is wide among regions, the majority of cities in one region has a similar policy design, with Surabaya as an exception. In four metropolitan regions, three policy instruments are observed in more than 67 percent of cities or two third of a region while the rest of 17 policy instruments range from 16 to 70 percent. This number indicates that common initiatives established by local governments are only a fraction of the observed instruments. The most common policy instrument reported by local government is in-kind transfer, a regulation allowing local government to fund intergovernmental projects through intergovernmental transfer. On average, Jakarta and Yogyakarta have a better inter-city policy coherence than Surabaya in almost all policy instruments observed. In Denpasar case, although the average of policy adopted by local governments is the least among observed regions, the level of policy coherence is higher than Surabaya.

Table 3. Percentage of adopted local collaboration-supportive policy instruments in observed regions.

| Instruments | Jakarta (n=9) | Surabaya (n=7) | Yogyakarta (n=3) | Denpasar (n=4) |
|---|---|---|---|---|
| **Exhortation** | | | | |
| Advocated in Master Plan | 100.0 | 71.4 | 100.0 | 25.0 |
| Advocated in the midterm Development Plan | 77.8 | 71.4 | 66.7 | 50.0 |
| Advocated in the long-term Development Plan | 77.8 | 28.6 | 100.0 | 50.0 |
| Advocated in the Program | 88.9 | 42.8 | 100.0 | 100.0 |
| **Direct provision** | | | | |
| Shared local budget to state enterprise | 88.9 | 100.0 | 66.7 | 75.0 |
| Shared local budget to third parties (private sector/other local government) | 88.9 | 57.2 | 66.7 | 50.0 |
| The budget allocation for managing regional collab. | 77.8 | 57.2 | 100.0 | 100.0 |
| Infrastructure transfer | 77.8 | 42.8 | 0.0 | 0.0 |
| Management of local assets | 100.0 | 85.7 | 66.7 | 75.0 |
| **Fiscal/Subsidy/Tax** | | | | |
| Grants | 77.8 | 71.4 | 66.7 | 50.0 |
| Incentives | 44.4 | 42.8 | 100.0 | 0.0 |
| In-kind transfer | 100.0 | 85.7 | 66.7 | 100.0 |
| **Contract** | | | | |
| Consolidated contract issuance | 77.8 | 42.8 | 100.0 | 100.0 |
| Evaluation scheme | 55.6 | 42.8 | 100.0 | 100.0 |
| Conflict solving | 77.8 | 28.6 | 33.3 | 0.0 |
| **Regulation (for collaboration)** | | | | |
| Regulation covering all sectors | 55.6 | 14.3 | 66.7 | 0.0 |
| Regulating nongovernmental sector only | 55.6 | 14.3 | 33.3 | 0.0 |
| Adopted from higher level (no local regulation) | 1.1 | 71.4 | 33.3 | 100.0 |
| **Authority** | | | | |
| Procedural guideline in collaboration | 88.9 | 0.0 | 100.0 | 0.0 |
| Sub-district and village collaboration | 33.3 | 57.2 | 33.3 | 0.0 |
| Mean | 78.96 | 51.42 | 70.01 | 48.75 |

*Source: Author (2014).*

Further looking at the array of the local policy design across metropolitan regions (Table 4), a wide variation is observed between regions. Generally, metropolitan regions can be divided into two groups; one that has large similarity in their policy instruments and another that has less similarity.

The variation on how regions perceive the importance of collaboration-supportive policies also differs across instruments. In this case, some regions see the importance of advocating and jawboning collaborative activities through their plans while other regions placed their collaborative concern through government provision and public investment related policies or providing comprehensive scheme on fiscal instruments.

The way cities projected their policy instruments from the perspective of fiscal strategies falls into three groups; regions with intergovernmental orientation, regions with cross-sectoral (public private) orientation, and regions which try to accommodate both intergovernmental and cross-sectoral collaboration. Cities with fiscal orientation leaning toward intergovernmental orientation provide fiscal transfer and/or intergovernmental resource sharing scheme through grants and in-kind transfer. The cross-sectoral oriented cities, however, have policy instruments covering private initiatives, incentive for private sector in joint partnership, providing an infrastructure transfer scheme, regulation outlining transfer management of local assets, and other private-sector friendly policies. Surabaya and Denpasar, in particular the core city and large suburbs, issues expansive policies accommodating public private partnership. Cities in Jakarta providing cross-sectoral friendly policies, however, are not limited to the large suburbs only but almost all cities in the region. Whereas cities in Surabaya other than the core city and large suburbs are not familiar with cross-jurisdictional fiscal policies, cities in Yogyakarta are the opposite. Fiscal policy preferences, can be concluded, reflect cities capacity in conducting a certain type of collaboration.

Table 4. Regional comparative policy characteristics based on the local policy design.

| Variable | Jakarta | Surabaya | Yogyakarta | Denpasar |
|---|---|---|---|---|
| Policy coherence | Limited (not in fiscal, contract) | Lack of coherence in all | Coherent in all | Coherent on collaborated sector |
| Advocacy on collaboration | Active | Passive | Active | Active |
| Collaborative policy orientation | Localised | Localised | Region-wide | Region-wide |
| Type of collaborative policy | All cities. Long and short term | Few cities. Limited to mid term | All cities. Long and short term | All cities. Long and short term |
| Fiscal policy orientation | Intergovernmental cross-sectoral | Cross-sectoral | Intergovernmental | Intergovernmental cross-sectoral |
| Regulation | Mostly enacted | Mostly adopted | All enacted | All adopted |

*Source: Author (2014).*

## *4.2 The Institutional Structure of Indonesian Collaborative Policymaking*

The analysis of institutional structure examined the relative importance of collaborative policymaking activity between cities and among participating actors at the local level. It was projected to explain the prominence of local actors at the collaborative platform. Local governments have many ties with different actors and in those ties they create relation with a particular actor through one or many types of activities. There are possibilities that local governments do not create ties with any actors on a certain joint policymaking activity as much as there are chances that they develop ties with a counterpart on all activities. Through the analysis, this study tried to capture the percentage of activity that involves each horizontal actors to represent how the collaborative policymaking is structured from the perspective of local actors. In order to do so, the aggregate of relative involvement of preferred actors chosen by local governments in a particular activity was measured by converting the total number of linkages between local governments and other players within a specific activity into a percentage. Table 5 summarised the findings.

Table 5. The horizontal interaction on the collaborative joint policymaking activities (percentage).

| | OC | D | SOC | CC | REC | PCD | U | NGO |
|---|---|---|---|---|---|---|---|---|
| Jakarta | 32.97 | 0.00 | 20.33 | 6.04 | 9.89 | 13.74 | 8.79 | 8.24 |
| | (1) | | (2) | | (4) | (3) | | |
| Surabaya | 27.85 | 1.27 | 24.05 | 3.80 | 13.92 | 11.39 | 12.66 | 5.06 |
| | (1) | | (2) | | (3) | | (4) | |
| Yogyakarta | 56.10 | 14.63 | 12.20 | 0.00 | 2.44 | 0.00 | 7.32 | 7.32 |
| | (1) | (2) | (3) | | | | (4) | (4) |
| Denpasar | 43.48 | 4.35 | 8.70 | 0.00 | 4.35 | 15.22 | 17.39 | 6.52 |
| | (1) | | (4) | | | (3) | (2) | |

OC: Other Cities
D: District
CC: Chamber of Commerce
SOC: State Owned Company
REC: Real Estate Consortia/ Private Sector Association
PCD: Private Sector and Developers
NGO: Nongovernmental Organization
U: University

Number in brackets are ranks.
*Source: Author (2014).*

Three different governance structures are observed from the results; intergovernmental, cross-sectoral, and mixed. Cities in Yogyakarta submitted the most intergovernmental results, implying that local governments in the region rely mostly toward their neighbouring cities by devoting their collaborative policymaking activities twice as active compared to the nongovernmental actors. Moreover, whereas the cities in the Yogyakarta regions are the most frequent users of the intergovernmental interaction, they are the least frequent users of the cross-sectoral interaction. The absence of private sector involvement leads to assumption that the Yogyakarta region employs a limited cross-sectoral collaboration and are more focused to develop their intergovernmental structural institutions. As opposite to Yogyakarta, instead of interacting with their neighbouring municipalities, local governments in Surabaya tend to put more focus to form a collaboration with the non-governmental organizations. Not as polarised as Yogyakarta or Surabaya, cities in Jakarta and Denpasar regions are found to be more balanced as they pursued the intergovernmental interaction to some extend and showcase a high cross-sectoral interaction in their policymaking activities.

### *4.3 The Influence of Local Policy Design to the Institutional Structure of Collaborative Policymaking*

In the rational choice institutionalism, the action situation influences participant in which way information is accessible (Ostrom, 1990). Consequently, the action situation varies according to the autonomous degree of participants in controlling their decision. During a decision making process, participants assigned to a situation must choose from possible actions that can affect the desired outcome (Ostrom, 2005). In this paper, the action situation is referred as the local policy design and follow similar characteristics from the rational choice perspective, i.e. it varies according to the set of policy instruments applied by the local entities. A city with a certain local policy design choose to conduct a selective collaborative activity with a specific actor in which affect the overall institutional collaborative structure of the city.

Given the importance of institutions in affecting the structure of a situation and the types of actors who are most likely to come to prominence in a particular type of situation, this paper tried to structure the collaborative governance which local governments engage in repeatedly to establish their local policy platform. Following the characterization of actors interaction analyzed in the previous section, this section addressed the linkage between this actors interaction with the local policy design by gauging the general tendency occurred on a certain condition.

Table 6 summarised the findings through the importance of the status of policy instruments toward the occurrence of collaborative activities. The summary is based on the examination between the characteristics of local policy design with the local institutional structure towards the regional characterization of collaborative governance. The analysis is conducted based on comparative regional observation of multiple occurrence among regions and cities. From the analysis, we found that the collaborative policymaking activities between cities sharing jurisdictional borders and between cities and nongovernmental actors do not require a strong policy coherence among cities in a region. This finding was gathered based on multiple occurrences of joint policymaking as the major collaborative activities among neighbouring cities regardless the status of their policy coherence (e.g. Yogyakarta and Surabaya both see the importance of conducting joint policymaking with neighbouring cities, although the first region has strong policy coherence and the latter has a weaker condition). The corollary is that as the activity focusing on establishing collaborative policymaking, which is considered more planning than implementing, it does not require a strong policy coherence on all instruments as much as implementing or adopting policies. It needs, instead, an active advocacy on collaboration from local governments.

The findings point out the inherent bias toward short-term issues and quick results of the Indonesian planning system as both intergovernmental and cross-sectoral collaborative policymaking prefer a short-term targeting model. This issue roots on the effects of decentralization in which a more decentralized administration and financing make it harder to agree on issues involving trade-off between local goals. Indonesian planning system, and subsequently its policymaking system, interlinks heavily with economics and politics which determine the policy substance and legal and bureaucratic processes which determine the policy implementation . As there is no guarantee that a policy will be implemented fully according to its original intention, the workable policies in Indonesia are often short term to reduce the distortions and noises often observed in the long-term policymaking. Short term targeting model of collaborative intergovernmental policymaking observed in this study stems from local governments demanding less time and energy to expend. Cross-sectoral collaboration is found to be less fussy than the intergovernmental as it is subjected to less political, legal and bureaucratic transaction costs and rather determined largely by the economic variables.

Table 6. Linkage between local policy design and actors interaction in the collaborative policymaking.

| Status of policy instruments | Governmental (neighbouring cities) | Nongovernmental (private and civic sectors) |
|---|---|---|
| Need of strong policy coherence on all instruments | Not related | Not related |
| Need of active advocacy on collaboration | Related | Not related |
| Need of region-wide collaborative policy orientation | Not related | Not related |
| Targeting model of collaborative policy | Short term | Long and/or short term |
| Fiscal policy orientation (Intergovernmental-cross sectoral) | Intergovernmental fiscal policy orientation | Cross-sectoral fiscal policy orientation |
| Status of regulation collaborative partnership (Enacted adopted) | Enactment of independent regulation is not crucial, except in case of Jakarta and Yogyakarta | Enactment of independent regulation is not crucial in Denpasar, yet in other regions cities with private regulation have higher cross-sectoral interaction |

*Source: Author (2014).*

In general, this paper found that the local policy design influences the state of intergovernmental collaborative policymaking more than it structures the cross-sectoral one. The condition of the local policy design directs the local government s behaviour in a way that loose or weak term of advocacy and fiscal orientation will lead local actors to choose nongovernmental actors as a counterpart in conducting collaborative policymaking than pursuing intergovernmental interaction. On the other hand, cross-sectoral collaborative policymaking between a city and nongovernmental actors in its jurisdiction are found not particularly dependable on the type of targeting model of local collaborative policies. Cities in the Surabaya regions which in general remodeling their collaborative programmes through the short term plan (working plan or medium-term development plans) pursue collaboration with nongovernmental actors as actively as cities in the Jakarta region which largely structured their collaborative programmes through both long and short term planning.

The status of regulations is found to create a variation of effects towards horizontal structures, which is predominantly structured according to each region. Enactment of individual regulation specifying code of conduct in collaboration, for example, is not necessary in Denpasar as the region has strong intergovernmental and cross-sectoral collaboration. On the other hand, cities in the Jakarta region, which perform more intergovernmental collaboration are observed to enact separate regulation specifying collaboration rather than adopting from the provincial or central governments. Taking into account power relations among actors, regions with a regional oriented collaborative strategy are generated from strong inter-jurisdiction interaction and, by some extent, closer relations with the higher levels of government. Closer relations with the provincial or central government, either through fiscal or sectoral programmes, can result on higher probability of the higher levels of government projecting their national or provincial plan to the local level. A region like Yogyakarta, for example, enjoys a tight relation with the provincial government in a way that the province can ensure the smooth adoption of the provincial spatial plan to local master plan. On the other hand, policy instrument and power relation also work on reverse, i.e. policy instruments affect the power relations, projecting region-wide collaborative strategy may lead to closer local-provincial or local-central interaction.

## 5. Conclusions

In general, according to the analysis on the institutionalisation of policy instruments, the local policy design through the effects of instruments selection and policy choice affects the state of the intergovernmental collaboration in a city. On the other hand, the correlation between the local policy design and the cross-sectoral collaboration is observed less significant. The variation between sampling cities in the cross-sectoral collaboration is wider than the intergovernmental collaboration. Policy instruments in Indonesian collaborative governance, thus, offer a means of structuring a space of selective cooperation and a space for exchange negotiations and agreements , setting aside an expansive platform with multiple actors, and thereby allow for a sectoral and case by case cooperation rather than ambiguous and metropolitan-wide consensus. Policy instrumentation for cross-sectoral collaboration is built upon a short-term exchanges and the state of power relation between government and nongovernmental actors through the use of authority and regulative instruments. The extent of intergovernmental collaboration, however, is influenced greatly through advocacy and subsidy instruments.

The artisanship of working with rules through instruments is important so as to improve how local policy design operates over time. The institutions where actors operate differently reward or prevent them over time, so that intrinsic and extrinsic motivations are learned and developed. Instruments, from the analysis, we found as a tool to try and change situations to achieve better outcomes. To improve collaborative policymaking with neighbouring cities, as a start, a city needs to actively

advocate collaboration in its local plans and to set their collaborative programme through short term plans. While aligning local collaborative policies toward a region-wide perspective is observed not crucial, but for the long term success of the collaborative governance it is considered necessary. These three rules that structure the local policy design largely require and expect reciprocity and trustworthiness from the regional perspective which is partial to conduct intergovernmental collaboration. Cross-sectoral collaboration, on the other hand, needs different type of rules in which localised perspective on collaboration is acceptable. In conclusion, referring to variation on how local policy design shapes local governments behaviour in conducting collaborative gov to craft rules that attract and encourage actors who share norms as a fundamental requirement needed in the collaborative society.

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# TRACK 12

# Responsibility for Social Cohesion in Housing, Cohousing and Neighbourhood Planning

# Responsibility of Social Cohesion for the Shelters Planning in Urban Residential Districts

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## Abstract

*There may be higher risk for people during disaster when they are enjoying the varieties of convenient services with urbanization trends. Especially during natural calamities, of which properties are unexpected and rapid, it is more serious for losses of life and property. The shelters in residential districts are the important location which the residents can immediately utilize for safety once natural disaster or emergencies happen. So basing on the common safety interests, there are some responsibilities of all the residents for shelters planning in urban residential districts, which can make shelters be adequately utilized and reduce the losses during disaster. Social cohesion will be needed to realize this objective, which is reflected by the following aspects: firstly making the residents participate in improvement of the shelters planning according to their actual needs; secondly ensuring the facilities in shelters can operate well and the rescue can be effectively utilized. In this paper, the role of social cohesion on shelters planning in urban residential districts, which also included the routing maintenances and improvements of the shelters, was studied by basing on disaster psychology and anthroposociology, and the case study was applied by the in-depth interview and questionnaires. It was found that the more effectiveness of the social cohesion in the shelters planning was bad, and the more roles of the shelters would be played during the disaster and simultaneously the losses could be possibly reduced. Therefore, the social cohesion is important one of the considerations in the shelters planning.*

**Key words:** social cohesion, urban residential districts, shelters planning

## 1 Introduction

The second world conference on disaster reduction (2005), held in Kobe, Hyogo, Japan, suggested that disaster prevention and mitigation in the cities should be paid our attentions, and especially the urban residential districts should be as the elementary unit for disaster mitigation( Li and Lu, 2009).Actually the larger potential risks have arose in modern urban residential districts during the natural calamities (such as earthquake and conflagration) because the high density of population resulted from the increasing density and height of the buildings in urban residential districts. As the vital components of the cities, urban residential districts daily accommodate the majority of population in the cities during some specific time (such as sack time), and there intensively contain amount of the public infrastructures (such as facilities used for electricity and natgas supplies). During the paroxysmal disasters this is prone to result in more casualties and the serious loss of properties compared with other areas, and even it causes serious secondary disasters. So the shelters planning in urban residential districts have became more important for the modern city, especially in China, compared with that in the last century.

However, less residents participated the shelters planning in their urban residential districts, and the most of the existing shelters were not periodically maintained after the construction or used for disaster prevention trainings. This may resulted in that the residents were not familiar with the shelters. After the analysis of the casualties during several earthquakes, it was found that the casualties during escaping to the shelters (such as green lands) were more serious than that caused directly by the disaster. During 5.12 earthquake (Wenchuan) in China, the victims directly put up the tents in street for the refuge, which delayed the arrival of the supplies and relief teams. In a survey for the unban planning (Liu, 2001), a resident said that it was not reasonable for the planning related to his surroundings solely made by whom did not live here. With the analysis (You, 2004) of 10 stricken areas in 9.12 earthquake (Taiwan), it was found that the residents tended to choose the shelters with the following characteristics: being near to their residences; familiar surroundings and neighbors, which made victims feel more belongingness and also contributed to mutual aid. Therefore, the daily life and familiar needs of the residents is the basis of shelters planning in urban residential districts.

Actually the shelters planning is a pattern of the resource allocation, and it is involved with the security interest of the residents. Marx (1956) said that people are fighting for everything to do with their interests. So it is necessary for the residents to participate in the planning, routine maintenances and use training of the shelters, which the social cohesion among the residents plays an important role in. Therefore, the social cohesion should be one of the main considerations for the shelters planning. The case study done by Li (2014) indicated that the level of the social cohesion could be influenced by the public space. However, until now few studies have been conducted to reveal the direct relationship between the social cohesion and the shelters planning in urban residential districts. In this study, the relationship of the social cohesion in the shelters planning was mainly analyzed, and a theoretical model of the shelters planning was proposed, which may further increase the utilization of the shelters during the outburst calamities in future.

## 2 Definition of concepts

### 2.1 Social cohesion

The term Social cohesion was first coined by Emile Durkheim in 1983 (Regina, 200 that it was a characteristic of the social order, which was expressed by the interdependence, mutual loyalty and solidarity among members of society. Subsequently, it has various definition narrated by many scholars, and some governments and organizations have made many efforts for improving its level among their citizens or members. The Social cohesion is a tie among the members of society, and its level can be assessed by the following factors: social relationship, task relation, perceived unity and emotion(Forsyth, 2010). Actually except the expression of social cohesion mentioned above, there also include belongingness, inclusiveness, the participatory, recognition, legality, shared values, shared challenges, equal opportunities and so on.

### 2.2 Urban residential districts

The residential districts are the areas with certain scale, which is divided by the roads or natural boundaries (such as rivers) in city and no main road is throughout, and there are the public greenbelts and the completed infrastructures which can meet the residents daily life. A residential district comprised of several housing clusters is a unit of the resident area. According to <Code of urban residential areas planning & design> (GB50180-93, 2002) in China, the scale of a resident district should range from 2,000 to 4,000 households (approximately 7,000-15,000 residents), and land-use area range from 10,000 to 36,000 square meters.

### 2.3 Calamities of residential districts

The disasters mentioned in this study, which belongs to the urban disasters, likely occur in the residential districts and threaten the security of the residents life and properties. These a of natural and man-made disaster and mainly include earthquakes, floods, severe colds, typhoons, tsunamis, fires, epidemics and the secondary disasters potentially resulted in by them (Liu, 2006).

### 2.4 Shelter

The shelters mentioned in this study, which solely referred to the emergency and temporary refuges rather than the municipal or provincial refuges, are the transitional places before the victims can be transferred to the larger public shelters together. (Design code for urban disasters emergency shelter-exposure draft, 2012, GB xxxxx-2012)

## 3 Research Objectives

The objectives of this study were to (i) explore the roles of the social cohesion in the shelters planning. (ii) Highlight the participation of the residents in shelters planning in order to increase its utilization during the outburst calamities in future. (iii) Establish a theoretical model of the shelters planning oriented by the social cohesion.

## 4 Research methods

A mixed method was design and applied in this study. Firstly, we identified the related literatures by searching the electronic databases of SCI, EI and CNKI, and the following keywords were used in various combinations: social cohesion , residential districts , or shelters planni obtain the real needs of the residents, we respectively made the in-depth interviews with 20 persons from the different resident districts, who are the residents, members of the neighborhood committees, or staffs from the property management companies. Every interview was randomly carried out for approximately half an hour, and the contents of the conversation were not limited before. Finally, the factors selected form the related studies were combined with the topics frequently mentioned in the interviews to design a questionnaire and a total of 200 questionnaires were online distributed.

## 5 Results and discussion

The serious losses of life and property were always caused because the calamities unpredictably and rapidly happened. The comprehensive measures for the disaster protection is one of effective methods to minimize the losses. A shelter in the residential districts is one of the important locations used for the disaster protection, so it is necessary for the immediate and efficient utilization of the shelters during the unexpected disasters, which is directly related to its planning. In this study, whether the social cohesion as one of the considerations is necessary for the shelters planning was investigated, and a theoretical model of the shelters planning oriented by the social cohesion was tried to established, which may be helpful to the related researches and planning.

### 5.1 Baseline of case study

A total of 200 questionnaires were online distributed, and 158 valid questionnaires were identified for the subsequent analysis. The baseline characteristics of case study were provided in Table 1. Briefly, all the respondents were from Chinese mainland and randomly selected without age, gender or education background limits.

Table1. The Baseline Characteristics of Case Study

| Type | Data |
|---|---|
| Gender | Male to female ratio 3:5 |
| Age | Under18:1.90%; 19-30:58.23%; 31-50:37.97%; 50-70:1.90%; Above70: 0% |
| City | About 39 different cities dotted about the country |
| Residence type | 12-30F:20.89%; 7-11F:9.49%; 4-6F:55.70%; the rest:13.92% |
| Housing ownership | Rent:29.11%; Own:70.89% |

## 5.2 Importance of the shelters in resident districts

The various disasters can happen anywhere at any time. More than 70% of the respondents in this survey indicated that they or their friends suffered the disasters (Fig.1). The residential districts are the important one of the functional units in city and are the areas with the dense population. The population mobility in the residential districts always focuses on the special time in daily life. In our surveys, it was found that 74% of the respondents stayed in their home at night and only 7% for all day (Fig.2: a). Simultaneously, the plot ratio are gradually increasing with the increase of population density, which resulted in the reduction of their safe distances. The secondary disasters (such as Stampede) are more easily resulted from the above factors when many panic residents with simultaneously escape for the refuge in the crowed spaces during the disaster. The shelters in resident districts are generally planned as the preferred emergency refuge for the residents during the disasters, and its reasonable planning can partly mitigate the losses and above risks, which is also conductive to the rescues and reconstruction after the disasters.

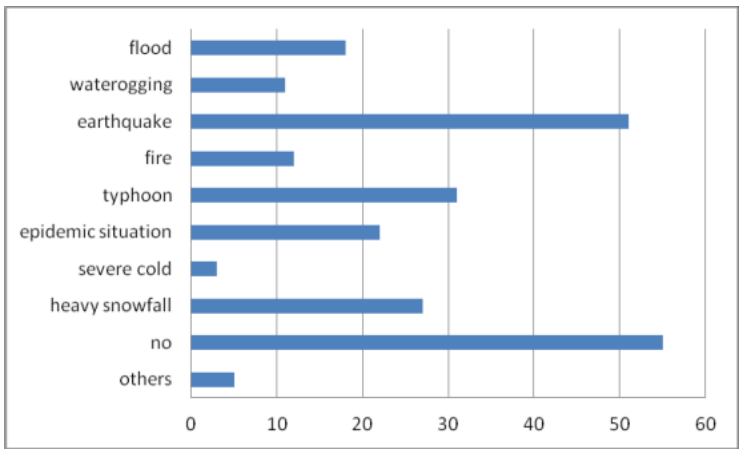
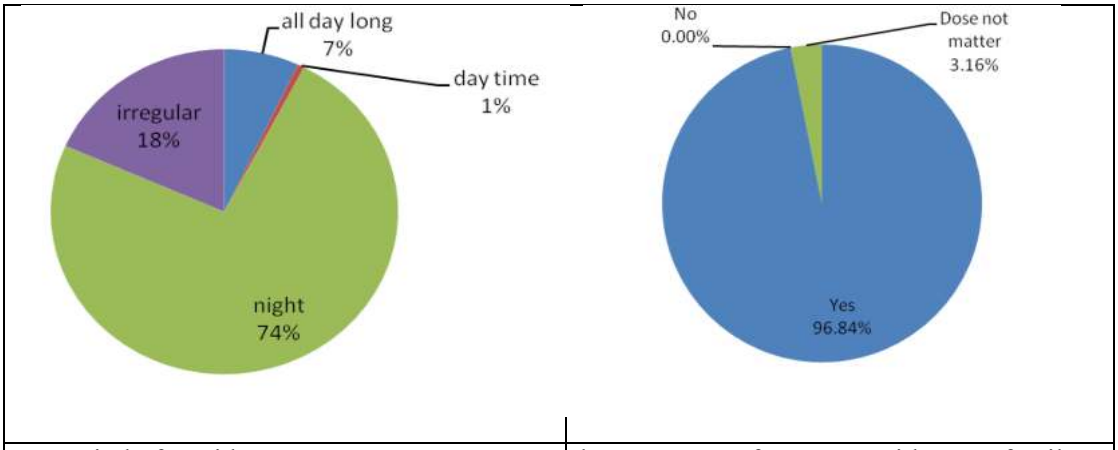



Figure1. Whether Personally Experienced, or Relatives and Friends Have Experienced the Following Disasters? (multiple choice)




| a: Period of Resident are at Home at Ordinary Times. | b: Do you prefer to stay with your family members when the disasters happen? |
|---|---|

Figure 2. The Relationship between Residents with Family and Family members.

### 5.3 Existing shelters and awareness of disaster prevention in urban residential districts

The public spaces (such as shelters) in the resident areas, which are the important parts of the urban public spaces, are closely related to residents daily life. However, actually the other urban public spaces were always paid more attention than them, and the resident areas especially resident districts were mistaken for the relatively safe locations. So far, the follow-up of many existing shelters, including the construction, rationality of their utilities, maintenances, improvements of their functions and so on, was infrequently concerned by their planners after accomplishments of their planning.

In this survey, many residents had been trained on the disaster prevention, but nearly a half of the respondents did not know where the shelters were in their resident districts, suggesting that the residents were not familiar with the shelters. 29.41% of the respondents indicated that they were not satisfied with the shelters planning and 21.52% were satisfied(Fig.3); simultaneously, during disaster 68.35% of the respondents intended to refuge in the opened areas outside the resident districts, and 25.95% chose the square in the resident districts for the refuge(Fig.4). In addition, the streets were also chosen by a few respondents for the refuge, which may hamper the recues and evacuations during the disaster. This suggested that the shelters were not regarded as the reliable refuges. If the resident districts were dissatisfied, 44.3%, 17.72% and 8.23% respectively chose to suggest property management companies, neighborhood committees or governments for it, and 7.59% chose to move and 22.15% did not know who should be in charge of it (Fig.5). This indicated that there was not a very definite way for the residents participation in the affairs (such as the affaires related to the sa of the resident districts.

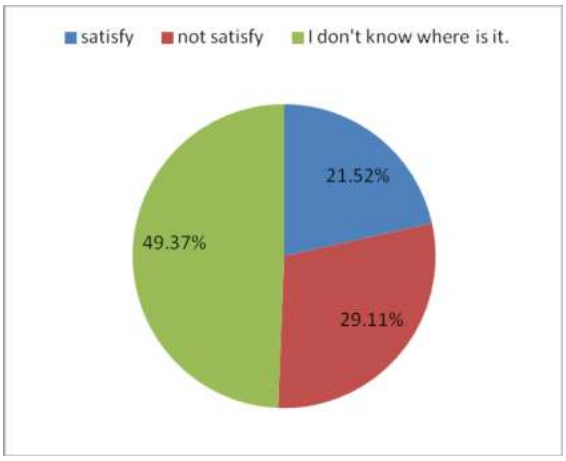



Figure3. Do you satisfied with the present residential area shelter?

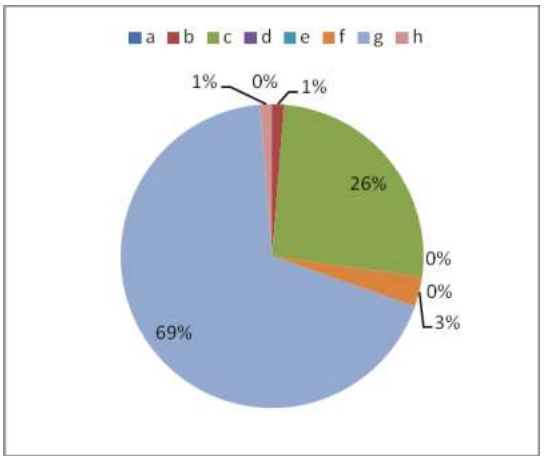



Figure4. Which one do you select as a shelter when a disaster occurs?

Figure legends: a: at home; b: Residential roads ; c: Residential square ; d: Community nursery ; e: Cell door ; f: Road outside the residential ; g: Opened areas outside the resident districts ; h: Else.

### 5.4 Social cohesion should be as one of the considerations in the shelters planning

The formation of the social cohesion is affected by the complex and diverse factors, which include kinship, traditional or national concepts, class status, social mentality based on the consistency of the realistic interests and so on. For instance, it was founded from this survey that 98.84% of the respondents indicated that they prefer to stay with their family members when the disasters happen (Fig.2:b). In this study, for the concretely reflecting the levels of the social cohesion in the resident districts, it was artificially and simplistically defined and assessed with the following factors in the resident district: the degree of familiarity among the residents, the frequencies and effects of the collective activities, the degree of residents satisfaction for the public spaces, the utilization rate of the public spaces and so on.

In this survey, more than 60% of the respondents, whose age group was from 50 to 70 or less than 18 years old, were familiar with the other residents in their resident districts, but it was less than 10% of the respondents whose age group was from 19 to 50 for it (Fig.6); correspondingly, more than half the respondents indicated that there was never any collective activity held in their resident districts (Fig.7 ). Simultaneously, 46.84% of the respondents had been trained on the disaster prevention and most of the training place were their school or work units rather than resident districts, and the proportions of the respondents trained decreased with age (Fig.8). This may be used to explain that nearly a half of the respondents did not know where the shelters were in their resident districts (Fig.3), and it could result in that the utility rate of the shelters would be low during the disasters. Similarly, the respondents who were the homeowners were more familiar with the other residents and more satisfied with the shelters than the tenants in their resident districts (Fig.9 &Fig.10). The potential utility rate of the shelters is closely related to residents familiarity with them, so the social cohesion will also affect it and should be considered in the shelters planning.

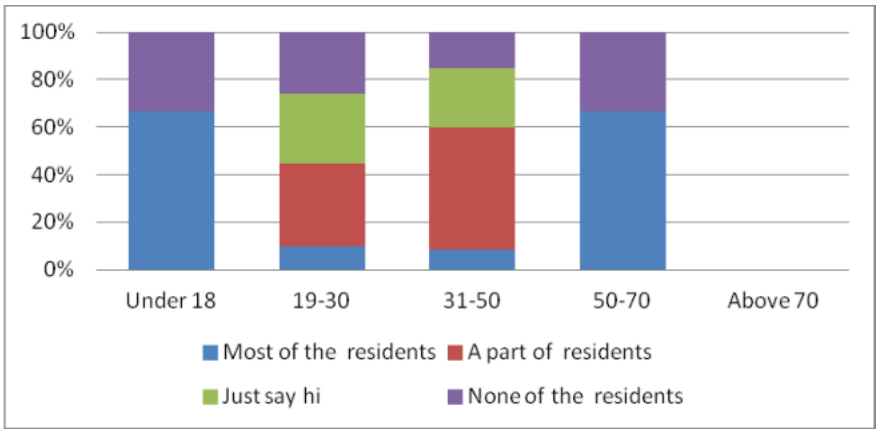



Figure 6. Are you familiar with the other residents in the resident districts?

Figure7. Is there any collective activity held in your resident districts

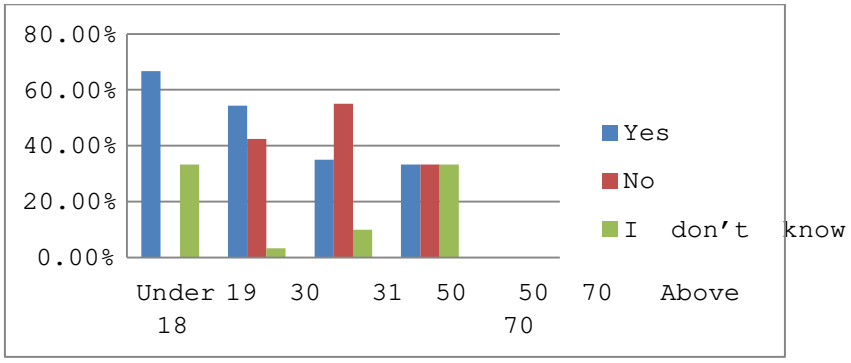



Figure8. Have you attend the survival training course?

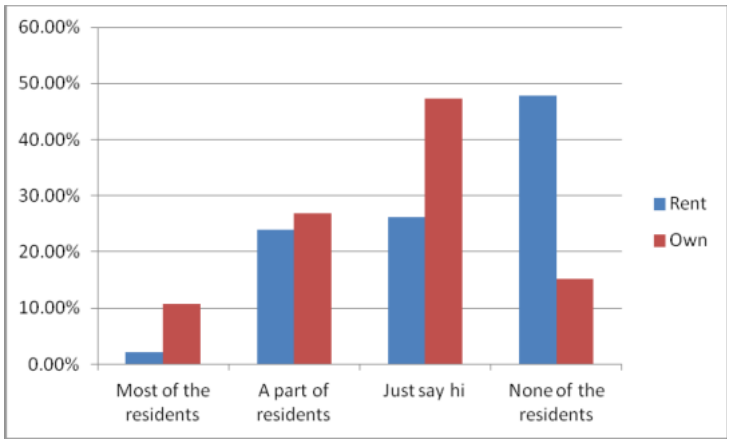



Figure9. Do you familiar with the other residents?

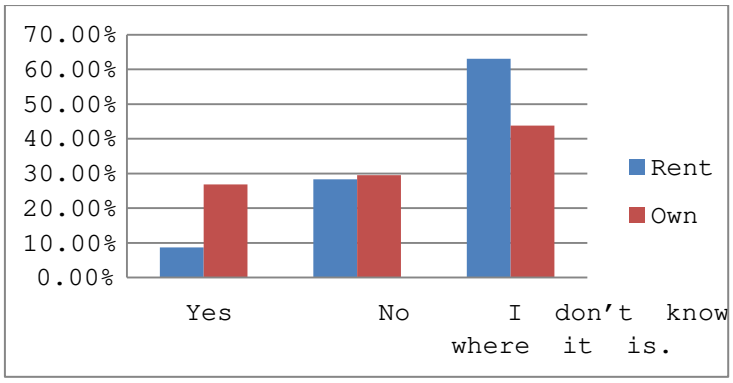
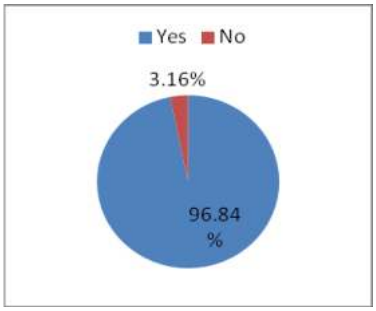


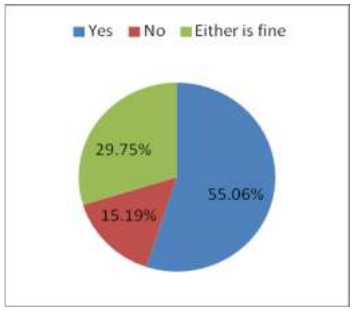

Figure10. Are you satisfied with the shelters?

The shelters in the resident districts are planned for and will be mainly utilized by the residents, so it is rational to consider their needs in the shelters planning. The function conservation of the shelters can successfully be realized in daily life and disasters when the planning meets the needs of the residents, which is impossible without the residents opinions. 95.76% of the respondents wou participate in the shelters planning if possible (Fig.11: a). However, it was learned from the in-depth interviews that it was always one-way for the communication between the residents and the managers in the resident districts. The manager generally told the residents what or how they should do rather than comprehended their thoughts or real needs, and the resident seemed to be used to that rather than actively gave their advices. This is consistent with the survey results obtained by Ma (2011). So the enthusiasm of the residents participation weakened by the management mechanism of the residen districts, which could also affect their participation in the following-up maintenances and improvements of the shelters after the constructions. In fact, the effective utilization of the shelters during the disasters is dependent on its following-up maintenances, and the functions of the shelters will be improved with constantly considering and comprehending the needs or habits of the residents in its maintenances. The effective utility of the shelters is related to residents participation in it following-up maintenances, so the social cohesion be certainly considered in the shelters planning.

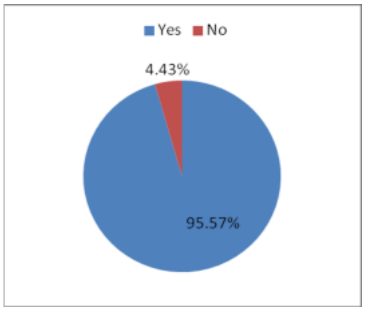
In addition, if the stir-and mutual-rescue can be firstly done among the residents before the recue teams arrival as soon as the disasters occur, the losses will be generally reduced at a great degree. The shelters in resident districts are generally planned as the preferred emergency refuge for this, so the degree of the stir-and mutual-rescue, which the social cohesion plays an important role in, was closely related to the utility rate of the shelters during the disasters. In this survey, more than half of the respondents indicated they would need the helps from others during the disasters (Fig.11: b), and more than 90% of the respondents would like to help others if possible (Fig. 11: c). This suggested that the social cohesion is important one of the considerations in the shelters planning.




a. Would you like to participate in the shelters planning if possible?




b. Do you need the helps from others during the disasters ?




c. Would you like to help others during the disasters if possible?

Figure11: The social cohesion of residents in the disaster.

The density and height of the buildings are gradually increasing with the increase of population density. Although a certain scale of the land are used as the shelters in the resident districts, but with basing on the considerations for the economics and utilization rate of the land, it is impossible to increase their areas without the limitation. So it is necessary to effectively utilize the shelters with the limited spaces during the disasters, which is partly dependent on the participation of its non-planner contributed by the social cohesion. Simultaneously, the various functions of the shelters need to be accepted and embodied by their utilizations among the residents in daily life or disasters, and these are gradually improved with constantly meeting the resident s needs. Therefore, the social cohesion should be considered as an important factor related to the utilization, maintenances and improvements of the shelters in the planning.

### 5.5 How to realize the shelters planning oriented by social cohesion

In this survey, the proportions of the respondents trained in the disaster prevention decreased with age (Fig.8), suggesting that the training had been increasingly paid more attentions. Simultaneously, none of the respondents trained would choose the elevators to escape during the disasters. This suggested that the effect of the training was yielded and the psychological fore-warning system on residents trained had been gradually constructed. The shelters in resident districts are generally planned as the

preferred emergency refuge for the stir-and mutual-rescue of the residents, and the participations of its non-planner (such as disaster prevention trainings), which is contributed by the social cohesion, certainly affect its utilization rate. So it is necessary to consider the residents needs in planning, and these needs are related to the following aspects: age and physical condition of the residents (such as the aged or disable), the locations of the shelters (which is necessary to whether the residents can arrive as soon as the disaster occur and whether it is convenient for the residents in daily life), appropriate functions (such as the differences of the infrastructures between south and north) and so on.

The potential real needs should be collected and summarized with basing on the interests of the majority, and these needs will be combined with other factors and realized in a rational degree by the shelter planner. Subsequently, after the shelters construction the planners should always learn their utilization rate and maintenances from the residents, and the various functions of the shelters will be further optimized according to the reasonable and necessary needs. In other words, the shelters planning in the resident districts should be based on the life experiences of the residents, and it is combined with the professional acknowledges of the planners to be realized. During the above process, the enthusiasm of the non-planners participation is important for the comprehension of their real needs, which is contributed by the social cohesion. In addition, the previous studies done by Guo (2013), Bowers (1996) and Olden-burg(1989) showed that the effective utilizations of the public spaces including the shelters in the resident districts or communities played an important role in and were contributed to the formation of the social cohesion. This means that there are the interactions between the social cohesion and shelters planning in the resident districts. So the shelters should be planned as the public spaces which can allow and attract most of the residents usually participate the group activities in daily life. This can not only promote the residents familiarity with the shelters, but be contributed to the familiarity among the residents, which are important to the utilization, maintenances and improvements of the shelters.

With basing on the results of the above survey and study, a theoretical model of the shelters planning in resident districts oriented by the social cohesion was proposed as the following: the residents participations in the shelter planning embody their needs to enhance their sense of belonging; The high degree of familiarity with the shelters for the residents can increase their utilization rate, and the frequent collective activities in the resident districts can promote the formation of the social cohesion; the social cohesion including the residents sense of belonging is contributed improvements of the shelters; the effective utilization of the shelters is important to the immediate stir-and mutual-rescue as soon as the disasters occur, which can generally reduce the losses at a great degree. Therefore, the more effectiveness of the social cohesion in the shelters planning was had, and the more roles of the shelters would be played during the disaster and simultaneously the losses could be reduced.

## 5.6 Limitation

There were certainly several limitations in this study. Firstly, there the biases of the amount of the different classified respondents, which was resulted from the limited total number of the respondents, and this may resulted in the deviations in the analysis results; Secondly, the current roles of the social cohesion in the shelters planning were only investigated, but the roles were not compared with that in the past for the further confirmation; Thirdly, the relationship between the social cohesion and the

shelters planning was only studied by univariate analysis and the multivariate analysis was not applied. Therefore, a detailed and well-designed study should be performed to further confirm our results.

## 6 Conclusion

In conclusion, our study does support that the social cohesion plays important roles in the planning, maintenances and improvements of the shelters in resident districts, and it should be as important one of the considerations in the shelters planning. The conclusions and recommendations are summarized as follows: the social cohesion is contributed to arouse the enthusiasm of the residents participat the planning, maintenances and improvements of the shelters in daily life, and the group activities in the resident districts (such as disaster prevention trainings) should be frequently held; During the disasters the stir-and mutual-rescue to reduce the losses relays on the effective utilization of the shelters, which the social cohesion also promote; The more effectiveness of the social cohesion in the shelters planning was had, and the more roles of the shelters would be played during the disaster and simultaneously smaller losses may be.

## 7 Acknowledgement

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# TRACK 13

## Transport Planning and Mobility Policies: Available and Affordable Transportation

# I MOVE THEREFORE I CAN . TRANSLATING MOBILITY CAPITALS INTO PLANNING PRACTICE

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Keywords: mobility capitals, mobility practices, mobility policy

**Abstract**

*Aim of the paper is to understand if the construction of mobility capitals, as shaped by planning actions, could be introduced in planning practice and if it could contribute to the orientation of individual and collective travel behaviours towards more sustainable mobility practices. Mobility capitals, that can be framed as the opportunities in the field of movement which are available to individuals, are introduced as a key concept to associate individual aspirations and their reflection on mobility practices, focusing on how individuals differently appropriate the opportunities of movement. Consequently, the potential significance of mobility capitals for mobility planning is discussed through various examples, referred in particular to the now spreading Sustainable Urban Mobility Plans a planning tool developed at the European level which seem to contribute to the construction of mobility capitals with different styles of mobility governance.*

## 1. Introduction

Contemporary urban settings are more and more shaped by mobility practices, which at the same time are crucial to shape individual lives. Relevant in this sense are mobility capitals, that can be framed as the opportunities in the field of movement which are available to individuals. The concept of mobility capital, developed in particular by mobility sociologists, is nevertheless missing attempts of concrete applications in planning.

Aim of the paper is to understand if the construction of mobility capitals, as shaped by planning actions, could be introduced in planning practice and if it could contribute to the orientation of individual and collective travel behaviours towards more sustainable mobility practices. In this way, it could be possible to provide mobility opportunities which would meet more closely individual aims, while providing more generally positive externalities (like lower pollutant emissions or wider access to job occasions). Specific interventions on mobility capitals could in fact provide wider and varied opportunities for movement while reducing the negative externalities related to personal trips.

The paper then introduces mobility capitals as a key concept to associate individual aspirations and their reflection on mobility practices, focusing on how individuals differently appropriate the opportunities of movement. Consequently, the potential significance of mobility capitals for mobility planning is discussed through various examples, referred in particular to the now spreading Sustainable Urban Mobility Plans (SUMP) a planning tool developed at the European level which seem to contribute to the construction of mobility capitals with different styles of mobility governance.

The concept of mobility capitals has not established significant relationships with the current planning practice, maintaining mainly an academic nature. Then, it is not possible to observe ongoing examples of mobility planning practice which explicitly assume mobility capitals as a guiding concept. On the contrary, it is possible to observe if and how some current experience provide potential contributions to the construction of mobility capitals, nurturing specific features which do increase individual and collective opportunities in the field of mobility. In this sense, the recent SUMPs may provide a tentative field for this exploration. The European guidelines shaping them in fact recognise a key role to the achievement of social targets, referr

citizens are offered transport options that enable access to key destinations and services
contribute to enhancing the attractiveness and quality of the urban environmen
for the benefits of citizens, the economy and society as a whole (Wefering e
interest in SUMPs could deepen in particular the reading of those plans which have been considered as best mobility planning practices, like those that since 2012 have received the Sump award (as part of the Do the Right Mix initiative, promoted by the European Commission). Considering the recent nature of this planning tool, the analysis of examples which are already considered as positive experiences allows a preliminary examination of the paper

**2. The relevance of mobility capitals**

Mobility is imposing itself as a category that can frame and arrange into new forms contemporary social life, leading to the definition of a new paradigm for social sciences (Sheller and Urry, 2006). Mobility appears as a fundamental tool to analyse contemporary urban settings, considering the possibility that every individual has to move both from a spatial and a social point of view (Canzler & al, 2008). From academic debate to policy discourse, it is seen as a crucial aspect to understand what already exists and to prefigure future scenarios. The wide recent production of reflections on the issues of mobility seems to reflects such rich influence (as well summarised in Sheller, 2011).

The rich debate reflects a shift in the way mobility is considered. Like any other discipline with a strong (but not exclusive) technical component, also mobility planning has been influenced for long time by the Positivist approach criticised by Donald Schön (1981): an attitude summarised in the concept of problem solving, according to which any given problem has its own solution, specified by technical standards and technology. The approach has characterised a rational form of planning partially abandoned only in the last decades, but is instead still present in the transport field. The planning activity dealing with mobility in fact is oriented by efficiency, with the purpose of favouring existing mobility trends as observed in the given settings. The search for an efficient mobility is reflected in the prevalence of technical tools, like transport modelling and cost-benefit analysis.

Today instead it is more and more necessary to consider mobility from an enlarged perspective, able to take into account also social issues (Martens, 2006). Planning practice has always had social and political reflections, also when dealing with movement: the relationships between subjects and communities are effectively developed also through a specific construction of the territory and its networks (Raffestin, 1983). Nevertheless, in addition to this some current environmental, social and economic issues frame mobility as a fundamental opportunity for any individual, being an essential requisite for the recognition of citizenship rights (Secchi, 2014).

The rise of this social dimension of mobility is conveyed by different approaches that try to deal with it, with a specific attention to overcome existing inequalities among individuals and communities. On the one hand, many have focused on transport-related social exclusion, developing conceptual frameworks and operative tools based on three different features: accessibility, capability and time geography (as in the summary provided in Lucas, 2012). On the other hand, a more purposeful and political approach is related to wider conceptualizations of social justice, framing mobility as a fundamental right to guarantee also civic freedom for every citizen (Sheller, 2014).

Within this rich debate, the perspective we choose to explore in this paper is that of mobility capitals. Considering its current development in fact this approach seems to well focus on the freedom that a person has to lead one kind of life or another, adopting it as a relevant ethical approach even for planning practices. Mobility in facts acts as a tool for differentiation, guarantying to anyone a capital that can be used to pursue one s own aspiratio
as a capital, different are the definitions, such as motility (see for example Kaufmann, 2002), network capital (see Larsen et al, 2006) or potential mobility (Kellermann, 2007); these different definitions anyway share the focus on both individual resources and local ties, opportunities and

endowments. Potential interactions between these principles and the actions in the mobility field are missing, suggesting to take into account the possible practical inflections of a theme discussed mainly from a theoretical perspective up to now, at least. The possible relevance of the topic then is not only academic, but possibly wider: a deeper understanding of the empowering role of mobility and its uses in planning are not just a contribution to an existing debate, but could help the current planning practice. Amongst the others, an approach focused on making individuals and territories capable even through mobility could increase the opportunities available to them and consequently contribute to their development, even in terms of struggling with new opportunities and risks (Donolo, 2005).

## 3. Mobility capitals and practices

Mobility has a relevant influence on contemporary societies, acting as an element of individual differentiation (Litman, 2011) and having as a consequence an increased plurality of urban populations and spatial practices (Pasqui, 2008). Nevertheless, it seems constraining to consider mobility simply as a frame to read contemporary urbanity: could it be possible instead to frame it also as a policy tool (Pucci, 2015)? Aiming at forecasting and influencing future urban scenarios, individual behaviours could have a fundamental role (Urry, 2008). Existing or new mobility practices could generate positive externalities both for individuals and communities: in such a perspective, mobility capitals could become a reference, both to work on individual behaviours (promoting existing virtuous examples and sustaining alternative practices) and to increase individual opportunities (providing access to basic services which are currently inaccessible for specific areas or populations).

The first operational option draws on the fact that, in their multiplicity, mobility practices become the tactical expression of wider strategies, which mobilize different capitals in different ways. Practices are not ended in themselves, since they often have an instrumental value (for example, a movement aims at reaching a certain place, to carry out a certain activity or facilitate a specific interaction) and intercept other dimensions. They also provide occasions for aggregation: according to the situations, mobility becomes the field in which are expressed or from which are originated unexpected occasions for interaction and for the mobilization of capitals. Often the mobility practices convey requests and propose solutions which can intercept the public action, with travel behaviours which express new needs and sometimes propose alternative solutions, being an expression of the multiple trajectories and interests that characterize contemporary mobility. Then, moving from the aim of orientating behaviours, mobility practices can be examined starting from the capitals they mobilize, developing then specific actions to support them. This relationship also seems to anticipate a new way to conceive mobility policy. Traditionally, a mobility demand from the bottom was sided by an offer defined by institutions, that starting from technical analyses developed infrastructures and services for mobility, framing them as a further form of welfare (Secchi, 2005). Contemporary practices instead show more and more examples that from below express a mobility demand which, at the same time, tries to internally develop also part of the offer. The demand-offer dichotomy, as expressed in diverse forms of social engagement, questions also traditional approaches to mobility planning.

The second option focuses instead on the availability of mobility opportunities and on the consequent possibility to use them. While capitals represent a form of potential mobility, which could be appropriated according to individual aims and aspirations, often the provision of mobility opportunities is scarce, compromising even the ability to access basic services. Accessibility to places, goods, services and people becomes then the focus of an approach that can use mobility as a tool to increase the availability of such opportunities. In this sense, mobility is a medium rather than an end, being related to the access that it allows. The focus on basic accessibility seems more suitable where massive interventions on mobility are missing (leading to informal alternatives) or address only specific interests; the Western tradition that has included transport infrastructures and services within a wider definition of welfare somehow reduces the relevance that this specific approach could have in European settings. This approach could anyway act both at a microscale

(with specific interventions on chosen areas) or with a broader perspective (making the capability approach contribute to ongoing planning processes, especially when referring to mobility). Compared to the approach working on individual behaviours, the focus on basic accessibility would consider specific, systematic practices those related to the access to basic services and opportunities like workplaces, schools, market places and social services, which are needed on a daily or regular basis. This approach would then convey a more traditional framing of mobility issues, related to the provision of increased opportunities: its difference would rely on the proposed approach, based on the construction of individual capitals and not simply on the public provision of transport services and infrastructures.

## 4. Mobility capitals and planning

Privileging mobility capitals and the practices using them, planning practice would require specific adaptations to such approach, considering that up to now this has mainly remained within an academic domain. Nowadays, mobility practices reflect the multiplicity of interests, opportunities and need of any individual: occasional trips are growing, in relation to varied activities (leisure, services, accompanying ) and to different periods of the day. The multiplicity of time destinations obstacles the provision of effective alternatives to the use of private cars. Moreover, multiple mobility practices continuously question traditional administrative divisions, defining contingent territories shaped by the temporary presence of urban populations (Pucci, 2013). Such multiplicity is an issue for traditional approaches to the government of mobility, but maybe is also an opportunity bringing potential solutions. Practices may propose claims and produce collective goods, developing policies from the bottom. In the first case, the relevance of practices is in their very existence, since it allows specific forms of spatial appropriation. In the second case instead the focus is on the social production of public goods, so to have commons by social practices rather than by policies (Donolo, 2005, p. 47). Such perspective associates the mul practices with a potential production of collective goods: individuals and communities may contribute to their creation, using existing services in unexpected ways or creating new possibilities for mobility.

An attentive planning approach to mobility may then recognize those contributions from the bottom which could develop interesting features to be considered within mobility policy. Nevertheless, even traditional forms of planning may focus on the production of those features which constitute individual and collective mobility capitals. Preliminarily assuming the features of mobility capitals as exemplified in the concept of motility (for which more operational definitions have been provided), their construction should focus on access to different forms mobility, competence to recognize and make use of access, and appropriation of a particular choice, including the option of non-action (Kaufmann et al, 2004, p. 750). Adopting mo capitals as a reference for planning, existing and new actions can be evaluated according to their contribution to individual and collective capitals, going beyond a simple evaluation of their technical or economical efficiency. Rather than introducing new solutions, the proposed perspective works on how the planning practice is framed: it becomes an activity oriented to guarantee opportunities. To do so, it differently evaluates traditional approaches and becomes more attentive to those proposals and initiatives which may contribute to the provision of such capitals.

As a way to explore the feasibility of such paradigm change, the discussion of some recent European Sustainable Urban Mobilities Plan aims at observing ongoing actions, to consider if and how they already contribute to the construction of these capitals and how. The current mobility planning practice does not consider explicitly the concept of mobility capitals; nevertheless, before proposing devoted actions an attentive analysis of what already exists can explore a different framing, to orientate current actions towards different, and possibly more effective, directions.

## 5. SUMPs and mobility capitals

A tentative recognition of the SUMPs awarded since 2012 as best European plans can provide first elements to support the possible introduction of a mobility capital approach in the planning practice. The short overview of their various plans can refer to the three already mentioned categories that compose mobility capitals (as framed by the motility concept): access, competence and appropriation (Kaufmann et al, 2004). As a preliminary observation, all the examined plans seem to share a similar approach to mobility planning: it is seen as an activity combining projects and policies, trying to reduce the use of private cars and to replace it with more sustainable alternatives from public transport to cycling. The focus on sustainability, mainly seen as an environmental target, leads to a shared emphasis on some widespread current planning principles, referring to land use-transport connection, promotion of active mobility, integration among different transport modes. As a consequence, the plans tend to privilege similar actions and most of them seem to foster individual and collective access, with a minor emphasis on competence and appropriation.

As for access, it is constrained by options and conditions. The options refer means of transportation and communication available, and the entire range of services and equipment accessible at a given time. The conditions refer to the accessibility of the options in terms of location-specific cost, logistics and other constraints (Kaufmann et al, tends then to include the majority of the actions proposed in the examined plans, especially those increasing the opportunities for movement. A first action in this sense is the integration of existing transport networks, combining different transport services, offering common titles of use and providing interchanges. The action combines service planning and fare policy: for example, the German city of Dresden has promoted the networking of all transport modes by intermodal and multimodal transfer points, while the compatriot city of Bremen has improved the integration of transport network across its region. In addition to these overall approaches, integration is pursued also via smaller specific infrastructures, like park and ride structures or bicycle stations (as in Dresden). All these elements facilitate the use of the networks, making easier to access them and take advantage of their various parts.

A further element increasing access is the provision of specific services and infrastructures that are missing or incomplete. Apart from the expansion of public transport and cycle networks (which are almost commonplaces of sustainable mobility planning and can be found almost in any place, at least as guidelines), some plans have fostered the diffusion of new sharing services, focusing on cars. Both car pooling and car sharing have then been introduced as a way to provide new connections that can more effectively serve specific relations in specific times of the day, when alternative services are not available: even if their sustainability can be questioned, shared cars do increase the opportunities for access, especially for places and hours with poor services.

The previously mentioned actions somehow intervene on the options, including means of transportation, services and equipments; the focus on public spaces instead seems to work on the conditions of accessibility, privileging interventions on the locations. The Belgian city of Ghent offers a traditional approach to the theme, focusing on the extension of pedestrian areas and proposing the reduction of cut-through traffic in the historic centre; the measure in itself reduces specific quotes of accessibility, preventing car drivers to use the central roads, but also guarantees wider opportunities of use for non motorists, increasing the available areas and the possible usages of these public spaces. Instead, the Basque city of Vitoria has promoted a diffused use of the superblocks, urban cells of different dimensions from which motorised vehicles are prevented to enter. Traffic is concentrated on the bordering roads, while the inner streets are left to active forms of mobility from cycling to walking; also public transport is redesigned accordingly. In this way, the quality of urban space is increased and specific forms of mobility become more attractive from the improved public transport to the safer cycling.

Moving to competences, this is maybe the most difficult field of action for current mobility planning. Our attitudes to mobility are influenced by previous experiences that are part of our mobility biographies, so that a sedimentation of experiences and opportunities continuously shapes

the individual competencies for mobility. Various communication and civic education initiatives addressing specific categories (children in particular) work on the construction of individual competences, while interventions on the legibility of networks reduce the level of complexity in the use of transport services. Among the most recent SUMPs, the plan of Dresden provides a small example in this sense, having worked on the adjustment of public transport schedules: an integrated system, with regular passages and interchanges, provides an easier understanding for its users and requires then a lower level of competencies in order to be used. In other cases, inbetween competence and appropriation, some cities have developed devoted marketing initiatives: for example, the Slovenian town of Ljutomer has introduced a day of active mobilit use of cycling and walking also as modal choice for everyday trips.

Considering appropriation, the discussed measures imply the effective possibility to rely on a given service, choosing to use it or not. A first example is that of operative traffic information, as those provided in Dresden: ongoing road works, traffic conditions and parking possibilities are communicated on real time, offering the information that allow to know which is the most convenient modal alternative in a specific moment of the day. This action intervenes providing updated information, allowing then the appropriation of a modal alternative in a precise moment; it does not have the structural consequences that can obtain actions focused on fostering individual and collective competencies, since it allows the appropriation of something that can be already used. A second approach is that of providing incentives for specific categories, fostering the use of existing services which may prevent some citizen groups from their uses. The French city of Strasbourg has intervened both creating special facilitations for disabled people, both providing fare incentives for financially disadvantaged families. In this way, services that already exist and could be potentially used become more usable also to those categories that are currently experimenting restrictions to access, due to physical or economic reasons. In general, also the actions for appropriation are difficult to define, since external interventions can privilege one modal choice or another, but the final decision on how to move is in charge of each individual.

It must be also noted that all the examined plans share a specific attention to stakeholder involvement and participatory planning processes. While not being directly related to the provision of further opportunities for mobility, this can be framed as an aspect that fosters both competence and appropriation. On the one hand, participatory processes help to increase knowledge of existing transport alternatives and more general mobility issues, expanding the perspectives of everyday urban experiences. On the other hand, appropriation is potentially fostered, admitting that participatory processes allow a better knowledge of different mobility alternatives and increase the familiarity of individuals and communities to them.

## 6. Conclusions

From the short overview on the awarded European SUMPs, what emerges is the potential space for a mobility capital approach even within the current planning practice. The overall attention to sustainability in fact provides some elements that contribute to the construction of individual and collective capitals. Most of the actions contribute to access, working on the offer of mobility services and, indirectly, on the quality of public spaces (which can facilitate specific forms of active mobility). Devoted measures, like incentives and promotional initiatives, provide elements facilitating the appropriation of mobility. Competences instead are almost completely absent from current mobility planning, without structural marketing or educational initiative which may shape the individual ability to use one or another modal choice.

The current planning practice seems then to provide a partial contribution to the construction of mobility capitals. It is relevant to notice that most of the examined plans have been developed in medium-sized cities, mainly located in Central Europe: the results of this preliminary overview are then influenced by the focus on relatively small cities where the principles of sustainable mobility planning have been in use since long time. It would be interesting to conduct a similar analysis on completely different areas, less sensitive to the issues of sustainability or less influenced by

consistent planning traditions; more simply, also a study of more complex metropolitan areas and urban regions could potentially provide different results on how mobility capitals are currently constructed throughout these different settings.

In general, a potential space for a further attention to mobility capitals appears. The European guidelines on SUMPs recognise specific social objectives that mobility planning should pursue, while the dominant planning paradigms tend to privilege actions that are environmentally sustainable (considering also that it is easier to measure their impacts and benefits); as a consequence, the social benefits of mobility plans are very specific (with precise categories receiving the positive externalities of some actions) or too generic (without any possibility to quantify the positive consequences of specific interventions, especially if generally benefitting the whole community). Instead, a focus on mobility capitals could guarantee specific references for their construction (referring to the three categories of access, competence and appropriation, and eventually to further, more precise categorisations), and at the same time could also provide wider occasions to consider and support those everyday mobility practices which contribute to the pursuit of wider collective aims.

The paper then aims to suggest a different, and potentially fruitful perspective for mobility planning, trying to give more relevance to the social dimensions of mobility. Its starting concepts require further research, in order to be expanded and even adapted to the peculiarities of the planning practice: considering the various definitions provided for mobility capitals and their scarce planning uses, it becomes necessary to understand at which conditions a mainly sociological concept could be transferred (and become usable) within the current mobility planning practice. Nevertheless, a reference to mobility capitals can give more relevance to individual attitudes and behaviours, making mobility opportunities more effective thanks to a closer connection to the ways in which they are used. More importantly, framing mobility from a capability perspective may allow to consider the wider uses of mobility, taking into account also the activities and the social relations to which it can contribute.

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# TRACK 15

## Culture, Entertainment, Tourism and Planning: Panacea or Threat?

# Planning Coordination Mechanism of Scenic Spots and City Area Contradiction——Case Study of Dengfeng, Henan, China

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Key Words: Contradictions, The synergistic mechanisms, Scenic spot and city area

## 1. Introduction

Dengfeng is located in the central of Henan province of China. World Cultural Heritage The Centre of Heaven and Earth , the Songshan Scenic Area and the world famous Shaolin Temple are located in Dengfeng. The rapid development of economy and city expansion brings to the contradiction of scenic spot and city area, culture tourism and Real estate development, high rise building and city style. Therefore, it is reference significant to explore the synergistic mechanisms of scenic spot and city area under the participation of local government, enterprise planners and citizen.

In order to exploring the reasons of contradictions between scenic spot and city area, cultural tourism and city development in the process of rapid urbanization of China, it is important to research the synergistic mechanisms of typical case in the micro and macro bilinear logic view in the interception of certain historical span. It is argues that keeping the flexible adaptability of micro system relative to macro system (the national or regional scale) is the key to stable local elements, guide the coordination of scenic spot and city area and inverse configuration. The synergistic mechanisms of scenic spot and city area, which consist by the transition space of basic control line, height zoning and cultural infiltration, could form a bidirectional djustment path and elements allocation pattern which aims to optimize small unit. city unit development mode leads to the reshape of scenic spot and city blending area, but it also brings with a certain degree of inner closed tend, which deeply influences the formation of new relationship of scenic spot and city area. At last, it reclaims that China should transfer from the macro guide system to micro innovation system when deal with the relationship of scenic spot and city area, to enhance the ability of independent regional development organization and effective allocation of elements.

## 2. Transformation of urban development mode in the rapid urbanization trend

Urbanization level is a significant symbol of a country s industrial modernization level. Seen from the world development history ever since the industrial revolution, if a country shall realize the modernization successfully, it shall not only promote the industrialization, but also enhance the urbanization synchronously. Ever since the reform and opening-up in China, the urbanization develops stably, and in 2014, the proportion of urban population in the total population reached 54.77%. However,

generally, the urbanization and industrialization level in China still lacks behind, and it is far behind that in developed countries and even lower than the average world level. According to the statistics, the urbanization rate of developed countries has already been close to or higher than 80%, and the urbanization rate of our surrounding countries like Malaysia, the Philippines, etc. which have similar per capita income, is also above 60%. The low urbanization rate prevents the domestic demand from expanding, and impacts the upgrading of industrial structure, which is also a significant reason for the inconsistent regional economic development. Consequently, the acceleration of urbanization process is an important part of the adjustment of economic structure.

In the grand urbanization development trend, the urban culture, ecology and landscape construction shall be fully learnt. It is proposed in New National Urbanization Planning (2014-2020) that it shall pay attention to human-oriented and quality-stressed urbanization path, and avoid the wrong mode of weighing amount and neglecting quality, and sacrificing environment for economic growth in the past rapid expansion period. Aiming at the problems of occupying scenic sports for the urban expansion and declining service ability, the National Tourism Administration proposed the cancelation of 44 A-level scenic spots in April 2015, and put forward the reorganization requirements for some 5A scenic sports. In this general background, many cities begin to transform the development thoughts and reformulate the urban planning and scenic spot planning, and study the coordinated scenic-city planning and management mechanism.

## 3 Changes in scenic-city relation in Dengfeng in the rapid urbanization period

Dengfeng, located in the middle of Henan Province, has center of the heave world cultural heritage, Songshan Mountain and World-famous Shaolin Temple. In recent decade, the economy grows rapidly and urban scale expands constantly. Profit from the major projects, such as Music Shaolin Grand Ceremony and key projects of Shaolin Temple, the tertiary industry in Dengfeng enjoys great development, and especially, the tourism value and tourists are nearly doubled. According to the statistics, the annual tourists increased to 9.58 million in 2013 from the 6. 7 million in 2009 in Dengfeng, and the total tourism income developed to 6.2 billion in 2013 from 3.6 billion in 2009. It could be said that in the past decade, the city and scenic spot developed rapidly, but there were distinctions in the development subjects. The emphasis of urban development shall be in the population, industry and land expansion, while the key of the development of the scenic sport shall be the promotion of service and supporting facilities, as well as the way of dealing with the huge passenger flow in peak time.

Table 1 Changes of major indicators in the past decade in Dengfeng

| Classification of indicators | | 2001 | 2013 | Growth rate |
|---|---|---|---|---|
| Economic indicators | Gross domestic product of the city (0.1 billion Yuan) | 52.2 | 450.9 | 8.63 |
| | Per Capita GDP (Yuan) | 9818 | 65978 | 6.72 |
| | Total value of agricultural output (0.1 billion Yuan) | 7.7 | 21.8 | 2.83 |

| | | | | |
|---|---|---|---|---|
| | Total industrial output value (0.1 billion Yuan) | 98 | 1019 | 10.4 |
| | Local financial revenue (0.1 billion Yuan) | 1.91 | 27.1 | 14.18 |
| Urban scale | Urban population (10000 People) | 10.7 | 19.3 | 1.8 |
| | Urban size (square kilometers) | 11.35 | 23.13 | 2.03 |

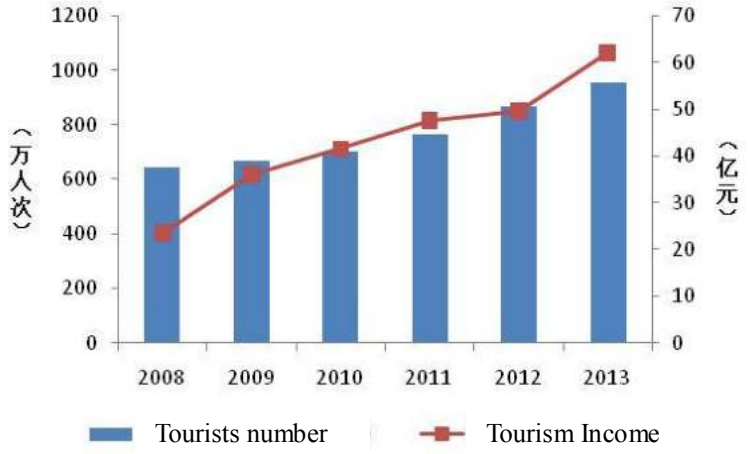


Fig. 1 Changes in tourists received and general tourist income in Dengfeng from 2008 to 2013

Dengfeng has eight scenic spots, including Shaoshishan Scenic Spot, Shaolin Temple Scenic Spot, Fawang Temple Scenic Spot, Songyang Academy Scenic Spot, Taishishan Scenic Spot, Luya Cliff Scenic Spot, Zhongyue Temple Scenic Spot and Guanxingtai Scenic Spot. Fengdeng is surrounded by the scenic spots, with close boundaries. At the early stage of the rapid urban expansion in Dengfeng, there was also the impact of cultural tourism project, industrial project and real estate development on the ecological environment and scenic spot, especially the constant emergences of high-rise buildings. In the old city transformation process, many traditional buildings were torn down, and the tourists and residents were doubted at the urban scape. Therefore, with the common participation of local government, planner, residents and enterprise, the achievement in the exploration of scenic-city planning coordinated mechanism based on the concept of scenic city will be of certain referential significance.

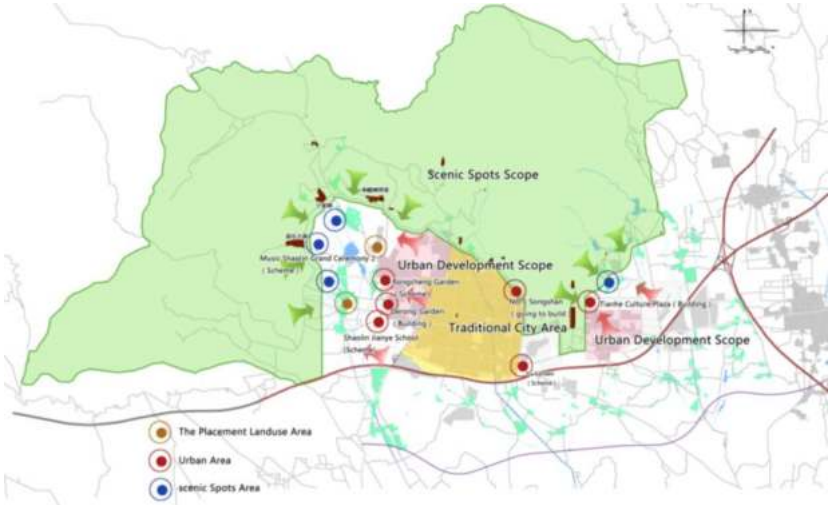


Fig. 2 space of scenic spots and Dengfeng city

## 4 Processing of scenic-city relation with the concept of scenic city

The scenic city theory has abundant details of traditional culture, and inheriting the traditional philosophic concept, as an eco-city theory with Chinese characteristics. According to the artistic conception of traditional Chinese landscape painting, artificial environment is one of the significant elements of the composition. Especially, the single architecture and architectural complex with historical or regional features usually become the theme and spirit of the painting. Therefore, respecting the urban context and continuing the historical features shall be the important links of the construction of scenic city.

In the Chinese history, attention shall be paid to the concept of geomancy, as w requirements on drinking water, disaster prevention and war prevention, etc. in the building of a city, and it had the tradition of building the city near the mountain and by the water, which created a batch of historic cities with remarkable landscape features. Historic city, town and village shall stick to the principle of overall maintain the traditional street textures and spatial scale, instead of changing the natural landscape and environment relying on the traditional patterns and historica [1] The protection of historic culture shall also integrate the thinking of scenic city.

Currently, the scenic spot planning and overall urban planning compiled for most cities may be detached in the compilation time and coordination. And the planning of scenic spot is usually limited within the protection range, and there is a lack of effective control over the surrounding natural environment. Therefore, the specific measures and methods of implementing the landscape and historic culture from the coordination of scenic-city relationship, especially in the planning of some small towns, may be of great significance for the protection of scarce resource, shaping of urban features, as well as the coordination of development and construction.

## 5 Planning strategy based on the concept of scenic city

### *5.1 Investigating the landscape environment and historical culture, and clarifying the protection object*

Before the compilation and implementation of the planning, it shall balance the urban development power and requirements on the landscape environmental protection. The legal, immovable, and non-renewable mountains, waters and historic sites with particular significance shall be protected strictly, and general resources shall also be applied in classification after full demonstration. In this period, it must pay attention to the connections between the objects, investigate and confirm the surrounding environment, important sights and overlook landscapes [2].

### *5.2 Paying attention to the coordination between protection and development, and highlighting the thematic features*

At present and in the future, the force of urban population and industrial concentration is still strong [3]. When creating the scenic city with historic features, it can dredge the population and industry by constructing new urban areas, thus to alleviate the historic protection pressure. Confirm the differential development mode of the new and old urban areas gradually, and encourage the functional updating and multi-element combined utilization in controllable condition.

*5.3 Controlling the development capacity and construction intensity, and promoting the sustainable development of the city and environment*

Scenic city shall conduct the practical control over the overall urban environment, and realize the sustainable use and constant optimization of landscape, as well as the organic integration of the economic benefit, social benefit and economic benefit [4]. It must carry out scientific measurement of the environmental carrying capacity and resource capacity, control the development capacity, construction intensity and architectural height reasonably, and guarantee the coordination between the urban development and landscape environment.

## 6 Collaborative mechanism of planning based on the scenic-city coordination

In the legal planning system, the control of the urban natural landscape and environment is realized with the overall planning which are the main documents for the planning management department to carry out the planning and construction management. Consequently, in order to implement the concept of scenic city and historic protection, it must propos the measures and methods from the perspective of the overall planning. Combining the above analysis, the author proposes the scenic-city planning mode from the perspective of the overall planning (Fig. 1). It mainly puts forward four aspects of contents,

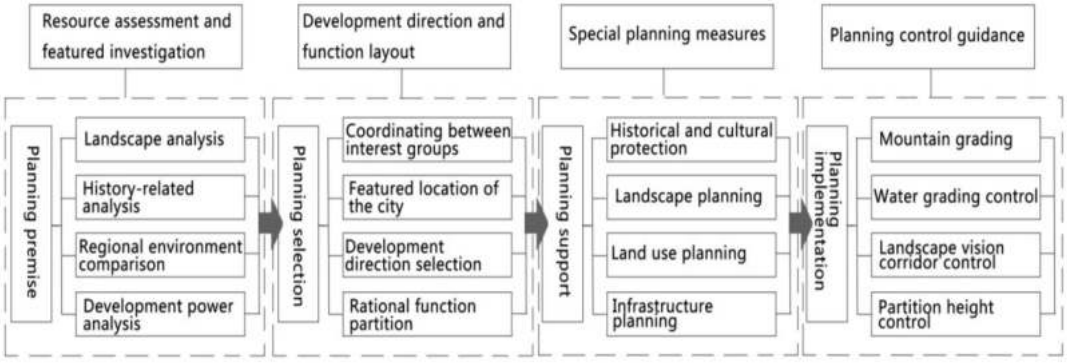


Fig. 3 Collaborative mechanism of planning based on scenic-city coordination

including the resource evaluation and feature investigation, development direction and functional layout, special planning measures and planning control guidance, as well as the staged integration of overall planning.

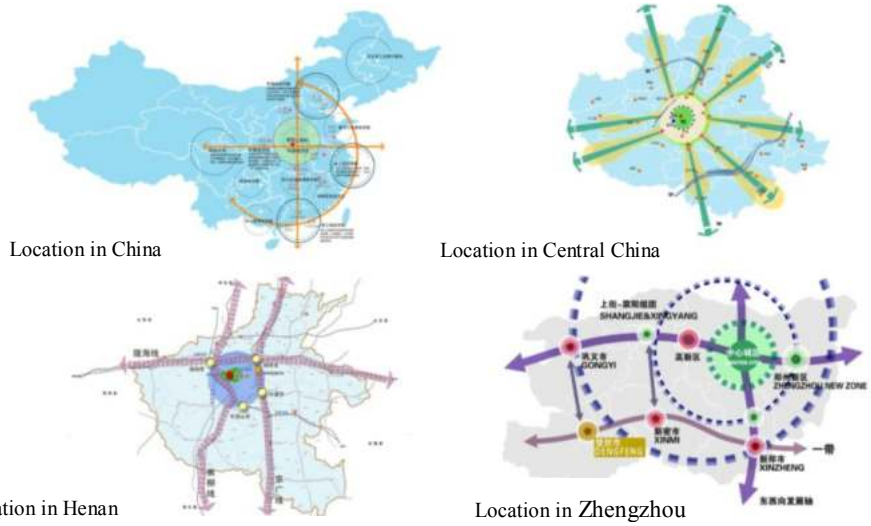


Fig. 4 Zone bit of Dengfeng

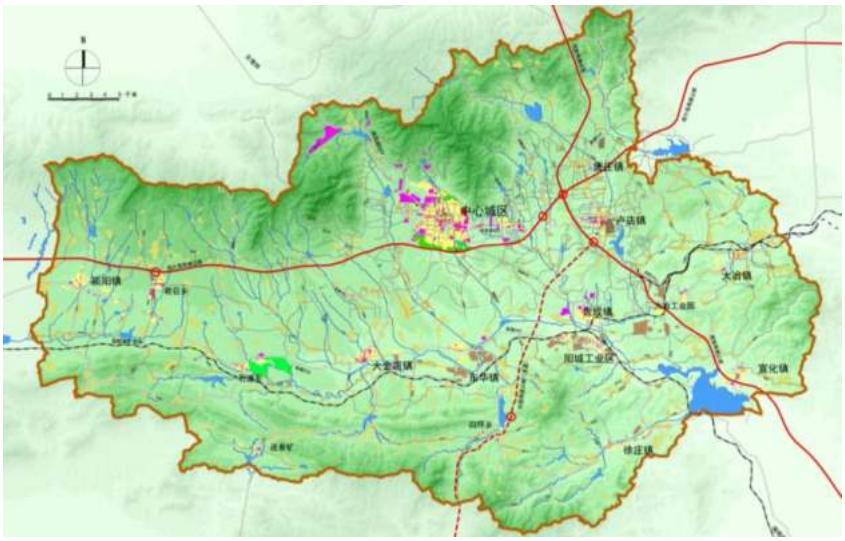

Fig. 5 Land status

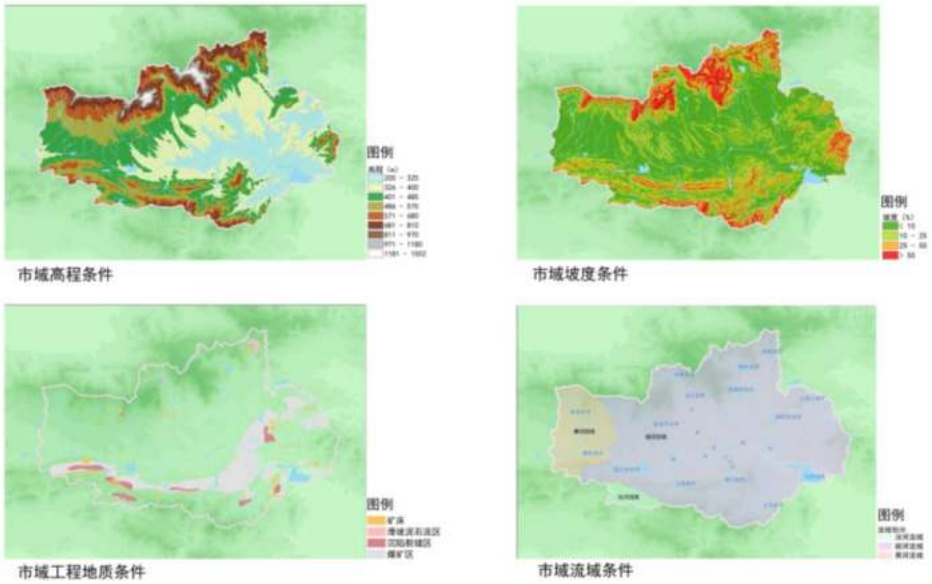


Fig. 6 Comprehensive assessment of land use

## 7 Planning practice based on scenic-city coordination in Dengfeng

### *7.1 Analysis of the landscape environment and historic culture*

The integrated mountain-city feature in Dengfeng is quite outstanding. The northern Songshan Mountain is not only one of the five mountains, a national-level scenic spot, but also a significant part of the historic city pattern. The historical architectural complex in center of the heaven and earth includes 11 outstanding historical buildings, including Shadows Measuring Platform, Star Observation Platform, Songyue Pagoda, three Watchtowers (Taishi Watchtower, Shaoshi Watchtower and Qimu Watchtower), Zhongyue Temple, Songyang Academy, Huishan Temple, Shaolin Temple Architectural Complex (including Changzhuyuan, Talin and Chuzu an), etc. It passed the del the 34th conference of the World Heritage Committee UNESCO, and being listed in the World Heritage List successfully, becoming the 39th world heritage.

There are numerous cultural relics and historic sites, which are especially concentrated in the south foot of Songshan Mountain, covering the dwellings, ancient streets, entrance building, temple, ancient pagoda, ancient tomb, ancient stele, ancient sites, etc. in which, multi-period features were quite significant. Before planning, it mainly started from the artistic carriers and historical remaining, including the contents, ancient poetries, books and paintings, and the landscape and historical sites that shall be protected with emphasis shall be confirmed for guiding the development direction, through the comprehensive analysis of the popularity, particularity, landscape value and preservation integrity.

### *7.2 Spatial structure planning of bottom line control*

(1) Urban expansion power and development direction analysis

Seen from the zone location, Dengfeng is in the suburbs of Zhengzhou, Henan, Central China, as the core economic region of the Central Plains, as well as the key area of industrial development and population integration. Seen from the urban coordination, Zhengzhou will construct the metropolitan area pattern, and require Dengfeng to develop the urban world history cultural tourism city. Seen from the tourism development, Dengfeng is a significant part of the golden tourist route Kaifeng Z Dengfeng (Songshan) - Luoyang , and it shall still be improved and perfected i tourist reception facilities and scenic spot construction. Therefore, Dengfeng must coordinate the relation between protection and development, and expand the development thought based on the continuity of historical context, stick to the ecology red line and historic culture landscape protection line strictly, and shape the featured scenic-city space integrating the landscape and historical cultural protection.

(2) Delimiting the basic control line

The overall planning of Dengfeng mainly alleviate the pressure of old city protection with the urban cluster in the east and south of the city, strengthen the population and industrial

concentration in the new city, and intensify the historical protection and tourism development in the old city. The urban clusters are mainly separated by the water system and greenbelt. In the cluster, it mainly plans the garden and greenbelt by relying on the landscape, thus to form the overall spatial structure of surrounding by r water, as well as gardens . Industrial parks shall be constructed at a certa the old city, for avoiding the damages to the historic culture and landscape environment. (Fig. 5 and Fig. 6)

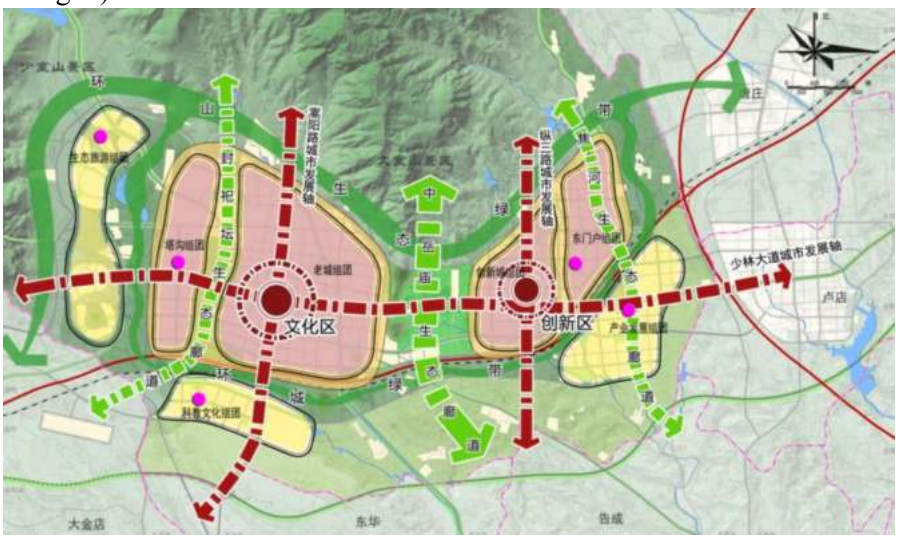


Fig. 7 Planning structure

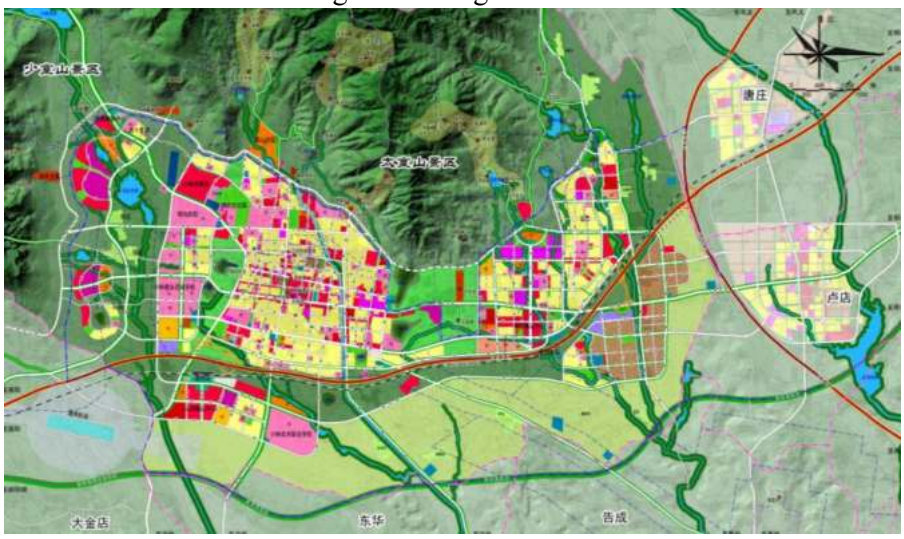


Fig. 8 Landuse

Designate the boundary of construction land and non-construction land in the urban planning area, control the urban growth range, and protect the landscape and rural ecological environment (Fig. 7 and Fig. 8)

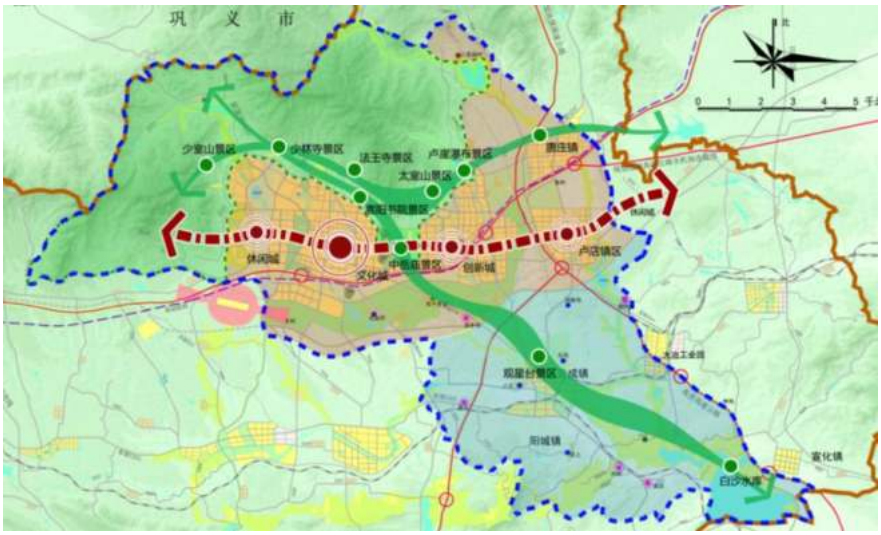


Fig. 9 Eco-space structure in urban planning area

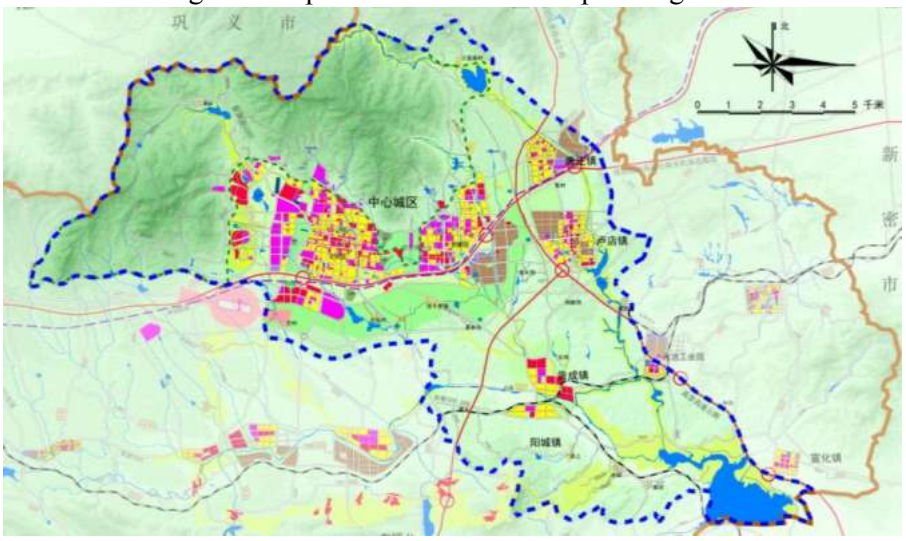


Fig. 10 Landuse of urban planning area

*7.3 Coordinating transition space*

Form the recreational transition zone between the city and Songshan Mountain with the current round-the-mountain roads, and expand several places of public space for forming the leisure nodes of tourism.

Form several places of the slow public place by making use of the features of distributed tourist sites. Highlight the recreational traveling atmosphere of the entire Dengfeng through the urban travel and leisure zone. Distribute several important tourist facilities cluster, and perfect the supporting service system in Dengfeng.

Control the surrounding areas of Mazhuang Reservoir between the urban area and landscape, the west and north side takes the boundary of landscape as the boundary, to Epo- Fengjitan Suogudui Urban ecological greenbelt in the east, and Zhengshao Highway in the south. Plan and develop the functional cluster dominated by the ecological travel and leisure functions. It shall strictly control that the construction land shall not

exceed 1/3 of the total, and reserve large stretches of forest and farmland. The unit development gives rise to the re-shaping of local element and environment in the scenic-city integration region, with certain inside closure inclination, which has great impact on the formation of new scenic-city relation.

*7.4 Strict height partition*

The following elements shall be considered for determining the architecture height: guaranteeing the overall style and feature of the city, especially the smoothness of the visual corridor. Combining the building function layout of blocks, the architecture height shall be adjusted according to the natures of the function. Considering the operability of the planning management, the same plot employs unified architecture height for control.

Designate the architectural height control line in Dengfeng. It is in the buffer control region of Songshan Mountain in the north. The limit height of the building in core tourism service region is 12 meter, while the architectural height in the north of Shaolin Avenue shall be less than 18 meters, and that in the south of Shaolin Avenue shall be less than 3 meters. The urban construction shall be controlled according to such height, and those memorial and landmark architectures exceeding the height shall receive special procedures or examination and approval.

*7.5 Landscape features with cultural penetration*

Guarantee the integrality and uniqueness of the urban spatial form, and keep the coordination between the natural landscape and human landscape.

The planning shall follow the goal of ecological tourist city and national-level historic city, highlight and strengthen the mountain, river and city urban landscape organize the roads, architectures, architectures and greening space rationally, integrate the urban environment, natural environment and humanity history environment, and form the harmonious and unique featured tourist city and landscape.

Starting from the landscape components, including nature, humanity and city, carry out the contrast analysis by combining relevant cases. The overall positioning of the future urban landscape in Dengfeng is determined as Mountain-foot city cultural city famous tourist city . Focusing on such a positioning, the future urban landscape sh the following nine strategies: highlighting the mountain, water loving, integrating green, inheriting history, carrying forward Zen culture, displaying the spirit of the time, protecting the traditional feature block, constructing ecological livable city, and improving the traveling experience and service.

## 8 Conclusion

At present, the urbanization accelerates in China, but hind the economic globalization and planning standardization, the appealing for counter-urbanization, ecologicalization and

humanistic transformation keeps raising [6]. The overall planning of Dengfeng carries out the thinking of landscape city and protection of history and culture. In the small urban planning, it shall continue the traditional art and culture of China, respect the urban context and landscape, establish the planning system, guide the featured development of the city, and provide good references for shaping the featured and attractive small towns. The disposal of scenic-city relation shall transform from the macroscopic system supply to the scenic-city coordinated microcosmic system, and enhance the autonomous organization of development and effective allocation of element. However, there are still many problems requiring more studies and exploration, for instance, the problem between history protection and urban construction, problem between traditional landscape and modern landscape, problem between waterfront development and disaster prevention, which are also the problems that would certainly be confronted in the rapid urbanization process.

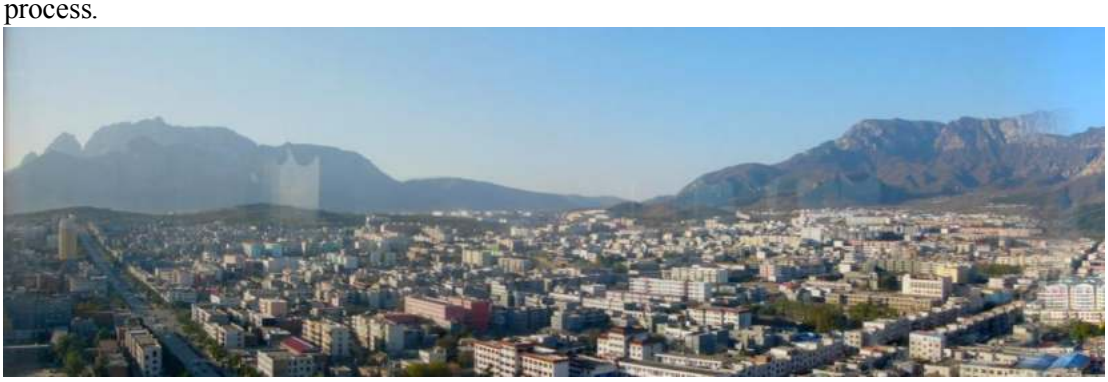

Fig. 11 Dengfeng region realizing the overall landscape control

Fig. 12 Scenic spot

Fig. 13 Transition region

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# TRACK 18

## Complexity, Planning and Fuzzy Responsibilities

**Urban Landscape Cultivation in Contact With Protected Nature; How to Solve Fuzzy Relations by Design?**

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Keywords: nature reserve, urban fringe, landscape design

***Abstract***
*This paper explores the process of cultivation of specific areas within Bratislava urban landscape located in close proximity to protected areas of Little Carpathians included in the Natura 2000 BA project towards Restoration of NATURA 2000 sites in cross-border Bratislava capital region. However, the concept of landscape management of contact zones of urban and natural structures is not reflected in the project and existing policies. Therefore, responsibility for decision making and sustainability of these areas are fuzzy and divided between many actors with conflicting interests, such as residents and vacationers, environmentalists, municipalities, developers and activists. Hence, the emergent need is to cultivate these spaces - to develop their relations into deeper levels of understanding, participation and sharing by visionary planning, innovative design and sensitive management in the complexity.*
*The output of the research is the framework of development measures for sustainable development and cultivation of the urban fringe natural areas developed by author in cooperation with NGOs Daphne and BROZ - the Natura 2000 BA partners. Using field research, analyzing historical and existing characteristics of the sites, by the participation of residents and visitors, and consulting with experts, the concept of landscape plan was developed. Segments of the plan designed in detail respect both the interests of nature and also human requirements - democratic, accessible places with more opportunities for sociability. This paper contributes to the debates on practical examples of managing various interests in specific locations, characterized by fuzzy relations between natural and urban aspects.*

## 1. Introduction

Urban fringe, where rural and urban environments intertwine and where the most intense growth and change happen (Friedberger, 2000), is under constant pressure. Urban fringe natural areas (UFNA) are facing various challenges arising largely from dynamics of contemporary human lifestyle and needs, dealing with process of urbanization and also from alterations in relationship between people and nature. Particularly significant is the problem of urban sprawl in contact zones of densely urban and highly protected natural structures (Gažová, 2006; Arnberger et al., 2013). The new development on the border of such contrast environments is related also to disharmony of relations, territorial conflicts and fuzzy division of responsibilities between diverse actors with conflicting interests, such as residents and vacationers, environmentalists, municipalities, developers and activists.

Protected areas within the borders of urban areas are very valuable since they provide many ecosystem services - the benefits people obtain from ecosystems and nature (Millennium Ecosystem Assessment, 2005). UFNA in conservation are biodiversity hot spots, producing drinking water, regulating hot summer temperatures, providing wildlife viewing, recreational, spiritual and eco-tourism opportunities and wellbeing for their visitors and residents of the locality (Daniel et al., 2012). At the same time,

they constantly suffer from high recreation use pressures because of their attractiveness (Arnberger et al., 2013).

This paper focuses on the important case of the UFNA – the area Devínska Kobyla. The case study Devínska Kobyla is unique massif belonging to the protected mountains Little Carpathians. This area is significant in several aspects: by the location on the edge of Bratislava city whole surrounded by its urban areas and separated by two rivers Danube and Morava from Austria. Due to unique landscape character and rare flora is the locality of Devínska Kobyla highly protected. Its natural areas are involved in the Natura 2000 BA project - Restoration of NATURA 2000 sites in cross-border Bratislava capital region by LIFE Programme. However, the Devínska Kobyla areas are intensively used settings and the pressure of human needs for recreation with lack of complex established infrastructure causes degradation of the landscape.

Subsequently, it is highly important to deal with the conflict resolutions in such areas, since fuzzy relations and conflicting interests can impact negatively the natural resources and consequently the quality of the resident well-being and the visitor experiences.
There are many positive examples of landscape design, planning and management of protected areas in close proximity to large city. Such important previous study is focused on Donau-Auen National Park in Vienna, where effectiveness of buffer zones is deeply investigated (Gál, 2013; Arnberger et al., 2013).

However, the previous studies differ considerably from this study mainly due to the character of transition zones between urban environment and protected nature. The focused case Devínska Kobyla is characterized particularly by direct bordering of the protected nature with housing developments, with almost any buffer zones. Furthermore, contribution of this study is also deep emphasis on human needs and requests on natural environment, since the studies from similar cases mainly focus on demands of the protected nature.

## 2. Literature review

### 2.1 Cultivation of urban landscape

The process of cultivation is elucidated and defined briefly in this paragraph. Currently, cultivation is still predominantly connected with agriculture field; even if in the connection with urban landscape (May and Rogerson, 1995; DeLind, 2002, Diogo et al., 2010). Although despite of that the expression of "cultivation" fits exactly to the main objective of the study; improvement of fuzzy management in the contact zones of contrasting environments towards sustainable and resilient by appropriate planning and design. Cultivation process is grasped and shaped as the complex concept responding to current challenges of the studied areas.

Generally, the meaning of cultivation is according to Oxford Dictionaries defined as;

- "The action of cultivating land, or the state of being cultivated", where cultivating means process of improving, developing and promoting into growth

While in Oxford Advanced Learner's Dictionary definition is;

- "The deliberate development of a particular relationship, quality or skill"
- "The preparation and use of land for growing plants or crops"

In connection with landscape, cultivation is defined as the process based on human existence, when things are growing and it is possible to show up the core ability of culture. Then developing spatial

opportunities lead to multitude of possibilities, expanding knowledge, innovation, valuing beauty, perception, enriching experiences (Marques, 2014).

Hence, the concept of cultivation in the specific areas of Bratislava urban fringe is understood as the process, when conflicting interests and complex relations of actors in both environments are taken in account and developed into higher, deeper or richer levels of understanding, participation and sharing. And so the fuzzy relations between urban and natural structures are harmonized, such as relationship between people and nature.

## 3. Research objectives

Whereas the relations in these areas are fuzzy, many problems occur. The landscape suffers from the conflicting interests of many various actors. Underestimation results to unsatisfactory compromises or to severe neglecting of some interest groups, heading to physical and philosophical decay, deviating from sustainability and resilience of the environment.

The question of arises whether is possible to plan, manage and design effective infrastructure for recreation with attractive entrance spaces which will satisfy the demands of various users and concurrently will help to protect the nature of Devínska Kobyla, despite very tight buffer zones.
Thus, this research aims to identify the optimal planning and designing measures and management options useful for answering fuzzy conflicting relations between natural and urban aspects towards sustainability of the landscape.
The proposed output is the framework of development measures and the landscape design concept for cultivation of the UFNA "Devínska Kobyla".

## 4. Core construct - Urban vs. natural relations

### 4.1 Cultivating harmony in the urban fringe of Bratislava

To achieve relevant approach to cultivation, the core construct was developed on the basis of the most important characteristics of the area. This process involves many layers, aspects and specifics in the case study Devínska Kobyla. The research should be complex, noticing enough attention to all of aspects, so then is possible to avoid negative impact at the natural resources, at the quality of the recreation and quality of living environment for residents in the locality. However, the limits resulting from nature conservation should serve as fundamental mantinels for planning process, while the conservation of the natural and historic values is the priority in the area.
The uniqueness and strengths of the locality bring a lot of opportunities for whole Bratislava region, but it also entails some challenges; majority of the most important and brief relevant proposals for solutions are outlined below.

#### 4.1.1 Management of recreation in contact zones - infrastructure for recreation, entrances and buffer zones

In the contact zones – specific areas where is occurring direct contact of settlement and nature, there the relations of city and protected nature intertwined and emerging conflicts then lead to degradation of the environment. The recreation use pressure makes the situation much more alarming.
Thus, linking, structuring and hierarchization of the system of natural environment from the core entrance zones and urban recreation areas are essential (Gažová, 2006). Subsequently, areas of major intervention of city to the country would become the core areas of interest for the urban dwellers. Although the buffer zones practically not exist, the main recreational areas and points of interest should

be defined within the infrastructure for the recreation. Defined structure of the connected trails and nodes helps to clearer spatial fuzziness.

Further, satisfactory quality of particular recreational areas, urban green spaces and interest points should be managed, since their design and program significantly influence well-being of visitors during their recreation. Hence, the research should focus also on human requirements and needs - democratic, accessible places with more opportunities for sociability (Thompson, 2002).

### 4.1.2 Protection of the nature by motivational approaches

Learning landscape design – cultivating the positive relationship to nature

Next important challenge in the area is the lack of awareness of the importance for nature conservation by some visitors and especially local dwellers. The issue of increasing respect for nature and cultivation of the positive relationship should be underpinned by creative peaceful means. Whereas there is demonstrated high contribution of early childhood education to sustainable society (Herbert, 2008; Didonet, 2008), to cultivate human values is very effective from the earliest age.
Appropriate solution then could be planning and design of interactive learning parks – Nature Play areas, emphasizing the need to introduce nature to children by inspiring, interactive and playful way. Initiator of such areas in Oregon - landscape architect Mathis (2013) states that the intent behind Nature Play Areas is to provide creative, free form play spaces that spark children's connection to, and love of nature. Obviously, planning the interconnected infrastructure of educational trails is also a proven and widely used method for improving environmental awareness of human society.

Figures 1 and 2 - Learning landscape design in Devínska Kobyla applicated by Daphne NGO

Sustainable grazing management

The locality of Devínska Kobyla is protected mainly because of occurrence of unique xerothermic grasslands that spread through human agricultural activities (Senko, 2010). It is therefore essential to find the ways of sustainable maintenance of these plant communities, since the expansion of invasive tree species is rapid and almost uncontrolled.
To suppress the overgrowing of rare grassland and ensuring regular removal of biomass is suitable to apply the management of traditional grazing and mowing (Dúbravková et al., 2011). Application of grazing also increases the attractiveness of the site and naturally adopts people to appreciate the values of

nature. At the same time, further benefit is utilization of goat milk for production and sale of desired organic food.

## 5. Methodology

### 5.1 Case study Devínska Kobyla

The case study area is defined on the western slopes of the robust mountain Devínska Kobyla, part of the massif of Little Carpathians, while its whole area belongs to the Little Carpathians Protected Landscape Area. The wooded mountain is located in the northern part of Bratislava, the capital city of Slovakia, with a population of about 0,5 Mio. This massif is surrounded from all sides by neighborhoods of Bratislava. The area of focused segment is almost 400 ha, while the urban areas of the city districts Devín and Devínska Nová Ves extend into the study area. The highly protected National Nature Reserve Devínska Kobyla occupies most of the study area, containing unique protected paleontological sandstone Sandberg. The area is managed by organization Urban forests in Bratislava, involved in the Natura 2000 BA project - Restoration of NATURA 2000 sites in cross-border Bratislava capital region by LIFE Programme, lasting 2012-2017.
Locality is unique for an incomparable landscape character, rare protected steppe flora, significant geological, topographic and singular paleontological structures and beautiful views of the landscape from steep slopes and for historic and cultural wealth.

#### 5.1.1 Data collection methods and approaches

In first phase, the basic and deeper research about Devínska Kobyla area was necessary; for understanding the conditions, potentials and limits of the territory. It was conducted from Sept. 2013 to May 2014 on the basis of field survey and mapping, then literature and documentations survey on various aspects of landscape country and also by meetings and consultations with experts; environmentalists, stakeholders from NGOs Daphne and BROZ participating on Natura 2000 BA project in the area, stakeholders from local government and by interviewing the public.
In next phase, data from the survey were analyzed in the complex context – using also historic plans. Analyses of land-use, relief, functions, legislative, dendrologic, visual and compositional relationships were included.
In third phase the qualitative research with the users of area was conducted. The knowledge and views from the “experts of the locality” – the users and residents were obtained. Data were collected by method of individual interviews with random representative sample of the public across study area Devínska Kobyla.

#### 5.1.2 Sampling

Locality of survey was conducted mainly on routes leading to the "main entrances" to Devínska Kobyla, especially in the district Devínska Nová Ves, where are the most significant conflict zones between natural and urban environments.

A total sample of respondents involved in the survey was 51; respondents were chosen randomly, trying for varied and representative sample (Figure 3).

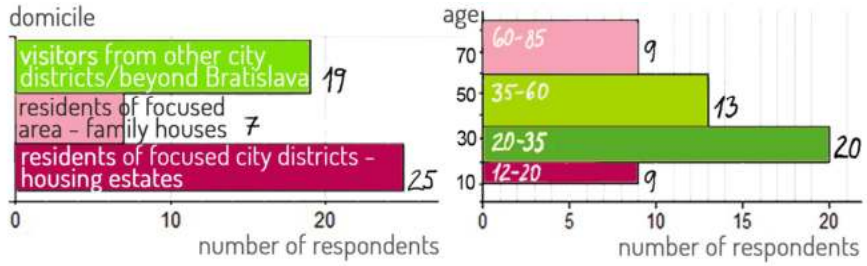



Figure 3 – Basic pattern of respondents – structure of domicile and age structure

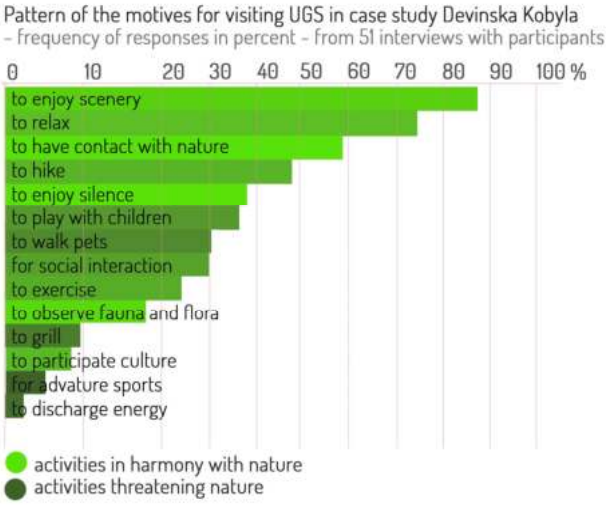



Figure 4 – Pattern of the motives for visiting the natural areas in case study Devínska Kobyla

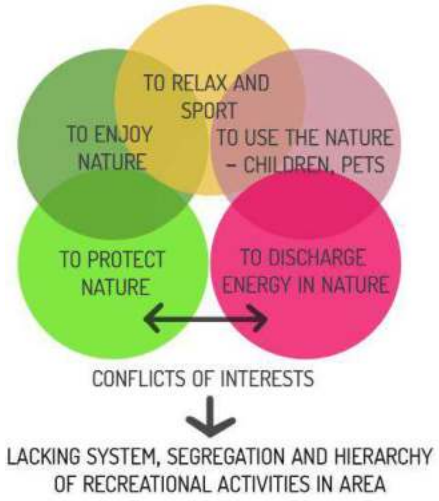



Figure 5 – Conflicts of interests in the locality

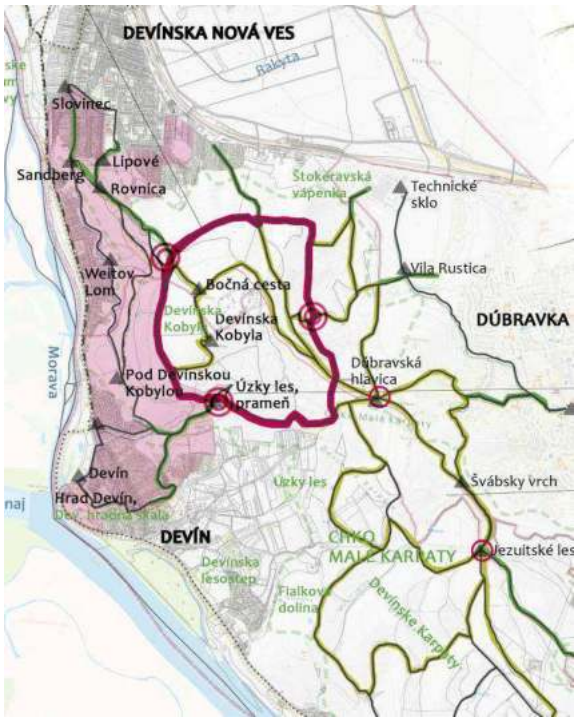
## 6. Discussion of results

By synthesis of complex knowledge from previous stages of the research was developed the design concept for the landscape plan, applicable in practice. Whereas the focus of Natura 2000 BA project aims on measures beneficial for natural aspects of the locality, the output of the research significantly addresses the measures improving recreational infrastructure in the locality, although by respecting the nature – whereas conservation is the priority among conflicting interests.

Cultivation plan for sustainable management of Devínska Kobyla locality is designed across multiple scales to complex design concept; from the overall design of the infrastructure of routes and trails and its hierarchization, mutually connected to the principal interconnecting sports circuit, to the detailed design of various recreational spaces, points of interest and interactive stops.

Since in the transparent recreational infrastructure of Devínska Kobyla is cumulated the main pressure of visitors, the Nature Reserve Devínska Kobyla is protected from the degradation of lively activities. These activities are transferred to peripheral buffer zones in the contact with urban zones and also inside the forested massif, beyond of the highest protected Nature Reserve with unique grasslands. Furthermore, by the network of trails, the city districts surrounding the massif are mutually interconnected. In the strategic crossroads, where the main sports circuit intersects the other trails from

the districts, hubs for recreation are designed. Particular recreational spaces are according to their hierarchy equipped with several components for rest and recreation, accessible and attractive for various visitors.




Figur. 5.The connection of trails to systematic infrastructure for recreation; main sports circuit

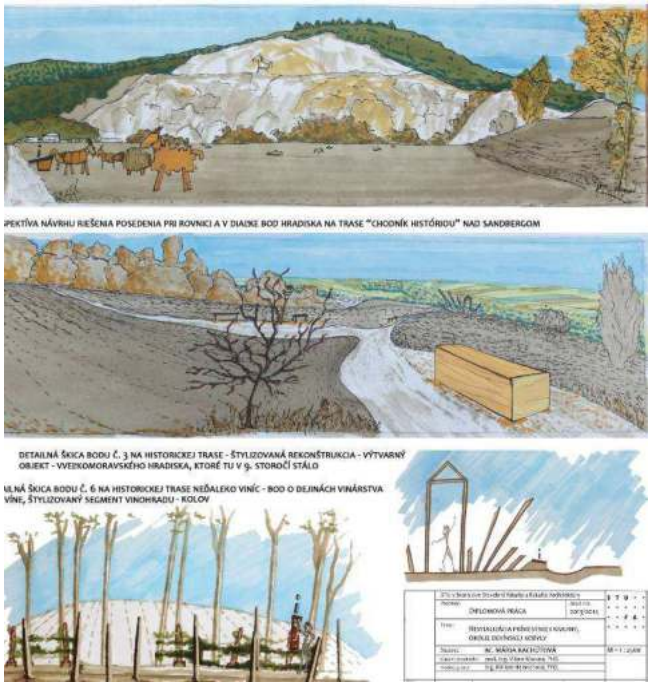


Figure 6. Sketches of the educational and recreational areas and nodes - interactive point on the trails

The core philosophy of the design concept for cultivation of Devínska Kobyla UFNA is based on the very nature of the locality. The concept "From fairy tale to fairy tale" indicates tremendous wealth and uniqueness of the Devinska Kobyla.
Particular stories about different layers of the area are introduced by individual segments, creating the mosaic of the complex history of the locality.

1. Three main interactive trails in the Nature Reserve Devínska Kobyla introduce specific aspects of Devínska Kobyla. These trails and their themes are: “The Story of Nature”, “The Path of History” and the sports “Circuit Kobyla”.
2. Interactive hubs and points of interests at these trails have learning, informative and recreational character with the character of Nature Play areas – inspired by Learning landscape design.
3. Navigation element in the form of a mare reference to the name of locality - Devínska Kobyla (kobyla in Slovak = mare). Land-art elements are incorporated in the whole locality, made out in the form of sculptures, statues, playground components. These navigation elements highlight the identity of the site and unite the locality into a unified whole. They also elevate the artistic value of the site, creating the art libretto.

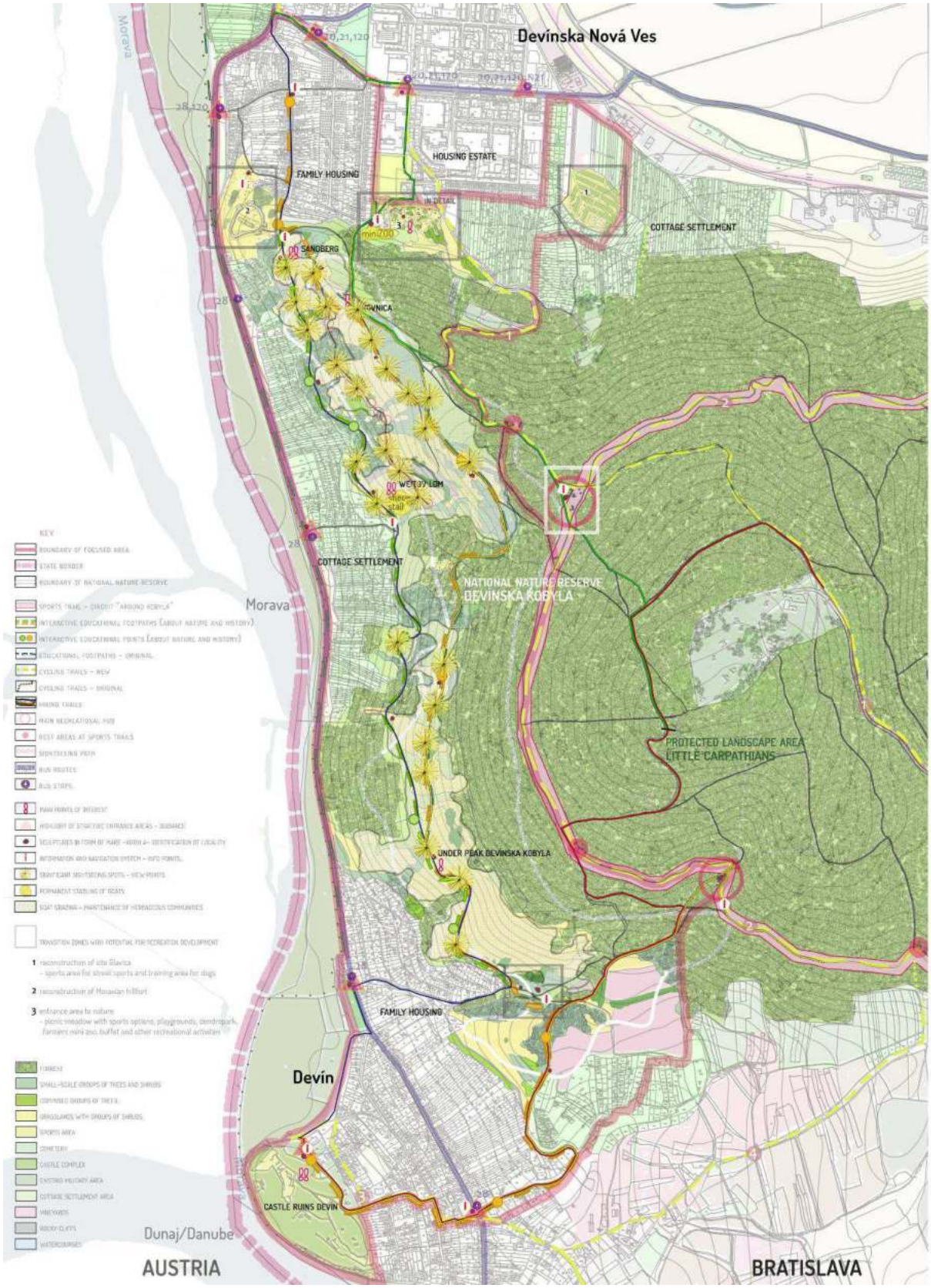



Figure 7. Complex plan of development measures in Devínska Kobyla

The protected grasslands are proposed to be maintained by sustainable grazing management in accordance of the intention of LIFE project, managed by BROZ and Daphne NGOs. Children from the urban areas are attracted by present goats and sheep, serving as the magnet for the visitors. Hence, the visitors learn about the need of conservation and the uniqueness of the locality also by this way.

The main recreational spaces and entrances to the Nature Reserve are located in the peripheral zones of the urban areas, as their inhabitants visit the natural environment most frequently. Each of the spaces provides other forms of activities, answering also on the need of lively recreational activities as downhill, skating and dog exercises.

## 8. Conclusion

The study solves the area of Devínska Kobyla by set objectives. The resulting output answers to the conflicts of nature and the city by proposing facilities for recreation in accordance with the protected landscape by management and design measures.
Methodology and creative approaches in the process of development could contribute to solving similar territories with spatial fuzziness, where the great pressure of urbanization on highly protected nature negatively impact the landscape and where residents and visitors have a high demand for recreational use of the environment.
The research has not solved the policies and governance of the locality more in details, next phase of research propose to focus on this issue.
The paper contributes to the debates on practical examples of synchronizing various interests in specific locations with fuzzy relations between natural and urban aspects in general.

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# TRACK 19

## Smart Approaches to Responsible-minded Planning Practice

# THE ROLE OF VISUAL REPRESENTATIONS IN URBAN PLANNING

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*Representations inform our capacity*
*and our need to imagine the city*
*(James Donald, 2000, p.53).*

Visual representations in its all different forms help us to understand our cities, make it available for analysis. They help us to make useful conceptual shortcuts in our understanding in order to have a glimpse of what s happening in our cities.

This research focuses on visuals as representations of cities. These visuals may be a single spatial representation as a map or a sketch, or it may be in form of a visual metaphor (for example Blue Banana, European Bunch of Grapes, London Green Belt, the finger model of Copenhagen etc. ) or a complex set of images.

Throughout the history, the urban planning discipline has looked at visual representations in various different ways, giving little to no attention on them at all (Jarvis 1994; Neuman 1996, 2000; Faludi 1996; Dühr 2007).

Since the notion of planning through debate (Healey, 1992) they are acce communication tools which shape attention (Forester 1989), therefore shape the discourse (Kunzmann 1996; Healey 1997, 2006; Forester 1999). On the other hand, they are object to treacherous vision (Shields, 1996) which allows manipulations (Pickels 1992; Neuman 1996; recognized that representations may focus on certain parts while inevitably neglecting others (Harvey 1996). Since the visual representations of spaces, like cartographical maps, are not accepted as objective and scientifically informed instruments only, they as well are object to communicative distortions (D hr, 2007). That s why it is believed by some theoreticians that it is proba abstain visual representations (Eeten and Roe, 2000) because they can lead to serious conflict (Zonneveld, 2000) through their biased perspective of reality (Crampton, 2001).

Despite the recognized consensus-building purpose of representations; growing chaos, complexity and fuzzy reasoning hinders their effective outcomes (Forester, 1999; Healey, 2007; Innes and Booher, 2010; Neuman, 2010). Growing complexity makes planning messier, their outcomes sketchier (Neuman, 2012) and their discourse more abstract. On the other hand how can we make planning interesting and understandable without using visual representations (Zech, 2013)?

Nevertheless discourse helps finding meaning in complexity and it can create unquestioned knowledge that requires unconventional creative thinking. Visual representations in all its different forms help us to understand the urban complexity.

The web has become a new opinion space today, a virtual but de facto public space (Shields, 2013). It is re-wiring our way of thinking, how we perceive our cities and how we respond to changes.

But we face a great challenge, besides the obvious complexity of our cities;

phenomenon. We are producing an enormous diversity of data, from governments to city councils to institutions. It is getting incredibly difficult to make sense of all these data, how to analyse it, how to see through it, how to communicate it, how to visualize it.

The open-ness of the virtual public space makes cities more inclusive, enabling its citizens and different organizations to actively take part in it. Open data initiatives and institutions are actively encouraging their smart citizens to use the urban data and make meaning out of

Urban and regional areas need to be represented collectively, not only from certain perspectives or in certain forms. If we can have a glimpse of what s happening, then we might hav intervene, to plan, to design and sometimes to resist (Mitchell, 1996).

To empirically analyse this hypothesis UCIT (www.ucit.or.at) is created, it is an open source project consisting of open source solutions. Here, the purpose was to present urban data in an interesting way to the media and public, just by creating an application which shows the urban data with its time-space character. We need to re-examine the city, keep it open to further critical analysis and show the urban data in different ways from different perspectives which in turn may reveal unperceived knowledge and spur creative thinking.

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# Smart Solutions For Healthcare System
## Cases From China

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Abstract
In the digital age, the structure of global economy has been transformed; the he
also changed. By reviewing the history and statistical data of China healthc
evaluating them in a global realm, this paper reveals the fact that medical sys
China still falls behind the world average level, which doesn t coordinate wit
urbanization development. The main reasons are deficiency of financial expen
institutions and health care workers, which is hard to be improved within a sho
local governments have adopted Smart Healthcare System to meet the people s der
care. Cases include Smart healthcare card, new health insurance policy and the
were introduced, Following by the review However, this paper also indicates t
these smart methods, and presents a holistic medical service system-planning f
predictive urban planning to responsive urban governance, the whole process of
system could be realized by big data analysis and local legislation establishmer
planning decisions more rational and feasible.

Keywords: smart cities, healthcare, China

## 1. Introduction

Since China implemented reform and opening policy in the late 1970s, China ha
general adoption of the market principle. Financial reform has also been made
system toward a free market system. National healthcare for all the people was c
of health facilities were encouraged to support their operations rely on us
governments continued to take control of the prices and hospitals. These finar
organizational policies were not coordinated. These uncoordinated policies
problems in the system. Market-based financing created more unequal access t
between the rich and poor. Irrational classification system of public healthcar
management caused inefficiency, waste and poor quality of health care.

In the 21st century, despite the fact that China has higher income, better
advanced medical equipment, due to negative effects raised by urbanization, ind
globalization, Chinese public health system has encountered greater difficulties
are more and more unsatisfied with the low efficiency and the high expenses

healthcare service. Then another reform in healthcare system was raised in 20
decided to recover the national healthcare insurance for all the people.

To examine China s Health care condition from a holistic perspective, data f
countries to developed countries were collected to compare with China. Four majo
chosen, including health care expenditure per capita, health expenditure propor
physicians per 1,000 people and hospital beds per 1,000 people.

1.1 Healthcare expenditure

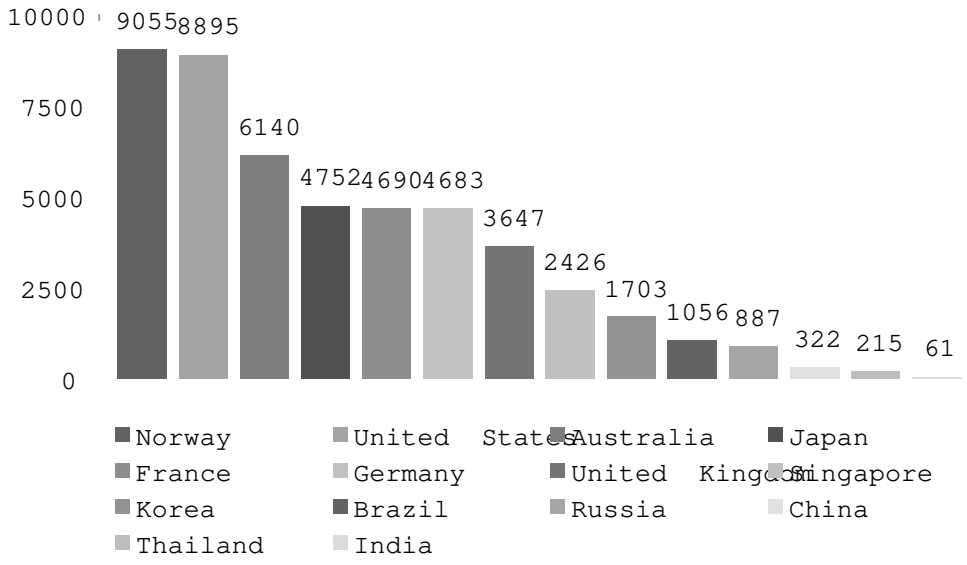


Figure 1. Health Expenditure Per Capita in 2012 (current US$)
(Resouce: World Bank Open Data)

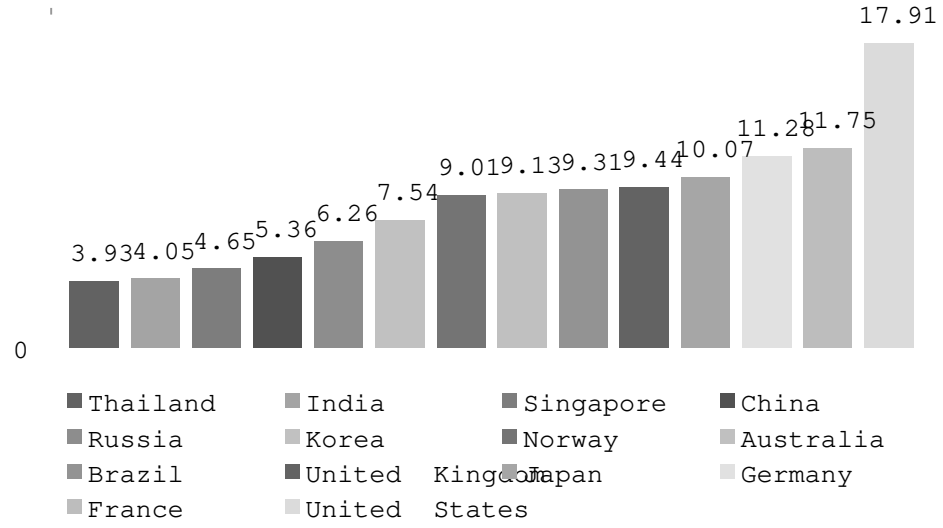


Figure 2. Health expenditure % of GDP in 2012(current US$)
(Resource: Chinese Health and Family Planning Statistical Yearbook)

China ranked 118 in health expenditure per capita in 247 countries and regio
Although China is better than Asian countries like India and Thailand, but it st
developed countries quite a lot, for example the index of Norway is almost 30 ti

Besides, despite the fact that China has experience rapid growth in economy, it
health expenditure portion of GDP. The reason may be Chinese macro-health pol
health care financing and delivery toward a free market system in the1980s.

## 1.2 Healthcare facilities

When it comes to the index of physicians and hospital beds per 1000 people, alt
of China are not advanced in the world, the latter could be compared with that
the former is one of the last in the main countries.

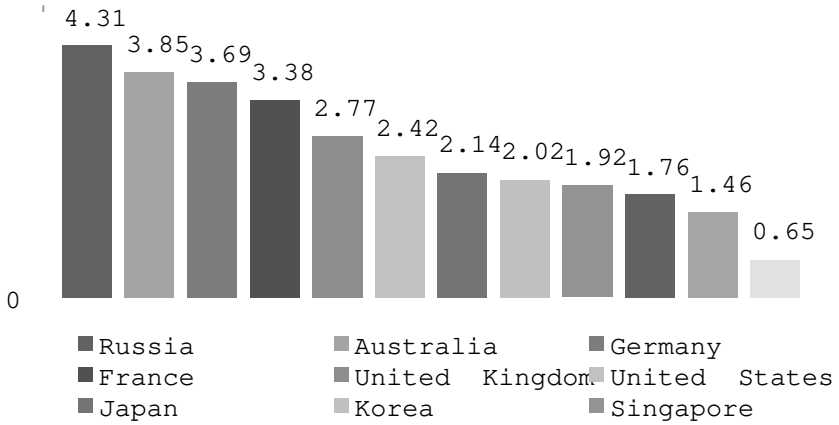


Figure 3. Physicians per 1,000 people in 2012
(Resource: World Bank Open Data)

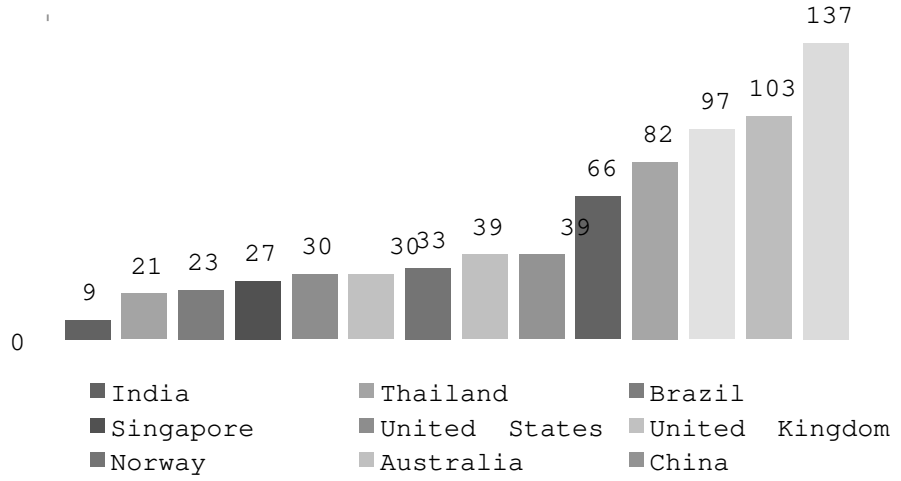


Figure 4. Hospital beds per 1,000 people in 2012
(Resource: World Bank Open Data)

Comparing the conditions of economic development and healthcare development, obvious that healthcare service still fall behind the economic and urbanization

To conclude, the hardware condition is generally better than the software condit seen from the rank of the number of health care institutions, hospital beds and reflects the fact that China paid more attention on hardware construction, but i of workforce in health care.

The reason could be as follows: firstly, China is still a developing country, government were still going to infrastructure construction projects, but not y medical workers. Secondly, since China changed the financing policy in health was invested in the income of medical workers, therefore people working in thi adequate to provide qualified service. Thirdly, the whole system is free marke could go to hospitals whenever and wherever they want, therefore, there s alw workers in the general hospitals, but not much patients were treated in commu institutes.

## 2 Smart Healthcare

For several decades, China is experiencing rapid urbanization from 26% in 1990 end of 2014, but still less than other mid-level developing countries such as M urban) or developed nations like the United States (80 percent). Chinese governm further urbanization to support economic development. But pollution, housing a traffic congestion are already heavy burdens, so it s urgent for cities to fi creating a better life for migrants.

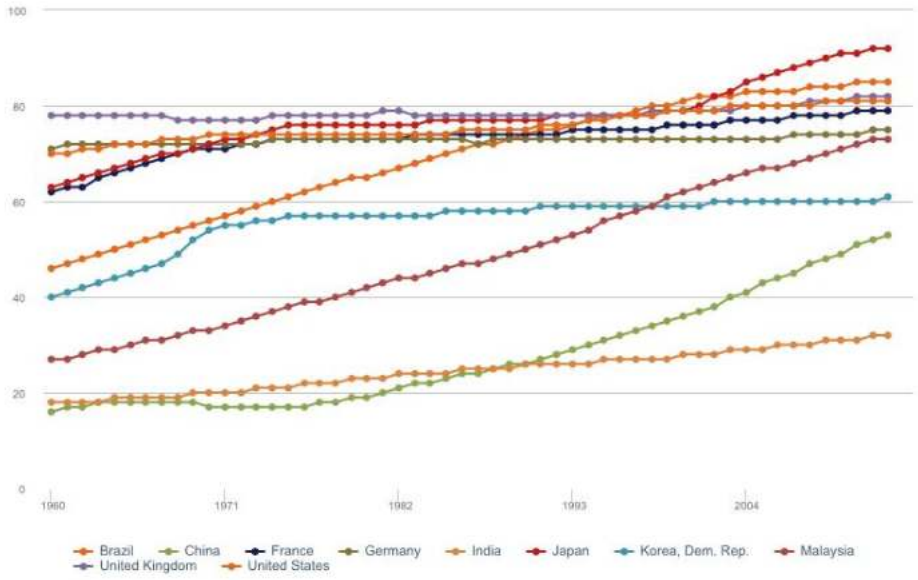


Figure 5. Urban population rate in the world
(Resource: World Bank, World Development Indicators)

Then the concept of Smart City was raised. A smart city (also smarter cit
technologies to enhance performance and well being, to reduce costs and resour
and to engage more effectively and actively with its citizens. Key 'smart' secto
energy, health care, water and waste. A smart city should be able to respond
global challenges than one with a simple 'transactional' relationship with its c

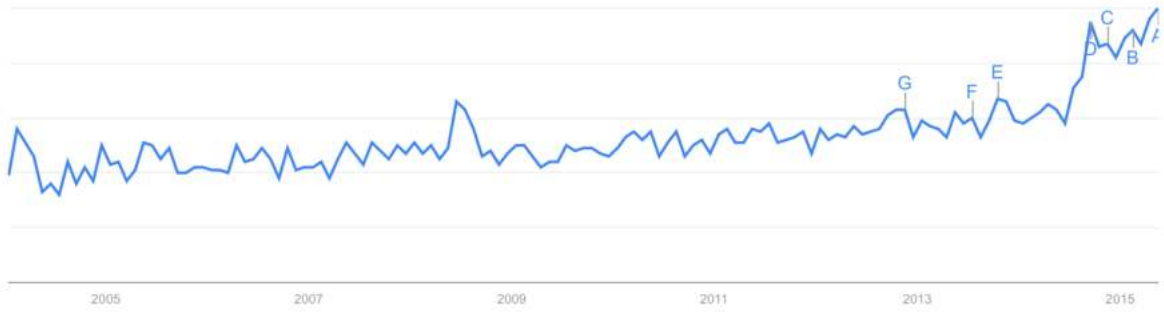


Figure 6. Search trend of Smart City
(Source: Google Trend)

Since the central government made development of smart city technology and p
national policy, it quickly gained popularity in China. Almost every city is des
the pilot project of Smart City, which is led by the Ministry of Housing and
Development (MOHURD). Till now, MOHURD selected 290 local governments and eco
development zones as official smart city pilot project sites, making them eligi
a ¥800 billion ($130 billion) investment fund sponsored by the official China De

Figure 7. Cities with smart city projects at the end of 2013, according to CC
(Source: Donald Johnson/CCID Consulting)

Health would have significant effect on the mobility of capital and labor. Howev
of public healthcare has not been recognized in the field of urban planning.
economic growth, public healthcare situation are still far from satisfactory
increasing workload of doctors and insufficient financial expenditure on p
compared to developed countries.

Smart Healthcare, as a new management approach has been introduced to improv
situation in public health in many cities in China, especially in the Yangtze
service system and remote consultation were applied. Besides the successful cas
suggests that urban planners could predict the healthcare demand before making
through big data analysis, therefore making more reasonable decisions.

## 3 Cases from China

The area of China is so large and diversed that it s hard to solve the problem
one time. Therefore, local governments had made efforts to introduce some new
methods to change the situation little by little, especially those in the develo

Three cases were selected here to present how local governments in China deal
considering citizens demands in the public healthcare.

### 3.1 Smart Health Card

Hangzhou, one of the first cities in China to introduce the concept of Smart h
Smart healthcare project in September 2012, and quickly spread it to all the
county hospital, 10 provincial hospitals, 45 community healthcare centers a
healthcare stations in Hangzhou.

The convenient payment function of the citizen card is the core technique of t
requiring patients to go to the counter for services, it enables citizens to pay
consulting rooms and nurse stations; to charge, make reservations, query, payme
test reports on the self-service machine, which is more convenient and time-savi

According to statistical data, there have been 2.5 million citizens opened th
function of the citizen card, which benefited more than 6.55 million outpatie
inpatients. The average time saved per person is about 1 hour.

Online tests and reports inquiry systems were also promoted by the Smart healt
has served about 0.95 million person-times, at least 10% patients were excuse
hospital for tests and reports personally. The estimated time saved is about 2
means 0.2 million hours were saved for the whole society, and it s also a r
conditions.

3.2 New health insurance policy

The healthcare system in China used to develop upon the administrative fra
healthcare facilities were classified into three grades according to owne
administrative departments.

Chinese government was determined to promote the classified healthcare system y
level service system of city hospitals (general hospitals, specialty hospitals)
were adopted to realize the reasonable distribution of healthcare facilities.

With the ownership of hospitals transferred from administrative departments to
provincial hospitals, city hospitals and district hospitals were expected to gr
in the city- community two-level healthcare service system.

Many cities shared the thought that emphasis should be put on general hospit
hospitals, while the hospitals in the middle would have to be modified for new d
system.

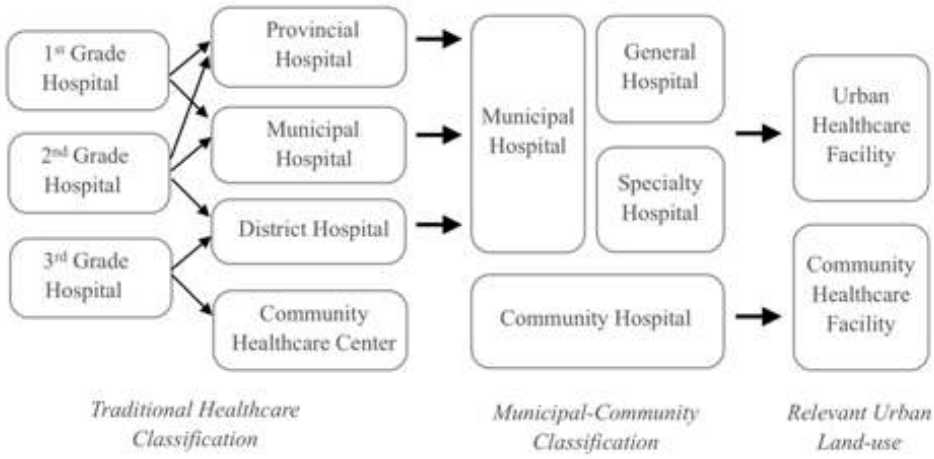


Figure 8. The transform of Healthcare classification System (W.P. Lin, 20

The new City-Community system were established, however, it didn t function we
to. Owing to the huge difference between developed general hospitals and star
hospitals in medical devices and service quality, but the same expenses they
preferred to go to general hospitals all the time, regardless of which kind of
result, the pressure of general hospitals was not released and the community
enough patients to get the chance to develop.

Therefore, Guangzhou announced a new health insurance policy that has become ef
2015. The new policy is mainly about raising the proportion of health expenditu
insurance in community hospitals. To transfer from community hospital to genera
cover a higher proportion than go to general hospitals directly. Citizens are a
regular community hospital first in order to get transaction service. Otherwise,

regular general hospital and would not get the most of health insurance. On th
than 20,000 people went to community hospitals to choose their regular hospit
more than peak number in 2014.

This means currently the new policy has an effect on attracting people to commu
the number of patients in general hospitals has not decreased obviously as expec

3.3 Ningbo Cloud Hospital

After six months of trial operation, the first cloud hospital in China, Ningb
officially opened in March, 2015. This platform based on new information techn
computing, big data, internet and internet of things is trying to deal with
healthcare system, while using internet methods to enhance current medical res
borderless hospital union. (China Business News, 2015)

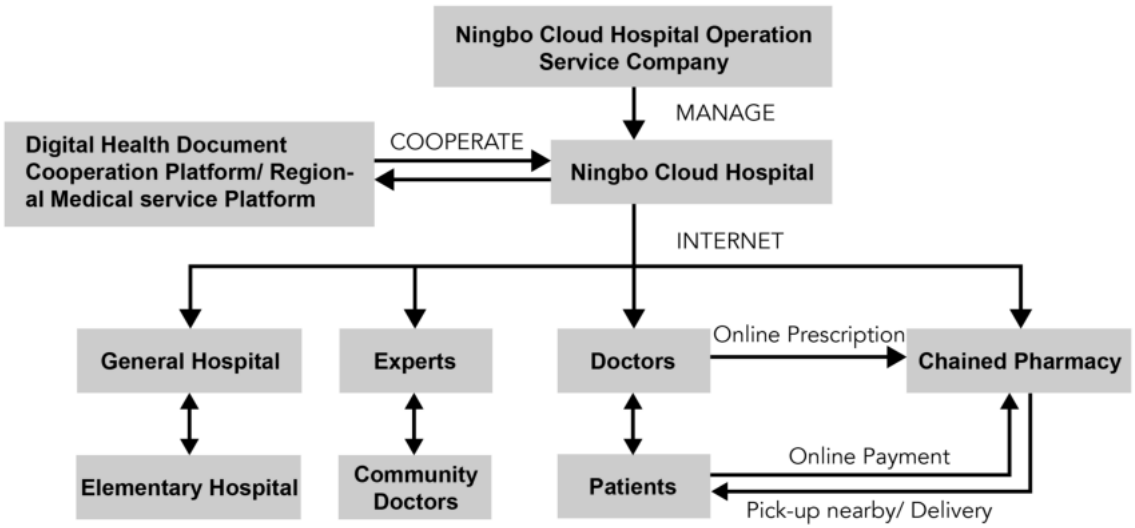


Figure 9. Illustration of the Ningbo Cloud Hospital structure

Till now, there are 100 elementary medical institutions connected to the cloud
doctors and family doctors are under contract of it. Four cloud consulting room
pressure, diabetes, psychological consultation and general practitioner are av
hospital is also connected to local chained pharmacies so that the patients co
with prescriptions at any pharmacy nearby. Door-to-door medicine delivery is exp
in June. Cloud consulting rooms will increase to 10 in July. The cloud hospital
be released in August.

However, the key issue of getting the medical expenses of the cloud hospital inc
health insurance is yet to be solved. The condition of current hospital operat
but it is believed to change people s life in the future similar to eBay and Tao

## 4 Conclusions

The cases presented above worked in the different levels of the healthcare
Healthcare technologies such as self-service system, easy payment are improving
inside the hospital, saving time and money for patients; The new policy on cor
Guangzhou showed a way to cope with irrational medical resources distribution; t
to some extent toward a future lifestyle. All of them have strengths and limitat

The Smart Healthcare card is dealing with problems in the small scale not for
and small investments could produce effect immediately, and directly making
advantages it brought about, such as saving time and efforts. But on bigger pic
the basic issues of the healthcare system, it is more like a compensation but
After all, people would still rush to general hospitals because of a cold, and
distribution would still be insufficient and unequal.

The new healthcare insurance policy adopted by Guangzhou is more strategic solut
system. When the resources are not enough, at least the distribution should be
patients of different levels of diseases, saving the resources for more urgent
to be more reasonable for the current situation in China. It might seems to be
carried out in developed countries for decades, however, it still works and it
Because social justice and affordability are always the core issues citizens car

The cloud hospital has a really smart concept, and it make advantage of the col
stakeholders. It definitely makes referrel and treatment of chronic diseases eas
for the patients. But the limitations are face-to-face contact is still import
online consultant could not replace that. Therefore it could not take the place
specialty hospitals. It is more like the future version of family doctors that a

When we think about Smart Cities, technologies like cloud computing, big data,
might be the first things to occur. However, Smart does not necessarily mean tec
Guangzhou Case indicated. Technologies alone was not enough, they could only be
stable base has been established, which can be achieved by proper policies.

The most important change brought by Smart Cities is not only technology. Sin
been introduced, there would be no top-down or bottom up procedures any more.
network instead of a vertical way. Every stakeholder including citizens, govern
institutes, hospitals are all on the same level of a huge co-creation platform.

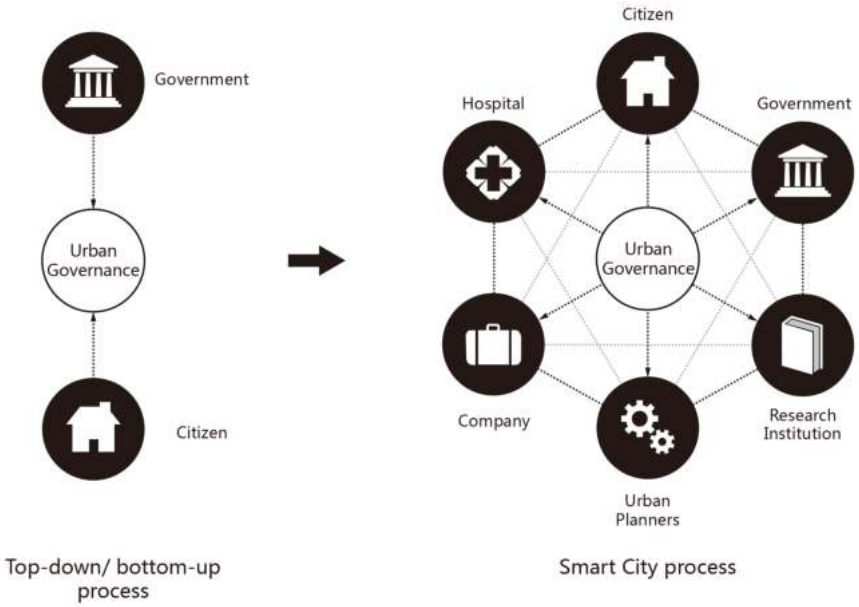


Figure 10. The change of process in Smart City Governance

The improvement of the healthcare system would not be reached by the effort of
It requires the collaboration between healthcare department and urban planning
and government. As we can see from the cloud hospital case, intersection c
important right now but also very difficult to realize. There would still be
through before we finally got to the smart future.

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# PROCESSES IN THE CONSTRUCTION OF PUBLIC SPACE: BOTTOM UP VERSUS TOP DOWN PROCESSES. INFORMAL SPACES AND ALTERNATIVE USES.

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## Abstract

*Historically there have always been two different genealogies of public space (Rowe,1981; Sennett,1997 Trachana, 2014). On the one hand there have been spaces created by human societies over time, based on evolution, empirical knowledge, daily life and the real needs of communication and exchange among citizens. These are places full of life that persist over centuries in our cities (De Certeau, 1999). On the other hand, there are instant spaces, planned, designed, and imposed from above. These spaces are governed by a geometric, abstract and symbolic order. They are regulated or regulatory spaces that impose certain patterns of use and behavior that have prevailed from the Renaissance and Baroque to modern and contemporary times in terms of urbanism. Today the effectiveness and professionalism in urban design that local administrations and economic powers have promoted and always justified by the common good, is being questioned.*

*The main issue addressed here is how some practices that are being spread nowadays, can be justified. This paper is a critical review of different urban actions that are taking place in Europe (with special emphasis in the case of Spain) and Latin America, and that are an alternative to the public sector in urban planning. Some of the most common actions are the occupation of empty sites, urban gardens, ephemeral transformations of public space for social and recreational uses, and other practices that generally respond to citizens´s real needs in depressed neighborhoods and impoverished urban areas. These practices constitute effective responses with little means adapted to the current socio-economic situation that imply austerity in public resources and an optimization in the use of technological tools within easy reach by both, professionals and citizens. They are made possible by the network connectivity resulting in collective actions in the physical space. The new models of performance have not only begun to be supported by the public sector but have been adopted and are actually promoted by them.*

## 1. Introduction

In this paper we deal with some alternative processes to those that control the government and the usual promoters. These are processes managed by the citizens, through their associations and groups formed by interdisciplinary professionals. The latter belong to a new generation of professionals who investigate new forms of intervention in the city. They also seek career opportunities in Spain and in many European countries where the public sector has significantly reduced their budgets for building work and improvements in their neighbourhoods. Many of these new initiatives have emerged from the economic and social crisis and replace the institutions and where they fail to intervene or make mistakes. They are acting on the micro-scale level of the city with limited resources but they often have a great impact as they stimulate responsible communities in opposition to governmental institutions which in turn are stimulated by these initiatives. These are formulas based on citizen participation and the use of new technological tools and social networking. There are many categories such as urban art, ephemeral occupations of public space, urban gardens and community gardens, occupied plots and vacant areas that are reclaimed for social and recreational uses, obsolete industrial

areas and other waste and degraded spaces creatively reused. We call these interventions soft urbanism (Trachana, 2012) and in other places we have also referred to them as hybrid spaces, as they have as a main characteristic, the ability to integrate people within its creation, through their opinions by the use of networks and also by their physical participation *in situ* (Trachana, Martín Castillejos, 2014). These are non-business like interventions and focus instead on the enjoyment of the citizens and for the citizens.

The Madrid urban action group called *estoesunaplaza* ("this is a square") provides through a methodological manual of urban action that has been developed and that indicates the basic issues to consider before starting an intervention strategy on an urban site. The group recommends the setting up of a good multidisciplinary team to develop a strategy of action in order to convince, attract and get the different elements required to carry out the action, and above all, to get the necessary support and public sponsorship. For them, a workshop, an exhibition or a party are highly social events, either artistic or cultural (without seeming merely commercial-promotional) that leave their mark in the liberated space, and can mobilize expectations and get institutional or financial support. The creative process finally takes place when all the elements are gathered together as it requires people, action and dissemination, policy and administration. The participation in the process of the people for whom the space is intended, is absolutely essential, so that they can feel their involvement in the creation of the space, calling it their own and providing a continuity in time. Without people, neighbors or groups involved, an urban action would not make sense (Moradiellos, 2009).

## 2.Conceptual framework

The historical city has produced spaces where the conditions of everyday life have been altered and where extraordinary rituals take and have taken place. History reveals how a city, when planned as a whole unit or when arisen from synergies over time, forges a structure consisting of a series of architectural events and unique collective spaces, with artistic will that clearly differs from the typical production processes, i.e, the reproduction of stereo-types. It is the leisure activity spaces that are the essential fields of expression, of confrontation and cultural production, this is one of the diverse forms of expression of the material and spiritual existence of human beings. In their essence, these spaces are public. They are spaces that give energy and help develop the daily and community life. The elements that shape these spaces sometimes express the world of ideas, discourses and utopias of the city. But its meaning cannot be reduced to its layout, design, architectural construction, forms of occupation and planned use. They depend, fundamentally, on their interpretation and the spontaneous use given to them. Their use can, therefore, be outside the forecasts and planned programs.

In these spaces, then, freedom of expression, participation and the exercise of citizenship are accomplished. In general terms, today, they have little or no interest at all for the economic powers, and the developers of urban space. It is not surprising, therefore, the low profile with which they are developed in the emerging city given their zero economic profitability as their essence is enjoyment, not productivity. It is not that today's cities lack social and recreational spaces, but they are built, occupied, regulated and managed without having the concept of public space. They don t form the part of the budgets and components of civic identity. Leisure spaces developed by institutions, trading companies or a consortium of both, often privately exploited, do not exactly respond to the natural impulses of spontaneous individuals and collective activities that arise from complete freedom (Trachana, 2014).

The theoretical approach to the areas of reference are derived from the Situationi Situationists advocated the construction of situations or isolated events and fragmented urban projects as opposed to the objective and unitary character that urban planning sought to give to the city s image aimed at the 'society of the spectators' (Debord, 1967 and 1988). The Situationist *dérive* consisted of the non-productive experimental use of urban space. The city would have spaces dedicated to games and the well being of the people. This idea was certainly indebted to the spirit of Laugier and shared with the Romanticism and the Baroque in the daring adventures and discovery of spaces as the result of travel and the assimilation of cultures. The new conceptions of art today are connected to action,

participation, involvement and commitment with reality and with the collective. Art is no longer conceived as an isolated work but has been brought out of the galleries in the street to provide us with a stronger and more intense perception of reality (Perniola, 2002, p.17). This idea of contemporary art that emanates from the Situationist notion, conceives the city as a collective of dynamic art works. It has the potential of a total artwork place or an environment all inspired and carried out by and for t community without being distracted from everyday life.

The concept of "place", on the other hand, involves the inter-communication as opposed to the non-places or places lacking in communication (Augé, 1994). In these places the memory of ephemeris manifests itself, the historical and social identity is reaffirmed by repeated civic events and religious rituals. They are places of significant density, complexity and up-to-date in that they continue being live scenarios of society. They are, therefore, structural or primary elements of the city (Rossi, 1971). Since ancient times these areas have been regulated, i.e. generated architectural types and have been part of the management of the city. Today they continue being direct references for the creation of new urban spaces. In these structures one would have to add those little shaped and sometimes ephemeral or improvised some sectors of modern society can promote, those that may arise from the bases as demand for living space. But would, above all, reclaim quality spaces from the hands of the professionals who are ready to investigate, experiment and work in collaboration with those more sensitive sectors of citizens and administration. The public space project would integrate social and cultural needs with solutions to the environmental problems, re-introduce nature to the urban areas, recover the degraded and wasted areas and preserve the festivals, games and traditional rituals in their original places for celebration.

In different regions of the world, ancestral formulas of popular occasions and games have survived and continue to captivate popular appeal. Some are carried out in spaces that are especially prepared and others in popular multi-purpose plazas. They acquire all their meaning and sense thanks to their ability to convene the people to the evocation and memory that constitutes the hallmark of the people. In these scenarios the identity, nationalism and regionalism are updated and revived through the architectural buildings. But the majority of times it is the streets and the open spaces in the city, the undefined spaces, which temporarily absorb these popular occasions. It is the very people of the city who make up the social spaces and not the defined spaces which shape the society.

The construction of spaces for festivities, games and rituals in society reflect their historical and fabled identity, built as a decisive and inescapable condition of life both individual and collectively. In Spain, for example, the games of rural origin, the processions of Holy Week and bullfighting itself constitute a mnemonic persistence of which, however, form part of the formal strategies and operational modes of certain politics and powers that be.

In the first decades of the twentieth century, the architectural avant gards advocated the disintegration of the street and all highly organised public space, promising in exchange an area of freedom and enjoyment close to nature where the border between the private and the public would be abolished. The free area as a spatial continuum could only facilitate the demands for freedom, nature and free spirit . The naturalist space, free and unlimited was considered superior to any structured space. The claim for free time was associated to this concept of free space of the modern society: leisure, sport, health, closeness to nature. But, as it turned out it was just a fantasy embedded in the modern city that started to fade and be recognized that the ideal of free space and its indiscriminate neutrality or equalised uniformity was barely attainable and not even desirable (Colin Rowe, 1981).

But this debate had already been surpassed in the second half of the twentieth century when the principles of the modern city went into crisis for having surrendered to the interests of real estate speculation and for having produced effects of uniformity, monotony and low spatial quality. The critical platform that addressed these phenomena counted with the Situationist movement among its different components, which started a new way of seeing and experiencing urban life. Instead of being prisoners of a daily routine (voiced by modern rationalism under the terms of work, rest, move' with the subsequent zoning of the city), the Situationist proposed creating situations as specific emotional

moments of life, deliberately constructed for collective organization. Guy Debord (1957) considered urban transformation as the possibility for an orderly intervention on all the complex and interacting factors of the material part of life and behavior involved. The concept of a unitary urbanism would integrate all the arts and techniques as a means by which they contribute to a comprehensive composition of the environment. It can be said that the Situationist utopia becomes a possibility today thanks to a connectivity that encourages citizen activism that is spread by the social networks.

In the ideological basis of such interventions underlies the wish to please that is always associated with personal pleasure from the aim of creating a space for the enjoyment of a group, diluting the personal into the collective. As opposed to the typical interventions where personal projection prevails over architectural design, originality and innovation, this is rather, intelligent management by the people. It's not about occupying space selfishly but about opening moments of freedom and leisure in urban areas that lack space for recreational and socialization activities. The areas are redefined to escape the 'totalitarian' control of the star designer projects that public today. It is about trying to find the formulas in which people become involved and participate in creating public space, so that they can take it over and give it a temporal continuity. Without people the intervention would have no sense or life. Many spaces designed by prestigious authors in fact fail because they stop considering people, to be there for the people, as they have the ambitious aim, for it to become an event for a society of spectators .

We have, nevertheless, historical forerunners who think of the architecture of the public space for everyday life and present needs, which responded effectively to the special circumstances of each place and have been approached by several very good architects in the past. Let´s remember how Aldo Van Eyck of the municipal services of the city of Amsterdam, transformed vacant lots and residual spaces in playgrounds. After the destruction of half of the city as a result of air bombardments during the Second World War, he transformed these areas with scarce resources and a lot of ingenuity. When the financial crisis knocked down many buildings in Manhattan, the Green Guerillas in New York devoted themselves to the creation of urban gardens. Lina Bobardi, in the 70's, did some work to transform the heart of Bahía (a degraded environment and closely linked to very active popular uses). They were focused on rescuing popular traditions and local building knowledge that also involved the revaluation of popular cultures. From the 90's on there is an awareness in several European cities that urban spaces are not dead places but 'areas of opportunity'. Residual areas could accommodate emerging ways of life, that are an alternative to those proposed by the city council and then the creative reuse of degraded industrial areas could begin. We have enough examples of projects that cross the frontiers between formal and informal works and where the architectural discipline breaks its barriers. The new parks in the Ruhr valley in Germany where the mining and steel industries were abandoned are good examples.

Thus, against the typical transformations of squares and open spaces in urban centers and historic districts by the local administration, where there is, generally, total disconnection between citizens, future users (mostly neighbours), architects and authorities, today we can see several initiatives that are starting to develop. Nowadays, opportunities for direct action, formulas to act autonomously, that are independent from political programs and where professionals can get out of usual commissions and become involved in more daring ones are produced continuously. Moreover, when the economic crisis has truncated the public works, the young professionals have the ability to see new project opportunities, to detect new needs, to look for different promoters and to seek solutions to urban problems. Thus, interdisciplinary professional groups have been created displacing the personal ego in order to carry out different activities where the focus is no longer on specific and stellar works that become an emblem for institutions and capital. They are professionals who identify the final users and meet up with them using the new technology and innovative marketing tools.

Further, the ineffectiveness of the reconfiguration processes or the restoration of public spaces, always conceived from the point of view of the interests of economic and political elites, is more than clearly demonstrated. More positive forms of intervention necessarily involve interdisciplinary processes that imply the participation of local intelligence by conversing with professionals who coordinate them.

More than ever we can say that today what is needed is not so much in new initiatives, but rather, to add value to what already exists, by transforming, enhancing their own characteristics and inventing new possibilities of appropriation. In this sense, we have an increasing number of examples of good professional interventions in given situations designed to be effectively functional, sustainable, natural and popular.

## 3.Emerging tendencies of informal spaces

There are numerous examples of necessary spaces for pleasure, urban transformations that are able to offer a temporary use such as *container city*, or the widespread urban vegetable gardens, the creative management of social spaces such as the Tabacalera Building Madrid or a gym created under a highway in Sao Paulo by the ex-boxer Nilson Garrido and his wife Cora Oliveira. Other unusual places have been brought about outside the conventional channels to mitigate social problems like unemployment, leisure, poverty, drugs and crime. There are also practices of dissent concerning temporary occupations devised from the ingenuity, the recycling and the parasitic actions. The "a-legality" in which they move, the survival practices and the marginality with their flexible mechanisms in order to stay within the city; the city with an economic crisis must develop new mechanisms of spatial configuration through recycling, the inclusion of residual spaces, etc.

The running of the contemporary city with regard to the dynamics of community life extends well beyond entertainment, tourism or consumerism in the new networks (ephemeral, changeable, transformable) of collectively used spaces, residual spaces that are temporarily activated by the people who occupy them, acquiring a collective meaning. The city is inhabited by practices that do not leave permanent traces, which appear and disappear, such as the Plaça dels Angels in front of the MACBA in Barcelona, which is activated by the presence of groups practising skateboarding or the Plaza de Colón in Madrid used in a similar way for different sports. With small behavior patterns like these new relationships with the public arise and new dimensions of life that transform, in their own way, the usual features that are involved in the public space.

Meanwhile, the contemporary urbanism still poses a dichotomy between the planned and the unplanned city. And the informal, that appears to be the problematic and is seen as a visual disorder, has however, an aspect full of life, that reveals itself as an enormous interaction of social energy. For this reason and facing exclusion (in its many codes that contemporary cities have developed) we would have to assess the emerging forms of urban intervention assimilating natural tendencies, and reversible, ephemeral and sustainable actions; such as the inclusion of, the reuse and recycling of spaces and disposable elements and materials; the spontaneity with which citizens generate and regenerate living spaces aside from the power and the production systems; the communal living and citizenship generate and the knowledge transferred to the academy and the institutions involved.

*Container city*, for example, constitutes one of London's architectural oddities. It is a conception of flexible spaces that are adapted to different lifestyles. Containers can become a very flexible method of modular construction, very strong, very quick and economical from the structural point of view. They are easily adaptable and transformable with regards to their image. They can be reversibly dismantled and remounted releasing the occupied ground for other purposes when required. Today with this method, they have created several units of affordable rooms, low cost youth residences, social and cultural centers, lecture halls, offices, artist studios, workshops, medical facilities, and all kinds of habitats. Some of them are self-built and others are part of the innovations of architectural design.

Other notable examples of informal occupation are the wagenplatz in Berlin constituted by trailer-dwellings that colonize different empty plots formed after the fall of the wall. The wagenplatz or bauwagenplatz, urban settlements consisting mainly of trailers, cars and site offices are communities that originated in Germany in the years after the end of World War II, due to the housing shortage. Currently several of them remain in Germany and other countries like the Netherlands or Switzerland.

Their rise began in the 80s, from the movements of occupation as an alternative way of living to the capitalist s system. There is as much a variety of wagenplatzs as settlements. installed directly on occupied land, others that rent the ground after years of negotiations, or even those that offer a service to the community in exchange for its use. In any case, they serve as a reference for physical spaces where resistance and counterculture are defended day after day by means of everyday acts such as the preparation of food for the community, the exchange of second-hand clothes, cleanups, etc., besides collaborating actively in the anti-fascist struggles, against real estate speculation or racism.

These ways of understanding the urban phenomenon are presented as an alternative to the excessive planning that supports the fact that politics resembles surveillance and that justifies a neoliberal state control that empowers corporate forces to exercise repression in the name of the public good. In the impoverished economies prevailing today, to use bland urbanism or to use self-built, ephemeral, fast, lightweight, removable, strictly functionalist and why not, effective aesthetic formulas, is to answer to the needs that many people have in whatever part of the world that depends on them. That makes us wonder what can be done and what is still not being done.

The informal appropriation of urban spaces for temporary uses, we believe, is an extremely important aspect for the future of urban space. The different formations with a casual connotation such as spontaneous occupations with recreational activities, the organization of parties or trade activities, markets or spontaneous malls have arisen in slums. This is where legal activities mix with illegal and others have been accepted by the state and its system of formal organization. In most cases, the obsession for security has transformed the paradigm of temporary into a real strategy of control and repression, which is exactly the opposite for which they were originally destined.

There are also architectural and artistic interventions in the cities which are sensitive to the anthropic, by trying to respond to immediate needs and improve the people s spirits. Gordo Anarchitects, the Stalker group, Lacaton and Vassal architecture, among others, give us a glimpse of their principal ethical behavior and aesthetic criteria that reflect a willingness to conceive natural, uninhibited and positive responses, even at low-cost but no less strategic in the current situation. The traditional conceptions of form/design are surpassed by a certain informality and openness of a multiple interaction with the users, the environment and with time itself.

Many paradigms of alternative urban actions have been placed in European cities as well as in other continents (Martín Castillejos, 2014), carried out in multidisciplinary ways and with the participation of academics and students who are facing the new social and economic situation with new ideas and new techniques. The peculiar mode of action of the Basurama group, whose office is a website, has been spread across the four continents with a different approach towards the waste that surrounds us and towards recycling in general through workshops and urban actions. Worth noting is the work of L'Atelier d'Architecture Autogérée (AAA) that is developing urban community gardens in Paris with the support of local authorities.

The so called open source communities develop online collaborative design methods that atte cut costs and experiment with recyclable or biodegradable materials and components, formulas of self-build, etc. Other projects try to recover the artistry of the urban voids by focusing on the urban dynamics through architecture, urbanism and art, taking into account the perspective of citizen participation, collective intelligence, urban revitalization and public space. This is precisely what groups like PKMN, Studio Bijari, Bruit du Frigo, Esterni, Supersudaca, Raumlabor ..., etc. do. These are groups that develop urban activities as a way of instantly intervening in the cities and workshops as a direct experience and who seek political provocation through their critical interventions. All these groups and many others investigate new ways to build civic spaces with reduced, ecological and sustainable resources using ICTs as a *leitmotif* (Trachana, 2014 p.218)

The Roman group Stalker was named like that, in their attempt to find another way of doing architecture, to address the transformations of space and to interact with these transformations in a city

of the future, chaotic, labyrinthine, multi-ethnic and multicultural. In recent years, they have investigated marginal issues, the residual spaces, the non-places that are, according to them, the genuine places to investigate, create, build; to understand the city of the future and to change it. The Campo Boario, in the very historical center of Rome, is an example of the new phenomenon of where these emerging places are appearing, and although marginal they have not been forced to the outskirts. In the Campo Boario, the Stalker acted without having a project in mind. Stripped of prejudices and preconceptions, just by watching, they understood "what the thing was, that was going on there," and how they could, somehow, wrap up this situation, "making it go from a form of degradation to something interesting". They collaborated with the transient Kurdish immigrant community and local artists and students to organize events at Campo Boario, including Kurdish festivals, workshops and competitions for the site and other art exhibitions and performances. It was not a topic that they could resolve in terms of form; their approach was not presenting an architectural or urban project, they operated through a "a work of woven relationships," by trying to get the di were coexisting in the same space, to get along together. This took place through a playful approach where they act as artists who organized the Campo Boario Games: Global Game , Boario Lunch and a number of playful actions that were carried out so that the participants could forget their everyday problems and get involved in the game as an artistic performance that spoke about themselves. In addition to the physical transformation of the space the Stalker distinguish a mental one through a modification that makes reference to a new perception of the space.

Specifically in Spain we can find several collectives. There are about 50 in total, among others, recetasurbanas.net, straddle3.net, caldodecultivo.com, estonoesunsolar.com, etc. stand out. These groups have managed to make vacant lots, temporary buildings, civic participation, employment plans emerge from the legal vacuum; all of them are a series of actions that change the rules of the game through a new logic to undertake projects. They all seek to renew the concept of public space in the public domain. Architects, engineers, landscapers and workers consider their work as "opportunities for learning and cooperation" with an ideology willing to provide the means to get to see a change in their cities. Beyond design (most of the time there is no time to draw plans), they are responsible for the construction of projects.

The intervention carried out on the municipal site in Doctor Fourquet Street in Madrid was the fruit of two years of intense collective work by the Milanese Esterni Group and the following institutions in Madrid: la Casa Encendida, COAM (Colegio Oficial de Arquitectos de Madrid) and the Central District Council. They were able to make a square for the neighborhood residents, with its trees, its garden, its allotment, its square for exchanging goods, its stage for performances, its football field and its silent disco. Today there is a complete and complex project of joint management of the space with the 300 residents who signed the petition to the Council in order to be able to keep on using this space during the time that is available. The authors of this intervention have been encouraging citizen creativity to initiate more interventions on potential urban sites or to present proposals and program ideas for the 'urbanaccion2' competition, which has been launched together with the Competition Office of the COAM. The group thinks that the more ideas people put on the table, the better the cities where we live will become.

Other references in Spain are: Andrés Jaque with his so-called Office of Innovation Policy. It is a platform for experimentation and generic research that develops projects, interventions, performances, exhibitions, critical reflection on architecture and the city. In those projects, certain aims and uses are pursued in order to transform everyday life. According to Jaque, the idea is to subvert the "modern project" in order to create situations (following the Situationist manner) and encourage people to enjoy them. The final goal is "that architecture fosters situations instead of making situations depend on the spaces that architecture imposes."

Urban ecosystem is a group that works in Spain and abroad holding workshops and doing projects. The Ecobulevar of Vallecas in Madrid, designed by them consists on some artifacts (artificial trees) that aim to improve environmental comfort, promote social exchange and design a more sustainable public space. They create, therefore, a space of a more social character between traffic lanes with very

few resources. The materials used are mostly recycled; they also use alternative sources of energy and air conditioning systems by using passive cooling techniques commonly used in the agricultural industry. Being aware of the fact that the best reconditioning of the public space would consist of sufficiently dense and good sized trees, material that would need about fifteen or twenty years to properly show itself, they opted for an "emergency" performance that serves as the seed for a regenerative process of the public space. The three pavilions or air shafts function as temporary for multiple activities chosen by their users. Installed in the non-city will only be used until the inactivity has been corrected and the trees have grown. Sufficient time allowed, these devices should be removed, leaving the premises they occupied as clearings. The goal in the Vallecas project was to create an atmosphere that invited and promoted activity in an urban public space. It is not part of a marketing strategy, creating reconditioned environments in which the citizen plays an active part in the public space.

Santiago Cirugeda, from 'Urban Recipes' (www.recetasurbanas.net) addresses issues such as ephemeral architecture, recycling, strategies of occupation and urban intervention with the incorporation of prosthesis for existing buildings or public participation in decision-making processes on urban issues. He takes advantage of legal vacuums to carry out alternative solutions for the benefit of the community. By means of interventions that investigate the legal frameworks that govern the city, he develops protocols to be used by groups or citizens, both to improve urban fragments, as well as carrying out individual projects that resolve housing problems. In particular, many of the "urban recipes" that he proposes as "subversive" and "revolutionary" take advantage of the regulations that allow the temporary installation of items such as tanks and furniture in public spaces that have not been equipped by the administration and also scaffolding and roof constructions to create extensions and finding habitable solutions in available spaces after getting the neighbours´ agreement. He defines himself as a social architect. His work developed with many groups that work on the urban field (hackers, planners, activists, architects, etc ...), has achieved the creation of a network called "Collective Architectures", that uses as working and information tools, both face to face meetings and digital platforms.

Hackitectura architects are from Seville and they define themselves as "architects, programmers and artists designing in the convergence of physical and digital space." Their research is about the different ways of hybridization between the network (cyborg) culture and "open source" communities. Zoohaus is a multidisciplinary work platform made up of individuals and collectives and born in Madrid in 2007. It functions as a network depending on the availability of its members to be more flexible when planning a job or responding to a request. It develops all kinds of projects that focus on urban dynamics through the fields of architecture, urbanism and art, from the perspective of citizen participation, collective intelligence, urban revitalization and public space.

In Latin America, Carlos Teixeira is a Brazilian architect who complements its commercial architecture with projects of artistic recovery of urban spaces using public cultural funds. The Bijari Studio is a studio in Sao Paulo interested in political provocation through critical interventions in urbanism and the occupation of abandoned buildings. Supersudaca is a collective of architects located in five Latin American countries whose research is based on new formulas related to the "sudaca" territory and tourism. Raumlabor builds civic spaces with very scarce means. The list goes on but shows concerns widely shared today by young architects and other professionals.

Public institutions, that are increasingly becoming more involved in alternative projects of this type, are seconded by corporate institutions. The municipality of Zaragoza, for example, has promoted the occupation of twenty sites in less than two years. They have been carried out by the Esonoesunsolar group creating parks, orchards, social spaces with sports fields, playgrounds and other activities, and have become in such a way, a municipal employment plan. The Madrid College of Architects, COAM, has promoted the creation of Madrid Think Tank', a platform-open-lab for ne which the participation of companies, administrations, institutions and individuals is sought with the aim of building a collective urban project for Madrid thereby improving the city and quality of life

of its inhabitants. Through public calls for ideas they intend to propel innovative initiatives that foster citizens participation.

## 4.Implications of ICT in new configurations of public space

The new paradigms of transformation of the urban space that we observe today are imaginative, open and implemented by technological processes; they start on the network and are verified in situ. So, the development of these projects implies the participation of different entities that act from below, from the baselines of citizenship, instead of being directed from above, from the governments and professionals. These are projects that are usually tackled from different disciplines and not only from the point of view of urbanism and architecture, and that use new technologies as a catalyst. The new trends in the design of the urban environment that are not exclusively architectural, point towards new learning based on sensitive perception, with the induction and the imagination of citizens who act as interpreters and managers of information generated and shared with technological tools and telematic means that they choose or design themselves.

The new technological tools for everyday use come with great spontaneity and ease which enables the development of expressive and communicative skills not only by those with expertise in the architectural design of the environment but also by all citizens. In such a way, a new generation of public space projects is emerging thanks to the connectivity in the virtual environment that stimulates the creativity of citizens. So, instead of remaining passive confronting the world, they are no longer willing to adapt themselves, in one way or the other, to the external circumstances. The new active inhabitants of the city can now imagine that they are creating and recreating the conditions of their environment and of their own lives.

We refer, therefore, to the citizen´s ability to take initiatives and undertake unconventional projects, sometimes in conjunction with professionals that act outside the usual regulations; or react to urban planning in order to rectify mistakes that the public administration is unable to solve or where architects and planners are making a mistake, by demanding changes and introducing reforms. Thanks to the resources available for communication and citizen interaction as a common denominator, the emerging trends in the design of the public spaces affect not only the external transformation of places but the people that inhabit them**.**

As Juan Freire (2010) says, we are witnessing a process of "hybridization" that is modifying, our individual identities as much as the community and territorial ones. The distinction between physical space and virtual communities is being updated. Internet, which has contributed to the development of global networks, is now beginning to have a significant influence at local levels. Digital technologies are radically changing the way in which we organize and interact with our environment. The telematic means of communication and interaction increase the citizen´s options for participating, constituting an open and dynamic tool that is constantly being updated.

Development of skills and creative abilities point towards more realistic guidelines, as well being more imaginative and innovative in the design of the Environment. These are capable of regenerating the architecture and building sector in crisis from a more anthropological than aesthetic perspective. The traditional architect educated in the responsibility of designing and constructing their work, can nowadays, assume much broader and diverse tasks recovering a more humanistic and global view of the architectural space as an experiential space.

In fact, the classical paradigms of modern architecture are reviewed from a wider point of view. So we are seeing a shift "towards strategy" in opposition to an interest in the pure expression of the architectural project that requires new procedures and tools both theoretical and practical, more adequate to their time. We are at the crossroads of new *poietics* that break with conventions in order to establish new educational and cultural habits and explore new proposals by claiming reflection and lifetime commitments.

Models of collective management of the convivial space are taking place on the internet, from where they are extending in situ. New communication and relationship dynamics, able to improve the cohesion of communities are developed on the internet. They are presented as an alternative "place" for social relationships, differing from the "traditional" ones. Digital relationships call face to face relationships and on the net the perspective of community as a "place" is generated. We can then speak of a hybrid identity of spaces which are digital and, at the same time, produce face to face relationships. We can speak of "territorial activation from the digital culture . The new "hybrid spaces" emerge from the integration of digital technologies in the physical space. They are configured as places where the free exchange of information is guaranteed and where management transparency is encouraged. With the design of these public spaces, a key role to restore the vitality of these places is given to society by returning to these places the vitality that they seem to have lost (Di Siena, 2011).

The *Campo de la Cebada* Project in Madrid, for example, is a neighborhood initiative to temporarily reactivate the urban space that occupies the site (the previous plot of the demolished La Latina sports center) in the Central District of Madrid. The project consists of the generation of dynamic neighborhood meetings with collective interests for the development of participatory, recreational, cultural, educational, non-consumptive activities, necessary for the community. The *Campo de la Cebada* is a space, historically unique in the center of the city that has been made available so that people can play, skate, cycle, run, meet ... This initiative has neighbors who come from different professional, sociological and ideological backgrounds. It is planned as a temporary alternative to revitalise a closed and abandoned site, only during the time that the works planned for reuse are not carried out, and it is expected to have to wait for some years before that happens. It is a space where priority is given to the human relationships rather than the projects themselves. The project is open to all constructive proposals and initiatives in line with the demands and the parish´s needs that are key to the design process where the neighbours maintain a constant dialogue with the respective institutions.

The result is a strange structure that is a mixture of architecture, self-construction, self-management and where something is inaugurated every day. The content is constantly changing as it is not just a physical construction but the construction of an environment where the neighbors provide their services for free. The place becomes, therefore, an educational and cultural field, an area of social construction and a space to perform all kinds of projects with the active participation of people. It already has multiple facilities and all kinds of events and festivals are organized. 'Edumeet', for example, consists of informal meetings every 15 days, in which there are debates on education, learning and culture and a horizontal structure is maintained. Communicating and sharing is more important than authorship. The fact that these meetings take place in the *Campo de la Cebada* prevents the space from determining their identity and authorship. The announcements, dissemination, communication and interaction obviously happens through the net. Certainly such spaces are initially constituted as a digital entity. (http://elcampodecebada.org/).

The hybrid paradigms mentioned before, created outside the established channels of architecture and urbanism are beginning to have an extreme interest in urban areas. These new generation spaces are almost always created on the border between the need and the creativity of their "users". This innovation gives priority to the creation of social life and political culture rather than the physical construction of the space. Most of the time, the creation of these spaces is alien to the cultural policies, moreover, it acts in substitution of them, because they do not exist.

The group Ecosistema urbano provides another example of how to carry out projects of a hybrid nature. 'Dreamhamar' is a project among others that have been conducted in a workshop format where they have promoted the process of citizen participation through the network to redesign Stortorget Square in Hamar, Norway. The Hamar commune has chosen a pioneering approach for the construction of the new square. Instead of giving the citizens of Hamar a finished space, they have chosen to participate in a process of collective reflection that will determine the new configuration of Stortorget. The architects created a design process in the network -Think Tank- in order to share with the Hamar citizens the way they saw their city and the way in which they imagined their square. All

the residents in Hedmark were invited to participate in on-site workshops so that they could say how they wanted this main space to be. (http://ecosistemaurbano.org/).

Digital technology, on the other hand, is being adopted to encourage feedback between citizens and institutions, even though these platforms still work in a precarious way bilaterally. Nevertheless, they have information and provide services electronically, saving time and energy for citizens. There are, in fact, a wide range of public and private, local, national and European level initiatives (for more information see Trachana, 2013, pp. 45-46). But nevertheless, there still exists much work to be done in order to develop the potential of ICT in the transformation of cities. Today we speak of the "open source city", an expression that makes reference to the free access to urban information which public administrations provide for the citizens, and we also speak of smart cities that through digital technologies offer a diversity of advanced services related to street lighting, traffic, pollution, waste, etc. But the truth is that the transformation of the urban reality is more in the hands of citizens than that of the technology itself as a product, a mere consumable and business object. It depends on the Citizens creativity as it continues to find new solutions to new and old probl are feasible due to the infinite possibilities of choice. We understand creativity as the ability that citizens have as individuals to capture and transform reality, by generating and expressing new ideas. According to Florida (2009), as long as the citizens acquire the ability to make this become their way of life, one can envisage that new possibilities to create and recreate the living environment that will emerge, and that should improve people´s living conditions and coexistence.

## 5.Final implications as a conclusion or the creative essence of a city

Therefore, we can see how a new concept of the city starts being clearly described on the horizon. In contrast to the stable city like a monumental and representative image, a new urban condition is emerging. The urban condition is a continuous flow that cannot materialize or stop, it cannot be planned. We are referring to the practices of mobilized citizens; a sphere of and for practices, and specific knowledge that serves a unique organization of coexistence based on perceptual and sensitive values, movement, change and instability as raw material; the citizens´ knowledge and participation allows them to organize the self-build of their living spaces. In such a way, returned to the citizens, sensitized and motivated into action by seeking pleasure in working together. (Lefefbre, 1978; Delgado, 2007)

With that, the need and urgency to plan cities should not be questioned. We should not accept the withdrawal of the public administration nor the permissiveness of speculation by the fiercest of liberalism that despoils and makes the city a mere business; that converts their spaces into consumer products; that stimulates ownership but restricts appropriation; which considers the urban utility as an obstacle for good urban marketing and as a source of uneasiness for any form of political power. Urban use, is incapable of being planned, it is only possible to keep an eye on these spaces where urban life passes by contemplating all the unforeseen events. The happenings, the ways to escape and the possibilities of emancipation; the "minimal relationships" that can achieve a high level of intensity, the latent 'placing', a possibility of place or a city. The return to the naturalist spirit already permeates a methodological change in all the disciplines that study and act in the urban sphere.

This eagerness to capture what happens to our senses should be translated in a stronger interest in the environmental conditions and the practices that build an anthropological space. The naturalistic or positivist observation that seemed to have been buried under the pretentious methods of 'high design' based on abstract concepts and under the tyranny of a speech that prevents access to the things themselves, it should be guided by common sense processes, collaborative and sustainable development among sensitive professionals and motivated citizens, committed to the common cause which is that of urban space.

In opposition to an urban planning that is a predictor of continuous regularit are those molded to the real needs and everyday, free and spontaneous citizens practices. The configuration of space through instituted planning is systematically based on models that are based on

mimetic behavior. The 'spatialization' of social experience involves the creation of identity because the individual and collective identity is expressed in terms of space. Each 'spatialization' involves identification and the identification is made possible from the 'spatialization' (Stavridis, 2003, p.59). The neoliberal and globalized tactics transform besides the production of space, each intervention in the urban space, experience and relationship in the space in an commercial relationship. The control of the space expressed as under the official authority regulations for public spaces as much as under the rehabilitation of degraded areas, with the perspective of its transformation int and the management of these urban pockets; such is the vision that prevails over other perspectives.

With the practices that escape this control a doctrine for a more creative and more intensive use of urban space (Florida 2009) is being spread and a new urban practice, a 'soft and flexible urbanism', of local and particular rules is emerging. A pro-active and creative citizens body, able to create and recreate their own life and their own living space, is taking shape, thus keeping the Situationist philosophy (Debord, 1967; Constant, 1974) alive. This is certainly, an optimistic reading for the future, possibly the only one that can be made of megacities focusing on the urban space that remains outside the controls of regulation: the residual spaces, the vague terrain significance, as characterized by Solá Morales (2002) and particularly in the daily and spontaneous processes of intervention and transformation of urban space.

The significant changes that are occurring in the management mechanisms and in the proper design of urban space mainly consider mutant factors of the environment: communication, mobility, everyday uses, activities, perceptions ... against the objectives, quantitative or statistical data. Against permanent structures, representative public spaces, monuments, major infrastructure and equipments, etc., focus on the minimal, informal and irregular practices, the individual and collective experiences that escape any systematization.

The urban and constructive paralysis that is a consequence of the economic crisis is another reason that leads us to a new 'sensitive urban planning' that intercedes with the consequences of excesses (hyper-consumption of resources and territory) and the surplus of unemployed and unoccupied; an alternative urbanism to the planning that has provoked endless extensions of empty apartments to the outskirts of the city (Spanish case), the reduced population in the center of traditional downtowns in the cities and their transformation into theme parks; the fragmentation of cities by the globalization processes that marginalize the poor (informal part with their own laws) and separate the exclusive wealthy (formal part controlled by the government); a conservative planning facing the radical destruction and replacement of obsolete industrial areas that erase the traces of the material culture of industrialization.

In this new situation Constant´s forecast seems to have been proved, according to which, as a result of the increasing technology and automation, leisure time would be increased to the point that citizens would be exempt from work, although this occurs today under the most dramatic form of unemployment and lack of occupation. The newbabylons became nomads because a stable habitat and stable relationships were a consequence of a stable occupation. Losing this condition (of a permanent job), they would use their time to build their environment creatively. This raises the challenge, now more than ever, to focus on the creative essence of the city as a permanent change, overlapping of vital processes, of incessant flow of people from diverse backgrounds and cultures, changing representations of life along with goods. It is urgent to rescue the positive values of the informal part of the city. This interest responds to the fact that it is in the city where the new and more committed art developments germinate, where lies an immense creative potential, spaces where intense dynamic exchanges can take place, spaces of communication and of freedom, to fight out the differences and where the individual human being can change from a *homo faber* to a creative human being (*ludens*). In these areas, a dialectic between order and disorder takes place. These are ambiguous spaces in a universe dominated by the rigidity of formality and legality. In this ambiguity we can see how wisdom and an ethical clarity lie, that makes it possible to mix things up and confuse them.

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# Waterfront Space Utilization in Coastal Metropolitans: An Empirical Study Based on Quantitative Analysis

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## Abstract:

For most coastal metropolitans, the waterfront areas provide various valuable resources, However, reasonable arrangement and utilization of different resources, scientific distribution of diverse functions and efficient management of various urban elements with the limited space are major difficulties for urban planners. This study chooses 14 famous coastal cities over the world as the research objects, to conduct a quantitative analysis. Researchers have demarcated a 10-km$^2$ waterfront area (10-kilometer-long coast, 1-kilometer-wide outspread urban space) in each case city with a screenshot software based on Google Earth, then marked different components on the map with different colours, and calculated the ratios of buildings and lands with different functions. Moreover, this study has elaborately analysed the qualities, functions and heights of buildings through the open-source platform Openstreetmap and Geographic Information System, for answering three questions: (1)the proportions and percentages of various types of lands; (2) the types, forms and heights of constructions and buildings; (3)the organization of road net system. The result of the study has concluded key elements of coastal-waterfront space planning, utilization and management.

Keywords: coastal metropolitans, waterfront spaces, quantitative analysis,

## 1 Introduction

### *1.1 Waterfront Space: the Revitalizing Engine of Coastal Metropolitans*

Waterfront space of a city refers to the urban land or dockland district which is alongside a body of water. Giovinazzi (2008) suggested that the waterfront should not be considered as a line, but should be more correctly envisaged as a network of places, functions, additions and hinges between the coast and the city[1] Compared with most inland cities, coastal metropolitans usually have much more longer and broader waterfront area, which is a substantial proportion of urban space. Nowadays, coastal cities and its waterfront spaces have played a significantly important role in the process of global urbaniza 21 , which was published on UNCED Earth Summit of Rio de Janeiro in 1992, st Sixty percent of the world s population already lives in coastal areas, whi cities with populations above 2.5 million are located along the world coasts in the Chapter

1 Giovinazzi, O., 2008. Waterfront planning: a window of opportunities for post-disaster reconstruction. 4th international i-Rec conference, Christchurch 30 April-2 May 2008.

17 Protection of the Foreshore[2] For most coastal metropolitans, waterfront areas have various valuable treasures, such as sightseeing, resort, biological, cultural, business and other public activities etc. As A.C. Moore said, a waterfront is a significant resource ad a challenging opportunity for a city, chance to be an escape for the pressure-cooker of crowded city life, a chance to be a bright breathing edge of city living.[3]

In the ancient ages, the utilization of sea and coasts was limited. Waterfront areas of coastal cities were always only used as ports, wharfs, fishery industry facilities or manufacturing factories. The urban centres and downtowns of those cities were usually not adjacent to their coasts or seashores. However, after the Second World War, the functions of sightseeing, residence, commerce, entertainment and other various functions besides transportation and industries had been developed in waterfront areas of coastal cities all over the world. In 1964, the government of Baltimore, a major metropolitan of the U.S. State of Maryland which is located in the east coast of America, operated an ambitious plan to re-use the maritime waterfront for tertiary facilities, middle-class and tourist settlements, therefore rejecting the conventional organisation based on manufacturing plants and traditional residential buildings.[4] Since that time, coastal-waterfront spaces have become a kind of public resources for the residents and tourists of cities. As Jauhiainen (1995) mentioned, waterfront redevelopment became a widely spread and largely accepted tool against urban dereliction of inner city areas close to water in North America. This development stared in the 1960s in the United States and about a decade later it spread to Europe where it was a key factor in inner city redevelopment during the 1980s and 1990s.[5] Today, coastal waterfront has become the stage of newly-emerging industries such as tourism, hotel and resort, real estate, MICE (meetings, incentives, conferences and exhibitions) as well as other public services projects. Those industries and projects make the engine that revitalize the coastal city.

### *1.2 Question: How do we make use of coastal urban waterfront?*

Since urban coastal waterfront area provides a large amount resources and opportunities which can be used for various functions, we are facing to a major question that how we can distribute, arrange and manage those different functions in limited space. What are the proportions and percentages of each kind of land? Are there any waterfront space use models in coastal metropolitans? In this paper, we have raised three questions about the utilization of coastal-waterfront space: (1) ratios of various types of land; (2) ratios of various types of constructions and buildings; (3) the organization of road net system. For these targets, we

2 The United Nations Conference on Environment and Development, 1992. Agenda 21 [online] Available at: <http://habitat.igc.org/agenda21/index.htm> [Accessed 1 May 2015].

3 Moore, A.C. and Childs, P.P., 1971. Bright, Breathing Edges of City Life: Planning for Amenity Benefits of Urban Water Resources. Washington: Arthur Cotton Moore Associates.

4 Vallega, A., 2001. Urban Waterfront Facing Integrated Coastal Management, Ocean & Coastal Management, 44, pp. 379-410.

5 Jauhiainen, J. S., 1995. Waterfront redevelopment and urban policy: The case of Barcelona, Cardiff and Genoa. European Planning Studies, 3(1), pp. 3-21.

have designed this research which focuses on case study and empirical research based upon quantitative analysis.

## 2 Case Study

### *2.1 Overview of 14 Coastal Metropolitans*

This study chooses 14 coastal metropolitans which have various characteristics and are located in 9 countries as the research case cities. We demarcates a 10-km$^2$ waterfront area in each case city as our survey sample. Then we compare and analyse these samples quantitatively in terms of the function categories of land use, building density and road traffic density etc. Through the comparison and analysis, we finally conclude key elements of planning and the model of coastal-waterfront space utilization.

As the table 1, the chosen cities are New York City, Los Angeles, Seattle, Baltimore, San Francisco, Barcelona, Benidorm, Fukuoka, Busan, Lisbon, Rio de Janeiro, Rotterdam, Marseilles and Vancouver. They are located in Continents of Asia (2), North America (6), South America (1) and Europe (5) (see Figure 1). In summary, every city of 14 chosen coastal metropolitans is of great importance in the aspects of economy, policy and culture in its region or country. Meanwhile, all of them are adjacent to sea, ocean or great lake, and each of them has huge and continuous body of water, long shoreline and port or harbour. Therefore, these 14 cities are the suitable cases of typical coastal metropolitans.

Figure 1. 14 Case cities on the World Map

Table 1. Case Cities and Their Locations, Characteristics, Population and Adjacent Waterbody

| Nr. | City | Country | Characteristic | Population(million) | Sea/Ocean/lake |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 1 | New York City | U.S.A | The largest city of the United States. | 19.7 | Atlantic Ocean |
| 2 | Los Angeles | U.S.A | The second largest city of the United States, the largest port of the United States. | 3.9 | Pacific Ocean |
| 3 | Seattle | U.S.A | The largest city of North-western U.S. | 0.6 | Pacific Ocean |
| 4 | Baltimore | U.S.A | The largest city in the U.S. state of Maryland. | 0.6 | Atlantic Ocean |
| 5 | San Francisco | U.S.A | The second largest city in the U.S. state of California | 0.9 | Pacific Ocean |
| 6 | Barcelona | Spain | The second largest city of Spain, the largest port of Spain. | 1.6 | Mediterranean Sea |
| 7 | Benidorm | Spain | The famous tourism destination of Spain. | 0.07 | Mediterranean Sea |
| 8 | Fukuoka | Japan | The capital city of Fukuoka Prefecture and is situated on the northern shore of the island of Kyushu in Japan. | 1.5 | Pacific Ocean |
| 9 | Busan | Korea | The second largest city of South Korea, the largest port of South Korea. | 3.5 | Pacific Ocean |
| 10 | Lisbon | Portugal | Capital city and the largest port of Portugal. | 2.7 | Atlantic Ocean |
| 11 | Rio de Janeiro | Brazil | The second largest city in Brazil, the sixth largest city in the Americas and the world's thirty-fifth largest city by population. | 6.5 | Atlantic Ocean |
| 12 | Rotterdam | Netherlands | The largest port of Europe | 1.0 | North Sea |
| 13 | Marseilles | France | The second largest city of France, the largest port of France. | 0.9 | Mediterranean Sea |
| 14 | Vancouver | Canada | The third largest city of Canada, the largest port of West Canada. | 2.3 | Pacific Ocean |

### *2.2 Study Methodologies*

In this study, we cut out the satellite image of each case city with a screenshot software based on Google Earth, a virtual globe, map and geographical information program (see Figure 2).[6]

6 http://en.wikipedia.org/wiki/Google_Earth

According to the 14 satellite maps we demarcated a 10-km$^2$ waterfront area (10-kilometer-long coast, 1-kilometer-wide outspread urban space) in each case city. On the maps, we mark different functional lands and main buildings with different colours. With the marked maps of the case cities, we can divide and distinguish the different components of the waterfront spaces, and calculated the ratios of lands and buildings with different functions (see Figure 3). Through the database of the open-source website Openstreetmap, we can estimate the heights buildings in the research areas. Meanwhile, we use Openstreetmap, Autodesk CAD and Geographic Information System to calculate the road traffic density of the coastal space of each case city.

Figure 2. The Satellite Images of 14 Case Cities and Their Waterfront Area

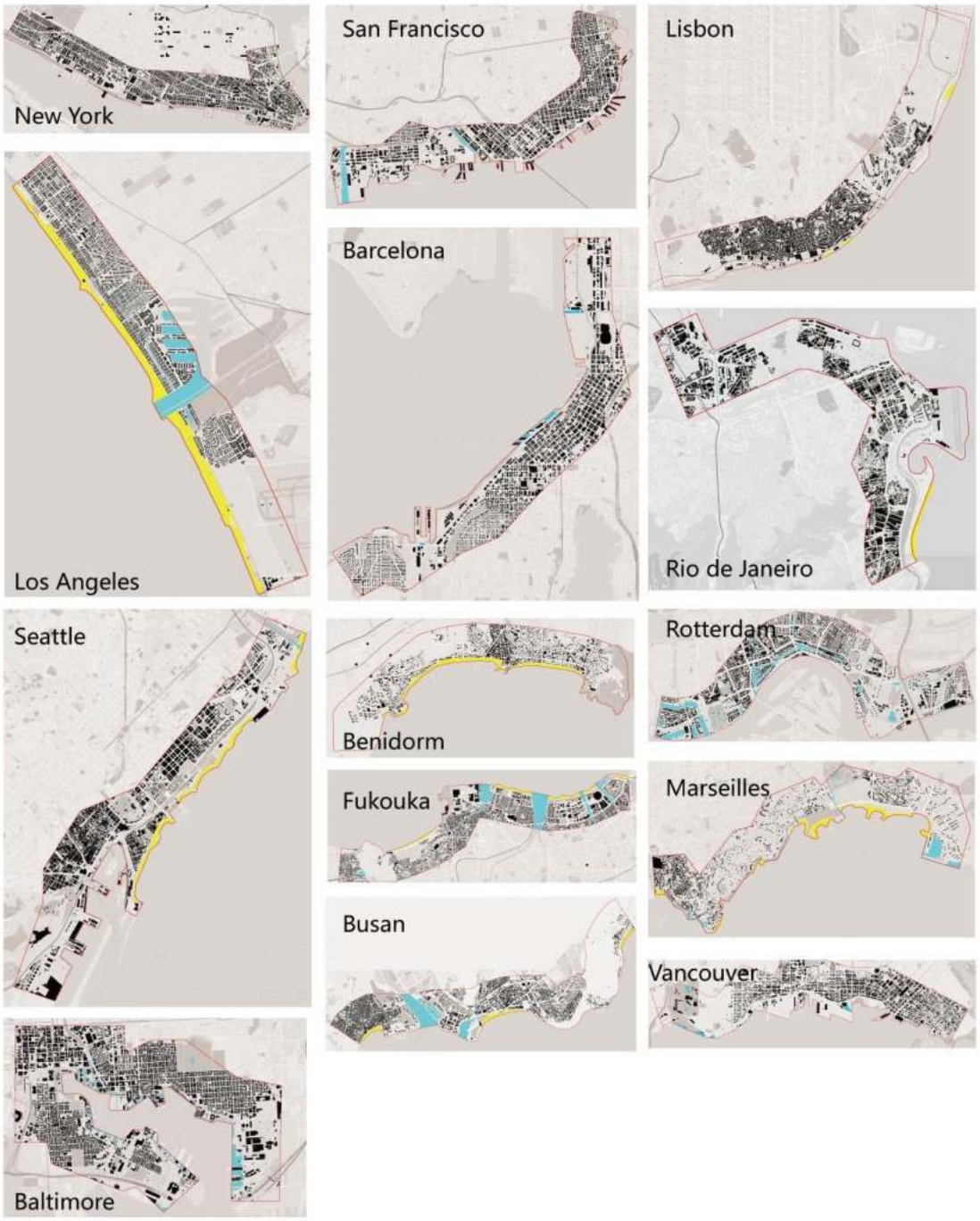



Figure 3. The Marked Maps Which Distinguished Different Components of the Coastal Area of the Case Cities.

### *2.3 Analysis on Land Use*

The pie charts in below Figure 4 show the land use ratios of waterfront areas of 14 case cities. The red parts of the charts refer to the lands used for buildings. The green parts refer to the lands used for roads and green spaces. The orange parts refer to sand beaches. The blue parts refer to water bodies.

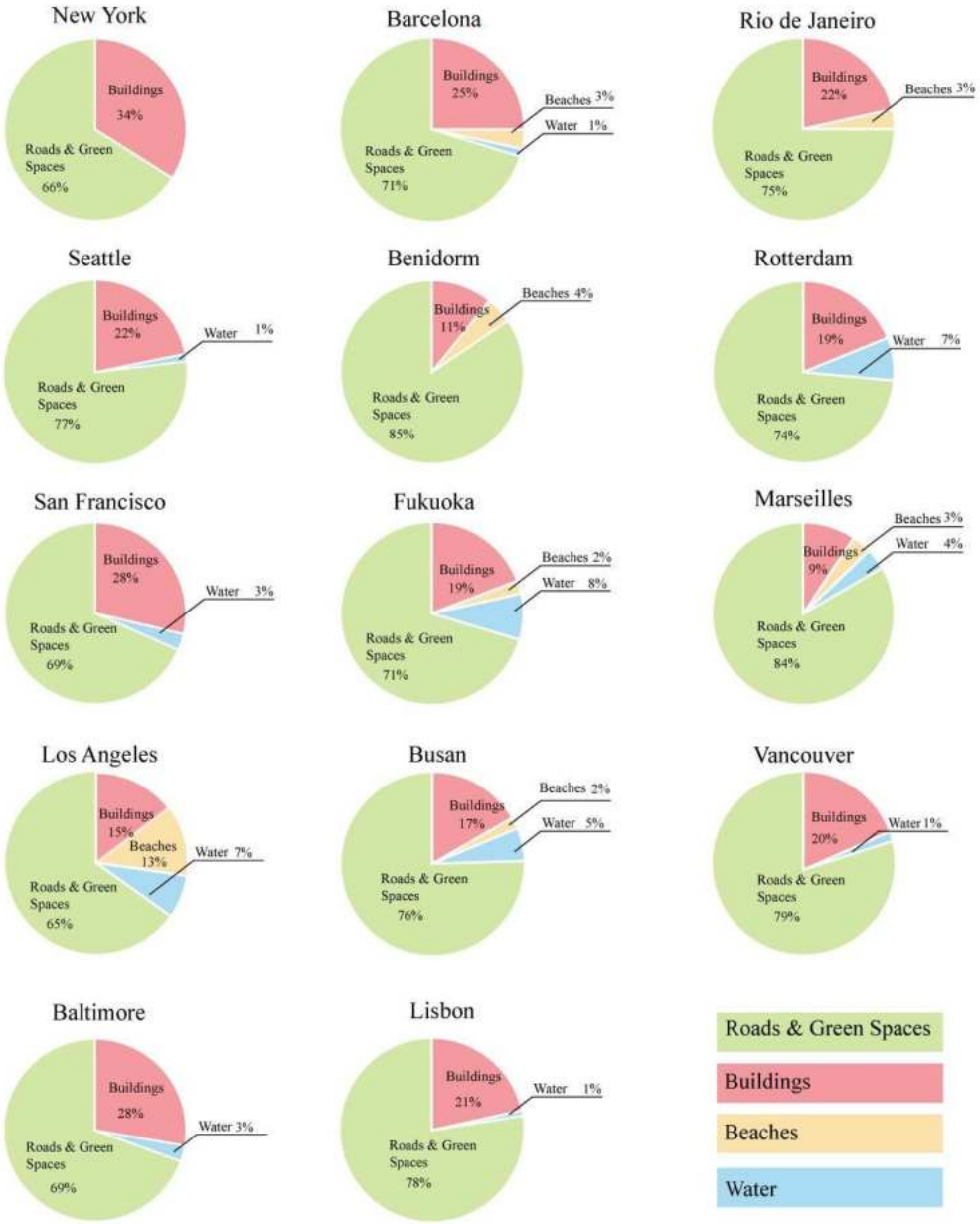



Figure 4. The Pie Charts about Land Use Ratios of the Waterfront Areas of the Case Cities

Generally speaking, the most lands of waterfront areas are used for roads and green spaces, which cover about three-fourth (74.2%) of all in average. The lands used for buildings occupy about one-fifth (20.7%) of all in average. The lands used as sand beaches cover about 2.1% in average. Besides, the small water bodies (such as rivers, small lakes or pools) occupy some 2.9% in average (See Figure 5).

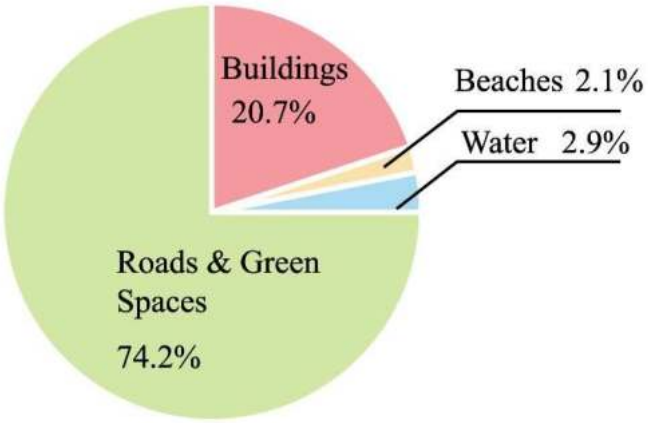
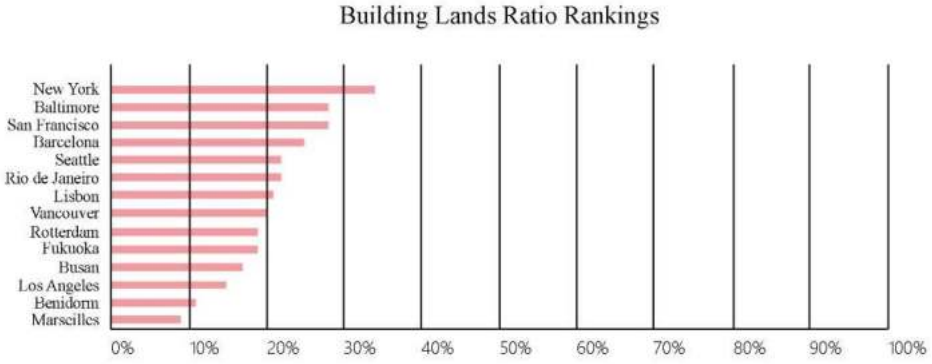



Figure 5. Average values of the percentages of different lands

As we see in the charts, in all 14 case cities the top three cities with highest ratio of buildings are New York City (34%), Baltimore (28%) and San Francisco (28%) (See the rankings of different types of lands in figure 6). And their rankings of roads and green spaces are relatively low. Except these three cities, all the case cities lands for buildings are l the whole waterfront areas. And this ratio is less than one-third even in New York City, the global commercial centre, financial centre, cultural centre, transportation hub and a world-class comprehensive metropolitan which has the most population in 14 cases. These statistics demonstrate that a large amount of outdoor open spaces and public facilities are necessary and the most important components of waterfront areas of coastal cities.



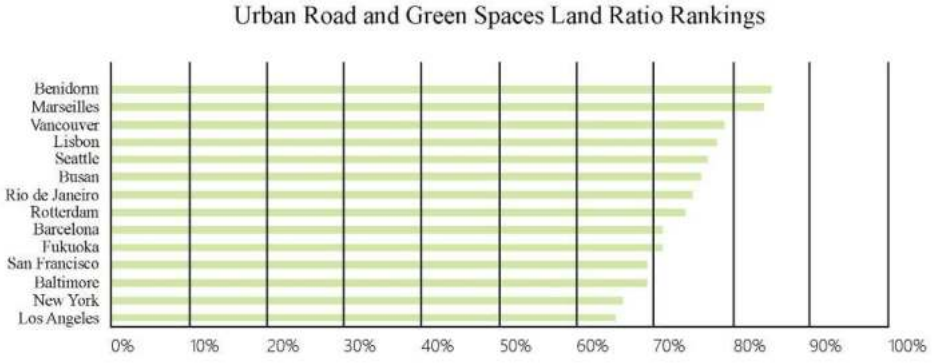



Figure 6. Building Land Ratios Rankings and Urban Road & Green Space Ratio Rankings

*2.4 Analysis on Buildings*

Through the planar shapes of the buildings on the satellite maps and the building information data come from the open-source platform Openstreetmap , we can estimate the heights the buildings on the waterfront areas of 14 case cities. We classify those buildings as low-rise buildings, multi-story buildings and high-rise buildings. Their percentages of each type of buildings of 14 case cities are shown in the figure 7.

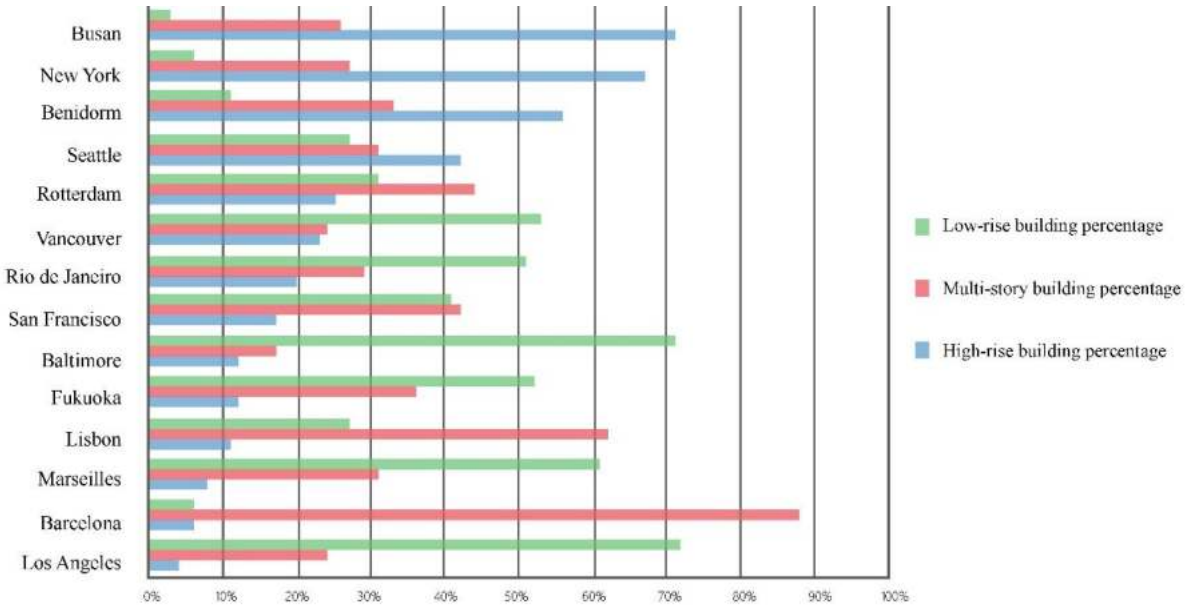



Figure 7. Percentage of Each Type of Buildings of 14 Case Cities

*2.4.1 High-rise buildings*

As we see in the Figure 8, among 14 case cities, Busan, New York City and Benidorm have relatively high percentages of high-rise buildings. Their percentages are 72%, 71%, 67% and 56%, which are all above 50%. Among them, Busan is the most important industrial centre in South Korea. New York City is the most populous city in the United States and the centre of the New York City metropolitan area, one of the most populous urban agglomerations in the world and a global power city.[7] Benidorm is the new town which is regarded as a vital seaport and an attractive tourism and resort city located in the Mediterranean coast. Benidorm is known for its hotel industry, beaches and skyscrapers.[8] In fact, it has the most high-rise buildings per capita in the world.[9]

7 Wikipedia. Benidorm. [online] Available at: <http://en.wikipedia.org/wiki/New_York_City> [Accessed 10 May 2015].

8 Wikipedia. New York City. [online] Available at: <http://en.wikipedia.org/wiki/Benidorm> [Accessed 10 May 2015].

9 Burdett, R. and Sudjic, D., 2008. The Endless City. London: Phaidon Press Ltd.

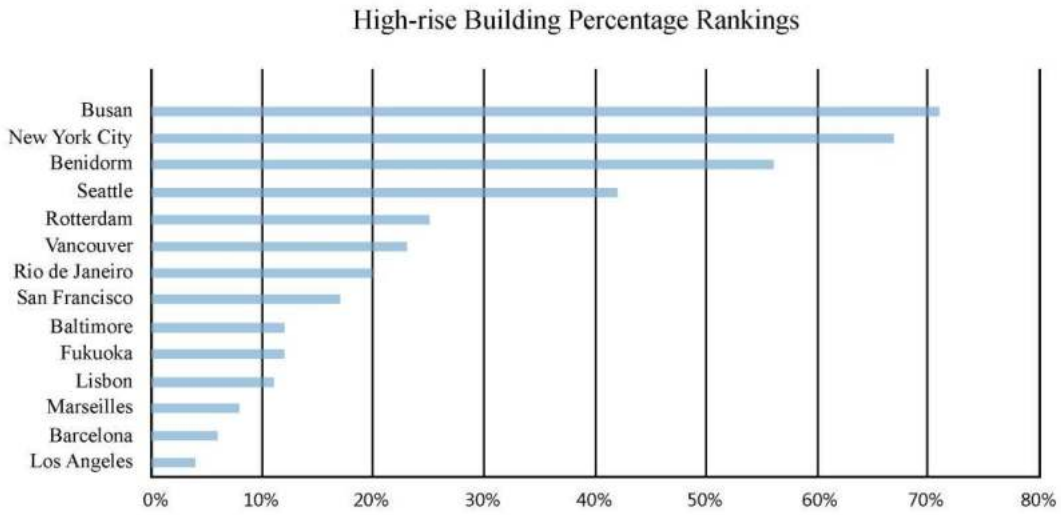



Figure 8. High-rise Building Percentage Rankings

*2.4.2 Multi-story buildings*

As we see in the Figure 9, Barcelona has the highest percentage of multi-story buildings. One reason might be the terrain of the city. It is located in the hilly region where multi-story buildings are more adaptive. Another reason is that the historic communities and architectures. As an ancient coastal city whose old down town is very close to the seashore, Barcelona has a large number of old building in the waterfront area, and most of those buildings are multi-story. Lastly, compared with other cities, Barcelona s coastal areas have mor communities, and the dwelling houses are almost multi-story.

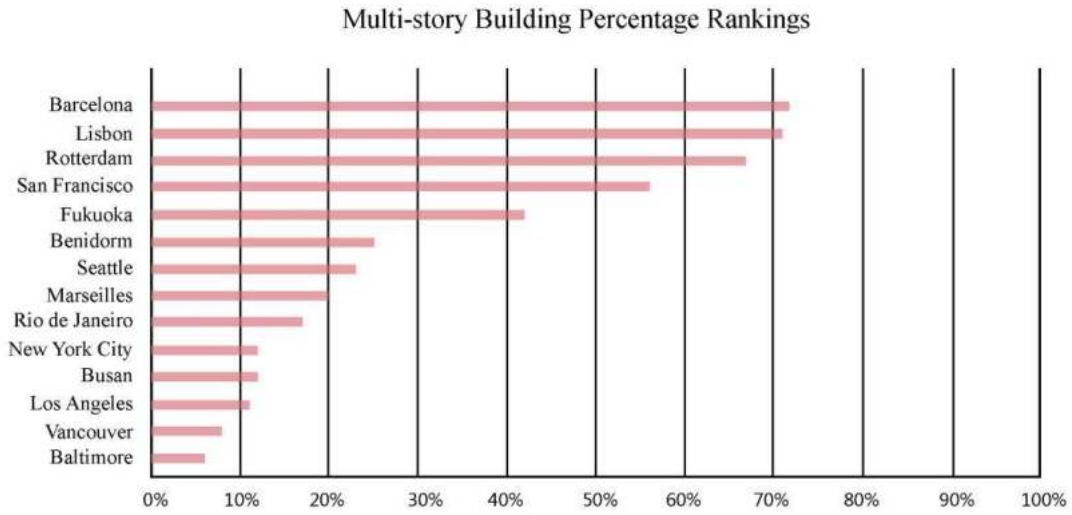



Figure 9. Multi-story Building Percentage Rankings

*2.3.3 Low-rise buildings*

As we see in the Figure 10, Los Angeles, Baltimore and Marseilles are in the top rank of the percentage of low-rise buildings. Their percentages are 72%, 71% and 61% in all the buildings

of the coastal areas.

Los Angeles has the highest percentage of low-rise buildings. That is because that Los Angeles is located in the seismic zone and earthquake disasters happen frequently. For instance, more than 2500 buildings were damaged in the 1994 Northridge earthquake. Therefore, single story buildings and low-story buildings are the main types of the architectures in coastal area of Los Angeles.

Baltimore ranks second in this percentage. Frequent natural calamities is also the main reason. Since 1980, 56 known hurricanes, tropical storms and tropical depressions have affected the U.S. state of Maryland, which state Baltimore is located in.[10] Hurricane Isabel submerged the whole Inner Harbour, the historic seaport, tourist attraction, and landmark of the city of Baltimore. Low-rise buildings are more easily preserved in severe weather.
Hence, natural conditions and geologic hazards are nonnegligible factor in the planning and design for the waterfront areas of coastal cities, which always are the frontlines of the disasters and the ecological sensitive areas as well.

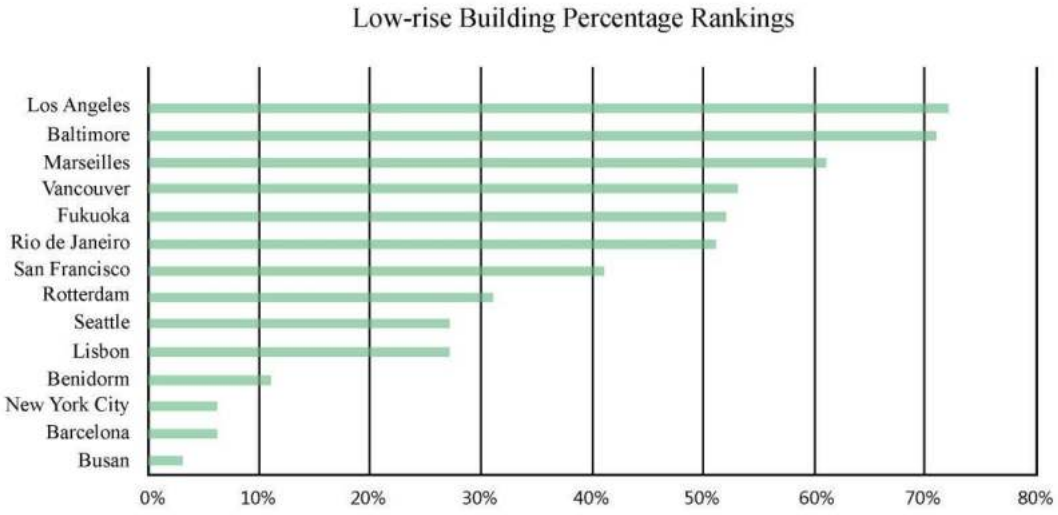



Figure 10. Low-rise Building Percentage Rankings

### *2.5 Analysis on linear density of road net*

We exported data of networks of roads within all the study areas of 14 case cities through the open-source platform Openstreetmap . These data are in the file format of OSM. Via the geographic information system ArcGIS, we parsed these data files and turned them to DWG files which can be analysed in Autodesk CAD. By the analysis of Autodesk CAD, we finally educe the linear density of the networks of roads in the research areas of 14 case cities (See Table 2. The List of the Linear Density of Road Net and the Figure 12. Linear Density of Road Net Rankings) .

10 Wikipedia. List of Maryland Hurricanes. [online] Available at: <http://en.wikipedia.org/wiki/List_of_Maryland_hurricanes_(1980%E2%80%93present)> [Accessed 10 May 2015].

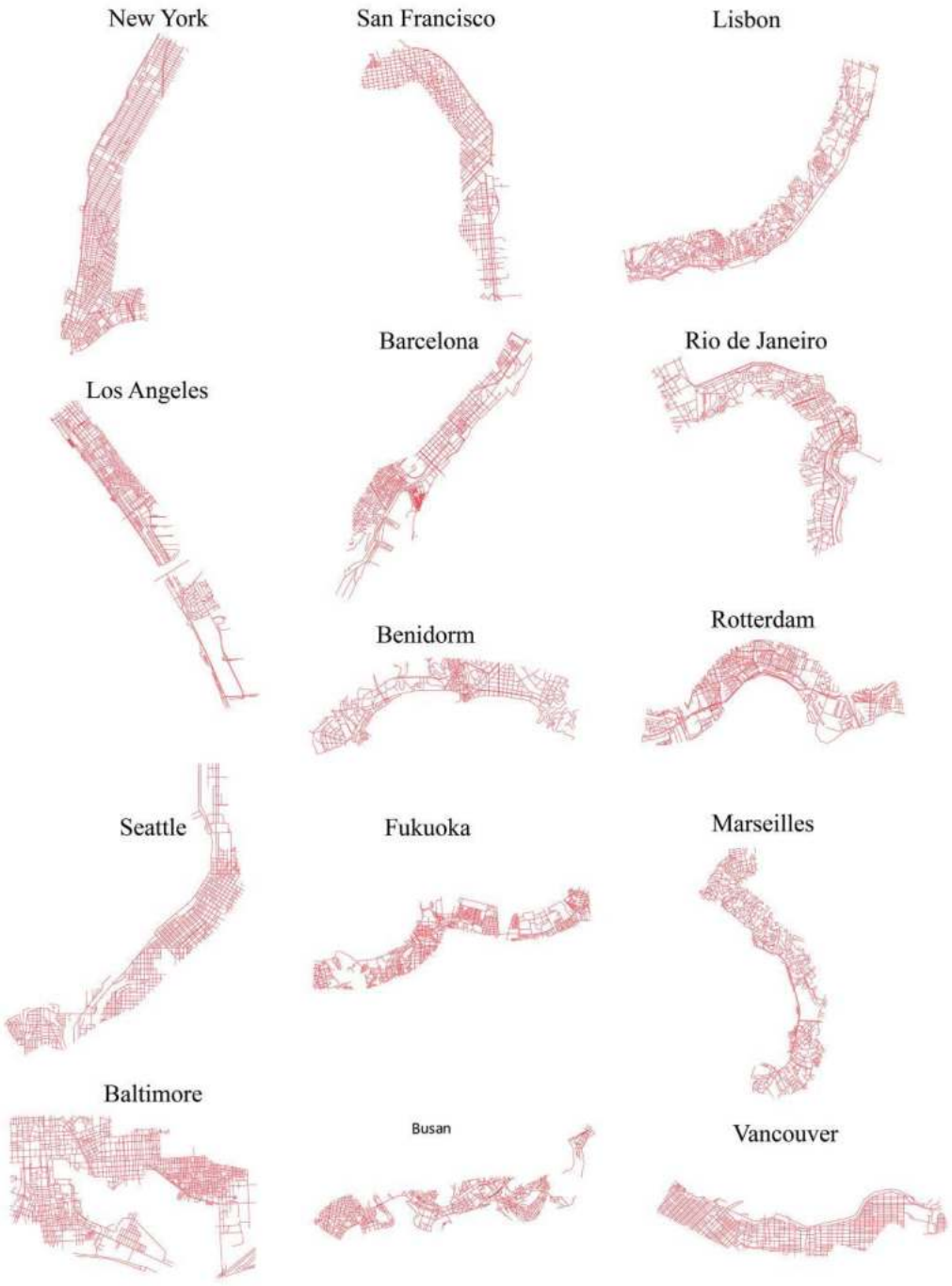



Figure 11. The Road Networks of 14 Case Cities

Table 2. The List of the Linear Density of Road Net of Each Case City

| Nr. | City | Linear Density of Road Net km/km$^2$ |
|---|---|---|
| 1 | New York City | 19.8 |

| | | |
|---|---|---|
| 2 | Los Angeles | 13.8 |
| 3 | Seattle | 14.2 |
| 4 | Baltimore | 21.4 |
| 5 | San Francisco | 15.7 |
| 6 | Barcelona | 16.9 |
| 7 | Benidorm | 12.2 |
| 8 | Fukuoka | 17.8 |
| 9 | Busan | 14.4 |
| 10 | Lisbon | 16.3 |
| 11 | Rio de Janeiro | 15.8 |
| 12 | Rotterdam | 17.7 |
| 13 | Marseilles | 14.6 |
| 14 | Vancouver | 14.7 |

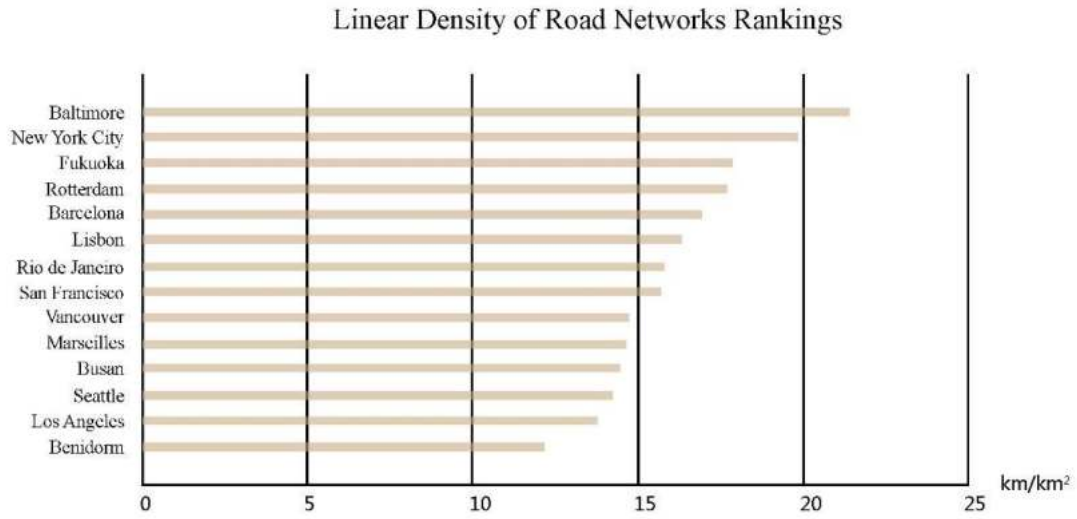



Figure 12. Linear Density of Road Net Rankings

As we see in the figure above, all case cities linear density of road net are ex and the average linear density of the 10-km$^2$ waterfront areas 14 case cities is about 16 km/km$^2$, which means that all the waterfront areas in those cities have relatively good accessibility. Among them, Baltimore ranks the first in the road networks linear density, which is about 21 km/km$^2$, and New York City has the second highest linear density of road networks, which is close to 20 km/km$^2$. While Benidorm has the lowest road networks linear density. Compared with each percentage of building lands of case cities (New York City and Baltimore rank in the top and Benidorm ranks in the bottom), we can conclude that there is interrelated between building density and the linear density of road networks.

## 3 Conclusions

Through the case study and empirical research based upon quantitative analysis, we discover several regular phenomena about the waterfront space use in coastal metropolitan.

### *3.1 Land Use Division and building density*

As we found in the case study, roads and green lands occupy the largest proportion of the coastal waterfront space (about 74% in average), while the lands of buildings averaged in one-fifth. The largest building density is about one-third of the whole area (New York City). This phenomenon tells us the importance and heavy demand of outdoor public activities in coastal-waterfront areas. Therefore, we must balance the scale of open space and indoor construction with rigid control over the construction quantity, avoiding to misappropriate the green lands and other public infrastructures by blind expansion of buildings.

### *3.2 Type and Height of the Building*

In the case analysis, we can see that the types and heights of the buildings vary in different cities. There are three decisive factors for this phenomenon. The first one is the functional role and development orientation of the coastal-waterfront area as well as the city. For example, Busan, New York City and Seattle are the industrial centres, commercial centres and transportation hubs in their regions, while Benidorm is a well-known tourism and resort destination which is famous for its beach sceneries and coastal landscape. In other words, in all of those cities, the density of population is comparatively high in the waterfront area, since a large number of people live, work, communicate or travel in this area. Hence, the proportions of high-rise buildings in those cities are much higher than the proportions of other cities. The second reason is the natural environmental conditions, including terrain condition, geologic condition and natural disasters etc. For example, the regions of Barcelona, Marseilles and San Francisco are hilly and uneven, thus skyscrapers are not proper for the terrain of those places. Another instance is Los Angeles and Baltimore, these two cities often encounter severe natural catastrophes, like earthquakes and hurricanes. The threads come from nature force them abandoning high-rise buildings. The third reason is the historical background of the city. Old cities which have long history, and whose old downtown are near the waterfront areas, always have higher percentage of low-rise buildings and multi-story buildings.

When we plan a new coastal city s waterfront, we much synthetically consider the functions and development orientation, natural environmental condition and history background of this city, for design and arrange the forms and heights of the new-constructed buildings.

### *3.3 Organization of the traffic and road networks*

In our research, the linear density of the case cities are relatively high. The average value is 16.1 km/km$^2$, and the highest value is 21.4 km/km$^2$. In all the case cities of different types and scales, dense roads guarantee the connectivity, openness, publicity and accessibility of the

coastal-water areas. All case cities have special promenades in their water front. In fact, the cities with higher building density, always have correspondingly higher linear density of road net (like New York City and Baltimore). This phenomenon shows that even in high building density cities, most buildings in the coastal-waterfront areas are not private properties. When we plan or design for the urban coastal waterfront area, it is required to ensure the accessibility and necessary to increase the linear density of branch road net.

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